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August 31, 2015

Mr. John E. Kieling, Chief
NMED - Hazardous Waste Bureau
2905 Rodeo Park Drive East, Bldg 1
Santa Fe, NM 87505-6303

Carl Chavez, Environmental Engineer
Oil Conservation Division
1220 S. Saint Francis Drive
Santa Fe, NM 87505

RE: 2014 Annual Ground Water Monitoring Report and GW-032AP-111.
Western Refining Company, Southwest Inc. - Gallup Refinery
EPA ID # NMD000333211

Dear Mr. Kieling and Mr. Chavez:

Western Refining Southwest, Gallup Refinery is pleased to submit the Annual Ground Water Monitoring Report for 2014. This report is being submitted to comply with the existing requirements under the OCD Discharge Permit 32 which is now referred to as GW-032AP-111. The reports are distributed as follows: Two hard copies of the Report with CDR disc for NMED and one copy with CDR disc to OCD. The report was also sent electronically via e-mail to both agencies.

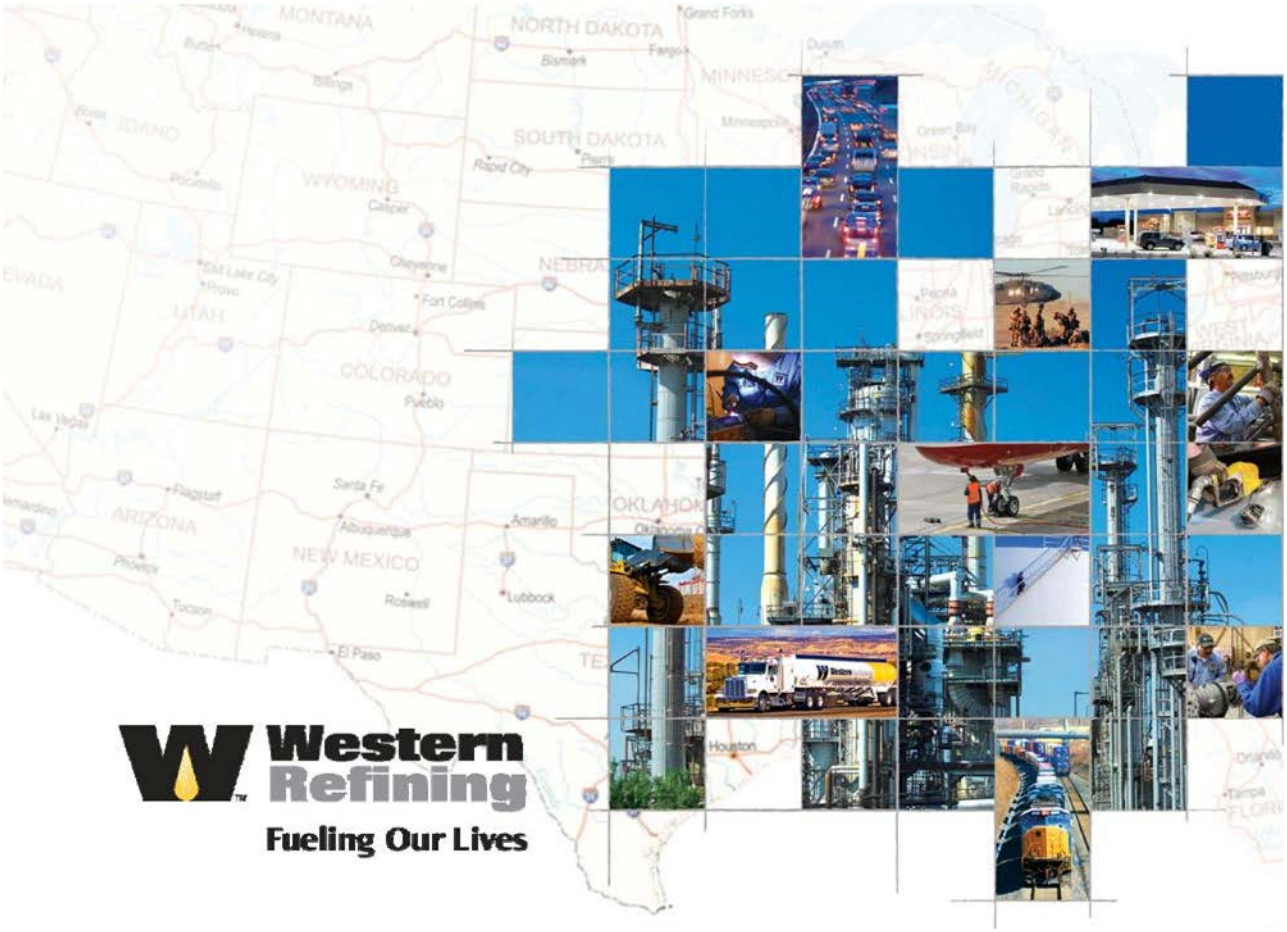
If there are any questions regarding the 2014 Annual Ground Water Report, please contact Mr. Ed Riege, Environmental Manager (505) 722-0217 or Cheryl Johnson, Environmental Specialist at (505) 722-0231.

Sincerely,

Ed Riege, Environmental Manager
Ed.riege@wnr.com

cc: K. Van Horn, NMED HWB w/enclosure
C. Chavez, OCD w/enclosure
E Riege, Western
C. Johnson, Western

Annual Groundwater Monitoring Report: Gallup Refinery – 2014



Western Refining
Gallup, New Mexico
Submitted: August 28, 2015

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

_____ _____

William C. McClain, Jr. Date

Refinery Manager

Prepared by: Trihydro Corporation Reviewed by:

_____ _____

H. Joey Waldmann Jr., P.G. Ed Riege, MPH

Project Manager / Geologist Environmental Manager

_____

Cheryl Johnson

Environmental Specialist

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LIST OF ACRONYMS

AC	Alternating Current
AL	Aeration Lagoon
API	American Petroleum Institute
BMP	Best Management Practices
BOD	Biochemical Oxygen Demand
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
BW	Boundary Well
COC	Chain of Custody
COD	Chemical Oxygen Demand
DC	Direct Current
DGF	Dissolved Gas Flotation
DO	Dissolved Oxygen
DRO	Diesel Range Organics
DTB	Depth to Bottom
DTP	Depth to Product
DTW	Depth to Water
EP	Evaporation Pond
EPA	Environmental Protection Agency
FT	Foot/Feet
FWGWMP	Facility Wide Groundwater Monitoring Plan
GPM	Gallons Per Minute
GRO	Gasoline Range Organics
GWM	Groundwater Monitoring Well
HP	Horse Power
HWB	Hazardous Waste Bureau
IDW	Investigation Derived Waste
ISE	Ion Selective Electrode

LIST OF ACRONYMS - continued

LDU	Leak Detection Unit
LPG	Liquefied Petroleum Gas
LTU	Land Treatment Unit
MCL	Maximum Contaminant Level
MPPE	Macro Porous Polymer Extraction
MRO	Motor Oil Range Organics
MTBE	Methyl Tert Butyl Ether
mg/L	Milligrams/liter
mV	Millivolts
MW	Monitoring Well
NAIC	North American Industry Classification System
NAPIS	New American Petroleum Institute Separator
NAPL	Non Aqueous Petroleum Liquid
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NOD	Notice of Disapproval
NPDES	National Pollutant Discharge Elimination System
OBSM	Oil Bearing Secondary Material
OCD	Oil Conservation Division
OW	Observation Well
ORP	Oxidation Reduction Potential
PAH	Polycyclic Aromatic Hydrocarbon
PSTB	Petroleum Storage Tank Bureau
PVC	Polyvinyl Chloride
PW	Process Well
RCRA	Resource Conservation and Recovery Act
<RL	Less than the Applicable standards Detection Limit

LIST OF ACRONYMS - continued

RSL	Regional Screening Level
RW	Recovery Well
SMW	Shallow Monitoring Well
SPH	Separate Phase Hydrocarbon
STP	Sanitary Treatment Pond
SVOC	Semi-volatile Organic Compound
SMWU	Solid Waste Management Unit
SWPPP	Storm Water Pollution and Prevention Plan
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbon
µm	Micrometer
UPS	United Parcel Service
VOC	Volatile Organic Compounds
WQCC	Water Quality Control Commission
WWTP	Waste Water Treatment Plant
YTD	Year to Date

EXECUTIVE SUMMARY

The Annual Groundwater Monitoring Report for 2014 (Report) incorporates all of the field monitoring, sampling, and inspection of all active wells located on the facility. Analytical data and field notes are incorporated into this report to show any changes or discoveries of various constituents found in the groundwater collected for sampling. On February 15, 2012, Groundwater Discharge Permit GW-032 was rescinded by the Oil Conservation Division (OCD) of New Mexico. We are however required to continue to abate pollution of groundwater pursuant to 19.15.30 NMAC (Remediation) under case number AP-111 with remediation activities already in place under Groundwater Discharge Permit GW-032. Monitoring and field work activities conducted for 2014 followed the guidelines of the approved 2010, Revision 1, Annual Groundwater Monitoring Report, approved on December 12, 2012 and concurrence from Comment 6 of New Mexico Environmental Department's (NMED) Disapproval Facility Wide Groundwater Monitoring Work Plan, 2011 Updates, September 24, 2012.

GROUNDWATER MONITORING

There are a total of 87 monitoring wells located throughout the refinery property. The groundwater program consists of a number of sampling locations, target analytes, and monitoring frequencies which are monitored on a quarterly, semi-annual, and annual basis. These monitoring wells have been grouped as follows:

GROUP A	GROUP B	GROUP C	GROUP D	GROUP E
BW-1A, 1B, 1C	GWM-1, 2, 3	OW-13, 14, 29, 30	PW-2, 3, 4	MKTF-1 thru
BW-2A, 2B, 2C	NAPIS-1, 2, 3, KA-3	OW-50, 52	OW-1, 10	MKTF-45
BW-3A, 3B, 3C	OAPIS-1	RW-1, 2, 5, 6	OW-11, 12	
MW-1, 2, 4, 5	STP1-NW			
SMW-2, 4	STP1-SW			

GROUP A - WELLS

There are a total of nine boundary wells located on the northwest section of the refinery property. Three (BW-1A, 1B, 1C) are located between evaporation ponds 7 and 8, and three (BW-2A, 2B, 2C) are located

on the west end of evaporation pond 11. BW-3A, 3B, 3C are located on flat terrain directly northwest of evaporation pond 12A.

- Three of the seven wells (BW-1A, BW-1B, and BW-3A) continue to indicate no water level since original installation in 2003 and 2004.
- No benzene, toluene, ethylbenzene, or total xylenes (BTEX) or methyl tert butyl ether (MTBE) constituents have been detected in any of the boundary wells to date.
- Bis(2-ethylhexyl)phthalate was first detected in BW-3B in 2009, BW-3C in 2011, and in BW-1C in 2013. The detection of this organic compound is suspected to be a laboratory contaminant or possibly from the polyvinyl chloride (PVC) pipe materials used in the well. Subsequent annual sample results have indicated non-detectable levels of the organic constituent in each of these wells.

Within this area of the refinery, three Resource Conservation Recovery Act (RCRA) land treatment units (LTU) exist. Each of the three LTU cells measure 480 feet x 240 feet and received hazardous waste application until 1990. Non-hazardous waste application ceased in 1993. Each section is diked and encompasses a surface area of 2.6 acres. The MW series (MW-1, 2, 4, and 5) and SMW series (SMW-2, and SMW-4) of wells were installed to monitor the detection of hazardous constituents from the LTU in groundwater. On the northern edge (up gradient) of the LTU are three monitoring wells (MW-1, SMW-4 and MW-2). Down gradient along the eastern edge of the LTU are two monitoring wells (MW-5, SMW-2). MW-4 is located on the northwest corner of evaporation pond 2 (EP-2) and was installed as a background monitoring well. A summary of the laboratory analyses for these wells through 2014 includes:

- Low concentrations of MTBE were detected in SMW-2 from 2008 through 2014.
- Low concentrations of fluoride and chloride have been detected in MW-1, MW-2, MW-3, MW-4, and SWM-4. SMW-2 has exceeded the Water Quality Control Commission (WQCC) standards for chloride and sulfate since 2008.
- Manganese and uranium concentrations have exceeded the WQCC standard since 2012 in SMW-2. SMW-4 has exceeded the standard for uranium concentrations since 2011. Low concentrations of manganese and uranium were detected in the remaining wells.
- In 2008, SMW-2 had exceedances of 1,4-dioxane; however, annual samples through 2014 have all been less than the applicable standards limit. The detection of this organic constituent is suspected to be a laboratory artifact or possibly from the PVC pipe materials used as casing for this well.

In addition to the annual sampling requirements, the LTU monitoring wells are on a once every ten year sample schedule per the RCRA Post Closure Care Permit. The next RCRA Post Closure Care Permit sample event is scheduled to occur in 2019.

GROUP B - WELLS

The Group B wells are located within and around the aeration basin. Wells GWM-1, GWM-2 and GWM-3 are located on the west edge of Aeration Lagoon 2 (AL-2) and Pond 1. The NAPIS-2, NAPIS-3, and KA-3 wells are adjacent to the west bay of the New American Petroleum Institute Separator (NAPIS) and NAPIS-1 is located upstream on the southeast side of the east bay of the NAPIS. A leak detection unit (LDU) well, the West LDU, is located on the west bay of the NAPIS. The Oil Sump LDU and East Bay LDU wells are located on the east bay of the NAPIS.

In July 2012, a new well (OAPIS-1) was installed on the northwest side of Aeration Lagoon 1 (AL-1). The installation of this well resulted from the Solid Waste Management Units (SMWU) No. 1, Aeration Basin and SMWU No. 14, Old API Separator site investigation. The investigation work was implemented to determine if there had been a release from the aeration basin and to delineate impacts associated with any such releases. Information collected from this site investigation is also used to track groundwater in monitoring wells GWM-2 and GWM-3.

Two new monitoring wells (STP1-NW and STP1-SW) were installed at the new sanitary treatment pond in May of 2014. STP1-NW is located on the west end of the north bay of STP-1 and STP1-SW is located on the southwest corner of the south bay of STP-1. Both of these wells were added to the ground water sampling plan.

A summary of laboratory analyses for the Group B wells through 2014 is listed below:

<u>GWM 1, GWM-2, GWM-3</u>

- No groundwater was detected in GWM-2 and GWM-3 in 2014.
- High benzene concentrations have been detected in GWM-1 since 2006.
- Low concentrations of total xylenes and MTBE have been detected in GWM-1 from 2006.
- Fluoride and chloride have exceeded standards in each of the three wells since 2006.
- A low concentration of uranium below the applicable standard was detected in GWM-1.
- Low concentrations of DRO and GRO have been detected in each well with DRO exceeding the applicable standard in GWM-1 since 2010 through 2014.
- Arsenic, iron, and manganese concentrations exceeding applicable standards have been detected in each of the three wells.

- The organic compound, 1-methylnaphthalene, has exceeded the EPA RSL standard in GWM-1 since 2009.

NAPIS-1, NAPIS-2, NAPIS-3, and KA-3

- NAPIS-2 has had exceedances in benzene and MTBE through 2014.
- Low concentrations of benzene and MTBE were also detected in the remaining NAPIS wells.
- DRO exceedances were detected in NAPIS-2.
- A fluoride exceedance was detected in NAPIS-1 in 2014. Barium has exceeded the WQCC standard in NAPIS-2 since November 2009. Uranium concentrations exceeded standards in NAPIS-3 since 2010 through 2014. Iron and manganese concentrations have been detected in each of the NAPIS wells.
- Naphthalene was detected exceeding the applicable standards for NAPIS-2 in one sample collected in 2014.

West LDU, Oil Sump LDU, and East Bay LDU

- The Oil Sump LDU has an insufficient volume of water for sample collection in 2014.
- Constituents in BTEX and DRO have exceeded applicable standards since 2010 through 2014. GRO concentrations have been detected in each of the LDU wells since 2010.
- Arsenic, chromium, iron, and manganese have been detected in concentrations exceeding applicable standards in each of the LDU wells sampled in 2014. Neither total nor dissolved uranium was detected.
- The organic constituents 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene have shown concentrations exceeding applicable standards in each of the LDU wells since 2010 through 2014 (no sample in 2014 for Oil Sump LDU).

OAPIS-1

- Benzene and MTBE have exceeded the applicable standards in OAPIS-1 since 2013.
- Concentrations of fluoride, chloride, and DRO have shown exceedances in OAPIS-1 since 2013.
- Arsenic, iron, manganese, uranium, and cyanide have exceeded applicable standards in OAPIS-1 since 2013.

STP1-NW and STP1-SW

- There were no detections of BTEX, MTBE, DRO, GRO, or MRO above applicable standards in 2014.
- Chloride and nitrate concentrations exceeded applicable standards during each 2014 sampling event.

- Total and dissolved uranium concentrations in the second quarter 2014 exceeded the applicable standard. Low concentrations of barium, iron, manganese, selenium, and zinc were detected during each 2014 event.

GROUP C WELLS

Group C wells include six observation wells and four recovery wells. Observation well OW-14 is adjacent to the liquefied petroleum gas (LPG) compound while OW-13, OW-29, and OW-30 are located north of the tank farm. Observation wells OW-50 and OW-52 were installed in 2009 per NMED and monitor the potential for contaminant migration offsite. Recovery well RW-1 is located within the tank farm east of Tank 568 while RW-2 is located on the southwest side of Tank 576. Recovery well RW-5 and RW-6 are located northeast of Tank 345. The recovery wells were installed during a subsurface investigation conducted between 1987 and 1992 near the tank farm. BTEX concentrations and separate-phase hydrocarbons (SPH) were detected in the groundwater.

SPH recovery continues quarterly. Recovery is completed using a disposable hand-bailer in RW-5 and RW-6 and completed in RW-1 using a portable submersible pump. Measureable SPH has not been detected in RW-2. The SPH volume has continued to drop from year to year in the three wells.

A summary of the observation wells and recovery well laboratory analyses through 2014 is as follows:

<u>OW-13, OW-14, OW-29, OW-30, OW-50, and OW-52</u>

- Benzene has exceeded the EPA MCL standard in OW-14 since 2008 through 2014. MTBE concentrations have shown exceedances in OW-14, OW-29, and OW-30 since have exceeded applicable standards since 2007 (2010 for OW-29) through 2014. No BTEX or MTBE constituents have been detected in OW-13, OW-50, and OW-52.
- Manganese and uranium concentrations exceeded standards in OW-29 and OW-30.
- No other VOCs or SVOCs were detected in any of the observation wells,

<u>RW-1, RW-2, RW-5, and RW-6</u>

- Benzene and ethylbenzene concentrations have exceeded standards in each of the RW wells since 2011. In 2014, concentrations of toluene and total xylenes exceeded the constituent standards in RW-1 and RW-2.
- Barium, iron, and manganese have exceeded applicable standards in each of the recovery wells since 2011 through 2014. Arsenic was detected in concentrations exceeding the standard in RW-1 and RW-6 during 2014. Low concentrations of uranium below the standard were detected in RW-1. Uranium was not detected in any other RW well.
- During 2014, the organic constituents 1,2,4-trimethylbenzene and aniline concentrations exceeded the applicable standards in RW-2. In RW-5 and RW-6, the organic constituents 1,2,4-

trimethylbenzene, naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene concentrations exceeded the applicable standards.

- During 2014, the following organic constituents were detected in RW wells above the applicable standards::
  - RW-1: Aniline and 3,4-methylphenol exceeded the applicable standards.
  - RW-2: Aniline, 1,2,4-trimethylbenzene, and 3,4-methylphenol exceeded the applicable standards.
  - RW-5: 1,2,4-trimethylbenzene, naphthalene, 1-methylnaphthalene, and 2-methylnapthalene exceeded the constituent applicable standards.
  - RW-6: the same constituents as those in RW-5, plus 1,3,5-trimethylbenzene exceeded the applicable standards.
- Hydrocarbon recovery from RW-1 has shown a steady decrease from 2005 through 2014. In 2014, total hydrocarbon recovery is estimated at 2.25 gallons in 83 gallons of water purged compared to the 2005 estimate of 431 gallons of hydrocarbons in 1,210 gallons of water. No measureable hydrocarbons have been detected in RW-2 since the well was installed. SPH has not been detected in RW-5 and RW-6 since February 2009 and November 2011, respectively.

GROUP D WELLS

The Group D wells can be found within the refinery property and include three process/production wells (PW-2, PW-3 and PW-4) and four observation wells (OW-1, OW-10, OW-11, and OW-12). The process/production wells are used to provide process water for the refinery and drinking water for both the refinery and the Pilot Travel Center. PW-2 is located on the central west side of the refinery directly west of Evaporation Pond 6 (EP-6). PW-3 is centrally located on the refinery property north of the maintenance shop and west of the domestic water tank Z-86-T2. PW-4 is located south of the Pilot Lift Station. Each of the PW wells is screened at a depth of 1,000 feet. The observation well OW-1 is found west of PW-2 and is an artesian well. Observation well OW-10 is located east of Evaporation Pond 9 (EP-9), OW-11 is located on the west side of the main access road, and OW-12 is centrally located west of the refinery tank farm.

A summary of the Group D Wells laboratory analyses through 2014 is as follows:

<u>PW-2, PW-3, and PW-4</u>

- No BTEX or MTBE constituents were detected in the process wells since 2004 (2006 for PW-3).
- Low concentrations of barium and iron were detected but did not exceed applicable standards. Low total and dissolved uranium was detected in each of the PW wells at concentrations below the applicable standard.
- No VOCs SVOCs were detected in the process wells in 2014.

OW-1, OW-10, OW-11, and OW-12

- Other than low concentrations of MTBE in OW-10 during each 2014 quarter, no BTEX or MTBE were detected in the observation wells during 2014.
- Chloride concentrations exceeded the WQCC standard in well OW-10, and fluoride and sulfate exceeded the applicable standards in OW-11 and OW-12 during 2014.
- Uranium concentrations have exceeded the constituent standards in OW-1, OW-10, and OW-11 for 2014.
- During the 2013 annual sampling event, bis-2(ethylhexyl)phthalate was detected in OW-11 at a concentration exceeding the standard of 0.006 mg/L; however, this is suspected to be either a lab artifact or from the PVC well materials.

GROUP E WELLS

To date, a total of 44 monitoring wells (MKTF-1 through MKTF-44) have been installed to aid in delineating the extent of a hydrocarbon seep discovered in 2013 in an isolated area approximately 100 yards west of the crude tanks T-101 and T-102. A pre-existing well located in the seep investigation site area at the loading rack was added to the marketing wells and has been labeled as MKTF-45. Site investigations have included excavations within the seep area, soil/water samples, and the installation of six temporary sumps to recover the non-aqueous phase liquid (NAPL). Liquid recovery from the sumps through the end of 2014 is estimated at 362,987 gallons of NAPL and ground water. A hole was identified in the refinery's waste water process sewer line near the bundle cleaning pad and a leaking transmix transfer line was also identified in the area. Interim measures are on-going to identify any potential sources from the hydrocarbon seep. Recovery of SPH from six temporary sumps and from the 10 wells that have a product layer are on-going. The MKTF series of wells have also been added to the ground water sampling program for 2014.

The MKTF wells are sampled quarterly. BTEX, MTBE, DRO, GRO, total and dissolved metals including uranium, and several VOCs and SVOCs have been detected in many of the wells above the referenced standards.

ADDITIONAL SITES MONITORED

The new waste water treatment plant (WWTP) and the new holding pond Sanitary Treatment Pond (STP-1) were completed and put in service in May of 2012. All waste water flow was routed to the WWTP in May 2012 and in January 2013, the demolition and removal of the benzene strippers was completed. Pilot effluent was routed to the WWTP in June of 2013 and the aeration lagoons and pond 1 are no longer

receiving any flow. All influent and effluent sample sites continued between lagoons and pond 1 as long as there was continued gravitational flow.

Outfall BW to EP-2

- The flow from the boiler unit discharges into EP-2. It is sampled at its discharge point to the pond on a semi-annual basis for major cations/anions.
- Chloride concentrations exceeded the standard of 250 mg/L during both sampling events.

Outfall STP1 to EP-2

- The EP-2 Inlet designation was changed to STP1 to EP-2 in the second half of 2012 as flow to the aeration lagoons and pond 1 were diverted to the new WWTP. Aeration lagoons and pond 1 were taken out of service and no longer receiving flow. STP-1 effluent now flows into the northeast corner of EP-2. The outfall is sampled on a quarterly basis.
- Benzene and DRO concentrations exceeded the constituent respective standards in 2014.
- Total and dissolved arsenic, total and dissolved iron, and total and dissolved manganese concentrations exceeded the respective constituent standards in 2014. Low total and dissolved uranium concentrations were detected but were below the applicable standard.
- Concentrations of 2-methylphenol and phenol exceeded the respective applicable standards. Low concentrations of acetone, 2-butanone, and carbon disulfide were detected but are below applicable standards.

Evaporation Ponds

There are a total of twelve evaporation ponds including pond 1 that are sampled semi-annually. Pond 1 (EP-1) thru evaporation pond 6 (EP-6) are centrally located on the west end of the refinery property (west of the aeration basin) and evaporation pond 9 is located on the south section of the refinery property divided by a dirt road separating EP-9 from EP-1 through EP-6. Evaporation ponds 7, 8, 11, 12A/B are located on the northwest corner of the refinery boundary.

- Pond 1 is no longer in service.
- In 2014, BTEX and MTBE concentrations were below applicable standards for all the evaporation ponds.
- In 2014, concentrations of fluoride, chloride, sulfates, and COD exceeded the applicable WQCC standards in all of the evaporation pond samples.
- In 2014, BOD concentrations exceeded the applicable standards in each of the evaporation ponds except for EP-7, EP-8, and EP-9.
- Total and dissolved arsenic and manganese concentrations exceeded applicable standards in all of the ponds throughout 2014. Total and dissolved uranium concentrations were mostly not detected.

- Aniline, phenol, and 3,4-methylphenol concentrations that exceeded the applicable standards were detected in several ponds during the March 2014 sampling event. However, there were no VOC or SVOC exceedances during the November 2014 event.

ADDITIONAL APPLICABLE STANDARDS REQUIREMENTS

OCD Discharge Permit is now titled GW-032/AP111. The Discharge Permit was rescinded by NM-OCD on February 15, 2012; however Gallup is still required to continue with abatement of pollution of groundwater pursuant to 19.15.30 NMAC (Remediation), with remediation activities already in place.

This report includes:

- Monitoring of the aeration lagoons, ponds and outfalls between the lagoons and ponds on a quarterly, semi-annual and annual basis. (Section 8)
- Summary of Monthly Waste Water Flow Rate (Appendix D)
- New Wells – MKTF-19 thru MKTF-45 (Appendix F)
- Major Refinery Activities and Events (Summary EPA/NMED/RCRA Activity) (Appendix G)
- Summary of All Leaks, Spills, and Releases (Appendix H)
- Temporary Land Farm Analytical Results (Appendix J)
- Analytical Data (Appendix K)

SECTION 1

INTRODUCTION

The 2014 Annual Groundwater Monitoring Report has been prepared to describe monitoring and remediation activities undertaken throughout 2014. Groundwater sampling is performed on a quarterly, semi-annual and annual basis and also includes sampling of the evaporation ponds located on the northwest section of the refinery property. The activities completed include analysis of all active monitoring wells and evaporation ponds. The data generated is used to characterize the nature and extent of impacts to the groundwater, at the refinery, from historical releases and to monitor any levels of constituents that exceed applicable standards.

This report presents the results of the groundwater monitoring activities and contains the following information:

- Scope of activities
- Sampling methods and procedures
- Groundwater elevation surveys
- Regulatory criteria
- Groundwater monitoring results
- Conclusions and recommendations

1.1 FACILITY OWNERSHIP, OPERATION AND LOCATION

This report pertains to the Western Refining Southwest Inc., Gallup Refinery, located at Exit 39 on Interstate I-40, approximately 17 miles east of Gallup, New Mexico, in Jamestown, New Mexico. Figure 1 shows the regional location of the refinery.

Owner: Western Refining (Parent Corporation)
123 West Mills Avenue, El Paso, TX 79901

Operator: Western Refining Southwest, Inc. (Postal address)

92 Giant Crossing Road, Gallup, NM 87301

Western Refining Southwest, Inc. (Physical address)

I-40, Exit 39, Jamestown, New Mexico 87347

The following regulatory identification and permit governs the Gallup Refinery:

- SIC code 2911 (Petroleum Refining) applies to the Gallup Refinery
- U.S. EPA ID Number NMD000333211
- OCD Discharge case number AP-111(GW-032/AP-111)

The refinery status is corrective action/compliance. Annual, semi-annual, and quarterly groundwater sampling is conducted at the refinery to evaluate present conditions. The refinery is situated on an 810 acre irregular shaped tract of land that is substantially located within the lower one-quarter of Section 28 and throughout Section 33 of Township 15 North, Range 15 west, of the New Mexico Prime Meridian. A small component of the property lies within the northeastern one-quarter of Section 4 of Township 14 North, Range 15 West. Figure 2 is a topographic map showing the general layout of the refinery in comparison to the local topography.

1.2 BACKGROUND INFORMATION

The refinery primarily receives crude oil via two 6-inch diameter pipelines; two pipelines from the Four Corners Area enter the refinery property from the north. In addition, the refinery also receives natural gasoline feed stocks via a 4-inch diameter pipeline that comes in from the west along the Interstate 40 corridor from the Wingate Plant, formerly Conoco gas plant. Crude oil and other products also arrive at the site via railroad cars. These feed stocks are then stored in tanks until refined into products.

The refinery incorporates various processing units that refine crude oil and natural gasoline into finished products. These units are briefly described as follows:

Crude Distillation Unit: separates crude oil into various fractions; including gas, naphtha, light oil, heavy oil, and residuum.

Fluidized Catalytic Cracking Unit (FCCU): dissociates long-chain hydrocarbon molecules into smaller molecules, and essentially converts heavier oils into naphtha and lighter oils.

Alkylation Unit: combines specific types of hydrocarbon molecules into a high octane gasoline blending component.

Reforming Unit: breaks up and reforms low octane naphtha molecules to form high octane naphtha.

Hydro Treating Unit: removes undesirable sulfur and nitrogen compounds from

intermediate feed stocks, and also saturates the feed stocks with hydrogen to make diesel fuel.

Additional Treater Units: remove impurities from various intermediate and blending feed stocks to produce finished products that comply with sales specifications.

Isomerization Unit: converts low octane hydrocarbon molecules into high octane molecules.

A set of Acid Gas Treating and Sulfur Recovery Units: convert and recover various sulfur compounds from other processing units in order to produce either ammonium thiosulfate or a solid elemental sulfur byproduct.

As a result of these processing steps, the refinery produces a wide range of petroleum products including propane, butane, unleaded gasoline, diesel, kerosene, and residual fuel. In addition to the aforementioned processing units and various other equipment and systems support the operation of the refinery and are briefly described as follows:

- Storage tanks are used throughout the refinery to hold and store crude oil, natural gasoline, intermediate feed stocks, finished products, chemicals, and water. These tanks are all located aboveground and the capacity ranges from 80,000 barrels to less than 1,000 barrels.

- Pumps, valves, and piping systems are used throughout the refinery to transfer various liquids among storage tanks and processing units. A railroad spur track and a railcar loading rack are used to transfer feed stocks and products from refinery storage tanks into and out of railcars.

- Several tank truck loading racks are used at the refinery to load out finished products and also may receive crude oil, other feed stocks, additives, and chemicals. Gasoline and diesel are delivered to the Pilot Travel Center via tanker truck. An underground diesel pipeline exists between the refinery and the Pilot Travel Center. As a result of an off-refinery release in 2011, the pipeline was purged of product, filled with nitrogen and temporarily taken out of service. Western worked with the NMED – PSTB (Petroleum Storage Tank Bureau) and the NM OCD (Oil Conservation Division) to place this line back in service. In 2013 the underground diesel line from the Gallup Refinery to the Pilot Travel Center was replaced. The replaced line runs above ground from the marketing area of the refinery for approximately 150 feet and continues underground to the Pilot Travel Center. The diesel line was re-commissioned and put back in service on February 3, 2014.

- A designated area is used to conduct employee firefighting training. During these training activities waste water and/or wash water drains directly into a dedicated tank that is located in the vicinity. The waste water is removed via a vacuum truck and drained into a process sewer leading to the NAPIS after each training exercise. Oily water and sludge is transferred via vacuum truck to the NAPIS for processing and oil-water separation.

- The process waste water system is a network of curbing, paving, catch basins, and underground piping that collects waste water effluent from various processing areas within the refinery. The waste water effluent flows into T-27, T-28 and into T-35 (which works in parallel to T-27 and T-28) and into the NAPIS which provides the first stage oil-water separation where the removal of free oil

is separated from waste water by gravity. The clarified water is routed to the new waste water treatment plant (WWTP) Dissolved Gas Flotation (DGF) system which provides the second stage oil-water separation process. The DGF process involves the pressurization of waste water in the presence of air or nitrogen, creating a super-saturated solution called coagules that are carried to the surface. The float is removed to disposal by mechanical float scrapers and the effluent is recycled back to the flotation chamber. The skimmed float is sent to the DGF float management system, “float tanks”. Oily solids collected in the float tanks are recycled through the refining process (on-site) or handled as a K048 listed hazardous waste for proper disposal.

- The clarified effluent from the DGF system then flows to the Macro Porous Polymer Extraction (MPPE) system. The MPPE system removes dissolved and dispersed hydrocarbons from the waste water, including aromatics, polycyclic aromatic hydrocarbons (PAH), through a liquid-liquid extraction process where waste water is passed through a column packed with MPPE particles (porous polymer beads) containing the extraction liquid suitable for removal of aromatic hydrocarbons and PAHs. The waste water that passes through the MPPE column discharges into the sanitary treatment pond (STP-1). The hydrocarbon-water mixture is recycled and sent back to the refinery for reprocessing. Carbon filtration was also used at various times during 2013 in conjunction with the MPPE to increase waste water treated. In December 2014, the MPPE was removed from service and replaced with the carbon canister system. The two systems ran in parallel for three months in the second half of 2014 followed by trial with carbon canisters for two months before the MPPE was removed from service. The MPPE unit did not perform as expected from a flow rate standpoint. It removed benzene efficiently, but became plugged so that flow rates decreased below adequate levels. Flow rates up to 50o gpm can now be achieved through the carbon system.

- STP-1 has two bays, north and south and each bay is equipped with five aerators. The treated waste water is mixed with air in order to oxidize any remaining organic constituents and increase the dissolved oxygen concentration available in the water for growth of bacteria and other microbial organisms. The microbes degrade most of the hydrocarbons into carbon dioxide and water. Five 15-hp mechanical aerators provide aeration in each bay (North and South) in STP-1. Effluent from STP-1 then flows onward into evaporation pond 2 (EP-2) and is gravitated to the rest of the ponds.

- The initial startup of the new WWTP was in May of 2012 which resulted in the decommissioning of Benzene Strippers 1, 2, and 3, and the Aeration Lagoons 1 and 2 (AL-1 and AL-2). In November of 2012, the benzene strippers were taken off-line permanently and completely demolished in January of 2013.

- At the evaporation ponds, waste water is converted into vapor via solar and mechanical wind-effect evaporation. There are a total of four evaporators located at the ponds. Two 80 gpm, electrically driven water evaporators are located between evaporation ponds 4 and 5 (EP-4 and EP-5) and two additional 66 gpm sprayers were installed between ponds 3 and 4 in October 2014. No waste water is discharged from the refinery to surface waters of the U.S. All treated waste water is routed into several evaporation ponds which have large surface areas that are designed to efficiently evaporate water by sunlight and exposure to the changing ambient temperatures.

- The stormwater system is a network of valves, gates, berms, embankments, culverts, trenches, ditches, natural arroyos, and retention ponds that collect, convey, control, treat, and release stormwater that falls within or passes through refinery property. Stormwater that falls within the processing areas is considered equivalent to process waste water and is sent to tanks T-27, T-28 and T-35, NAPIS, WWTP, STP-1 and into EP-2 where flow is gravitated to the rest of the evaporation ponds.

- Stormwater discharge from the refinery is infrequent due to the arid desert-like nature of the surrounding geographical area. Gallup Refinery maintains a Storm Water Pollution Prevention Plan (SWPPP) that includes Best Management Practices (BMPs) for effective storm water pollution prevention and control. The refinery has constructed several berms in various areas and improved

outfalls (installed barrier dams equipped with gate valves) to minimize the possibility of potentially impacted runoff leaving the refinery property.

1.3 SITE CHARACTERISTICS

Built in the 1950's, the refinery is located within a rural and sparsely populated section of McKinley County, Jamestown, New Mexico, and located 17 miles east of Gallup, New Mexico. The setting is a high desert plain on the western slope of the Continental Divide. The surrounding land is comprised primarily of public lands and is used for cattle and sheep grazing at a density of less than six cattle or 30 sheep per section. The nearest population centers are the Pilot Travel Center (formerly Giant) refueling plaza, the Interstate 40 highway corridor, and a small cluster of residential homes located on the south side of Interstate 40, approximately 2 miles southwest of the refinery (Jamestown). Surface vegetation consists of native xerophytic vegetation including grasses, shrubs, small junipers and some prickly pear cacti. Average rainfall is less than ten inches per year with the maximum average precipitation occurring during the month of August.

Local topography consists of an inclined down-slope from high ground in the southeast to a lowland fluvial plain in the northwest. The highest point on refinery property is located at the southeast corner boundary (elevation approximately 7,040 feet) and the lowest point is located at the northwest corner boundary (elevation approximately 6,860 feet). The refinery processing facility is located on a flat man-made terrace at an elevation of approximately 6,950 feet.

Surface water in this region consists of man-made evaporation ponds and aeration basins located within the refinery, a livestock watering pond (Jon Myer's Pond) located one mile east of the refinery, two small unnamed spring fed ponds located south of the refinery, and the South Fork of the Puerco River and its tributary arroyos. The various ponds and basins typically contain water consistently throughout the year. The South Fork of the Puerco River and its tributaries are intermittent and generally only contain water during, and immediately after, the occurrence of precipitation.

The 810 acre refinery property site is located on a layered geologic formation. Surface soils generally consist of fluvial and alluvial deposits; primarily clay and silt with minor inter-bedded sand layers. Below the surface layer is the Chinle Formation, which consists of very low permeability clay stones and siltstones that comprise the shale of this formation. As such, the Chinle Formation effectively serves as an aquiclude. Inter-bedded within the Chinle Formation is the Sonsela Sandstone bed, which represents the uppermost

potential aquifer in the region. The Sonsela Sandstone bed lies within and parallels the dip of the Chinle Formation. As such, its high point is located southeast of the refinery and it slopes downward to the northwest as it passes under the refinery. Due to the confinement of the Chinle Formation aquiclude, the Sonsela Sandstone bed acts as a water-bearing reservoir and is artesian at its lower extremis. Artesian conditions exist through much of the central and western portions of the refinery property.

Groundwater flow within the Chinle Formation is extremely slow and typically averages less than 10^{-10} centimeters per second (less than 0.01 feet per year). Groundwater flow within the surface soil layer, above the Chinle Formation, is highly variable due to the presence of complex and irregular stratigraphy; including sand stringers, cobble beds, and dense clay layers. As such, hydraulic conductivity may range from 10^{-8} centimeters per second in the clay soil layers located near the surface and up to 10^{-2} centimeters per second in the gravelly sands immediately overlying the Chinle Formation. Figure 4 depicts the regional surface water flows are in a westerly direction and Figure 5 depicts surface water bodies and flow lines.

Shallow groundwater located under refinery property generally flows along the upper contact of the Chinle Formation. Although the prevailing flow direction is from the southeast and toward the northwest; a subsurface ridge has been identified and is thought to deflect some flow in a northeasterly direction in the vicinity of the refinery tank farm.

SECTION 2

SCOPE OF ACTIVITIES 2014

The 2014 quarterly and annual groundwater sampling, and semi-annual evaporation pond sampling was conducted by Trihydro Corporation on behalf of Western. The third quarter groundwater sampling was combined with the annual sampling event per approval from NMED and OCD and conducted in September 2014. The following is a list of monitoring and inspections completed for 2014:

- Separate Phase Hydrocarbon Recovery Logs – Appendix A
- Field Inspection Logs–Appendix C
- Treatment System Monitoring – Monthly Flow Rate – Appendix D
- New Well Installation, MKTF-19 thru MKTF-45 – Appendix F
- Summary of all Leaks, Spills, and Releases–Appendix H
- Temporary Land Farm Semi-Annual Sampling – Appendix J
- Data Tables, Analytical Data – Section 8
- Well Data DTW/DTB Measurements (Elevations) – Section 9
- Quarterly, Semiannual, Annual Inspections Summary – Section 10

2.1 MONITORING AND SAMPLING PROGRAM

The primary objective of groundwater monitoring program is to analyze groundwater samples collected and use data to assess groundwater quality at and near the refinery. Groundwater elevation data was collected to evaluate groundwater flow conditions. The groundwater monitoring program for the refinery consists of sample collection and analysis from a series of monitoring, recovery, boundary, process, and shallow monitoring wells, and includes evaporation pond locations and influents/effluents at the aeration basin.

The groundwater monitoring network is separated into five investigation areas (Group A, Group B, Group C, Group D, and Group E). The sampling frequency, analyses and target analytes vary for each investigation areas and include the outfalls/evaporation pond locations. The combined data from these investigation areas were used to assess groundwater quality beneath and immediately down-gradient of the refinery, and to evaluate local groundwater flow conditions. Samples were collected annually from monitoring wells that had measurable separate-phase hydrocarbon (SPH) levels. For wells that were purged dry, samples were collected if recharge volume was sufficient for sample collection, within 24 hours. Wells not sampled due to insufficient recharge were documented in the field logs.

Daily field activities, including observations and field procedures, were recorded for each activity and are maintained at the refinery. Field logs include the following information:

- Sample Location Identification
- Date
- Start and finish sampling time
- Field team members, including visitors
- Weather conditions
- Daily activities and times conducted
- Observations
- Record of samples collected with sample designations
- Photo log (if needed)
- Field monitoring data, including health and safety monitoring (if needed)
- Equipment used and calibration records, if appropriate
- List of additional data sheets and maps completed
- An inventory of the waste generated and the method of storage or disposal
- Signature of personnel completing the field record

All samples collected for analysis are recorded in the field report or data sheets. Chain-of-Custody (COC) forms are completed at the end of each sampling day, prior to the transfer of samples off-site. The signed copy of the COC is placed inside sample containers with the samples and shipped to the laboratory. A custody seal is affixed to the lid of the shipping container. Copies of all COC forms generated are kept at the refinery.

2.2 SAMPLING METHODS AND PROCEDURES

Each monitoring well was gauged for depth to water (DTW), total depth, and depth to product (DTP), if applicable, to determine the amount of water to purge. A minimum of two well volumes is purged from each well prior to sampling. If water level is at a minimum or the well has a low recharge rate, the well is allowed to recharge within 24 hours before a sample is collected. For wells that are not supplied with dedicated pumps, a portable pump is lowered slowly into the well to minimize disturbance to a depth of the midpoint of the screened interval of the well. The pump controller is started at a slow rate and gradually increased until water is discharged. Field water quality measurements must stabilize for a minimum of three consecutive readings taken at 2 to 5-minute intervals, within the following limits before purging will be discontinued and sampling may begin: dissolved oxygen (DO) (10%), specific conductance (3%), temperature (3%), pH (10%).

Groundwater samples were obtained from each well within 24 hours of the completion of well purging. The samples were transferred to an appropriate, clean, laboratory-prepared containers provided by the analytical laboratory. Sample collection methods have been documented in the field monitoring reports. Weather conditions, the volume of groundwater purged, description of water, the instruments used, and the water quality readings obtained at each interval were recorded on the field-monitoring log.

Well purging and sampling were performed using disposable polyethylene bailers and/or appropriate portable sampling pumps where applicable. Some of the wells have dedicated pumps installed where a controller is used to power the submersible pump to purge water. In shallow wells, new disposable bailers were used for each well to hand bail purge water and retrieve water samples. All purged groundwater was collected in 55 gallon drum(s) and/or 5 gallon bucket(s) and drained into the refinery waste water treatment system upstream of the NAPIS. Groundwater samples intended for metals analysis were submitted to the laboratory as total and dissolved metals samples.

At a minimum, the following procedure was followed when collecting/shipping samples:

- Protective eye wear (safety glasses, goggles and or face shield)
- Neoprene, nitrile, or other protective gloves are worn when collecting samples. New disposable gloves are used to collect sample at each sample point.

- All samples collected for chemical analysis are transferred into clean sample containers supplied by the analytical laboratory. Sample container are clearly marked and labeled.
- Groundwater samples obtained for dissolved metals analysis are filtered through a 0.45 µm (micrometer) mesh size disposable filter on site.
- Samples are labeled, sealed, placed in cooler with ice until they are shipped via United Parcel Service (UPS) Red, Federal Express Overnight or personally delivered to the analytical laboratory.
- Standard COC procedures are followed for all samples collected. The COC form and sample request form are shipped inside the sealed storage container to be delivered to the laboratory, signed and dated.
- Field duplicates and trip blanks are obtained for quality assurance during sampling activities. Trip blanks accompany laboratory sample bottles and shipping and storage containers intended for volatile organic compound (VOC) analyses. Trip blanks consist of a sample of analyte free de-ionized water placed in an appropriate sample container. Trip blanks are analyzed at a frequency of one for each shipping event involving twenty or more samples.

In order to prevent cross-contamination, field equipment that came into contact with water or soil was decontaminated before each sampling event. The decontamination procedure for the portable pump consists of rinsing/washing the equipment with a detergent water mixture followed by two rinses before use in another well. Any equipment that came in contact with each well, such as data loggers or tape measure, was decontaminated with a detergent water mixture and rinsed with distilled water before each use. Decontamination of equipment when feasible is done at the bundle pad where decontamination water is drained into the sewer system.

Decontamination water from field work was caught in an appropriate container and drained into the sewer system upstream of the NAPIS.

2.2.1 EQUIPMENT

- A submersible bladder pump 2 inch, 115 volt AC to DC converter, Grundfos Redi-flo2 constructed of stainless steel with check valve and 1/2 in. Teflon tubing, adjustable rate controller powered by a gas generator is used to purge groundwater from monitoring wells. Equipment is located downwind and at least 20 feet from the well so that exhaust fumes do not cross-contaminate the samples.
- Water level instrument used is a Heron Instrument 100 feet DipperT electric water-depth tape complying with US GGG-T-106E, EEC, Class II. This instrument measures water level, indication is a steady audible tone and hydrocarbon indication is an erratic audible tone.
- Parameter Instrument – YSI Model 556 MPS Multi Probe System which simultaneously measures DO, conductivity, temperature, and optional pH and ORP (Oxidation Reduction Potential). As a backup, we also have an IQ Scientific Instrument, Model IQ180GLP which measures pH, DO, TDS (Total Dissolved Solids), conductivity, salinity, ISE (Ion Selective Electrode), mV (Millivolts) and temperature.
- Disposable Bailers – Polyethylene bailer (1.5 inches X 36 inches) overall length (OAL); capacity approximately 1 liter). Individually sealed packaging, single check valve bailer with slide in angle

cut nozzle for sample removal. A new bailer is used for each well that requires hand bailing for purging and sample retrieval.

- Field equipment parameter instruments were calibrated to known standards in accordance with the manufacturers' recommended schedules and procedures. Calibration checks are conducted before a sampling event and the instruments recalibrated as deemed necessary. Calibration of equipment was noted in the daily field logs.
- If field equipment becomes inoperable, a properly calibrated replacement instrument is used in the interim. Type of instrumentation used during a sampling event is recorded in the daily field logs.

2.3 COLLECTION AND MANAGEMENT OF INVESTIGATION DERIVED WASTE

Investigation derived waste (IDW) generated during each groundwater sampling event includes purged water, decontamination water, excess sample material, and disposable sampling equipment. All water purged from monitoring wells generated during sampling and decontamination activities was temporarily stored in a labeled 55-gallon drum(s) and/or 5 gallon bucket(s) and then drained into the refinery sewer system upstream of the NAPIS.

2.4 COLLECTION OF SURFACE WATER SAMPLES

At the evaporation ponds, grab samples were collected near the inlets (pond edge). This location was noted in the field notebooks. For outfalls, a grab sample was collected at the pipe end, and recorded in the field log.

2.5 ANALYTICAL METHODS

Groundwater and surface water samples collected during the monitoring events were analyzed for the constituents listed in Table 1, Section 10.0. In addition, the WQCC standard was used for total and dissolved metals analysis.

2.6 PERIMETER INSPECTION

Perimeter inspections are part of the daily routine for refinery personnel to report any hydrocarbon staining, spills or any release that could result in material leaving the property boundary.

2.7 REMEDIATION ACTIVITIES

A site investigation of the refinery tank farm network conducted in 1987 indicated high concentrations of BTEX constituents in the groundwater as well as hydrocarbons. As a result of the findings from additional

site investigations conducted from 1987 through 1990, four recovery wells (RW-1, RW-2, RW-5, and RW-6) were installed to recover the SPH. SPH has been recovered from RW-1 using a submersible bladder pump and from RW-5 and RW-6 by hand-bailing using a disposable polyethylene bailer. Tables in Appendix A summarizes measurements, volume of product and water purged and also provides year to date (YTD) product purged from each well. RW-2 is listed as a recovery well but to date no visible hydrocarbon layer or odor has been observed in this well during quarterly inspections.

In RW-1 a bladder pump was used to pump out SPH on a quarterly basis into a labeled 55-gallon drum. Visible layer of product on the top was measured with a tape measure and calculated as best as possible for volume of product recovered. In RW-5 and RW-6, a 3 foot disposable hand bailer was used to extract product and water from the wells. Bailed water was collected in a 5-gallon bucket and the visible layer of floating product was then measured with a tape measure to estimate volume of SPH recovered. The purged water was drained into the refinery waste water treatment system upstream of the NAPIS.

Hydrocarbon recovery from RW-1 has shown a steady decrease from 2005 through 2014. In 2014, total hydrocarbon recovery is estimated at 2.25 gallons in 83 gallons of water purged compared to the 2005 estimate of 431 gallons of hydrocarbons in 1,210 gallons of water. No measureable hydrocarbons have been detected in RW-2 since the well was installed. RW-5 and RW-6 have shown a steady decrease in hydrocarbons since 2005. SPH has not been detected in RW-5 and RW-6 since February 2009 and November 2011, respectively. However, an oil sheen, and a hydrocarbon odor has persisted in RW-5 (Appendix A).

On June 26, 2013, notification of the discovery of a hydrocarbon seep to the land surface was made to NMED and OCD. The area has been identified as the “Hydrocarbon Seep”, located directly west of crude Tanks 101 and 102. Response actions have included installation of six temporary sumps, and to date a total of 44 permanent monitoring wells (MKTF-1 through MKTF-44) have been installed to monitor ground water impacts. From June 2013 through December 2014 total hydrocarbon recovery is estimated to be 5,296 gallons and 421,179 gallons of water from the sumps. Of the 44 permanent monitoring wells installed, nine (MKTF 3, 5, 6, 7, 8, 12, 13, 14, 15) wells have been identified to have a product layer. Hydrocarbon recovery from these nine wells is estimated at 10 gallons when wells were pumped in August 2014. The nine wells identified to have a product layer will be pumped on a more frequent basis to determine recharge rate and recovery of hydrocarbons.

SECTION 3

GROUNDWATER DTW / DTP ELEVATION

Groundwater elevation data were collected from the wells listed in Table 1, Section 10.0. A summary of field measurements (DTW, DTP) taken during the quarterly, semi-annual and annual inspections is included in Section 9. Groundwater levels and SPH column thickness measurements (from the RW series of wells as well as the MKTF wells) were collected quarterly to monitor groundwater elevation and product column thickness fluctuations over time. Maps were generated using elevation data collected from surveys conducted by DePauli Engineering and from Hammon Enterprises Inc., professional surveyor and data from the 2014 field inspection logs.

Field notes and measurement data were recorded in field logs for each well for 2014 and are located in Appendix C. The depth to groundwater and SPH column thickness levels were measured to the nearest 0.01-ft. The depth to groundwater and SPH column thickness are recorded relative to the surveyed well casing rim or other surveyed datum. A corrected water table elevation is provided in wells containing SPH by adding 0.8 times the measured SPH column thickness to the measured water table elevation (Section 9).

All water/product levels are measured to an accuracy of the nearest 0.01-ft using an electrical water-level based meter, the Heron Instruments DipperT 100-ft electric water depth tape complying with US GGG-T-106E, EEC Class II. After the water level is determined, the well volume is calculated using the height of the liquid column and the internal cross sectional area of the well. The purge volume is a minimum of two times the well volume.

Groundwater and SPH levels were measured in all wells within 48 hours of the start of groundwater sampling activities. All manual extraction of SPH and water from recovery wells, observation wells, and collection wells is discontinued for 48 hours prior to the measurement of water and SPH levels. Figure 6 (Section 11) shows the locations of all active wells.

SECTION 4

REGULATORY CRITERIA

Laboratory analytical data is compared to the most current regulatory standards (Appendix B) at time of submission of report.

- New Mexico 20NMAC 20.6.2.3103 (WQCC). Standards for Groundwater of 10,000 mg/L TDS Concentration or Less
- EPA 40 CFR 141.62. National Primary Drinking Water Regulations (Updated June 2015) (EPA MCL)
- NMED Table 6.2 (unknown oil). Total petroleum hydrocarbon (TPH) screening guidelines for Potable Groundwater (GW-1), (December 2014)
- NMED Tap Water Screening Levels (December 2014)
- EPA Regional Screening Levels set for Residential Risk-Based Screening Levels (EPA RSL) for Tap Water (Ross) (June 2015)

SECTION 5

GROUNDWATER ELEVATIONS

Groundwater elevations are depicted in the following maps generated using elevation data.

- Figure 7 (Section 11) presents a south-north geologic profile (east side of the refinery) showing contours of monitoring wells with reference to stratigraphic locations in which the water bearing zones are located.
- Figure 8 (Section 11) presents a south-north section on the west side of the refinery showing contours of monitoring wells with reference to stratigraphic locations in which the water bearing zones are located.
- Figure 14 (Section 11) represents a geologic profile for the west-east well locations

SECTION 6

GROUNDWATER MONITORING RESULTS

All analytical data tables, referenced in the following subsections, are included in Section 8 of this report. Bold and highlighted values indicate a constituent exceeds a listed standard(s). Laboratory data for 2014 sampling events are available on the CD provided in Appendix K.

6.1 CONSTITUENT LEVELS IN GROUP A MONITORING WELLS

Group A wells are located within the northwest corner of the refinery property. Nine monitoring wells are situated along the refinery boundary and six monitoring wells are within the RCRA LTU area.

6.1.1 Boundary Wells (BW-1A/1B/1C, BW-2A/2B/2C, BW-3A/3B/3C)

The nine boundary wells (BW), downgradient of the Refinery property, are screened within three different stratigraphic units. BW-1A, BW-2A, and BW-3A are screened within the Upper Sand stratigraphic unit; BW-1B, BW-2B, and BW-3B are screened in the Chinle/Alluvium Interface stratigraphic unit (Figure 10); and BW-1C, BW-2C and BW-3C are screened within the Sonsela stratigraphic unit (Figure 9).

The BW-1A, BW-1B, and BW-1C wells are located on the elevated dike separating evaporation pond 7 (EP-7) and evaporation pond 8 (EP-8). BW-2A, 2B, and 2C are located on the northwest edge of evaporation pond 11 (EP-11) and BW-3A, 3B, and 3C are located in the field north of evaporation ponds 12A and 12B (EP-12A and EP-12B). The boundary wells are sampled on an annual basis and evaluated for the following analytes: 8260B plus MTBE, 8270 plus phenol, major cations/anions, and WQCC total and dissolved metals.

Wells BW-1A, BW-3A, and BW-1B contained no water on the fluid-level gauging date (September 8, 2014) and were not sampled. The boundary wells were sampled and/or inspected on the following dates:

BW-1A: 9/9/2014	**BW-1B:** 9/9/2014
BW-1C: 9/10/2014	**BW-2A:** 9/9/2014
BW-2B: 9/9/2014	**BW-2C:** 9/10/2014
BW-3A: 9/10/2014	**BW-3B:** 9/10/2014
BW-3C: 9/10/2014	

- In the second quarter of 2014, berm work repairs resulted in increased berm height along the west edge of ponds 7 and 8 which resulted in extending the well casing and well shrouds on wells BW-1A, BW-1B and BW-1C. Wells were re-surveyed by Hammon Enterprises in September 2014.
- The 2014 annual sample event results indicate BTEX and MTBE constituents were not detected in BW-1C, BW-2A, BW-2B, BW-2C, BW-3B or BW-3C. BTEX and MTBE constituents have not been detected in these wells since 2006 (Table 8.1).
- The anion, fluoride, was detected above the WQCC standard (1.6 mg/L) in BW-1C at 2.6 mg/L and in BW-2C at 2.0 mg/L. Nitrite and nitrate was detected exceeding the standards in 2013 but 2014 sample results are below the standards. Low concentrations of chloride, bromide, and sulfate were detected in each of the BW wells sampled in 2014 (Table 8.1.1).
- Low concentrations of barium, iron, and manganese were detected in the BW wells with wells BW-2C and BW-3C exceeding the WQCC standard for iron in 2014. Chromium was previously detected in BW-1C (2012) and cadmium in BW-2C (2012). Both constituents were reported below the detection limits since August 2012. The remaining total metals analyzed for each well did not exceed applicable standards (Table 8.1.2). No dissolved metals analyzed exceeded applicable standards; however, low concentrations of barium, iron, lead, and manganese were detected in each well (Table 8.1.3).
- Bis(2-ethylhexyl)phthalate was detected in BW-1C in 2013, in BW-3B in 2009, and BW-3C in 2011 and may possibly be a lab contaminant or from the pvc pipe materials used as casing in these wells. The constituent was not detected in any of the BW wells sampled in 2014 (Table 8.1.4).

6.1.2 Land Treatment Unit (MW-1, MW-2, MW-4, MW-5, SMW-2, and SMW-4)

The LTU groundwater monitoring wells include MW-1, MW-2, MW-4, MW-5, SMW-2, and SMW-4. MW-1, SMW-4, and MW-2 are located down gradient along the north edge of the closed RCRA LTU. MW-5 and SMW-2 are located on the eastern perimeter of the LTU and MW-4 is located up gradient (south) of the LTU. MW-1, MW-2, MW-4, MW-5 are screened within the Sonsela stratigraphic unit. SMW-4 is screened within the Chinle/Alluvium Interface and SMW-2 is screened in both the Chinle/Alluvium Interface and Upper Sand stratigraphic units.

The LTU monitoring wells are sampled on an annual basis. In addition, MW-1, MW-2, MW-4, and MW-5, SMW-2 and SMW-4 are sampled every 10 years to comply with the RCRA Post Closure Permit. Annual samples were analyzed for the following analytes: 8260B plus MTBE, DRO, GRO, MRO, major cations/anions, WQCC total and dissolved metals, cyanide, and additional VOCs and SVOCs.

Annual sampling and inspections for 2014 on the LTU monitoring wells were completed on the following dates:

MW-1: 9/16/2014	**MW-2:** 9/16/2014
MW-4: 9/17/2014	**MW-5:** 9/17/2014
SMW-2: 9/11/2014	**SMW-4:** 9/11/2014

The next 10 year RCRA Post Closure Permit sampling event for MW-1, MW-2, MW-4, MW-5, SMW-2 and SMW-4 is scheduled to occur in 2019. The following analytes are evaluated during the RCRA Post Closure Permit sample event: modified Skinner List for VOCs, SVOCs, total petroleum hydrocarbons (TPH), DRO, GRO, MRO, metals to include mercury and cyanide, and major cations/anions with pH and conductance.

- In 2014, concentrations of BTEX or MTBE were not detected above applicable standards limits in LTU monitoring wells except for SMW-2. Low concentrations of MTBE, not exceeding applicable standards (0.0.143 mg/L), have historically been detected in SMW-2 (Tables 8.2 and 8.3).

- Since 2008, GRO has been detected in SMW-2 (0.23 mg/L for 2014). DRO and GRO were not detected above the applicable standards limits for the remaining LTU monitoring wells. Concentrations of MRO have not been reported above the applicable standards in any of the LTU monitoring well since being added to the sampling plan in 2010.

- Low concentrations of bromide and fluoride were detected in each of the LTU monitoring wells with the exception of SMW-2. In SMW-2, concentrations of chloride (2500 mg/L) and sulfate (1400 mg/L) have exceeded the WQCC standards of 250 mg/L and 600 mg/L, respectively. SMW-2 has a history of exceeding the WQCC standard for these two anions. The remaining LTU monitoring wells had concentrations of chloride and sulfate below the applicable standards. Concentrations for the remaining major list of anions and cations were not detected above the applicable standards in each of the LTU monitoring wells (Tables 8.2.1 and 8.3.1).

- Concentrations of arsenic and barium remain below the applicable standards for each of the LTU monitoring wells. Concentrations of chromium, selenium, cyanide, mercury, and zinc were not detected above the detection limits in 2014 in each of the LTU monitoring wells. Low concentrations of barium and manganese were detected in all of the LTU monitoring wells with the exception of SMW-2. SMW-2 exceeded the WQCC standard for manganese (0.2 mg/L) since 2011 with a 2014 concentration of 0.28 mg/L. Iron and lead were not detected in any of the LTU monitoring wells except for a low concentration of total and dissolved iron detected in SMW-2 (0.052 mg/L), SMW-4 (0.35 mg/L), and a low concentration of both iron (0.11 mg/L), lead (0.0017 mg/L) in MW-1. Total and dissolved uranium levels have exceeded the WQCC standard (0.03 mg/L) for SMW-2 and SMW-4 since 2011 and again in 2014 with uranium detected at 0.11 mg/L

(total) in SMW-2 and at 0.037 mg/L (total) in SMW-4. Uranium was detected in lower concentrations for the remaining LTU monitoring wells (Tables 8.2.2 and 8.3.2).

- Neither VOCs nor SVOCs were detected above applicable standards in any of the LTU wells in 2014 (Tables 8.2.4 and 8.3.4).

6.2 CONSTITUENT LEVELS IN GROUP B MONITORING WELLS

There are ten monitoring wells in Group B, not including the three leak detection units. These wells are located within the aeration basin west of the refinery tank farm. Group B includes three groundwater monitoring wells (GWM), four monitoring wells for the New American Petroleum Institute Separator (NAPIS), three leak detection units (LDU), OAPIS-1 installed in 2012 as a result of the Solid Waste Management Units (SMWU) No. 1, Aeration Basin and SMWU No. 14, Old API Separator site investigation. Two new monitoring wells (STP1-NW and STP1-SW), were installed at the sanitary treatment pond (STP-1) in May 2014.

6.2.1 GROUNDWATER MONITORING WELLS (GWM-1, GWM-2, GWM-3)

The GWM series of wells are all screened in the Chinle/Alluvium Interface stratigraphic unit. GWM-1 and GWM-2 are located on the west side of the aeration basin straddling the dike that separates AL-2 and EP-1. Downgradient from GWM-1 and GWM-2 is GWM-3 located on the northwest corner of EP-1. These wells are inspected and sampled on a quarterly basis. No groundwater was detected in GWM-3 during 2013 and 2014. An insufficient volume was detected in the fourth quarter of 2013 for GWM-2 and the well was reported dry for all of 2014. In agreement with OCD and approved by NMED, the third quarter sampling event was combined with the annual sampling.

Groundwater samples from GMW-1 were analyzed for the following constituents: BTEX, MTBE, DRO, GRO, MRO, major cations/anions, WQCC total and dissolved metals, and VOCs and SVOCs.

Quarterly inspections and sampling of the GMW wells were completed on the following dates:

Well ID	GWM-1	GWM-2	GWM-3
Quarter 1	3/11/2014	3/11/2014	3/11/2014
Quarter 2	6/5/2014	6/5/2014	6/5/2014
Quarter 3	9/12/2014	9/12/2014	9/12/2014
Quarter 4	11/13/2014	11/11/2014	11/11/2014

- Concentrations of benzene in GWM-1 exceeded the EPA MCL standard (0.005 mg/L) for all four quarters since 2006 with the exception of the fourth quarter in 2012. The highest concentration of benzene (0.012 mg/L) for 2014 was recorded in the fourth quarter. Concentrations of ethylbenzene, toluene, xylenes, and MTBE remain within the applicable standards for GWM-1 (Table 8.4).

- Concentrations of DRO and GRO were detected in GWM-1 with DRO exceeding the WQCC 2013 standard (0.2 mg/L) throughout 2013 and 2014. DRO has also exceeded applicable standards since quarter 3 of 2010 through quarter one of 2012. The highest concentration of DRO in GMW-1 was detected in quarter two during 2014 at a concentration of 3.4 mg/L.

- Concentrations of fluoride exceeding the WQCC standard (1.6 mg/L) have been prevalent since 2006 in GWM-1 with the exception of quarter four in 2011. In 2014, quarter one recorded the highest concentration of fluoride in GWM-1 at 2.6 mg/L. Chloride has exceeded the WQCC standard (250 mg/L) consistently in GWM-1 since 2006 with the highest 2014 reading recorded during quarter four at 1,000 mg/L. Bromide and sulfate concentrations have consistently been detected in GWM-1 since 2006. Nitrate, nitrite, and phosphorous concentrations remain within applicable standards (Table 8.4.1).

- Concentrations of total and dissolved arsenic, iron, and manganese in GWM-1 have exceeded applicable standards since 2008. The highest arsenic and iron concentrations for 2014 were detected in quarter four. Manganese concentrations for 2014 averaged 2.4 mg/L which exceeds the WQCC standard (0.2 mg/L). Low concentrations of total copper and zinc were detected during quarter four of 2014. Low concentrations of both total and dissolved zinc have been detected in GWM-1 since 2009. Total and dissolved barium and total lead concentrations, were detected within the applicable standards for all of 2014. Concentrations of the remaining total and dissolved metals did not exceed the applicable standards during 2014 (Tables 8.4.2 and 8.4.3).

- Concentrations of VOCs and SVOCs were not detected above the applicable standards in 2014 with the exception of 1-methyl naphthalene which exceeded the EPA RSL standard (.0011 mg/L) during quarter three of 2013 and quarters one and two of 2014. Low concentrations of 1,2,4-trimethylbenzene have historically been detected in GWM-1, but constituent concentrations have been below the applicable standard (0.015 mg/L) since the second quarter of 2013 (Table 8.4.4).

GWM-2 and GWM-3 were installed and developed in 2005. The wells are checked quarterly for the presence of water. If water is detected, NMED and OCD are notified within 24 hours of discovery. The water is purged from the well and re-measured to calculate the potential recharge rate. Groundwater samples are collected when water level is sufficient.

Groundwater was first observed in GWM-2 during the first quarter of 2008. The depth to water was 18.45 feet with an estimated water column height of 0.36 feet. Samples were collected and the well was bailed dry. GWM-2 did not recharge and remained dry until quarter three of 2010. GWM-2 continued to recharge as samples were collected throughout 2011, 2012, and most of 2013. GWM-2 has had an insufficient volume for sampling since quarter four of 2013 and remained dry throughout 2014. Similar to GWM-2; GWM-3 was first sampled in the third quarter of 2010. Samples were consistently collected throughout 2011 and 2012. In late 2012 through early 2013 the levels in the aeration lagoons dropped approximately one to two feet and gravitational flow between lagoons to EP-1 began to decrease. GWM-3 has remained dry since quarter one of 2013.

6.2.2 GROUNDWATER MONITORING WELLS: NAPIS-1, NAPIS-2, NAPIS-3, AND KA-3

The NAPIS groundwater monitoring wells are located east of AL-1. NAPIS-1 is an up gradient well located on the southeast side of the separator. The NAPIS-2 monitoring well is located in the southwest corner of the bay to the separator, and NAPIS-3 is located in the northwest corner. KA-3 is located between NAPIS-2 and NAPIS-3 on the west side of the bay to the separator unit. These wells are screened in the Chinle/Alluvium stratigraphic unit with three of the wells (NAPIS-2, NAPIS-3, and KA-3) installed subsurface.

The NAPIS and KA wells are sampled on a quarterly basis. In agreement with OCD and approved by NMED, the third quarter sampling is combined with the annual sampling event. Groundwater samples were analyzed for the following parameters: BTEX, MTBE, major cations/anions, WQCC total and dissolved metals, and VOCs and SVOCs. When applicable, standing water is removed from the vault of the three sub-surface wells prior to opening and sampling each well. The standing water is placed into a container for proper disposal.

Quarterly inspections and sampling were completed for the NAPIS and KA wells on the following dates:

Well ID	NAPIS-1	NAPIS-2	NAPIS-3	KA-3
Quarter 1	3/10/2014	3/10/2014	3/10/2014	3/10/2014
Quarter 2	6/05/2014	6/05/2014	6/05/2014	6/05/2014
Quarter 3	9/11/2014	9/11/2014	9/11/2014	9/11/2014
Quarter 4	11/11/2014	11/11/2014	11/13/2014	11/11/2014

- BTEX and MTBE have remained below the applicable standards since 2008 for NAPIS-1. Benzene and MTBE concentrations in NAPIS-2 have exceeded the applicable standards since 2008 and remained in exceedance for 2014. BTEX and MTBE were not detected in NAPIS-3 with the exception of benzene in the first and second quarter of 2010 where concentrations exceeded the EPA MCL standard of 0.005 mg/L. Monitoring well KA-3 has had concentrations of benzene and MTBE exceeding applicable standards prior to the third quarter of 2013; however, concentrations have remained below the applicable standards since the fourth quarter of 2013 (Table 8.5).

- Concentrations of DRO, GRO, or MRO have been below the applicable standards since 2008 for NAPIS-1 and NAPIS-3 (MRO since 2010) (Table 8.5.1).

- In NAPIS-2, DRO concentrations have consistently exceeded the WQCC standard from 2008 through quarter three of 2012 with exceedances also recorded in quarter one, two, and four of 2013 and the first three quarters of 2014. Low concentrations of GRO have also been detected in NAPIS-2 (Table 8.5.1).

- KA-3 has historically exhibited exceedances in DRO from 2009 through early 2012 (Table 8.5.1).

- Low concentrations of fluoride and chloride have been detected in NAPIS-1 since 2008 (Table 8.5.1).

- Fluoride and chloride concentrations in NAPIS-2 have exceeded the WQCC standards of 1.6 mg/L and 250 mg/L, respectively, for at least one quarter of each year since 2008 (since 2009 for fluoride) and continued to occasionally exceed applicable standards in 2014 (Table 8.5.1).

- Chloride concentrations in NAPIS-3 exceeded the WQCC standard (250 mg/L) during most of 2014 and have historically exceeded these standards since 2008. Fluoride levels have remained below the applicable standards for NAPIS-3 since 2008 (Table 8.5.1).

- Fluoride and chloride concentrations in KA-3 have remained below the WQCC standard since June of 2013 (Table 8.5.1).

- Concentrations of bromide and sulfate were detected in all of the NAPIS and KA wells during 2014. Nitrite and nitrate concentrations exceeding the applicable standards (1.0 mg/L and 10 mg/L, respectively) have historically been sporadic for each of the NAPIS and KA wells. There were no exceedances of any of these parameters in 2014 (Table 8.5.1).

- For 2014, total iron and manganese concentrations exceeded the WQCC standard of 1.0 mg/L and 0.2 mg/L, respectively, in NAPIS-1 with iron at the greatest concentration (1.2 mg/L) in the second quarter and manganese with the greatest concentration (0.24 mg/L) during the fourth quarter (Tables 8.5.2 and 8.5.3).

- From 2010 through 2014, total and dissolved barium, iron, and manganese have exceeded the applicable standards in NAPIS-2 (Tables 8.5.2 and 8.5.3).
- In NAPIS-3, total and dissolved iron and uranium exceeded applicable standards during 2014 and total manganese exceedances were reported for the first three quarters of 2014 (Tables 8.5.2 and 8.5.3).
- In monitoring well KA-3, total and dissolved manganese and uranium were detected above the applicable standards during 2014 (Tables 8.5.2 and 8.5.3).
- No VOCs or SVOCs were detected in the NAPIS and KA wells during 2014. In September of 2013, 1-methylnaphthalene (0.0094 mg/L) and naphthalene (0.0048 mg/L) exceeded the EPA RSL standards of 0.0011 mg/L and 0.00165 mg/L, respectively, in both NAPIS-2 and NAPIS-3, during the second quarter of 2010, and in KA-3 for all of 2009 and 2011. Naphthalene was also detected in KA-3 during 2010. Phenol and 1,1-dichloroethane concentrations were detected in NAPIS-2 during 2012 in 2011, respectively (Table 8.5.4).

6.2.3 LEAK DETECTION UNITS (LDU): EAST LDU, OIL SUMP LDU, WEST LDU

The NAPIS secondary containment units otherwise known as leak detection units (LDU) are installed on the east and west bay of the NAPIS unit. The East LDU is located on the southeast corner in the east bay of the NAPIS unit between the unit and NAPIS-1. The Oil Sump LDU is located north of the East LDU on the northeast corner of the NAPIS unit. The West LDU is located in the southwest corner of the west bay of the NAPIS unit. The LDUs were monitored in 2010 as part of the 2010 Facility Wide Groundwater Monitoring Work Plan (FWGWMP).

The LDU are sampled and inspected on a quarterly basis. In agreement with OCD and approved by NMED, the third quarter sampling was combined with the annual sample event. The LDUs were sampled for the following analytes in 2014: BTEX, MTBE, DRO, GRO, MRO, WQCC total and dissolved metals.

Quarterly inspections and sampling were completed for the LDU wells on the following dates:

Sample ID	**East LDU**	**Oil Sump LDU**	**West LDU**
Quarter 1	3/10/2014	3/18/2013	3/10/2014
Quarter 2	6/12/2014	3/12/2013	6/03/2014
Quarter 3	9/11/2014	9/11/2014	9/11/2014
Quarter 4	11/11/2014	11/11/2014	11/11/2014

- The East LDU and West LDU were not sampled during the third and further quarters 2014, respectively, due to insufficient water. The Oil Sump LDU was not sampled during 2014 due to insufficient water.

- BTEX and GRO concentrations exceeded the applicable standards in each of the LDU wells during 2014 with the exception of toluene and ethylbenzene in the West LDU. In 2014, the East LDU recorded the highest detection of benzene in quarter one (9.8 mg/L). The West LDU recorded the highest detection of benzene in quarter four (0.87 mg/L). DRO has exceeded the NMED Tap Water standard (0.2 mg/L) in each well since 2010 (Table 8.6).

- Total and dissolved arsenic, chromium, iron, and manganese concentrations were detected above the applicable standards in the East and West LDU wells during 2014. Concentrations of barium and zinc were also present in these two wells and have historically been present in all three LDU wells. Historically, low concentrations of total and dissolved selenium have been present in each of the LDU wells while cadmium, lead, and silver remained below the applicable standards. Manganese has been present in each of the three wells since 2010. Chromium levels have fluctuated; falling below the applicable standards for the East LDU in September of 2010 through March of 2011and falling below applicable standards for the West LDU in quarter one and two for 2012 and 2013, respectively (Tables 8.6.1 and 8.6.2).

- Concentrations of 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene exceeded the EPA RSL standard of 0.015 mg/L and 0.087 mg/L, respectively, for the East LDU and West LDU during 2014. Historically, these two constituents have exceeded applicable standards since sampling began in September of 2010 (Table 8.6.3).

6.2.4 GROUNDWATER MONITORING WELL: OAPIS-1

The OAPIS-1 groundwater monitoring well was installed in 2012 on the northeast edge of AL-2 as a result of the Investigation Work Plan for SMWU No. 1 (Aeration Basin) and SMWU No. 14 (Old API Separator). The OAPIS–1 well is screened in the Chinle/Alluvium Interface stratigraphic unit. The OAPIS-1 well was added to the quarterly sample schedule in 2013. In agreement with OCD and as approved by NMED, the third quarter sample event was combined with the annual sample event. .

In 2014, groundwater samples were collected from OAPIS-1 for the following analytes: 8260B plus MTBE, DRO, GRO, MRO, major cations/anions, WQCC total and dissolved metals, cyanide and SVOCs.

The OAPIS-1 well was inspected and sampled on the following dates in 2014:

Well ID	OAPIS-1
Quarter 1	3/10/2014
Quarter 2	6/5/2014
Quarter 3	9/12/2014
Quarter 4	11/11/2014

- Benzene and MTBE concentrations exceeded the EPA MCL standards (0.005 mg/L and 0.143 mg/L, respectively) for each quarterly sample event during 2013 and 2014. Concentrations of ethylbenzene were also present but remained below the applicable standard. Toluene and xylenes were below the applicable standards for 2014 (Table 8.7).

- In 2014, the DRO concentrations continue to exceeded the NMED Tap Water standard (0.2 mg/L) with the highest concentration recorded during quarter four (9.2 mg/L). Fluoride and chloride concentrations exceeded the WQCC standards of 1.6 mg/L and 250 mg/L, respectively, with the highest concentration recorded in 2014 during quarter four (1.9 mg/L fluoride; 1700 mg/L chloride). Concentrations of bromide and sulfate were also present but remain below the applicable standards (Table 8.7.1).

- Total and dissolved arsenic, iron, manganese, and uranium concentrations exceeded the applicable standards in 2014 with the exception of dissolved arsenic and uranium during quarter four. Total cyanide exceeded the EPA RSL standard (0.0014 mg/L) during 2014 with the highest concentration recorded in quarter one (0.0846 mg/L). Total and dissolved cadmium and silver, total mercury, and dissolved chromium and copper were below the detection limits with the exception of quarter two in 2014 when low concentrations of dissolved chromium and copper were detected (Tables 8.7.2 and 8.7.3).

- No VOCs or SVOCs exceeded the applicable standards in 2014 despite an exceedance of 1-methylnaphthalene in quarter four of 2013 (Table 8.7.4).

6.2.5 STP1-NW and STP1-SW

Monitoring well STP1-NW is located on the west end of STP-1 north bay and STP1-SW is located on the southwest corner of the south bay of STP-1. These wells were installed in May of 2013. Ground water samples were analyzed for the following analytes: 8260B plus MTBE, DRO, GRO, MRO, major cations/anions, WQCC total and dissolved metals, cyanide and SVOCs. The sample location was inspected and sampled on the following dates:

The STP1-NW and STP1-SW wells were inspected and sampled on the following dates in 2014:

Well ID	STP1-NW	STP1-SW
Quarter 2	6/16/2014	6/16/2014
Quarter 4	11/18/2014	11/18/2014

- There were no BTEX, MTBE, DRO, GRO, or MRO constituents detected above applicable standards in 2014 (Tables 8.8 and 8.8.1).
- Chloride and nitrate concentrations exceeded applicable standards during each sampling event. Additionally, nitrite exceeded its standard during quarter two (Table 8.8.1).
- The total uranium concentration (0.065 mg/L) and the dissolved uranium concentration (0.077 mg/L) of the quarter two sample exceeded the standard of 0.03 mg/L. Low concentrations of barium, iron, manganese, selenium, and zinc were also detected during each event (Tables 8.8.2 and 8.8.3).
- No VOCs or SVOCs were detected above applicable standards (Table 8.8.4).

6.3 CONSTITUENT LEVELS IN GROUP C MONITORING WELLS

The Group C wells include six observation wells (OW-13, OW-14, OW-29, OW-30, OW-50, and OW-52) located on level terrain northeast of the refinery tank farm, and four recovery wells (RW-1, RW-2, RW-5, and RW-6) located within the refinery tank farm. Observation wells OW-50 and OW-52 were installed in 2009 to monitor potential migration of constituents. The recovery wells were installed between 1987 and 1990 and have been used to recover SPH.

6.3.1 OBSERVATION WELLS: OW-13, OW-14, OW-29, and OW-30

The observation wells OW-14, OW-29, and OW-30 are screened in the Chinle/Alluvium Interface; observation well OW-13 is screened in the Sonsela stratigraphic unit. OW-13 is down gradient (north) of the tank farm and OW-14 is up gradient and adjacent to the LPG tank farm. OW-29 is located directly north of OW-14 and OW-30 is situated northeast of OW-14 along the east side of the railroad spur entering the refinery property from the north. These observation wells are sampled quarterly and in agreement with OCD, approved by NMED, the third quarter sampling event is combined with the annual sampling requirement per the OCD discharge permit.

Groundwater samples were collected from these observation wells and submitted for laboratory analyses of the following analytes: BTEX, MTBE, DRO, GRO, MRO, major cations/anions, WQCC total and dissolved metals, and VOCs and SVOCs.

Observation wells OW-13, OW-14, OW-29, and OW-30 were sampled on the following dates in 2014:

Well ID	OW-13	OW-14	OW-29	OW-30
Quarter 1	3/07/2014	3/07/2014	3/07/2014	3/07/2014
Quarter 2	6/03/2014	6/03/2014	6/02/2014	6/03/2014
Quarter 3	9/15/2014	9/15/2014	9/15/2014	9/17/2014
Quarter 4	11/10/2014	11/10/2014	11/11/2014	11/11/2014

- BTEX constituents were not detected in OW-13, OW-29, or OW-30 during 2014; the wells have not had detectable BTEX concentrations since 2006. Through 2014, there were low MTBE concentrations detected in the well, but all were well below the standard of 0.143 mg/L (Table 8.9).

- Low concentrations of MTBE were detected in OW-13 in 2014, but each detected concentration was well below the standard. Concentrations of MTBE in OW-14, OW-29, and OW-30 during 2014 were all above the standard, with the highest being in OW-30 during the fourth quarter at 3.6 mg/L. MTBE concentrations in these three observation wells have been above the standard since at least 2009 (Table 8.9).

- Low concentrations of GRO were detected in each observation well during 2014 except for well OW-13. MRO was not detected above applicable standards in any observation well during 2014. Concentrations of DRO have exceeded the standard of 0.2 mg/L since 2014, with a concentration in 2014 of 4.5 mg/L. The constituent were not detected above applicable standards in the remaining three wells in 2013 or 2014 (Table 8.9.1).

- In 2014, concentrations of fluoride, bromide, and sulfate were detected in each of the four observation wells, however concentrations remain below applicable standards. Concentrations of chloride have exceeded the standard of 250 mg/L in OW-14 in 2013 and 2014 (Table 8.9.1).

- No concentrations of total or dissolved metals were detected above applicable standards in well OW-13 in 2014. In well OW-14, concentrations of total barium, iron, and manganese, and, concentrations of dissolved arsenic, barium, iron, and manganese were above applicable standards in 2014; the concentrations detected are similar to previous years. In well OW-29 during 2014, concentrations of total and dissolved manganese and uranium were above applicable standards, and are similar to previous years. In well OW-30, concentrations of total and dissolved uranium were above the standard of 0.03 mg/L and have been since 2012 (Tables 8.9.2 and 8.9.3).

- In 2014, no VOCs and SVOCs were detected in OW-13, OW-14, OW-29, and OW-30 with the exception of 1-methylnaphthalene detected at a concentration of 0.044 mg/L in OW-14 during quarter four of 2014. Concentrations of 1-methylnaphthalene in OW-14 have occasionally exceeded the standard since 2008 (Table 8.9.4).

6.3.2 OBSERVATION WELLS: OW-50 and OW-52

Observation wells OW-50 and OW-52 were installed up gradient from OW-13 and OW-29 in 2009 to monitor possible migration of MTBE. The two observation wells are screened in the Chinle/Alluvium Interface

stratigraphic unit. A request to change the 2010 FWGWMP sample frequency from quarterly to annual for OW-50 and OW-52 was approved by NMED in 2012 (2011 Updates, Comment 6).

In 2014, groundwater samples were collected from observation wells OW-50 and OW-52 for the following analytes: BTEX, MTBE, DRO, GRO, MRO, major anions/cations, WQCC total and dissolved metals, and VOCs, SVOCs.

Observation wells OW-50 and OW-52 were sampled on the following dates in 2014:

OW-50: 9/15/2014	**OW-52:** 9/15/2014

- BTEX, MTBE, DRO, GRO, and MRO constituents have not been detected in either OW-50 or OW-52 since 2009 through 2014 (Tables 8.10 and 8.10.1).
- Low concentrations of fluoride, chloride bromide and sulfate were detected in 2014 but remain below the applicable standards (Table 8.10.1).
- Low concentrations of total and dissolved arsenic, barium, iron, lead, manganese, selenium, and uranium been detected in OW-50 and OW-52 in 2014, but all concentrations were below applicable standards (Tables 8.10.2 and 8.10.3).
- No VOCs or SVOCs were detected above applicable standards in OW-50 and OW-52 during 2014. In quarter one 2010, bis(2-ethylhexyl)phthalate exceeded the standard of 0.006 mg/L in OW-50 and a low concentration of benzoic acid was detected but have remained below this standard through 2014. The detection of these two organic compounds may possibly be lab contaminants or from the PVC pipe casing materials used for this well (Table 8.10.4).

6.3.3 RECOVERY WELLS: RW-1, RW-2, RW-5, RW-6

The recovery wells RW-1, RW-2, RW-5, and RW-6 are shallow wells installed in the refinery tank farm located in the east-central portion of the refinery property. The recovery wells are screened within the Chinle/Alluvium Interface stratigraphic unit and are used to recover SPH. RW-1 is located east of Tank 568; RW-2 is located between Tanks 581 and 582; and RW-5 and RW-6 are located in the northwest corner of the tank farm, east of Tanks 337 and 345.

Quarterly inspections for the RW wells include product recovery of SPH using disposable bailers in RW-5 and RW-6, and a portable 2-inch bladder pump for RW-1. Hydrocarbon thickness is measured prior to being removed. Purge water is collected and disposed upstream of the NAPIS. Hydrocarbon recovery is estimated based on measurements and observations.

The RW wells were added to the annual sampling schedule in 2011, per the *Approval with Modifications* in the 2010 FWGWMP and are evaluated for the following analytes: BTEX, MTBE, major cations/anions, WQCC total and dissolved metals, VOCs, and SVOCs.

The recovery wells were inspected and sampled in 2014 on the following dates:

RW-1	RW-2	RW-5	RW-6
9/18/2014	9/18/2014	9/18/2014	9/18/2014

- Benzene and ethylbenzene concentrations have exceeded the standards (0.005 mg/L and 0.7 mg/L, respectively) in each of the RW wells since 2011. In 2014, concentrations of toluene and total xylenes exceeded the standards (0.75 mg/L and 0.62 mg/L, respectively) in RW-1 and RW-2. Concentrations of total xylenes were detected in RW-5 and RW-6 but did not exceed the standard. In 2014, MTBE concentrations exceeding the standard of 0.143 mg/L was detected RW-2 (1.9 mg/L). MTBE concentrations have frequently exceeded applicable standards for RW-1 and RW-2 since 2011 (Table 8.11).
- Major cations and anions were not analyzed in 2014 (Table 8.11.1).
- Concentrations of total and dissolved barium, iron, and manganese have exceeded the applicable standards in each of the RW wells since 2011. Additionally, concentrations of total iron have exceeded its standard in each well since 2011. Concentrations of total arsenic above the standard were detected in 2014 in wells RW-1 and RW-6 (Tables 8.11.2 and 8.11.3).
- VOCs and SVOCs detected at concentrations above applicable standards in RW wells in 2014 include (Tables 8.11.4 and 8.11.5):
  - RW-1: Aniline and 3,4-methylphenol exceeded the applicable standard
  - RW-2: Aniline, 1,2,4-trimethylbenzene, and 3,4-methylphenol exceeded the applicable standards.
  - RW-5: 1,2,4-trimethylbenzene, naphthalene, 1-methylnaphthalene, and 2-methylnapthalene exceeded the constituent applicable standards.
  - RW-6: the same constituents as those in RW-5, plus 1,3,5-trimethylbenzene exceeded the applicable standards.

Hydrocarbon recovery from RW-1 has shown a steady decrease from 2005 through 2014. In 2014, total hydrocarbon recovery is estimated at 2.25 gallons in 83 gallons of water purged compared to the 2005 estimate of 431 gallons of hydrocarbons in 1,210 gallons of water. No measureable hydrocarbons have been detected in RW-2 since the well was installed. RW-5 and RW-6 have shown a steady decrease in hydrocarbons since 2005. SPH has not been detected in RW-5 and RW-6 since February 2009 and November 2011, respectively. However, an oil sheen and a hydrocarbon odor has persisted in RW-5 (Appendix A).

6.4 CONSTITUENT LEVELS IN GROUP D MONITORING WELLS

The Group D wells include three process/production wells, PW-2, PW-3, and PW-4 that supply water to the refinery and for domestic uses. These process wells reach approximately 1,000 ft and are screened in the San Andreas/Yeso aquifer. Additionally, Group D also includes four observations wells OW-1, OW-10, OW-11, and OW-12. The OW-1 and OW-10 wells are located in the northwest portion of the refinery. OW-11 is located near the entrance of the refinery and OW-12 is west of the tank farm in the surplus yard.

6.4.1 PROCESS WELLS: PW-2, PW-3, PW-4

PW-2, PW-3 and PW-4 are all process/production wells which supply process water to the refinery and domestic water to the company housing and Pilot Travel Center. PW-2 is located west of evaporation pond 6 (EP-6). PW-3 is centrally located directly north of the maintenance shop, and PW-4 is located on the southern edge of the refinery property and adjacent to the Pilot Lift Station.

The production wells are on a staggered 3-year sampling schedule, with the exception of PW-3 which is sampled annually since the detection of 2-methylnaphthalene exceeding the applicable standard in 2008. In 2014, groundwater samples were collected from PW-2 and PW-3 for the following analytes: BTEX, MTBE, nitrate, WQCC total and dissolved metals, and VOCs and SVOCs.

The process wells PW-2 and PW-3 were sampled in 2014 on the following dates:

PW-2:	9/10/2014
PW-3:	9/10/2014

- BTEX and MTBE were not detected in PW-2 and PW-3 in 2014 (Table 8.12).
- A low concentration of nitrate was present in PW-2 (0.12 mg/L) in 2014 (Table 8.12); the concentration is below the standard of 10 mg/L (Table 8.12).
- In 2014, low concentrations of total and dissolved arsenic, barium, iron, selenium, uranium, and zinc (dissolved only) were detected in well PW-2. Each of the detected concentrations was below applicable standards. In well PW-3, detectable concentrations of total and dissolved arsenic, barium, iron, manganese (total only), selenium, uranium, and zinc were below applicable standards (Tables 8.12.1 and 8.12.2).
- No VOCs or SVOCs were detected in PW-2 and PW-3 in 2014. Low concentrations of 2-methylnahthalene (0.032), 2,4-dimethylphenol (0.016 mg/L), 2-methylphenol (0.21 mg/L), 3,4-methylphenol (0.36 mg/L), phenanthrene (0.017 mg/L), and phenol (0.8 mg/L) were detected in

PW-3 in January 2008. PW-3 was sampled again in August 2008 with a blind duplicate with no detections confirmed for SVOCs (Tables 8.12.3 and 8.12.4).

6.4.2 OBSERVATION WELLS: OW-1 AND OW-10

Observation well OW-1 is an artesian well located on the west side of EP-6. Well OW-10 is located down gradient from OW-1 on the east side of EP-9. Wells OW-1 and OW-10 are screened in the Sonsela stratigraphic unit. Inspection requirements for these two wells were modified in 2010, per the 2010 FWGWMP, and included sampling on a quarterly basis. In agreement with OCD, approved by NMED, the third quarter sampling was combined with the annual sampling event. In 2014, groundwater samples from OW-1 and OW-10 were evaluated for the following analytes: BTEX, MTBE, DRO, GRO, MRO, major cations/anions, WQCC total and dissolved metals, VOCs, and SVOCs.

Groundwater samples were collected from OW-1 and OW-10 in 2014 on the following dates:

Well ID	OW-1	OW-10
Quarter 1	3/07/2014	3/07/2014
Quarter 2	6/03/2014	6/03/2014
Quarter 3	9/11/2014	9/12/2014
Quarter 4	11/10/2014	11/10/2014

- BTEX was not detected above applicable standards in either well in 2014. MTBE was not detected above applicable standards in OW-1; low concentrations of MTBE below the standard of 0.143 mg/L were detected in each 2014 quarter in OW-10 (Table 8.13).
- DRO and MRO were not detected above applicable standards in either OW-1 or OW-10 during 2014. Low concentrations of GRO were detected in quarters two through four in OW-10, but the constituent was not detected in OW-1 in 2014 (Table 8.13.1).
- In 2014, low concentrations of fluoride, bromide, nitrate, and sulfate were detected in OW-1 and OW-10 but remain below the applicable standards. The chloride concentration in OW-10 continues to exceed the standard of 250 mg/L, but constituent concentrations remains below the standard for OW-1 (72 mg/L, quarter 4) (Table 8.13.1).
- In well OW-1, concentrations of total arsenic, chromium, iron, lead, manganese, and uranium (each quarter, consistently since 2010) were detected above the applicable standards in one or more quarter. Concentrations of dissolved iron, lead, manganese, and uranium (each quarter, consistently since 2010) were detected above the applicable standards during quarter three. In well OW-10, total and dissolved concentrations of uranium have exceeded the applicable standard of 0.03 mg/L from 2010 through 2014 (Tables 8.13.2 and 8.13.3)

- No VOCs or SVOCs were detected in OW-1 in 2014. In well OW-10, in quarters two through four, the constituent 1,1-dichloroethane was detected but concentrations did not exceed the standard of 0.025 mg/L (Table 8.13.4).

6.4.3 OBSERVATION WELLS: OW-11 AND OW-12

Observation well OW-11 is located within the refinery property (southeast) on the west side of the main entrance. Well OW-12 is located within the surplus or bone yard located west and slightly north of the primary tank farm. OW-11 and OW-12 are screened in the Sonsela stratigraphic unit.

Well inspections and sampling are conducted annually. In 2014, groundwater samples from the two wells were evaluated for the following analytes: BTEX, MTBE, major anions/cations, WQCC total and dissolved metals, VOCs, and SVOCs. Observation well OW-11 and OW-12 were sampled in the third quarter of 2014 on the following dates:

OW-11: 9/12/2014	**OW-12:** 9/12/2014

- BTEX and MTBE have not been detected in OW-11 and OW-12 since 2006 and remained non-detect for 2014 (Table 8.14).
- Fluoride and sulfate concentrations continue to exceed the applicable standards (1.6 mg/L and 600 mg/L, respectively) in OW-11 with fluoride detected at 2.3 mg/L and sulfate at 960 mg/L in 2014. In 2014, chloride concentrations were detected in both wells but did not exceed the standard. Bromide was detected below applicable standards in OW-12 but remained below the applicable standards in OW-11 (Table 8.14.1).
- In OW-11, total and dissolved uranium concentrations continue to exceed the standard of 0.03 mg/L; the constituent was detected at 0.25 mg/L in 2014. Uranium concentrations were detected in OW-12 but remain below the standard. Low concentrations of iron and manganese were detected in both wells. Barium was detected in OW-12 but did not exceed the applicable standard (Tables 8.14.2 and 8.14.3).
- No VOCs or SVOCs were detected in either well in 2014. Bis(2-ethylhexyl)phthalate was detected in OW-11 during 2013 above the constituent's standard (Table 8.14.4).

6.5 CONSTITUENT LEVELS IN GROUP E MONITORING WELLS

To date, a total of 44 monitoring wells (MKTF-1 through MKTF-44) have been installed to aid in delineating the extent of a hydrocarbon seep discovered in 2013, directly west of crude tanks T-101 and T102. During the investigation, a pre-existing well (labeled as MKTF-45) was found directly west of the truck-loading rack. Each of the wells has been constructed into permanent monitoring wells, and these wells are designated as Group E wells.

6.6 CONSTITUENT LEVELS FOR MKTF WELLS

Thirty-one of the forty-five MKTF wells were sampled continuously throughout 2014. Sixteen of the MKTF wells (MKTF-19 through MKTF-26, MTKF-28, MKTF-36, MKTF-37, MKTF-38, MKTF-39, MKTF-40,

MKTF-43, and MKTF-44) were reported with no significant changes in laboratory data and are pending approval for a change in sample frequency from quarterly to annually. In addition, the nine MKTF wells installed along the perimeter of the suspect plume (MKTF-27, MKTF-29 through MKTF-34, MKTF-41, and MKTF-42) are currently pending approval for a sample frequency change from quarterly to semi-annually, if there are no significant increases in concentrations for four consecutive quarters.

In 2014, groundwater samples were collected from the MKTF wells and evaluated for the following analytes: BTEX, MTBE, DRO, GRO, MRO, major cations/anions, metals, VOCs, and SVOCs. Wells that had a hydrocarbon layer were not sampled. Refer to Table 1 in Section 10 for inspection and sampling dates.

- Benzene concentrations exceeded the standard of 0.005 mg/L in the following wells: MKTF-1, MKTF-2, MKTF-4, MKTF-9, MKTF-10, MKTF-11, and MKTF-17 through MKTF-26. The greatest benzene concentration (20 mg/L) during 2014 occurred in well MKTF-16 during quarter four (Table 8.15).
- Toluene concentrations exceeded the standard of 0.75 mg/L in the following wells: MKTF-1, MKTF-10, MKTF-15, MKTF-16, MKTF-20, MKTF-21, and MKTF-23. The highest toluene concentration (20 mg/L) occurred in well MKTF-10 during quarter four (Table 8.15).
- Ethylbenzene concentrations exceeded the standard of 0.7 mg/L in the following wells: MKTF-1, MKTF-4, MKTF-10, MKTF-11, MKTF-15, MKTF-16, MKTF-19, MKTF-20, MKTF-21, and MKTF-36. The highest concentration (2.8 mg/L) occurred in MKTF-20 during quarter one (Table 8.15).
- Total xylenes concentrations exceeded the standard of 0.62 mg/L in the following wells: MKTF-1, MKTF-4, MKTF-10, MKTF-11, MKTF-15, MKTF-16, MKTF-19, MKTF-20, MKTF-23, and MKTF-37. The highest concentration (7.6 mg/L) occurred in well MKTF-20 during quarter four (Table 8.15).
- MTBE concentrations exceeded the standard of 0.143 mg/L in the following wells: MKTF-1, MKTF-4, MKTF-9, MKTF-11, MKTF-15 through MKTF-25, MKTF-32, MKTF-33, and MKTF-36. The highest concentration (9.7 mg/L) occurred in well MKTF-19 during quarter four (Table 8.15).
- The constituent DRO was detected exceeding the standard (0.2 mg/L) throughout 2014 in MKTF-4 (2.0 mg/L), MKTF-9 (2.1 mg/L), MKTF-10 (7.4 mg/L), MKTF-11 (1.8 mg/L), MKTF-15 (4.1 mg/L), MKTF-16 (4.1 mg/L), MKTF-17 (1.4 mg/L), MKTF-18 (2.3 mg/L), MKTF-19 (13 mg/L), MKTF-20 (24 mg/L), MKTF-21 (27 mg/L), MKTF-22 (1.6 mg/L), and MKTF-23 (7.7 mg/L). Detectable concentrations of GRO were detected in each of the wells sampled except for MKTF-27, MKTF-28, MKTF-29, MKTF-40, and MKTF-44. There were no detectable concentrations of MRO in any well above the applicable standards. (Table 8.15.1).

- Chloride concentration exceedances above the standard (250 mg/L) were noted in the following wells: MKTF-1, MKTF-2, MKTF-10, MKTF-11, MKTF-15, MKTF-16, MKTF-23 through MKTF-28, MKTF-31, MKTF-31, MKTF-32, and MKTF-34. Fluoride concentration exceedances above the standard (1.6 mg/L) were noted in the wells MKTF-10 and MKTF-11 (Table 8.15.1)

- Total metals concentrations above applicable standards were noted in the following wells (Table 8.15.2):
  - Arsenic (0.01 mg/L): MKTF-16, MKTF-18, MKTF-19, MKTF-20, and MKTF-23
  - Barium (1 mg/L): MKTF-1, ,LTF-4, MKTF-10, MKTF-11, MKTF-15, MKTF-16, MKTF-18, MKTF-19, MKTF-20, and MKTF-22
  - Chromium (0.005 mg/L): MKTF-18
  - Iron (1 mg/L): all wells sampled
  - Lead (0.015 mg/L): MKTF-1, MKTF-4, MKTF-10, MKTF-17, MKTF-18, MKTF-19, and MKTF-20
  - Manganese (0.2 mg/L): all wells sampled
  - Uranium (0.03 mg/L): MKTF-2, MKTF-10, MKTF-24, MKTF-26, MKTF-27, MKTF-28, MKTF-30 through MKTF-33

- Dissolved metals concentrations above applicable standards were noted in the following wells (Table 8.15.3):
  - Arsenic: MKTF-16 and MKTF-19
  - Barium: MKTF-1, MKTF-4, MKTF-10, MKTF-11, MKTF-15, MKTF-18, and MKTF-19
  - Iron: MKTF-1, MKTF-2, MKTF-4, MKTF-9, MKTF-10, MKTF-11, MKTF-15, MKTF-16, MKTF-18, MKTF-19, MKTF-22, MKTF-23, and MKTF-24.
  - Lead: MKTF-11
  - Manganese: all wells except MKTF-20, MKTF-30, MKTF-31, MKTF-32, and MKTF-34
  - Uranium: MKTF-2, MKTF-24, and MKTF-26 through MKTF-33

- No VOCs or SVOCs were detected above applicable standards in wells MKTF-27, MKTF-28, MKTF-29, MKTF-33, MKTF-34, MKTF-40, and MKTF-44. The remaining wells had varying concentrations of the following constituents below and above the referenced standards (Tables 8.15.4 and 8.15.5):
  - Aniline (0.013 mg/L)
  - 1,2,4-trimethylbenzene (0.015 mg/L)
  - 1,3,5-trimethylbenzene (0.12 mg/L)
  - 1,2-dichloroethane (0.0017 mg/L)
  - Naphthalene (0.00017 mg/L)
  - 1-methylnaphthalene (0.0011 mg/L)
  - 2-methylnaphthalene (0.036 mg/L)

- 1,1-dichloroethane (0.025 mg/L)
- 1,1-dichloroethene (0.005 mg/L)
- 3,4-methylphenol (0.0015 mg/L)
- Bis(2-ethylhexyl)phthalate (0.006 mg/L)
- Phenol (0.005 mg/L)
- Trichloroethene (0.005 mg/L)
- Vinyl chloride (0.002)

6.7 CONSTITUENT LEVELS FOR EVAPORATION PONDS, INFLUENTS, AND EFFLUENTS

There are twelve evaporation ponds located within the northwest section of the refinery. Evaporation pond 1 is more commonly known as Pond 1and is considered separate from the remaining SMWU No. 2 Evaporation Ponds. Pond 1 is separated by a dike along the north side of aeration lagoon 1 (AL-1) and aeration lagoon 2 (AL-2), and is used as a holding pond for the aeration lagoons. Evaporation ponds 2 through 6 are separated by dikes and are located west of AL-2. Evaporation pond 9 (EP-9) is to the south and is separated from EP-2 through EP-6 by a two-track road. Evaporation ponds 7, 8, 11, 12A, and 12B are also separated by dikes and are located on the northwest corner of the refinery. In addition to the evaporation ponds, there are three influents and three effluent points that are routinely monitored.

6.7.1 EVAPORATION PONDS 1 THROUGH 12B

Samples have been collected annually from Pond 1 and EP-2 through EP-8 since 2007. In 2011, EP-9, EP-11, EP-12A, and EP-12B were added to the sample list, per the 2010 FWGWMP, and the sample frequency was increased to semi-annually for all of the ponds.

In 2014, samples were collected from Pond 1 and the evaporation ponds for the following analytes: BTEX, MTBE, major anions/cations, biochemical oxygen demand (BOD), chemical oxygen demand (COD), e-coli bacteria, WQCC total and dissolved metals, and VOCs and SVOCs. Pond 1, EP-1 through EP-9, EP-11, EP-12A, and EP-12B were sampled in 2014 on the following dates:

Quarter 1: 3/05/2014	**Quarter 4:** 11/12/2014

- BTEX and MTBE concentrations were below the applicable standards for Pond 1 and each of the evaporation ponds (Table 8.15).

- Concentrations of fluoride, chloride, and sulfates exceeded the applicable WQCC standards in Pond 1 and each evaporation pond during 2014. Low concentrations of bromide below the applicable standard were also detected in each of the ponds during 2014 (Table 8.16.1).

- In 2014, BOD concentrations exceeded the general requirement of the 20 NMAC 6.2.2101 (<30 mg/L) in Pond 1 and each of the evaporation ponds except for EP-7, EP-8, and EP-9. COD concentrations exceeded the general requirement (<125 mg/L) in each of the ponds. The e-coli standard of 500 organisms/100 mL was exceeded in two ponds, EP-2 (>24,916 CFU/100 mL) and EP-12B (1,012 CFU/100mL) (Table 8.16.2).

- Total metal concentrations in pond samples were detected as follows (Table 8.16.3):

  - Arsenic and manganese concentrations in each pond exceeded the applicable standards in one or more of the samples.

  - Detectable concentrations of barium and chromium were found in one or more samples, but were below applicable standards.

  - Cadmium, copper, and lead were below applicable standards in each pond sample.

  - A low concentration of mercury (0.00032 mg/L) was detected in one Pond 1 sample, but the constituent was below the applicable standard.

  - A low concentration of uranium (highest was 0.0071 mg/L) was detected in each EP-2 sample, but the constituent was below the applicable standard, as well as below the standards in s in all other pond samples.

  - Low concentrations of iron, selenium, and zinc were detected in other ponds and samples, but each was below the constituent applicable standards.

- Dissolved metals concentrations in pond samples were detected as follows (Table 8.16.4):

  - Arsenic and manganese concentrations in each pond exceeded the applicable standards in one or more semiannual samples.

  - Iron concentrations exceeded the standard in one or more samples of EP-1, EP-2, EP-3, EP-4, EP-12A, and EP-12B.

  - Selenium concentrations exceeded the applicable standard in one or more samples of EP-7, EP-8, and EP-9.

  - Low concentrations of barium were detected in each pond, but all were below the applicable standard.

  - A low concentration of lead was detected in one EP-4 sample (0.0013 mg/L) but that concentration is below the applicable standard.

  - A low concentration of uranium was detected in one EP-4 sample (0.0039 mg/L), but that concentrations is below the applicable standard.

  - Cadmium, copper, and silver were not detected in any pond samples.

- No VOCs were detected in any of the ponds during 2014 with the exception of low concentrations of acetone and carbon disulfide in EP-2, EP-3, EP-4, EP-5, and EP-6.

- Aniline was detected in concentrations exceeding the standard of 0.013 mg/L during March 2014 in EP-2 (0.044 mg/L), EP-3 (0.045 mg/L), EP-4 (0.04 mg/L), and EP-5 (0.023 mg/L) but decreased below the applicable standards limit during November 2014. Phenol concentrations were similar in

that the concentrations exceeded the standard of 0.005 mg/L in March 2014 for EP-2 (0.87 mg/L), EP-3 (0.79 mg/L), EP-4 (0.42 mg/L), EP-5 (0.26 mg/L), and in EP-6 (0.28 mg/L) then concentrations fell below the applicable standards for the same ponds in November 2014 with the exception of EP-2 which had a reduced concentration of 0.058 mg/L (Tables 8.16.5 and 8.16.6). Concentrations of 3,4-methylphenol that exceeded the applicable standard of 0.0015 mg/L were detected during the March 2014 event in EP-1 (0.14 m/L), EP-2 (0.35 mg/L), EP-3 (0.29 mg/L), EP-4 (0.21 mg/L), EP-5 (0.2 mg/L), EP-6 (0.088 mg/L), and EP-12B (0.079), but samples collected from these ponds in November 2014 were all below the standard.

6.7.2 INFLUENTS: AL-1, AL-2, AND EP-1

The start-up of the new WWTP occurred in May 2012. By the end of June 2012, all of the processed water going into AL-1 was re-routed to the WWTP, via Tank 35 and the NAPIS unit, with the exception of the Pilot lift station. Some gravitational flow continued from AL-1 to AL-2 and from AL-2 to Pond 1 (EP-1) through the second half of 2013.

The aeration lagoons and pond 1 are no longer in service and no samples were collected in 2014.

6.7.3 EFFLUENTS: AL-2 TO EP-1, PILOT, AND NAPIS

All effluents have been non-existent since June 2013 due to re-routing waters to the WWTP. The last effluent sample from AL-2 was in June 2013. The Pilot effluent was rerouted in June 2013 while the NAPIS unit was re-routed mid-June 2012. No effluent analyses are available for 2014.

6.7.4 OUTFALL BW TO EP-2

BW is defined as reverse osmosis water coming from the boiler unit. The flow from the boiler unit discharges into EP-2 through a 4-inch PVC pipe. EP-2 is directly west of EP-1. The BW to EP-2 sample is taken on a semi-annual basis and evaluated for the following analytes: major anions/cations.

The BW to EP-2 samples was taken in 2014 on the following dates:

Quarter 1: 3/05/2014	**Quarter 4:** 11/12/2014

- Chloride concentrations exceeded the standard of 250 mg/L during both semiannual sampling events, at 2,800 mg/L and 4,100 mg/L, respectively. Sulfate concentrations exceeded the standard of 600 mg/L during the first semiannual event. All other constituents were either below applicable standards or were not detected (Tables 8.17 and 8.17.1).

6.7.5 OUTFALL STP1 to EP-2 Inlet

The EP-2 Inlet designation was changed to STP1 to EP-2 in the second half of 2012 due to the startup of the new WWTP and the new sanitary treatment pond (STP-1). STP-1 effluent now flows into the northeast corner of EP-2. The STP1 to EP-2 inlet is sampled on an annual basis, and sampled for the following analytes: VOCs, GRO, DRO, MRO, BOD, COD, and TDS.

The EP-2 inlet was sampled in 2014 on the following dates:

Quarter 1: 3/05/2014	**Quarter 3** 9/10/2014
Quarter 4: 3/05/2014	

- The benzene and DRO concentrations of 0.018 mg/L and 2.4 mg/L, respectively, exceeded the constituents' applicable standards. Additionally, the TDS concentration of 2,780 mg/L exceeded the standard of 1,000 mg/L. All other BTEX and 8015 constituents were below the applicable standards (Table 8.18).
- The fluoride concentration (54 mg/L) exceeded the constituent standard during quarter three; the constituent was not detected during the fourth quarter. Chloride concentrations exceeded the applicable standard during each sampling event, with a high of 4,100 mg/L during quarter four. Sulfate, BOD, and COD concentrations exceeded the applicable standards during each sampling event of 2014 (Tables 8.18.1 and 8.18.2).
- Total metals were detected as follows (Table 8.18.3):
  - Arsenic concentrations exceeded the constituent standard of 0.01 mg/L during each sampling event.
  - Iron concentrations exceeded the constituent standard of 1.0 mg/L during quarters three and four.
  - Manganese concentrations exceeded the constituent standard of 0.2 mg/L during quarter one.
  - Low concentrations of barium, chromium, selenium, uranium, and zinc were detected during each sampling event but each were below applicable standards
  - Lead, silver, and mercury were not detected during any sampling event.
- Dissolved metals were detected as follows (Table 8.18.4):
  - The arsenic concentration (0.011 mg/L) exceeded the constituent standard during quarter three.
  - Iron concentrations exceeded the constituent standard during quarters three and four.
  - Manganese concentrations exceeded the constituent standard during quarters one and three.
  - Low concentrations of barium, selenium, uranium, and zinc were detected below the applicable standards.

- Cadmium, copper, and lead were not detected during any sampling event.

- The concentration of 2-methylphenol (22 mg/L) exceeded the applicable standard of 0.93 mg/L. The concentration of phenol (140 mg/L) exceeded the applicable standard of 5.8 mg/L. Low concentrations of acetone, 2-butanone, and carbon disulfide were detected but are below applicable standards (Tables 8.18.5 and 8.18.6).

6.8 ADDITIONAL SAMPLING AND/OR CHANGES

Requirements by NMED:

- Sample wells upgradient from the NAPIS wells, OW-1, OW-10, and OW-11 and review analytical results to determine if uranium detections are similar in concentrations in unaffected wells.

- Sample upgradient wells from the NAPIS wells, OW-1, OW-10, and OW-11 for total and dissolved metals.

The marketing (MKTF) wells from the hydrocarbon seep investigation have been added to the ground water sampling plan.

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SECTION 7

CONCLUSIONS AND RECOMMENDATIONS

This section is an overview of the analytical water quality data collected to identify potential impacts to the groundwater and determine if further monitoring or site investigations are required.

7.1 GROUP A

The boundary wells (BW-1A, BW-1B, BW-1C, BW-2A, BW-2B, BW-2C, BW-3A, BW-3B, and BW-3C) located in the northwest corner of the refinery along the west sides of evaporation ponds 7, 8 and 11 have not shown any detection of BTEX or MTBE constituents during annual sampling events. High concentrations of fluoride have been detected in BW-1C, BW-2B, and BW-2C, which may be naturally occurring in the groundwater. In 2014, iron exceeding the applicable standard was detected in wells BW-2C and BW-3C, but this metal may be naturally occurring as well. Low concentrations of barium, lead, manganese, and uranium are frequently detected in most of the boundary wells. In July 2009, the semi-volatile organic compound bis(2-ethylhexyl) phthalate was detected in BW-3B and in BW-3C in 2011. In 2013, the compound bis(2-ethylhexyl)phthalate was detected for the first time in BW-1C at a concentration level of 0.01 mg/L. Detection of this organic compound in the groundwater sample may be a laboratory contaminate or possibly from the PVC pipe materials used as casing for the wells. No detections of the SVOC have been identified in the groundwater samples collected since its first discovery in any of the wells in this group.

RECOMMENDATION: *Discontinue SVOCs.*

The MW (MW-1, MW-2, MW-4, and MW-5) series of wells are located around the RCRA LTU. No detectable concentration levels of BTEX or MTBE constituents have been found in the groundwater samples collected from these wells. No metals (total or dissolved) exceeded the applicable standards, however very low concentrations of arsenic, barium, iron, manganese, and uranium were detected in all of the MW series of wells. 2014 analytical data indicates no detection of VOCs or SVOCs in any of the MW wells; however in 2008, bis(2-ethylhexyl)phthalate was detected in the groundwater collected from MW-4. The detection of this particular constituent in the groundwater sample may have been a laboratory contaminant or from the PVC pipe materials used in this well.

These wells are also monitored under the RCRA Post Closure Permit on a 10-year cycle. The first cycle was completed in 2009/2010.

RECOMMENDATION: *Continue with current monitoring schedule and the RCRA 10 year monitoring. There have been no significant changes or discoveries of contaminants that warrant any changes other than the discovery of an organic compound in 2008.*

The SMW (SMW-2, SMW-4) wells are also located around the RCRA LTU and are screened in the Chinle/Alluvium Interface stratigraphic unit. These wells are also monitored under the RCRA Post Closure Permit on a 10-year cycle. The first cycle was completed in 2009/2010. No detectable concentration levels of BTEX constituents were found in these wells from 2006 through 2014. MTBE was only detected in SMW-2 in years 2008, 2010 through 2014 at concentration levels below the NMED Tap Water standard of 0.143 mg/L. SMW-2 also had elevated chloride and sulfate levels, and two metals (total), manganese and uranium that were detected exceeding the WQCC standards. In SMW-4, uranium (0.037 mg/L total and 0.033 mg/L dissolved) was the only metal that exceeded the WWCC standard of 0.03 mg/L in 2014. In 2014 no detections of any organic compounds have been detected in SMW-2 or SMW-4.

RECOMMENDATION: *Continue with current monitoring schedule.*

7.2 GROUP B – GROUNDWATER MONITORING

Analyses of groundwater samples collected from GWM-1 indicate high concentrations of benzene which would indicate the potential for historical releases from the aeration lagoons. An insufficient volume of water was detected in GWM-2 during the fourth quarter of 2013, and the well was reported dry for all of 2014. Additionally, no groundwater was detected in GWM-3 during 2013 and 2014.

Pond levels in the lagoons and pond 1 decreased in 2013 because all the influent into the aeration lagoons was diverted to the WWTP plant. The lagoons and pond 1 were taken out of service and no longer receiving any water. The levels in the lagoons and pond 1 have been significantly low and slowly evaporating. It was noted that the decrease in pond volumes did affect the water levels detected in the GWM wells. There were no significant changes in contaminant detections noticed in the GWM wells.

RECOMMENDATION: *Continue with inspections/sampling of the GWM wells.*

Also at the aeration basin are four monitoring wells situated around the NAPIS installed in 2007 and 2008 to address potential hydrocarbon leaks from the NAPIS. NAPIS-1 located on the east side (up-gradient) of the NAPIS has had no detectable contaminants since 2008. Down gradient of the NAPIS on the west side, NAPIS-2 and KA-3 have had concentrations of benzene and MTBE above the applicable standards. Samples collected from NAPIS-3 have not shown any BTEX or MTBE constituents since September 2010. 1-methylnaphthalene and naphthalene are frequently detected in NAPIS-2 and KA-3.

RECOMMENDATION: *Continue with inspections/sampling of the NAPIS wells.*

There are three leak detection units on the NAPIS Unit which are inspected for fluid level. Quarterly inspections of the units have indicated the presence of fluids. All three leak detection units (East LDU, West LDU, and Oil Sump LDU) continue to have a fluid level and are pumped out on a regular basis. During 2014, there was insufficient water for sampling in the East LDU during the third quarter, in the West LDU in the fourth quarter, and in the Oil Sump LDU during the year. When this unit is down for scheduled maintenance, the bays will be inspected internally and returned to service after a hydro-test with dye confirms no leakage into any of the LDUs. In June of 2014, the west bay was repaired with a plate installation, hydro-tested with fluorescent dye and no leaks were observed in the West LDU and the Oil Sump LDU. The west bay was placed back into service on July 8, 2014. Both LDUs were re-checked on August 6, 2014 and both showed no signs of leakage.

RECOMMENDATION: *Continue with inspections, gauging of the LDUs. During scheduled maintenance shutdown of the bays, inspect welds and hydro-test before placing back in service.*

A new well was installed on July 17, 2012, designated as OAPIS-1. The installation of this well is from a site investigation conducted according to the Investigation Work Plan Solid Waste Management Unit (SMWU) No. 1 Aeration Basin and SMWU No. 14 Old API Separator. Analytical results indicate high concentrations of benzene and MTBE throughout 2014. Also high concentrations of arsenic, uranium, iron, manganese and cyanide were detected in this well.

RECOMMENDATION: *Continue with sample schedule and site investigation associated with this well and the area (aeration basin). The aeration basin is currently designated as SMWU-1 in the RCRA Post Closure Care Permit and is in the process of a site investigation to determine and evaluate the presence of contaminants. Site investigations will include the GWM series of wells, the area surrounding the lagoons*

and take into account historical spills that have occurred in the area. Site investigation for the aeration basin will include additional soil borings and possible installation of additional monitoring wells dependent on contaminant levels found in soil/water samples.

Initial sampling of STP1-NW began in the second quarter of 2014. Fluids were not detected in STP1-SW during 2014. Analytical data of the three quarters in 2014 that STP1-NW was sampled indicate no detections of BTEX, VOCs, or SVOCs.

RECOMMENDATIONS: *Continue with current monitoring and sampling schedule.*

7.3 GROUP C – GROUNDWATER MONITORING

Groundwater monitoring activities from the Group A wells (northeast side of the Refinery) have shown that an MTBE plume exists between wells OW-13, OW-14, OW-29, and OW-30. In March of 2010 dedicated pumps were installed in all four wells to prevent possible cross contamination from sampling equipment and or field activities. Although concentration levels of MTBE in OW-13 does not exceed the applicable standard of 0.143 mg/L, sample data indicates a steady increase of MTBE from year to year. Of the three wells OW-14 is the only well where three constituents (benzene, ethyl benzene and MTBE) have been consistently detected in the groundwater samples collected since 2006 that have exceeded the applicable standards. All three constituents analyzed continue to increase from year to year through 2014. OW-14 is located down-gradient from two recovery wells RW-1 and RW-2. RW-1 is the only well where hydrocarbons are continually recovered. 2014 analytical data from RW-1 and RW-2 indicate high levels of BTEX, MTBE, and phenol.

Down gradient from OW-14 is OW-29, and OW-30 and the analytical data from both of these wells indicates that MTBE is present in the groundwater at concentration levels exceeding the NMED Tap Water standard of 0.143 mg/L since March of 2010 in OW-29 and December 2007 in OW-30. Analytical data for these four wells indicate a steady increase of MTBE concentration levels indicating that the MTBE plume is slowly migrating in a north, north-west direction down-gradient from RW-1 and RW-2. The stratigraphic units in which these wells exist are in what is known as the Chinle/Alluvium Interface.

RECOMMENDATIONS: *Continue with current sample schedule. MTBE plume is present between OW-13, OW-14, OW-29 and OW-30 and analytical data indicates a very slight increase in concentration levels over time. It was suspected that the migration of the MTBE plume may be in a northeast direction. As a result*

OW-50 and OW-52 were installed down gradient from these wells. After three years of sampling no contaminants have been detected in the groundwater collected quarterly from these wells. It is possible that the MTBE plume may be migrating in a north-northwest direction from OW-29 following the natural formation of the Chinle-Alluvium interface. Analytical data indicates that MTBE concentrations have been slowly increasing from year to year in OW-29 as well as OW-30.

Two new wells (OW-50 and OW-52) were installed in October 2009 down gradient of OW-13, OW-14 and OW-29 to monitor possible migration of MTBE in a north, north-east direction. To date, no detectable concentration levels of BTEX or MTBE constituents have been detected in OW-50 and OW-52. Based on the analytical data from these two new wells the migration of MTBE may be in a north-northwest direction from OW-29.

RECOMMENDATION: *Discontinue SVOCs. Continue with the current monitoring schedule.*

The inspection of the four recovery wells (RW-1, RW-2, RW-5 and RW-6) will continue as scheduled along with SPH recovery. No changes in product recovery are required and will continue with scheduled quarterly inspections. These wells were added to the annual sampling schedule beginning in 2011. Product recovery continues in RW-1 as there is a measureable hydrocarbon column thickness level. Field notes indicate that product recovery from RW-1 has decreased in quantity over the years with an estimated 2.37 gallons of product recovered in 2014. RW-5 and RW-6 product recovery has also been declining. From 2010 through 2014, no product has been recovered from RW-5 and no product was recovered from RW-6 in 2014. Although there is no measureable product level in RW-5 and RW-6 both wells will continue to be bailed as there is evidence of hydrocarbons in the wells from observing the bailed water (slight odor with a visible sheen).

RECOMMENDATIONS: *Continue with SPH recovery quarterly. These wells will continue to be inspected on a quarterly basis.*

7.4 GROUP D – GROUNDWATER MONITORING

PW-2, PW-3 and PW-4 are all process/production wells that are all set at around 1000 feet. All three of these wells are sampled every three years with the exception of PW-3 which was changed to annual in 2009 due to the detection of 2-methylnaphthalene in January 2008. Although the samples collected in August 2008 were all non-detect, it was determined by NMED that annual sampling was required for PW-3. No organic compounds have been detected in PW-3 from 2009 through 2014. Based on the analytical data the remaining two process wells remain relatively free of contaminants. No organic compounds were detected in PW-4 in 2014. PW-3 continues to be sampled on an annual basis pending approval from NMED for a request to return PW-3 to the 3-year sampling schedule. The next three year sample cycle schedule for PW-2 is 2017.

RECOMMENDATIONS: *Continue with current sampling schedule.*

OW-1 is an artesian well located on the west section of the refinery property. OW-1 is a relatively clean well. The only contaminant that has exceeded the WQCC standard since 2010 is uranium which is a naturally occurring element found in rock, soil, and water. This particular well may require repair and/or re-location as the concrete base on this well has deep cracks.

RECOMMENDATIONS: *Continue with current sampling schedule.*

OW-10 is developed in the Sonsela Aquifer and is located directly east of evaporation pond 9 (EP-9).

MTBE has been detected in the second and fourth quarter of 2012 as well as the first half of 2013 at a concentration level above the NMED Tap Water standard of 0.143 mg/L. MTBE was detected in the well throughout 2014 at concentrations below the applicable standard and remaining steady. Uranium concentration levels have has also exceeded the WQCC standard of 0.03 mg/L since 2010, however it is believed to be naturally occurring. Low concentrations of 1,1-dichloroethane have been detected in the well since 2011, but this is suspected to be a lab artifact.

RECOMMENDATIONS*: Change the quarterly analytical sampling test methods to: VOCs, major cations/anions, arsenic, and uranium.*

Observation well OW-11 is located within the refinery property (southeast) on the west side of the main entrance. The well is screened in the Sonsela stratigraphic unit. No BTEX, MTBE, VOCs, SVOCs (other than bis(2-ethylhexyl)phthalate detected in 2013 that is suspected to be either a lab artifact or from the PVC materials used to construct the well) have been detected OW-11. Total and dissolved uranium concentrations continue to exceed the standard of 0.03 mg/L.

RECOMMENDATIONS: *Continue with current sampling schedule.*

7.5 GROUP E – GROUNDWATER MONITORING

To date, a total of 44 permanent monitoring wells (MKTF-1 through MKTF-44) have been installed to aid in delineating the extent of a hydrocarbon seep discovered in 2013, directly west of crude tanks T-101 and T-102. During the investigation, a pre-existing well (labeled as MKTF-45) was found directly west of the truck-loading rack. The MKTF wells are sampled quarterly. BTEX, MTBE, DRO, GRO, total and dissolved, and several VOCs and SVOCs have been detected in many of the wells above the referenced standards. Recovery of SPH in several of the permanent wells will continue.

RECOMMENDATIONS:

Continue with SPH recovery from the MKTF wells that have a product layer, and continue with quarterly sampling.

7.6 ADDITIONAL MONITORING

- Continue with the sampling requirements of the most current approved Facility Wide Groundwater Monitoring Work Plan.
- Annual sampling for all wells that are not currently on an annual schedule will also include major cations/anions, VOCs, SVOCs, WQCC metals. Wells containing SPH will not be sampled.
- Submit the Annual Groundwater Monitoring Report on or before September 1 of every year.
- Submit recommendations to change or modify sampling requirements as needed.
- Conduct site assessments as required when spills/leaks are discovered.

SECTION 8

DATA TABLES

Data tables are also located on CD-R disc in Appendix K.

8.1 BW-1A/B/C, BW-2A/B/C, BW-3A/B/C

8.2 MW-1, MW-2, MW-4, MW-5

8.3 SMW-2, SMW-4

8.4 GWM-1, GWM-2, GWM-3

8.5 NAPIS-1, NAPIS-2, NAPIS-3, KA-3

8.6 Leak Detection Units (East LDU, West LDU, Oil Sump LDU)

8.7 OAPIS-1

8.8 STP1-NW

8.9 OW-13, OW-14, OW-29, OW-30

8.10 OW-50, OW-52

8.11 RW-1, RW-2, RW-5, RW-6

8.12 PW-2, PW-3, PW-4

8.13 OW-1, OW-10

8.14 OW-11, OW-12

8.15 MKTF Wells

8.16 EVAPORATION PONDS 1 - 12B

8.17 Boiler Water to EP2 (BW to EP2)

8.18 STP1 to EP2

SECTION 9

WELL DATA DTW / DTB MEASUREMENTS

The 2014 Well Data DTB/DTW Measurements has been updated with survey information submitted to and approved by NMED per notification received “Approval with Modifications, Requirement to Resurvey Groundwater Monitoring Wells and Recovery Wells issued on September 26, 2012. Western was required to resurvey the monitoring wells due to discrepancies found in applicable standards ground level elevation, well casing elevation, well casing bottom elevation and stick up lengths. All monitoring wells were surveyed by a licensed professional surveyor, DePauli Engineering 0.on June 7, 2011, April 2014, September 2014, December 2014, and January 2015. The Well Data Table is attached as Section 9.1.

The additional wells from the hydrocarbon seep (MKTF series) and the two new wells STP1-NW and STP1-SW were surveyed by Hammon Enterprises Inc., professional surveyor on September 15, 2014, December 16, 2014 and on December 16, 2014.

SECTION 10

2014 MONITORING SCHEDULE

The 2014 Well Data DTB/DTW Measurements has been updated with survey information submitted to and approved by NMED per notification received “Approval with Modifications, Requirement to Resurvey Groundwater Monitoring Wells and Recovery Wells issued on September 26, 2012. Western was required to resurvey the monitoring wells due to discrepancies found in applicable standards ground level elevation, well casing elevation, well casing bottom elevation and stick up lengths. All monitoring wells were surveyed by a licensed professional surveyor, DePauli Engineering 0.

TABLES AND APPENDICES C, F, J, K

(PLEASE SEE ATTACHED CD)

C. FIELD INSPECTION LOGS

F. NEW WELLS – MKTF 19 THRU MKTF 45

J. TEMPORARY LAND FARM ANALYTICAL RESULTS

K. HALL LABORATORY ANALYTICAL DATA

TABLES

8.1 BW-1C, BW-2A, BW-2B, BW-2C, BW-3B, BW-3C
BTEX Analytical Result Summary

			Parameters				
			Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	**0.75**	0.75	**0.62**	NE
40 CFR 141.62 MCL (June 2015)			**0.005**	1.0	**0.7**	10	NE
EPA RSL for Tap Water (June 2015)			0.00045	1.1	0.0015	0.19	**0.143[1]**
WELL ID	**DATE SAMPLED**	**METHOD**					
BW-1C	9/10/2014	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	9/9/2013	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	8/24/2012	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	10/28/2011	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	7/20/2010	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	7/6/2009	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	7/31/2008	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	12/31/2007	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	10/27/2006	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
BW-2A	9/9/2014	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	9/9/2013	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	8/24/2012	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	10/28/2011	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	7/20/2010	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	7/6/2009	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	7/30/2008	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	12/31/2007	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	10/27/2006	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
BW-2B	9/9/2014	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	9/9/2013	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	8/24/2012	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	10/28/2011	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	7/20/2010	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	7/6/2009	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	7/30/2008	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	12/31/2007	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	10/27/2006	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
BW-2C	9/10/2014	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	9/9/2013	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	8/24/2012	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	10/28/2011	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	7/20/2010	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	7/6/2009	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	7/30/2008	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	12/31/2007	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	10/27/2006	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
BW-3B	9/10/2014	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	9/9/2013	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	8/23/2012	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	10/28/2011	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	7/20/2010	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	7/6/2009	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	7/31/2008	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	12/31/2007	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	10/27/2006	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001

8.1 BW-1C, BW-2A, BW-2B, BW-2C, BW-3B, BW-3C
BTEX Analytical Result Summary

			Parameters				
			Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	**0.75**	0.75	**0.62**	NE
40 CFR 141.62 MCL (June 2015)			**0.005**	1.0	**0.7**	10	NE
EPA RSL for Tap Water (June 2015)			0.00045	1.1	0.0015	0.19	**0.143[1]**
WELL ID	**DATE SAMPLED**	**METHOD**					
BW-3C	9/10/2014	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	9/9/2013	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	8/23/2012	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	10/28/2011	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	7/20/2010	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	7/6/2009	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	8/1/2008	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	12/31/2007	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	10/27/2006	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other Standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table
1. NMED Tap Water (Dec 2014)

NOTES

8.1.1 BW-1C, BW-2A, BW-2B, BW-2C, BW-3B, BW-3C
General Chemistry Analytical Result Summary

			Parameters								
			Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Phosphorus (mg/L)	Sulfate (mg/L)	pH	Specific Conductance (µS/cm)
WQCC 20NMAC 6.2.3103			**1.6**	**250.0**	NE	NE	**10**	NE	**600.0**	**6 - 9**	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	**1.0**	10	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			0.8	NE	NE	1.6	32	**0.0004**	NE	NE	NE
Well ID	**DATE SAMPLED**	**METHOD**									
BW-1C	9/10/2014	300.0	**2.6**	33	0.12	<1	<1	<0.5	260	NA	NA
	9/9/2013	300.0	**2.1**	34	<0.1	**14**	**14**	<0.5	260	NA	NA
	8/24/2012	300.0	**2.3**	34	<0.1	<1.0	<1.0	<0.5	260	NA	NA
	10/28/2011	300.0	**2.6**	33	<0.1	**1.7**	1.7	<0.5	260	NA	NA
	7/20/2010	300.0	**2.7**	37	0.11	<1.0	<1.0	<0.5	290	8.66	1400
	8/3/2009	300.0	**2.5**	42	0.12	<0.1	<0.1	<0.5	280	8.65	1300
	7/31/2008	300.0	**2.4**	35	<0.1	<1.0	<1.0	<0.5	260	8.68	1400
	12/31/2007	300.0	**2.6**	35	NL	<1.0	<1.0	<0.5	270	8.5	1400
	10/27/2006	300.0	**2.7**	36	NL	<0.5	<0.5	<0.5	NL	8.39	1400
BW-2A	9/9/2014	300.0	1.1	37	0.4	<1	<1	**0.57**	7.1	NA	NA
	9/9/2013	300.0	0.9	37	0.39	**3.5**	3.5	<0.5	7.2	NA	NA
	8/24/2012	300.0	0.95	38	0.54	<1.0	<1.0	<0.5	6.8	NA	NA
	10/28/2011	300.0	1.1	37	0.36	<1.0	<1.0	**0.58**	7.0	NA	NA
	7/20/2010	300.0	1.2	42	0.43	<1.0	<1.0	**0.68**	7.1	8.09	1300
	8/3/2009	300.0	1.2	45	0.42	<0.1	<0.1	**1.0**	7.2	8.13	1300
	7/30/2008	300.0	1.1	40	0.43	<1.0	<1.0	**0.75**	7.3	7.87	1400
	12/31/2007	300.0	1.3	42	NL	<1.0	<1.0	**0.7**	7.7	7.76	1400
	10/27/2006	300.0	1.3	NL	NL	<0.5	<0.5	**0.64**	7.5	8.27	1400
BW-2B	9/9/2014	300.0	1.6	29	0.43	<1	<1	<0.5	160	NA	NA
	9/9/2013	300.0	**1.7**	28	0.14	**33**	**33**	<0.5	150	NA	NA
	8/24/2012	300.0	1.3	27	0.22	**1.4**	1.4	<0.5	150	NA	NA
	10/28/2011	300.0	1.6	27	0.75	<1.0	<1.0	<0.5	140	NA	NA
	7/20/2010	300.0	**1.8**	32	0.82	<1.0	<1.0	<0.5	160	8.17	2200
	8/3/2009	300.0	**1.7**	36	0.86	<0.1	<0.1	<0.5	160	8.07	2200
	7/30/2008	300.0	1.6	30	1.1	<1.0	<1.0	<0.5	150	7.76	2200
	12/31/2007	300.0	**1.8**	30	NL	<1.0	<1.0	<0.5	150	7.77	2400
	10/27/2006	300.0	**1.9**	31	NL	<0.5	<0.5	<0.5	140	8.1	1400
BW-2C	9/10/2014	300.0	**2**	42	0.11	<1	<1	<0.5	260	NA	NA
	9/9/2013	300.0	1.6	43	<0.1	**37**	**37**	<0.5	270	NA	NA
	8/24/2012	300.0	**2.0**	41	<0.5	<1.0	<1.0	<2.5	270	NA	NA
	10/28/2011	300.0	**2.0**	43	<0.1	<1.0	<1.0	<0.5	280	NA	NA
	7/20/2010	300.0	**2.1**	62	0.12	<1.0	<1.0	<0.5	310	8.73	1400
	8/3/2009	300.0	**1.9**	52	0.14	<0.1	0.13	<0.5	280	8.88	1300
	7/30/2008	300.0	**1.9**	44	0.14	<1.0	<1.0	<0.5	270	8.83	1400
	12/31/2007	300.0	**2.3**	45	NL	<1.0	<1.0	<0.5	290	8.73	1400
	10/27/2006	300.0	**2.4**	42	NL	<0.5	<0.5	<0.5	270	8.52	1300
BW-3B	9/10/2014	300.0	1.6	35	0.44	<1	<1	**1**	54	NA	NA
	9/9/2013	300.0	1.1	30	0.36	**11**	**11**	**0.87**	45	NA	NA
	8/23/2012	300.0	1.2	33	0.39	<1.0	<1.0	**0.82**	46	NA	NA
	10/28/2011	300.0	1.3	28	0.31	<1.0	<1.0	**0.84**	48	NA	NA
	7/20/2010	300.0	1.4	33	0.42	<0.01	<0.01	**1.1**	54	8.37	1500
	8/3/2009	300.0	1.5	41	0.45	<0.1	0.27	**1.4**	69	8.23	1500
	7/31/2008	300.0	1.4	34	0.42	<1.0	<1.0	**1.1**	55	7.95	1500
	12/31/2007	300.0	1.6	35	NL	<1.0	<1.0	**1.1**	51	7.93	1600
	10/27/2006	300.0	**1.7**	33	NL	<0.5	<0.5	**1.1**	250	8.5	1600
BW-3C	9/10/2014	300.0	1.3	35	0.14	<1	<1	<0.5	300	NA	NA
	9/9/2013	300.0	1.0	35	<0.1	<1.0	<1.0	<0.5	320	NA	NA
	8/23/2012	300.0	1.1	38	0.11	<1.0	<1.0	<0.5	310	NA	NA
	10/28/2011	300.0	1.4	35	<0.1	<1.0	<1.0	<0.5	320	NA	NA
	7/20/2010	300.0	1.4	41	0.12	<0.1	0.12	<0.5	380	8.57	1500
	8/3/2009	300.0	1.4	43	0.14	<0.1	0.21	<0.5	320	8.65	1500
	8/1/2008	300.0	1.5	34	<1.0	<2.0	<2.0	<5.0	240	8.63	1500
	12/31/2007	300.0	**1.8**	38	NL	<1.0	<1.0	<0.5	300	8.59	1500
	10/27/2006	300.0	**1.9**	37	NL	<0.5	<0.5	<0.5	280	8.39	1400

DEFINITIONS	STANDARDS
NE = Not established	WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
NA = Not analyzed	a) Human Health Standards; b) Other standards for Domestic Water
NL = Not listed on laboratory analysis	40 CFR 141.62 Detection Limits for Inorganic Contaminants
Bold and highlighted values represent values above the applicable standards	EPA Regional Screening Level (RSL) Summary Table

NOTES

8.1.2 BW-1C, BW-2A, BW-2B, BW-2C, BW-3B, BW-3C
Total Metals Analytical Result Summary

			Parameters											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	0.01	**0.05**	**1**	**1**	0.05	**0.2**	**0.05**	**0.002**	**0.03**	**10**
40 CFR 141.62 MCL (June 2015)			**0.01**	2	**0.005**	0.1	1.3	NE	**0.015**	NE	0.05	0.002	0.03	NE
EPA RSL for Tap Water (June 2015)			0.000052	3.8	0.0092	NE	0.8	14	0.015	0.43	0.1	6.30E-04	0.06	6
Well ID	**DATE SAMPLED**	**METHOD**												
BW-1C	9/10/2014	200.7/200.8	<0.001	0.026	<0.002	<0.006	<0.006	0.43	<0.001	0.028	<0.001	<0.0002	0.0099	<0.01
	9/9/2013	200.7/200.8	<0.001	0.027	<0.002	0.018	<0.006	0.4	<0.001	0.025	<0.001	<0.0002	0.006	<0.01
	8/24/2012	200.7/200.8	<0.0025	0.028	<0.002	**0.22**	6.2E-03	0.49	<0.005	0.068	<0.0025	<0.0002	5.2E-03	0.011
	10/28/2011	200.7/200.8	<0.0025	0.018	<0.002	0.031	<0.006	0.1	<0.005	7.7E-03	<0.0025	<0.0002	4.3E-03	<0.01
	7/20/2010	6010B	<0.02	<0.02	<0.002	<0.006	<0.006	<0.05	<0.005	8.3E-03	<0.05	<0.0002	0.003	<0.02
	7/6/2009	6010B	<0.02	<0.02	<0.002	<0.006	<0.006	<0.05	<0.005	2.7E-03	<0.05	<0.0002	0.002	<0.05
	7/31/2008	6010B	<0.02	0.016	<0.002	<0.006	<0.006	<0.05	<0.005	0.013	<0.05	<0.0002	1.15E-03	<0.02
	12/31/2007	6010B	<0.02	0.023	<0.002	<0.006	<0.006	<0.05	<0.005	0.01	<0.05	<0.0002	<0.1	<0.02
	10/28/2006	6010B	<0.02	<0.2	<0.002	<0.006	<0.006	<0.05	<0.005	NL	<0.05	<0.0002	<0.1	<0.02
BW-2A	9/9/2014	200.7/200.8	8.5E-03	0.13	<0.002	<0.006	<0.006	0.34	<0.001	0.12	0.0023	<0.0002	<0.001	<0.01
	9/9/2013	200.7/200.8	7.6E-03	0.15	<0.002	<0.006	<0.006	0.47	<0.001	0.14	<0.001	<0.0002	<0.001	<0.01
	8/24/2012	200.7/200.8	7.2E-03	0.15	<0.002	<0.006	<0.006	0.49	<0.005	0.16	<0.0025	<0.0002	<0.0025	<0.01
	10/28/2011	200.7/200.8	7.2E-03	0.16	<0.002	<0.006	<0.006	0.87	<0.005	0.19	<0.0025	<0.0002	<0.0025	<0.01
	7/20/2010	6010B	<0.02	0.13	<0.002	<0.006	<0.006	0.36	<0.005	0.12	<0.05	<0.0002	<0.001	<0.02
	7/6/2009	6010B	<0.02	0.15	<0.002	<0.006	<0.006	0.5	<0.005	0.15	<0.05	<0.0002	<0.001	<0.05
	7/30/2008	6010B	<0.02	0.14	<0.002	<0.006	<0.006	0.37	<0.005	0.14	<0.05	<0.0002	<0.001	<0.02
	12/31/2007	6010B	<0.02	0.18	<0.002	<0.006	<0.006	0.7	<0.005	**0.22**	<0.05	<0.0002	<0.1	<0.02
	10/28/2006	6010B	<0.02	0.15	<0.002	<0.006	<0.006	<0.05	<0.005	NL	<0.05	<0.0002	<0.1	<0.02
BW-2B	9/9/2014	200.7/200.8	2.2E-03	0.04	<0.002	<0.006	<0.006	0.21	<0.001	0.14	0.0048	<0.0002	0.015	<0.01
	9/9/2013	200.7/200.8	1.1E-03	0.052	<0.002	<0.006	<0.006	0.38	<0.001	0.16	1.3E-03	<0.0002	0.014	<0.01
	8/24/2012	200.7/200.8	<0.0025	0.044	<0.002	<0.006	<0.006	0.12	<0.005	0.16	<0.0025	<0.0002	0.013	<0.01
	10/28/2011	200.7/200.8	<0.0025	0.056	<0.002	<0.006	<0.006	0.57	<0.005	**0.26**	<0.0025	<0.0002	0.015	<0.01
	7/20/2010	6010B	<0.02	0.047	<0.002	<0.006	<0.006	0.16	<0.005	**0.22**	<0.05	<0.0002	0.012	<0.02
	7/6/2009	6010B	<0.02	0.099	<0.002	<0.006	<0.006	**1.8**	<0.005	**0.47**	<0.05	<0.0002	0.013	<0.02
	7/31/2008	6010B	<0.02	0.041	<0.002	<0.006	<0.006	0.064	<0.005	0.16	<0.05	<0.0002	1.15E-02	<0.02
	12/31/2007	6010B	<0.02	0.07	<0.002	<0.006	<0.006	0.62	<0.005	**0.29**	<0.05	<0.0002	<0.1	<0.02
BW-2C	9/10/2014	200.7/200.8	0.0011	0.055	<0.002	0.01	<0.006	**2.5**	0.0017	0.067	<0.001	<0.0002	5.6E-03	0.014
	9/9/2013	200.7/200.8	<0.001	0.027	<0.002	<0.006	<0.006	0.39	<0.001	0.025	<0.001	<0.0002	5.6E-03	<0.01
	8/24/2012	200.7/200.8	<0.0025	0.086	**0.013**	0.013	<0.006	**2.9**	<0.005	0.12	<0.0025	<0.0002	4.7E-03	0.025
	10/28/2011	200.7/200.8	<0.0025	0.021	<0.002	8.5E-03	<0.006	0.28	<0.005	0.023	<0.0025	<0.0002	4.3E-03	<0.01
	7/20/2010	6010B	<0.02	0.024	<0.002	0.017	<0.006	0.74	<0.005	0.033	<0.05	<0.0002	0.006	<0.02
	7/6/2009	6010B	<0.02	0.078	<0.002	<0.006	<0.006	0.85	<0.005	0.2	<0.05	<0.0002	0.005	<0.05
	7/30/2008	6010B	<0.02	0.13	<0.002	<0.006	<0.006	**1.3**	<0.005	**0.43**	<0.05	<0.0002	7.26E-03	<0.02
	12/31/2007	6010B	<0.02	0.026	<0.002	<0.006	<0.006	0.16	<0.005	0.024	<0.05	<0.0002	<0.1	<0.02
	10/28/2006	6010B	<0.02	0.031	<0.002	<0.006	<0.006	<0.05	<0.005	NL	<0.05	<0.0002	<0.1	<0.02
BW-3B	9/10/2014	200.7/200.8	4.7E-03	0.074	<0.002	<0.006	<0.006	0.32	<0.001	0.081	0.0022	<0.0002	<0.001	<0.01
	9/9/2013	200.7/200.8	4.7E-03	0.1	<0.002	<0.006	<0.006	0.51	<0.001	0.1	<0.001	<0.0002	<0.001	<0.01
	8/23/2012	200.7/200.8	4.4E-03	0.22	<0.002	0.01	<0.006	**3.6**	<0.005	**0.22**	<0.0025	<0.0002	<0.0025	0.014
	10/28/2011	200.7/200.8	4.9E-03	0.093	<0.002	7.5E-03	<0.006	0.82	<0.005	0.086	<0.0025	<0.0002	<0.0025	<0.01
	7/20/2010	6010B	<0.02	0.079	<0.002	<0.006	<0.006	0.45	<0.005	0.074	<0.05	<0.0002	<0.001	<0.02
	7/6/2009	6010B	<0.02	0.098	<0.002	<0.006	<0.006	0.62	<0.005	0.11	<0.05	<0.0002	<0.001	<0.05
	7/31/2008	6010B	<0.02	0.11	<0.002	<0.006	<0.006	0.43	<0.005	0.12	<0.05	<0.0002	<0.001	<0.02
	12/31/2007	6010B	<0.02	0.099	<0.002	<0.006	<0.006	0.64	<0.005	0.13	<0.05	<0.0002	<0.1	<0.02
	10/28/2006	6010B	<0.02	0.11	<0.002	<0.006	<0.006	<0.05	<0.005	NL	<0.05	<0.0002	<0.1	<0.02
BW-3C	9/10/2014	200.7/200.8	2.1E-03	0.11	<0.002	0.013	<0.006	**2.7**	0.0015	0.073	<0.001	<0.0002	0.0017	0.016
	9/9/2013	200.7/200.8	2.1E-03	0.073	<0.002	<0.006	<0.006	**1.5**	<0.001	0.051	<0.001	<0.0002	0.002	0.01
	8/23/2012	200.7/200.8	<0.0025	0.043	<0.002	<0.006	<0.006	0.34	<0.005	0.022	<0.0025	<0.0002	<0.0025	0.012
	10/28/2011	200.7/200.8	<0.0025	0.036	<0.002	0.007	<0.006	0.16	<0.005	0.018	<0.0025	<0.0002	<0.0025	<0.01
	7/20/2010	6010B	<0.02	0.042	<0.002	6.8E-03	<0.006	0.83	<0.005	0.021	<0.05	<0.0002	<0.001	<0.02
	7/6/2009	6010B	<0.02	0.054	<0.002	<0.006	<0.006	0.19	<0.005	0.02	<0.05	<0.0002	0.001	<0.02
	8/1/2008	6010B	<0.02	0.27	<0.002	7.8E-03	<0.006	**3.0**	<0.005	**0.41**	<0.05	<0.0002	2.51E-03	0.032
	12/31/2007	6010B	<0.02	0.068	<0.002	<0.006	<0.006	0.14	<0.005	0.015	<0.05	<0.0002	<0.1	<0.02
	10/28/2006	6010B	<0.02	0.059	<0.002	<0.006	<0.006	<0.05	<0.005	NL	<0.05	<0.0002	<0.1	<0.02

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
1) National Primary Drinking Water Regulation (May 2009); Action Level
EPA Regional Screening Level (RSL) Summary Table

NOTES:

8.1.3 BW-1C, BW-2A, BW-2B, BW-2C, BW-3B, BW-3C
Dissolved Metals Analytical Result Summary

			Parameters														
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Sodium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1.0**	0.01	NE	**0.05**	**1.0**	**1.0**	0.05	NE	**0.2**	NE	**0.05**	NE	**0.03**	**10.0**
Well ID	**DATE SAMPLED**	**METHOD**															
BW-1C	9/10/2014	200.7/200.8	<0.001	0.02	<0.002	3.2	<0.006	<0.006	<0.02	<0.005	<1	0.011	1.6	<0.001	320	8.9E-03	<0.01
	9/9/2013	200.7/200.8	<0.001	0.017	<0.002	3.3	<0.006	<0.006	<0.02	<0.001	<1.0	<0.002	1.5	<0.001	300	5.7E-03	<0.01
	8/24/2012	200.7/200.8	<0.001	0.016	<0.002	3.2	<0.006	<0.006	<0.02	<0.005	<1.0	2.9E-03	1.1	<0.001	330	0.005	<0.01
	10/28/2011	200.7/200.8	<0.001	0.016	<0.002	3.2	<0.006	<0.006	<0.02	<0.005	<1.0	<0.002	<1.0	<0.001	330	4.3E-03	0.026
	7/20/2010	6010B	<0.02	<0.02	<0.002	3.2	<0.006	<0.006	<0.02	<0.005	<1.0	9.4E-03	<1.0	<0.05	310	0.003	<0.05
	7/6/2009	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/1/2008	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/31/2007	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/28/2006	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BW-2A	9/9/2014	200.7/200.8	8.3E-03	0.16	<0.002	8.9	<0.006	<0.006	0.38	<0.005	3.3	0.13	1.2	2.7E-03	340	<0.005	<0.01
	9/9/2013	200.7/200.8	8.1E-03	0.15	<0.002	9.1	<0.006	<0.006	0.39	<0.001	3.3	0.15	1.6	1.5E-03	320	<0.001	<0.01
	8/24/2012	200.7/200.8	7.2E-03	0.14	<0.002	8.8	<0.006	<0.006	0.26	<0.005	3.4	0.13	<1.0	0.001	340	<0.001	<0.01
	10/28/2011	200.7/200.8	6.5E-03	0.13	<0.002	9.1	<0.006	<0.006	0.28	<0.005	3.3	0.12	<1.0	<0.001	350	<0.001	0.021
	7/20/2010	6010B	<0.02	0.14	<0.002	9.6	<0.006	<0.006	0.29	<0.005	3.5	0.14	<1.0	<0.05	340	<0.001	<0.05
	7/6/2009	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/1/2008	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/31/2007	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/28/2006	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BW-2B	9/9/2014	200.7/200.8	2.2E-03	0.042	<0.002	13	<0.006	<0.006	0.096	<0.001	3.0	0.14	2.1	4.7E-03	580	0.014	<0.01
	9/9/2013	200.7/200.8	1.6E-03	0.044	<0.002	13	<0.006	<0.006	0.078	<0.005	3.0	0.16	1.7	3.5E-03	570	0.014	<0.01
	8/24/2012	200.7/200.8	1.1E-03	0.043	<0.002	13	<0.006	<0.006	0.064	<0.005	3.2	0.16	1.8	1.9E-03	590	0.014	0.03
	10/28/2011	200.7/200.8	<0.001	0.051	<0.002	13	<0.006	<0.006	0.26	<0.005	3.1	**0.25**	1.3	1.3E-03	570	0.016	0.026
	7/20/2010	6010B	<0.02	0.047	<0.002	14	<0.006	<0.006	0.14	<0.005	3.1	**0.22**	1.23	1.2	580	0.012	<0.05
	7/6/2009	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/1/2008	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/31/2007	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/28/2006	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BW-2C	9/10/2014	200.7/200.8	<0.001	0.031	<0.002	3	<0.006	<0.006	0.81	<0.005	<1	2.6E-02	1.6	<0.001	300	5.1E-03	<0.01
	9/9/2013	200.7/200.8	<0.001	0.018	<0.002	2.4	<0.006	<0.006	<0.02	<0.001	<1.0	2.5E-03	1.0	<0.001	300	5.3E-03	<0.01
	8/24/2012	200.7/200.8	<0.001	0.086	0.0056	3.3	<0.006	<0.006	**3.0**	<0.005	1.5	0.049	1.8	<0.001	320	4.8E-03	0.014
	10/28/2011	200.7/200.8	<0.001	0.015	<0.002	2.2	<0.006	<0.006	<0.02	<0.005	<1.0	<0.002	<1.0	<0.001	320	4.4E-03	0.015
	7/20/2010	6010B	<0.02	<0.02	<0.002	4.9	<0.006	<0.006	0.028	<0.005	1.3	4.5E-03	<1.0	<0.05	330	0.006	<0.05
	7/6/2009	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/1/2008	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/31/2007	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/28/2006	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BW-3B	9/10/2014	200.7/200.8	6.1E-03	0.11	<0.002	8.3	<0.006	<0.006	0.42	<0.005	2.6	0.1	1.4	0.0027	390	<0.005	0.015
	9/9/2013	200.7/200.8/	5.2E-03	0.1	<0.002	8.3	<0.006	<0.006	0.44	<0.005	2.5	0.12	1.2	0.002	370	<0.005	<0.01
	8/23/2012	200.7/200.8	4.9E-03	0.091	<0.002	8.6	<0.006	<0.006	0.11	<0.005	2.7	0.11	<1.0	0.001	400	<0.001	<0.01
	10/28/2011	200.7/200.8	4.9E-03	0.11	<0.002	8.4	<0.006	<0.006	0.97	<0.005	3.0	0.12	<1.0	<0.001	400	<0.001	0.035
	7/20/2010	6010B	<0.02	0.076	<0.002	8.5	<0.006	<0.006	0.21	<0.005	2.6	0.083	<1.0	<0.05	390	<0.001	0.054
	7/6/2009	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/1/2008	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/31/2007	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/28/2006	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BW-3C	9/10/2014	200.7/200.8	0.0019	0.046	<0.002	4.1	<0.006	<0.006	0.73	<0.005	1	0.024	2	<0.001	380	<0.005	<0.01
	9/9/2013	200.7/200.8	0.002	0.039	<0.002	4.1	<0.006	<0.006	0.46	<0.005	<1.0	0.022	1.8	<0.001	340	<0.005	<0.01
	8/23/2012	200.7/200.8	2.2E-03	0.035	<0.002	3.9	<0.006	<0.006	0.031	<0.005	<1.0	0.017	1.6	<0.001	390	1.4E-03	0.012
	10/28/2011	200.7/200.8	1.7E-03	0.034	<0.002	3.8	<0.006	<0.006	<0.02	<0.005	<1.0	0.014	<1.0	<0.001	380	1.3E-03	0.066
	7/20/2010	6010B	<0.02	0.035	<0.002	3.8	<0.006	<0.006	0.073	<0.005	<1.0	0.013	<1.0	<0.05	370	0.001	<0.05
	7/6/2009	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/1/2008	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/31/2007	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/28/2006	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
1. National Secondary Drinking Water Regulation (May 2009); Action Level
EPA Regional Screening Level (RSL) Summary Table

NOTES

8.1.4 BW-1C, BW-3B, BW-3C

Semi Volatile Organic Compound Analytical Result Summary

			Parameters
			Bis(2-ethylhexyl)phthalate (mg/L)
WQCC 20NMAC 6.2.3103			NE
40 CFR 141.62 MCL (June 2015)			**0.006**
EPA RSL for Tap Water (June 2015)			0.0056
Well ID	**DATE SAMPLED**	**METHOD**	
BW-1C	9/10/2014	8270C	<0.01
	9/9/2013	8270C	**0.01**
	7/20/2010	8270C/8260	NO DETECT
	7/6/2009	8270C/8260	NO DETECT
	7/31/2008	8270C/8260	NO DETECT
	12/31/2007	8270C/8260	NO DETECT
	10/27/2006	8270C/8260	NO DETECT
BW-2A	9/17/2014	8270C	<0.01
	7/20/2010	8270C/8260	NO DETECT
	7/6/2009	8270C/8260	NO DETECT
	7/30/2008	8270C/8260	NO DETECT
	12/31/2007	8270C/8260	NO DETECT
	10/27/2006	8270C/8260	NO DETECT
BW-2B	9/17/2014	8270C	<0.01
	7/20/2010	8270C/8260	NO DETECT
	7/6/2009	8270C/8260	NO DETECT
	7/30/2008	8270C/8260	NO DETECT
	12/31/2007	8270C/8260	NO DETECT
	10/27/2006	8270C/8260	NO DETECT
BW-2C	9/10/2014	8270C	<0.01
	7/20/2010	8270C/8260	NO DETECT
	7/6/2009	8270C/8260	NO DETECT
	7/30/2008	8270C/8260	NO DETECT
	12/31/2007	8270C/8260	NO DETECT
	10/27/2006	8270C/8260	NO DETECT
BW-3B	9/10/2014	8270C	<0.01
	9/9/2013	8270C	<0.01
	8/23/2012	8270C	<0.01
	10/28/2011	8270C	<0.01
	7/20/2010	8270C/8260	<0.01
	7/6/2009	8270C/8260	**0.01** [1]
BW-3C	9/10/2014	8270C	<0.01
	9/9/2013	8270C	<0.01
	8/23/2012	8270C	<0.01
	10/28/2011	8270C	**0.014** [1]

DEFINITIONS

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or less.

a) Human Health Standards; b) Other Standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

NOTES

1) Detected for the first time. Possible lab contaminant.

8.2 MW-1, MW-2, MW-4, MW-5
BTEX Analytical Result Summary

			Parameters				
			Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	**0.75**	0.75	**0.62**	NE
40 CFR 141.62 MCL (June 2015)			**0.005**	1.0	**0.7**	10	NE
EPA RSL for Tap Water (June 2015)			0.00045	1.1	0.0015	0.19	**0.143** [1]
WELL ID	**DATE SAMPLED**	**METHOD**					
MW-1	9/16/2014	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	9/9/2013	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	8/24/2012	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	10/6/2011	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	7/16/2010	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	7/16/2009	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	8/4/2008	8260B	<0.005	<0.001	<0.001	<0.0015	NA
	12/29/2007	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	10/26/2006	8260B	<0.001	<0.001	<0.001	<0.0015	<0.0015
MW-2	9/16/2014	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	9/10/2013	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	8/24/2012	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	10/10/2011	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	7/16/2009	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
MW-4	9/17/2014	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	9/10/2013	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	8/21/2012	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	10/12/2011	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	7/19/2010	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	7/8/2009	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	8/5/2008	8260B	<0.005	<0.001	<0.001	<0.0015	NA
	12/29/2007	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	10/12/2005	8260B	<0.001	<0.001	<0.001	<0.0015	<0.0015
MW-5	9/17/2014	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	9/10/2013	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	8/23/2012	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	10/10/2011	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	7/19/2010	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	7/15/2009	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	8/13/2008	8260B	<0.005	<0.001	<0.001	<0.0015	NA
	12/29/2007	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	10/12/2005	8260B	<0.001	<0.001	<0.001	<0.0015	<0.0015

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Sandards; b) Other standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table
1. NMED Tap Water (Dec 2014)

NOTES

8.2.1 MW-1, MW-2, MW-4, MW-5
General Chemistry Analytical Result Summary

			Parameters											
			Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Phosphorus (mg/L)	Sulfate (mg/L)	pH	Specific Conductance (µS/cm)	DRO (mg/L)	GRO (mg/L)	MRO [2] (mg/L)
WQCC 20NMAC 6.2.3103			**1.6**	**250**	NE	NE	**10**	NE	**600**	**6 - 9**	NE	**0.2 [1]**	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	**1.0**	10	NE	NE	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			0.8	NE	NE	1.6	32	**0.0004**	NE	NE	NE	NE	NE	NE
WELL ID	**DATE SAMPLED**	**METHOD**												
MW-1	9/16/2014	300.0/8015D	0.69	44	0.11	<1.0	<1.0	<0.5	150	NA	NA	<1.0	<0.05	<5.0
	9/9/2013	300.0/8015B	0.61	44	<0.1	**4.1**	4.1	<0.5	150	NA	NA	<1.0	<0.05	<5.0
	8/24/2012	300.0/8015B	0.67	47	<0.1	<1.0	<1.0	<0.5	140	NA	NA	<1.0	<0.05	<5.0
	10/6/2011	300.0/8015B	0.64	47	0.11	**27**	**27**	<0.5	160	NA	NA	<1.0	<0.05	<5.0
	7/16/2010	300.0/8015B	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	<0.05	
	7/16/2009	300.0/8015B	0.76	53	NL	<1.0	<1.0	<0.5	160	**9.02**	1100	<1.0	<0.05	
	7/10/2008	300.0/8015B	**81**	51	NL	<1.0	<1.0	<0.5	160	8.95	1100	<1.0	<0.05	
	12/29/2007	300.0/8015B	0.89	53	NL	<1.0	<1.0	<0.5	170	8.89	1100	<1.0	<0.05	
	5/24/2007	300.0/8015B	0.69	53	NL	<1.0	<1.0	<0.5	170	8.89	1100	<1.0	<0.05	
	10/26/2006	300.0/8015B	0.84	46	NL	<1.0	<1.0	<0.5	150	8.98	NL	<1.0	<0.05	
MW-2	9/16/2014	300.0/8015D	0.73	51	0.11	<0.1	**21**	<0.5	150	NA	NA	<1.0	<0.05	<5.0
	9/10/2013	300.0/8015B	0.77	50	0.1	<0.1	0.11	<0.5	150	NA	NA	<1.0	<0.05	<5.0
	8/24/2012	300.0	0.67	49	<0.1	<1.0	<1.0	<0.5	150	NA	NA	<1.0	<0.05	<5.0
	10/10/2011	300.0	0.79	52	0.12	<1.0	<1.0	<0.5	160	NA	NA	<1.0	<0.05	<5.0
	7/16/2009	300.0/8015B	0.82	60	NL	<1.0	<1.0	<0.5	170	9.0	1100	<1.0	<0.05	
MW-4	9/17/2014	300.0/8015D	0.31	18	0.14	<0.1	<0.1	<0.5	140	NA	NA	<1.0	<0.05	<5.0
	9/10/2013	300.0/8015B	0.32	18	0.13	<0.1	0.14	<0.5	150	NA	NA	<1.0	<0.05	<5.0
	8/21/2012	300.0/8015B	0.29	16	0.11	<1.0	<1.0	<0.5	140	NA	NA	<1.0	<0.05	<5.0
	10/12/2011	300.0/8015B	0.35	18	0.12	**6.8**	6.8	<0.5	150	NA	NA	<1.0	<0.05	<5.0
	7/19/2010	300.0/8015B	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	<0.05	
	3/1/2010 [4]	8015B	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	<0.05	
	7/8/2009	300.0/8015B	0.37	16	NL	<1.0	<1.0	<0.5	160	8.74	1200	<1.0	<0.05	
	8/5/2008	300.0/8015B	0.37	17	NL	<1.0	<1.0	<0.5	160	8.63	1200	<1.0	<0.05	
	12/29/2007	300.0/8015B	0.42	17	NL	<1.0	<1.0	<0.5	160	8.63	1200	<1.0	<0.05	
	2006 [3]	300.0/8015B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
MW-5	9/17/2014	300.0/8015D	0.73	56	0.12	<1.0	1.1	<0.5	150	NA	NA	<1.0	<0.05	<5.0
	9/10/2013	300.0/8015B	0.76	57	0.11	<0.1	0.8	<0.5	160	NA	NA	<1.0	<0.05	<5.0
	8/23/2012	300.0/8015B	0.67	55	<0.1	<1.0	<1.0	<0.5	160	NA	NA	<1.0	<0.05	<5.0
	10/10/2011	300.0/8015B	0.79	59	0.11	<1.0	<1.0	<0.5	170	NA	NA	<1.0	<0.05	<5.0
	7/19/2010	300.0/8015B	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	<0.05	
	3/1/2010 [4]	8015B	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	<0.05	
	7/15/2009	300.0	0.76	66	NL	<1.0	<1.0	<0.5	180	8.96	1100	<1.0	<0.05	
	8/13/2008	300.0	0.85	63	0.15	<1.0	<1.0	<0.5	180	**9.02**	1200	<1.0	<0.05	
	12/29/2007	300.0	0.91	65	NL	<1.0	<1.0	<0.5	180	8.93	1200	<1.0	<0.05	
	2006 [3]	300.0/8015B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

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NA = Not analyzed
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STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other standards for Domestic Water
1) NMED Table 6-2 (Unknown Oil). TPH Screening Guidelines for Potable Ground Water (GW-1). (JUN 2012)
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table

NOTES:
2) Per NMED "Approval with Modifications Annual Ground Water Monitoring Report 2010, Rev 1", dated 12/12/12, Comment 7(a) added MRO to data table.
3) MW-4 and MW-5 were not sampled in 2006.
4) This was part of the 10 year RCRA Post Closure Sampling Event

8.2.2 MW-1, MW-2, MW-4, MW-5
Total Metals Analytical Result Summary

			Parameters										
			Arsenic (mg/L)	Barium (mg/L)	Chromium (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Cyanide (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1.0**	**0.05**	**1.0**	0.05	**0.2**	**0.05**	**0.2**	**0.002**	**0.03**	**10**
40 CFR 141.62 MCL (June 2015)			**0.01**	2.0	0.1	NE	**0.015**	NE	0.05	0.2	0.002	0.03	NE
EPA RSL for Tap Water (June 2015)			0.000052	3.8	NE	14	0.015	0.43	0.1	8.70E-05	6.3E-04	0.06	6
WELL ID	**DATE SAMPLED**	**METHOD**											
MW-1	9/16/2014	200.7/200.8	0.0011	0.012	<0.006	0.11	0.0017	0.012	<0.001	<0.01	<0.0002	0.012	<0.01
	9/9/2013	200.7/200.8	1.4E-03	0.011	<0.006	<0.02	<0.001	<0.002	<0.001	4.07E-02	<0.0002	0.011	<0.01
	8/24/2012	200.7/200.8	<0.0025	0.014	<0.006	0.078	<0.005	7.1E-03	<0.0025	NA	<0.0002	0.011	<0.01
	10/6/2011	200.7/200.8	<0.0025	0.012	<0.006	0.12	<0.005	0.01	<0.0025	NA	<0.0002	0.011	<0.01
	7/16/2010	6010B	1.46E-03	<0.02	<0.006	NL	<0.005	NL	<0.001	<0.01	<0.0002	NL	<002
	3/1/10 [2]	6010B	<0.005	<0.02	<0.006	NL	<0.005	NL	<0.005	<0.01	<0.0002	NL	<0.02
	7/16/2009	6010B	1.24E-03	0.015	<0.006	NL	<0.005	NL	<0.001	<0.01	<0.0002	NL	<0.02
	8/4/2008	6010B	<0.02	<0.02	<0.006	NL	<0.005	NL	<0.05	<0.01	<0.0002	NL	NL
	12/29/2007	6010B	**0.02**	<0.02	<0.006	0.092	<0.005	0.018	<0.05	<0.01	<0.0002	<0.1	<0.05
	10/26/2006	6010B	NL	0.019	<0.006	NL	<0.005	NL	NL	<0.01	<0.0002	NL	<0.02
MW-2	9/16/2014	200.7/200.8	<0.001	0.019	<0.006	<0.02	<0.001	0.0031	<0.001	<0.01	<0.0002	0.0095	<0.01
	9/10/2013	200.7/200.8	0.001	0.02	<0.006	<0.02	<0.001	0.006	<0.001	<0.01	<0.0002	9.7E-03	<0.01
	8/24/2012	200.7/200.8	<0.0025	0.021	<0.006	0.022	<0.005	7.2E-03	<0.0025	NA	<0.0002	9.7E-03	<0.01
	10/10/2011	200.7/200.8	<0.0025	0.02	<0.006	<0.02	<0.005	0.008	<0.0025	NA	<0.0002	9.6E-03	<0.01
	3/1/10 [2]	6010B	<0.005	<0.02	<0.006	NL	<0.005	NL	<0.005	<0.01	<0.0002	NL	<0.02
	7/16/2009	6010B	1.04E-03	0.019	<0.006	NL	<0.005	NL	<0.001	<0.01	<0.0002	NL	<0.02
MW-4	9/17/2014	200.7/200.8	<0.001	0.022	<0.006	<0.02	<0.001	0.0061	<0.001	<0.01	<0.0002	0.018	<0.01
	9/10/2013	200.7/200.8	<0.001	0.021	<0.006	<0.02	<0.001	5.8E-03	<0.001	<0.01	<0.0002	0.018	<0.01
	8/21/2012	200.7/200.8	<0.0025	0.02	<0.006	<0.02	<0.005	3.4E-03	<0.0025	NA	<0.0002	0.018	<0.01
	10/12/2011	200.7/200.8	<0.0025	0.022	<0.006	<0.02	<0.005	6.9E-03	<0.0025	NA	<0.0002	0.018	<0.01
	7/19/2010	6010B	1.17E-03	<0.02	<0.006	NL	<0.005	NL	<0.001	<0.01	<0.0002	NL	<0.02
	3/1/10 [2]	6010B	<0.005	0.023	<0.006	NL	<0.005	NL	<0.005	<0.01	<0.0002	NL	<0.02
	7/8/2009	6010B	<0.001	0.022	<0.006	NL	<0.005	NL	<0.001	<0.01	<0.0002	NL	<0.02
	8/5/2008	6010B	<0.02	<0.02	<0.006	NL	<0.005	NL	<0.05	<0.01	<0.0002	NL	<0.05
	12/29/2007	6010B	<0.02	0.021	<0.006	<0.05	<0.005	5.2E-03	<0.05	<0.01	<0.0002	<0.1	<0.05
	2006 [1]	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-5	9/17/2014	200.7/200.8	0.01	0.019	<0.006	<0.02	<0.001	0.0046	<0.001	<0.01	<0.002	0.0098	<0.01
	9/10/2013	200.7/200.8	<0.001	0.04	<0.006	<0.02	<0.001	3.5E-03	<0.001	<0.01	<0.0002	9.6E-03	<0.01
	8/23/2012	200.7/200.8	<0.0025	0.026	<0.006	<0.02	<0.005	0.012	<0.0025	NA	<0.0002	9.5E-03	<0.01
	10/10/2011	200.7/200.8	<0.0025	0.024	<0.006	<0.02	<0.005	4.3E-03	<0.0025	NA	<0.0002	9.7E-03	<0.01
	7/19/2010	6010B	1.36E-03	<0.02	<0.006	NL	<0.005	NL	<0.001	<0.01	<0.0002	NL	<0.02
	3/1/10 [2]	6010B	<0.005	0.024	<0.006	NL	<0.005	NL	<0.005	<0.01	<0.0002	NL	<0.02
	7/15/2009	6010B	<0.001	0.017	<0.006	NL	<0.005	NL	<0.001	<0.01	<0.0002	NL	<0.02
	8/13/2008	6010B	<0.02	<0.02	<0.006	NL	<0.005	NL	<0.05	NA	<0.0002	NL	<0.05
	12/29/2007	6010B	<0.02	<0.02	<0.006	<0.05	<0.005	4.5E-03	<0.05	<0.01	<0.0002	<0.01	<0.05
	2006 [1]	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

DEFINITIONS	**STANDARDS**
NE = Not established	WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS
NA = Not analyzed	Concentration or Less. a) Human Health Standards; b) Other standards for Domestic Water
NL = Not listed on laboratory analysis	40 CFR 141.62 Detection Limits for Inorganic Contaminants
Bold and highlighted values represent values above the applicable standards	EPA Regional Screening Level (RSL) Summary Table

NOTES

1) Wells MW-4, MW-5 were not sampled in 2006. Analyses for metals was not conducted in 2006.

2) This was part of the 10 year RCRA Post Closure Sampling Event.

8.2.3 MW-1, MW-2, MW-4, MW-5
Dissolved Metals Analytical Result Summary

			Parameters											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Sodium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1.0**	0.01	**0.05**	**1.0**	**1.0**	0.05	**0.2**	**0.05**	NE	**0.03**	**10.0**
WELL ID	**DATE SAMPLED**	**METHOD**												
MW-1	9/16/2014	200.7/200.8	0.0012	0.0095	<0.002	<0.006	<0.006	<0.02	<0.001	0.0027	<0.001	250	0.011	0.014
	9/9/2013	200.7/200.8	1.6E-03	0.012	<0.002	<0.006	<0.006	<0.02	<0.001	<0.002	<0.001	260	0.012	<0.01
	8/24/2012	200.7/200.8	1.3E-03	0.012	<0.002	<0.006	<0.006	<0.02	<0.005	<0.002	<0.001	260	0.011	<0.01
	10/6/2011	200.7/200.8	0.002	0.01	<0.002	<0.006	<0.006	<0.02	<0.005	<0.002	<0.001	240	0.011	0.11
	7/16/2010	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/1/2010 [2]	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/15/2009	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/4/2008	6010B	<0.02	<0.02	<0.002	<0.006	<0.006	NL	<0.005	NL	<0.05	260	NL	NL
	12/29/2007	6010B	<0.02	<0.02	<0.002	<0.006	NL	NL	<0.005	NL	<0.05	230	NL	NL
MW-2	9/16/2014	200.7/200.8	0.0012	0.017	<0.002	<0.006	<0.006	<0.02	<0.001	0.0026	<0.001	250	0.0093	0.026
	9/10/2013	200.7/200.8	<0.001	0.02	<0.002	<0.006	<0.006	<0.02	<0.001	5.1E-03	<0.001	250	9.5E-03	<0.01
	8/24/2012	200.7/200.8	<0.001	0.018	<0.002	<0.006	<0.006	<0.02	<0.005	0.003	<0.001	270	0.009	0.019
	10/10/2011	200.7/200.8	<0.001	0.019	<0.002	<0.006	<0.006	<0.02	<0.005	0.007	<0.001	260	9.3E-03	<0.01
	7/16/2010	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/1/2010 [2]	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/16/2009	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	9/17/2014	200.7/200.8	<0.001	0.018	<0.002	<0.006	<0.006	<0.02	<0.001	5.7E-03	<0.001	280	0.017	<0.01
	9/10/2013	200.7/200.8	<0.001	0.022	<0.002	<0.006	<0.006	<0.02	<0.001	5.7E-03	<0.001	280	0.018	0.017
	8/21/2012	200.7/200.8	<0.001	0.019	<0.002	<0.006	<0.006	<0.02	<0.005	3.1E-03	<0.001	290	0.016	0.033
	10/12/2011	200.7/200.8	<0.001	0.021	<0.002	<0.006	<0.006	<0.02	<0.005	5.8E-03	<0.001	290	0.017	0.1
	7/19/2010	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/1/2010 [2]	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/8/2009	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/5/2008	6010B	<0.02	<0.02	<0.002	<0.006	<0.006	NL	<0.005	NL	<0.05	280	NL	NL
	12/29/2007	6010B	<0.02	<0.02	<0.002	<0.006	<0.006	NL	<0.005	NL	<0.05	250	NL	NL
	2006 [1]	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-5	9/17/2014	200.7/200.8	0.0012	0.015	<0.002	0.006	<0.006	<0.02	<0.001	4.5E-03	<0.001	250	0.0094	0.025
	9/10/2013	200.7/200.8	0.001	0.018	<0.002	<0.006	<0.006	<0.02	<0.001	3.4E-03	<0.001	260	0.01	0.012
	8/23/2012	200.7/200.8	<0.001	0.016	<0.002	<0.006	<0.006	<0.02	<0.005	2.9E-03	<0.001	270	9.1E-03	<0.01
	10/10/2011	200.7/200.8	1.1E-03	0.016	<0.002	<0.006	<0.006	<0.02	<0.005	4.4E-03	<0.001	270	9.5E-03	0.12
	7/15/2009	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/1/2010 [2]	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/15/2009	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/13/2008	6010B	<0.02	<0.02	<0.002	<0.006	NL	NL	<0.005	NL	<0.05	260	NL	<0.05
	12/29/2007	6010B	<0.02	<0.02	<0.002	<0.006	NL	NL	<0.005	NL	<0.05	240	NL	NL
	2006 [1]	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less. a) Human Health Standards; b) Other standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table

NOTES
1) Wells MW-4, MW-5 were not sampled in 2006. Analyses for metals was not conducted in 2006.
2) This was part of the 10 year RCRA Post Closure Sampling Event.

8.2.4 MW-1, MW-2, MW-4, MW-5

Volatile and Semi-Volatile Organic Compound Analytical Result Summary

			Parameters		
			Acetone (mg/L)	**Diethyl phthalate (mg/L)**	**Bis (2-ethylhexyl) phthalate (mg/L)**
WQCC 20NMAC 6.2.3103			NE	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	**0.006**
EPA RSL for Tap Water (June 2015)			**14.1 [1]**	**14.8 [1]**	0.0056
WELL ID	**DATE SAMPLED**	**METHOD**			
MW-1	9/16/2014	8260/8270C	<0.01	<0.01	<0.01
	9/9/2013	8260/8270C	<0.01	<0.01	<0.01
	8/24/2012	8260/8270C	<0.01	<0.01	<0.01
	10/6/2011	8260B	<0.01	NL	NL
	7/16/2010	8260/8270C	<0.01	0.00103	<0.005
	3/1/2010 [3]	8260/8270C	<0.0025	NL	<0.005
	7/16/2009	8260/8270C	<0.0025	<0.01	<0.005
	8/4/2008	8260/8270C	<0.0025	<0.0005	<0.0005
	12/29/2007	8260/8270C	<0.0025	<0.01	<0.01
MW-2	9/16/2014	8260/8270C	<0.01	<0.01	<0.01
	9/10/2013	8260/8270C	<0.01	<0.01	<0.01
	8/24/2012	8260/8270C	<0.01	<0.01	<0.01
	10/10/2011	8260B	<0.01	NL	NL
	3/1/2010 [3]	8260/8270C	0.00273	<0.01	<0.005
	7/16/2009	8260/8270C	<0.0025	<0.01	<0.005
MW-4	9/17/2014	8260/8270C	<0.01	<0.01	<0.01
	9/10/2013	8260/8270C	<0.01	<0.01	<0.01
	8/21/2012	8260/8270C	<0.01	<0.01	<0.01
	10/12/2011	8260B	<0.01	NL	NL
	3/1/2010 [3]	8260/8270C	<0.0025	<0.01	<0.005
	7/19/2010	8260/8270C	<0.01	<0.01	<0.005
	7/8/2009	8260/8270C	<0.0025	NL	<0.005
	8/5/2008	8260/8270C	<0.0025	<0.0005	**0.00679**
	12/29/2007	8260/8270C	<0.01	<0.01	<0.01
	2006 [2]	8260/8270C	NA	NA	NA
MW-5	9/17/2014	8260/8270C	<0.01	<0.01	<0.01
	9/10/2013	8260/8270C	<0.01	<0.01	<0.01
	8/23/2012	8260/8270C	<0.01	<0.01	<0.01
	10/10/2011	8260B	<0.01	NL	NL
	3/1/2010 [3]	8260/8270C	0.00336	NL	<0.005
	7/19/2010	8260/8270C	<0.01	<0.01	<0.005
	7/15/2009	8260/8270C	0.00492	NL	NL
	8/13/2008	8260/8270C	<0.0025	<0.0005	<0.005
	12/29/2007	8260/8270C	<0.001	<0.01	<0.01
	2006 [2]	8260/8270C	NA	NA	NA

DEFINITIONS

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or less.

a) Human Health Standards; b) Other Standards for Domestic Water

1) NMED Tap Water (Dec 2014)

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

NOTES

2) Wells MW-4 and MW-5 were not sampled in 2006.

3) This was part of the 10 year RCRA Post Closure Sampling Event

8.3 SMW-2, SMW-4

BTEX Analytical Result Summary

			Parameters				
			Benzene (mg/L)	**Toluene (mg/L)**	**Ethylbenzene (mg/L)**	**Total Xylenes (mg/L)**	**MTBE (mg/L)**
WQCC 20NMAC 6.2.3103			0.01	**0.75**	0.75	**0.62**	NE
40 CFR 141.62 MCL (June 2015)			**0.005**	1.0	**0.7**	10	NE
EPA RSL for Tap Water (June 2015)			0.00045	1.1	0.0015	0.19	**0.143 [1]**
WELL ID	**DATE SAMPLED**	**METHOD**					
SMW-2	9/11/2014	8260B	<0.001	<0.001	<0.001	<0.0015	0.012
	9/9/2013	8260B	<0.001	<0.001	<0.001	<0.0015	0.0097
	8/23/2012	8260B	<0.01	<0.01	<0.01	<0.015	0.012
	10/12/2011	8260B	<0.001	<0.001	<0.001	<0.0015	0.0079
	7/16/2010	8260B	<0.001	<0.001	<0.001	<0.0015	0.0088
	7/27/2009	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	8/14/2008	8260B	<0.005	<0.001	<0.001	<0.0015	<0.001
	1/1/2008 [3]	8260B	<0.001	<0.001	<0.001	<0.0015	0.0099
	2006 [2]	8260B	NA	NA	NA	NA	NA
SMW-4	9/11/2014	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	9/9/2013	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	8/24/2012	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	10/10/2011	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	7/16/2010	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	7/27/2009	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	8/14/2008	8260B	<0.005	<0.001	<0.001	<0.0015	<0.001
	12/29/2007	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	2006 [2]	8260B	NA	NA	NA	NA	NA

DEFINITIONS

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other Standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

1. NMED Tap Water (Dec 2014)

NOTES

2) Wells SMW-2 and SMW-4 were not sampled in 2006.

3) Due to inclement weather in December 2007, annual samples were not collected until January 2008

8.3.1 SMW-2, SMW-4

General Chemistry and DRO/GRO Analytical Result Summary

			Parameters											
			Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Phosphorus (mg/L)	Sulfate (mg/L)	pH	Specific Conductance (µS/cm)	DRO (mg/L)	GRO (mg/L)	MRO [2] (mg/L)
WQCC 20NMAC 6.2.3103			**1.6**	**250.0**	NE	NE	**10**	NE	**600.0**	**6 - 9**	NE	**0.2 [1]**	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	**1.0**	10	NE	NE	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			0.8	NE	NE	1.6	32	**0.0004**	NE	NE	NE	NE	NE	NE
WELL ID	**DATE SAMPLED**	**METHOD**												
SMW-2	9/11/2014	300.0	<2	**2500**	2.9	<2	<2	<0.5	**1400**	NA	NA	<1	0.23	<5
	9/9/2013	300.0	<0.1	**2500**	2.1	<4.0	<4.0	<10	**1500**	NA	NA	<1.0	0.15	<5.0
	8/23/2012	300.0	0.16	**2400**	8.4	<2.0	<2.0	<0.5	**1600**	NA	NA	<1.0	0.28	<5.0
	10/12/2011	300.0	0.22	**2600**	3.1	<10	<10	<0.05	**1600**	NA	NA	<1.0	0.36	<5.0
	7/16/2010	300.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	<0.05	
	7/27/2009	300.0	0.32	**2300**	NL	<10	<10	<2.5	**1700**	7.61	7700	<1.0	0.73	
	8/14/2008	300.0	0.36	**2000**	3.1	<1.0	<1.0	<0.5	**1600**	7.25	8700	<1.0	0.36	
	1/1/2008 [4]	300.0	0.36	**2000**	NL	<2.0	<2.0	<0.5	**1600**	7.29	9200	<1.0	0.69	
	2006 [3]	300.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SMW-4	9/11/2014	300.0	1.1	53	0.19	<1	<1	<0.5	150	NA	NA	<1	<0.05	<5
	9/9/2013	300.0	0.93	59	0.16	<1.0	<1.0	<0.5	170	NA	NA	<1.0	<0.05	<5.0
	8/24/2012	300.0	1.0	58	0.35	<1.0	<1.0	<0.5	150	NA	NA	<1.0	<0.05	<5.0
	10/10/2011	300.0	1.1	58	0.2	**1.3**	1.3	<0.5	170	NA	NA	<1.0	<0.05	<5.0
	7/16/2010	300.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	<0.05	
	3/1/2010 [5]	8015B	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	<0.05	
	1/0/1900	300.0	1.2	58	NL;	<1.0	<1.0	<0.5	170	8.53	1300	<1.0	0.69	
	8/14/2008	300.0	1.1	52	0.15	0.11	0.11	<0.5	150	8.63	1200	<1.0	<0.05	
	12/29/2007	300.0	1.4	60	NL	<1.0	<1.0	<0.5	180	8.34	1300	<1.0	<0.05	
	2006 [3]	300.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

DEFINITIONS

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other standards for Domestic Water

1) NMED Table 6-2 (unknown oil). TPH Screening Guidelines for Potable Ground Water (GW-1) (JUN 2012).

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Sreening Level (RSL) Summary Table

NOTES

2) Per NMED "Approval with Modifications Annual Ground Water Monitoring Report 2010, Rev. 1", dated 12/12/12, Comment 7(a) added MRO to data tables.

3) Wells SMW-2 and SMW-4 were not sampled in 2006. Analyses for metals were not conducted in 2006.

4) *Due to inclement weather in December 2007, annual samples were not collected until January 2008*

5) This was part of the 10 year RCRA Post Closure sampling event

8.3.2 SMW-2, SMW-4

Total Metals Analytical Result Summary

			Parameters												
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Cyanide (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1.0**	0.01	**0.05**	**1.0**	**1.0**	0.05	**0.2**	**0.05**	**0.2**	**0.002**	**0.03**	**10**
40 CFR 141.62 MCL (June 2015)			**0.01**	2.0	**0.005**	0.1	1.3	NE	**0.015**	NE	0.05	0.2	0.002	0.03	NE
EPA RSL for Tap Water (June 2015)			0.000052	3.8	9.20E-03	NE	0.8	14	0.015	0.43	0.1	0.000087	6.30E-04	0.06	6
WELL ID	**DATE SAMPLED**	**METHOD**													
SMW-2	9/11/2014	200.7/200.8	<0.01	0.013	<0.002	<0.006	<0.006	0.052	<0.001	**0.28**	0.019	0.0456	<0.0002	**0.11**	<0.01
	9/9/2013	200.7/200.8	<0.01	0.028	<0.002	0.029	<0.006	0.66	<0.01	**0.27**	<0.01	0.0406	<0.0002	**0.11**	0.011
	8/23/2012	200.7/200.8	0.005	0.038	<0.002	**0.17**	<0.006	**1.5**	<0.005	**0.25**	7.2E-03	NL	<0.0002	**0.11**	0.021
	10/12/2011	200.7/200.8	0.0052	0.031	<0.002	**0.11**	<0.006	0.68	<0.005	0.16	0.011	NL	<0.0002	**0.12**	<0.01
	7/16/2010	6010B	0.0035	0.022	<0.002	**0.093**	NL	NL	<0.005	NL	<0.001	0.0525	<0.0002	NL	<0.02
	7/27/2009	6010B	0.00384	0.016	<0.002	<0.006	NL	NL	6.3E-03	NL	4.7E-03	0.0662	<0.0002	NL	<0.02
	8/14/2008	6010B	<0.02	<0.02	<0.002	9.2E-03	NL	NL	<0.005	NL	<0.05	0.0617	<0.0002	NL	0.11
	1/1/2008 [3]	6010B	<0.02	<0.02	<0.002	**0.055**	NL	NL	<0.005	NL	<0.25	0.0651	<0.0002	NL	<0.05
	2006 [2]	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SMW-4	9/11/2014	200.7/200.8	0.0034	0.024	<0.002	<0.006	<0.006	0.35	<0.001	0.012	0.0013	<0.01	<0.0002	**0.037**	<0.01
	9/9/2013	200.7/200.8	0.0025	0.021	<0.002	0.025	<0.006	0.15	<0.001	0.005	<0.001	<0.01	<0.0002	**0.031**	0.012
	8/24/2012	200.7/200.8	0.0033	0.019	<0.002	<0.006	<0.006	0.13	<0.005	4.6E-03	<0.0025	NA	<0.0002	**0.033**	<0.01
	10/10/2011	200.7/200.8	0.0029	0.037	<0.002	**0.058**	<0.006	0.94	<0.005	0.029	<0.0025	NL	<0.0002	**0.037**	0.012
	7/16/2010	6010B	0.00333	0.027	<0.002	<0.006	NL	NL	<0.005	NL	<0.001	<0.01	<0.0002	NL	<0.02
	3/1/10 [4]	6010B	<0.005	0.035	<0.002	8.2E-03	NL	NL	<0.005	NL	<0.005	<0.01	<0.0002	NL	<0.02
	7/27/2009	6010B	0.00297	0.028	<0.002	7.5E-03	NL	NL	<0.005	NL	<0.001	<0.01	<0.0002	NL	<0.02
	8/14/2008	6010B	<0.02	<0.02	<0.002	<0.006	NL	NL	<0.005	NL	<0.05	<0.01	<0.0002	NL	<0.05
	12/29/2007	6010B	<0.02	0.024	<0.002	<0.006	NL	NL	<0.005	NL	<0.05	<0.01	<0.0002	NL	<0.05
	2006 [2]	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

DEFINITIONS

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

1) National Primary Drinking Water Regulation (May 2009) Action Level

EPA Regional Sreening Level (RSL) Summary Table

NOTES

2) Wells SMW-2 and SMW-4 were not sampled in 2006. Analyses for metals were not conducted in 2006.

3) Due to inclement weather in December 2007, annual samples were not collected until January 2008

4) This was part of the 10 year RCRA Post Closure sampling event

8.3.3 SMW-2, SMW-4

Dissolved Metals Analytical Result Summary

			Parameters												
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Potassium (mg/L)	Sodium (mg/L)	Selenium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1.0**	0.01	**0.05**	**1.0**	**1.0**	0.05	**0.2**	NE	NE	**0.05**	**0.03**	**10**
WELL ID	**DATE SAMPLED**	**METHOD**													
SMW-2	9/11/2014	200.7/200.8	<0.01	0.015	<0.002	<0.006	<0.006	0.049	<0.02	**0.27**	3.7	2100	0.021	0.11	<0.01
	9/9/2013	200.7/200.8	0.0055	0.016	<0.002	<0.006	<0.006	0.028	<0.01	0.17	1.7	2200	0.011	**0.1**	0.014
	8/23/2012	200.7/200.8	<0.005	0.016	<0.002	<0.006	<0.006	0.042	<0.005	**0.22**	1.9	2100	0.0072	**0.1**	0.029
	10/12/2011	200.7/200.8	0.0064	0.016	<0.002	<0.006	<0.006	<0.1	<0.005	**0.24**	<5.0	2200	0.015	**0.11**	0.11
	7/16/2010	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/27/2009	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/14/2008	6010B	<0.02	<0.02	<0.002	<0.006	NL	NL	<0.005	NL	<1.0	1900	<0.25	NL	NL
	1/1/2008 [3]	6010B	<0.02	<0.02	<0.002	<0.006	NL	NL	<0.005	NL	1.1	1700	<0.05	NL	NL
	2006 [2]	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SMW-4	9/11/2014	200.7/200.8	0.0033	0.021	<0.002	<0.006	<0.006	0.041	<0.01	0.0033	1.4	300	0.0013	**0.033**	<0.01
	9/9/2013	200.7/200.8	0.0026	0.021	<0.002	0.012	<0.006	<0.02	<0.001	<0.002	<1.0	290	<0.001	**0.031**	<0.01
	8/24/2012	200.7/200.8	0.0028	0.016	<0.002	<0.006	<0.006	<0.02	<0.005	<0.002	<1.0	290	<0.001	0.03	<0.01
	10/10/2011	200.7/200.8	0.003	0.02	<0.002	0.0092	<0.006	0.035	<0.005	0.0041	<1.0	300	0.0011	**0.032**	0.13
	7/16/2010	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/1/10 [4]	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/27/2009	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/14/2008	6010B	<0.02	<0.02	<0.002	<0.006	NL	NL	<0.005	NL	<1.0	280	<0.05	NL	NL
	12/29/2007	6010B	<0.02	<0.02	<0.002	<0.006	NL	NL	<0.005	NL	<1.0	260	<0.05	NL	NL
	2006 [2]	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

DEFINITIONS

NE = Not established

NA = Not analyzed

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Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

1) National Primary Drinking Water Regulation (May 2009), Action Level

EPA Regional Screening Level (RSL) Summary Table

NOTES

1) Wells SMW-2 and SMW-4 were not sampled in 2006. Analyses for metals was not conducted in 2006.

3) Due to inclement weather in December 2007, annual samples were not collected until January 2008

4) This was part of the 10 year RCRA Post Closure sampling event

8.3.4 SMW-2, SMW-4

Volatile and Semi Volatile Organic Compound Analytical Result Summary

			Parameters					
			Acetone (mg/L)	bis(2-Ethylhexyl) phthalate (mg/L)	Diethylphthalate (mg/L)	Phenol (mg/L)	1,4-Dioxane (mg/L)	Benzenethiol (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	**0.005**	0.00672	NE
40 CFR 141.62 MCL (June 2015)			NE	**0.006**	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			**14.1** [1]	0.0056	**15**	5.8	**0.00776**	**0.017**
WELL ID	**DATE SAMPLED**	**METHOD**						
SMW-2	9/11/2014	8260B/8270C	<0.01	<0.011	<0.011	<0.011	NL	NL
	9/9/2013	8260B/8270C	<0.01	<0.01	<0.01	<0.01	NL	NL
	8/23/2012	8260B/8270C	<0.1	<0.01	<0.01	<0.01	NL	NL
	10/12/2011	8260B	<0.01	NA	NA	NA	NA	NA
	7/16/2010	8260B/8270C	<0.01	<0.0001	0.00189	<0.001	NL	<0.0005
	7/27/2009	8260B/8270C	0.00625	<0.0001	<0.0001	<0.001	<0.001	<0.0005
	11/13/2008	8260B/8270C	0.00753	<0.0001	<0.0001	<0.001	<0.001	<0.0005
	8/14/2008	8260B/8270C	0.00753	<0.0005	0.00057	<0.0001	**0.0136**	<0.0001
	1/1/2008 [3]	8260B/8270C	<0.01	<0.0001	<0.0001	<0.0001	**0.0148**	0.00019
	2006 [2]	8260B/8270C	NA	NA	NA	NA	NA	NA
SMW-4	9/11/2014	8260B/8270C	<0.01	<0.01	<0.01	<0.01	NL	NL
	9/9/2013	8260B/8270C	<0.01	<0.01	<0.01	<0.01	NL	NL
	8/24/2012	8260B/8270C	<0.01	<0.01	<0.01	<0.01	NL	NL
	10/10/2011	8260B	<0.01	NA	NA	NA	NA	NA
	7/16/2010	8260B/8270C	<0.01	<0.0001	<0.0001	<0.001	NL	<0.0005
	3/1/2010 [4]	8260B/8270C	<0.0025	<0.005	<0.01	<0.01	<0.005	<0.005
	7/27/2009	8260B/8270C	<0.0025	0.00105	0.00148	<0.001	<0.001	<0.0005
	8/14/2008	8260B/8270C	NA	<0.0001	0.0005	0.00113	<0.005	<0.0001
	12/29/2007	8260B/8270C	<0.01	<0.0001	<0.0001	<0.0001	<0.005	<0.0001
	2006 [2]	8260B/8270C	NA	NA	NA	NA	NA	NA

DEFINITIONS

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

1) NMED Tap Water (Dec 2014)

NOTES

2) Wells SMW-2 and SMW-4 were not sampled in 2006.

3) Due to inclement weather in December 2007, annual samples were not collected until January 2008

4) This was part of the 10 year RCRA Post Closure Sampling requirement, Total Recoverable Metals Analysis

RL > standard

8.4 GWM-1, GWM-2, GWM-3
BTEX Analytical Result Summary

			Parameters				
			Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	**0.75**	0.75	**0.62**	NE
40 CFR 141.62 MCL (June 2015)			**0.005**	1.0	**0.7**	10	NE
EPA RSL for Tap Water (June 2015)			0.00045	1.1	0.0015	0.19	**0.143** [1]
Well ID							
GWM-1	11/13/2014	8260B	**0.012**	<0.005	0.0057	0.023	0.05
	9/12/2014	8260B	**0.01**	0.0031	0.004	0.016	0.041
	6/5/2014	8260B	**0.011**	0.0021	0.0048	0.019	0.051
	3/11/2014	8260B	**0.01**	0.0022	0.0037	0.015	0.039
	11/11/2013	8260B	**0.008**	0.0023	0.0038	0.014	0.039
	9/3/2013 [4]	8260B	**0.008**	<0.005	<0.005	0.016	0.035
	6/12/2013	8260B	**0.0077**	0.0048	0.0039	0.018	0.04
	3/18/2013	8260B	**0.0098**	<0.005	<0.005	0.018	0.043
	11/28/2012	8260B	<0.01	<0.01	<0.01	<0.015	0.052
	8/21/2012	8260B	**0.0078**	0.0024	0.0035	0.015	0.044
	6/12/2012	8260B	**0.0053**	0.0014	0.0025	0.0094	0.04
	3/20/2012	8260B	**0.0057**	<0.001	0.0019	0.007	0.054
	12/14/2011	8260B	**0.0085**	0.0019	0.0042	0.014	0.054
	9/26/2011 [3]	8260B	**0.0096**	0.0052	0.0059	0.03	0.051
	6/15/2011	8260B	**0.0074**	0.0027	0.0053	0.026	0.047
	2/16/2011	8260B	**0.0095**	0.0034	0.0054	0.023	0.057
	11/2/2010	8260B	**0.0069**	0.0023	0.0035	0.022	0.062
	9/16/2010	8260B	**0.0075**	0.0049	0.0067	0.03	0.053
	7/20/2010	8260B	**0.008**	0.002	0.0068	0.03	0.077
	3/3/2010[2]	8260B	**0.012**	0.005	0.011	0.05	0.078
	7/27/2009	8260B	**0.0089**	0.002	0.0074	0.034	0.085
	7/10/2008	8260B	**0.011**	0.0021	0.0039	0.019	0.12
	5/24/2007	8260B	**0.016**	<0.001	<0.001	<0.003	**0.23**
	10/27/2006	8260B	**0.012**	<0.001	<0.001	<0.003	**0.16**
GWM-2	11/13/2014		No Samples - DRY				
	11/11/2013		Not enough water for sampling				
	9/3/2013 [4]	8260B	<0.001	<0.001	<0.001	<0.0015	0.0023
	6/12/2013	8260B	<0.001	<0.001	<0.001	<0.0015	0.0026
	3/18/2013	8260B	<0.001	<0.001	<0.001	<0.0015	0.002
	11/28/2012	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	8/21/2012	8260B	<0.001	<0.001	<0.001	<0.0015	0.0026
	6/12/2012	8021B	<0.005	<0.005	<0.005	<0.01	<0.012
	3/20/2012	8021B	<0.005	<0.005	<0.005	<0.01	<0.012
	12/14/2011	8021B	<0.001	<0.001	<0.001	a	0.0027
	9/26/2011 [3]	8021B	<0.001	<0.001	<0.001	<0.002	0.0026
	6/15/2011	8260B	<0.001	<0.001	<0.001	<0.0015	0.003
	2/16/2011	8260B	<0.001	<0.001	<0.001	<0.0015	0.0083
	10/4/2010	8260B	<0.001	<0.001	<0.001	<0.003	0.011
	9/16/2010	8260B	<0.001	<0.001	<0.001	<0.003	0.011
	2/28/2008	8260B	<0.001	<0.001	<0.001	<0.0015	0.028

8.4 GWM-1, GWM-2, GWM-3
BTEX Analytical Result Summary

			Parameters				
			Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	**0.75**	0.75	**0.62**	NE
40 CFR 141.62 MCL (June 2015)			**0.005**	1.0	**0.7**	10	NE
EPA RSL for Tap Water (June 2015)			0.00045	1.1	0.0015	0.19	**0.143** [1]
Well ID							
GWM-3	11/13/2014		No Samples - DRY				
	11/11/2013		No Samples - DRY				
	9/3/2013		No Samples - DRY				
	6/12/2013		No Samples - DRY				
	3/18/2013		No Samples - DRY				
	11/28/2012	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	8/21/2012	8260B	<0.001	<0.001	<0.001	<0.0015	1.5E-03
	6/12/2012	8021B	<0.005	<0.005	<0.005	<0.01	<0.012
	3/20/2012	8021B	<0.005	<0.005	<0.005	<0.01	<0.012
	12/14/2011	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	9/26/2011 [3]	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	6/15/2011	8260B	<0.001	<0.001	<0.001	<0.0015	0.002
	2/16/2011	8260B	<0.001	<0.001	<0.001	<0.0015	8.1E-03
	10/4/2010	8260B	<0.001	<0.001	<0.001	<0.003	9.2E-03
	9/16/2010	8260B	<0.001	<0.001	<0.001	<0.003	0.009

DEFINITIONS
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NA = Not analyzed
NL = Not listed on laboratory analysis
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STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards: b) Other Standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table
1. NMED Tap Water (Dec 2014)

NOTES:

2) GWM-1 sample schedule is on an annual basis. For this sampling period, technician used the unapproved Facility Work Plan (FWP) at the beginning of 2010. which called for this well to be sampled on a quarterly basis. The FWP was approved on August 25, 2010.
3) 9/26/2011 Quarterly sampling combined with Annual sampling event
4) Quarterly sampling combined with 2013 Annual sampling event.

8.4.1 GWM-1, GWM-2, GWM-3

General Chemistry and DRO/GRO Analytical Result Summary

			Parameters											
			Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Phosphorus (mg/L)	Sulfate (mg/L)	pH	Specific Conductance (µS/cm)	DRO (mg/L)	GRO (mg/L)	MRO [2] (mg/L)
WQCC 20NMAC 6.2.3103			**1.6**	**250.0**	NE	NE	**10**	NE	**600.0**	**6 - 9**	NE	**0.2 [1]**	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	**1.0**	10	NE	NE	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			0.8	NE	NE	1.6	32	**0.0004**	NE	NE	NE	NE	NE	NE
Well ID	**DATE SAMPLED**	**METHOD**												
GWM-1	11/13/2014	300.0/8015B	**1.8**	**1000**	2.7	<1	<1	<5	85	NA	NA	**2.3**	0.5 P	<5
	9/12/2014	300.0/8015B	**2.4**	**910**	2.8	<1	<1	<2.5	150	NA	NA	**2.1**	0.51	<5
	6/5/2014	300.0/8015B	**2.2**	**890**	2.5	<1	<1	<2.5	94	NA	NA	**3.4**	0.56	<5
	3/11/2014	300.0/8015B	**2.6**	**930**	2.9	<1	<1	<5	180	NA	NA	**3.3**	0.66	<5
	11/11/2013	300.0/8015B	**2.3**	**1000**	2.5	**4.1**	4.1	<2.5	97	NA	NA	**7.1**	0.49	NA
	9/3/2013 [4]	300.0/8015B	**3.1**	**960**	2.5	**35**	**35**	<2.5	130	NA	NA	**2.3**	0.49	<5.0
	6/12/2013	300.0/8015B	**2.7**	**940**	2.4	<1.0	<1.0	<5.0	88	NA	NA	**3.9**	0.66	<5.0
	3/18/2013	300.0/8015B	**2.7**	**1000**	2.4	<1.0	<1.0	<2.5	94	NA	NA	**5.3**	0.57	<5.0
	11/28/2012	300.0/8015B	**3.2**	**1000**	7.2	<0.5	<0.5	<2.5	150	NA	NA	**1.6**	1.1	<5.0
	8/21/2012	300.0/8015B	**3.0**	**1200**	2.5	<0.5	<0.5	<2.5	140	NA	NA	<1.0	1.2	<5.0
	6/12/2012	300.0/8015B	**3.4**	**1300**	3.5	<0.5	<0.5	<2.5	140	NA	NA	<1.0	1.2	<5.0
	3/20/2012	300.0/8015B	**3.6**	**1200**	3.2	<0.5	<0.5	<2.5	130	NA	NA	**3.5**	1.0	<5.0
	12/14/2011	300.0/8015B	1.2	**1300**	2.5	<1.0	<1.0	<10	54	NA	NA	**2.9**	0.81	<5.0
	9/26/2011	300.0/8015B	**3.5**	**1300**	1.5	<4.0	<4.0	<2.5	47	NA	NA	**3.9**	0.65	<5.0
	6/15/2011	300.0/8015B	**2.6**	**1200**	2.6	<2.0	<2.0	<2.5	64	NA	NA	**4.0**	0.53	<5.0
	2/16/2011	300.0/8015B	**2.8**	**1400**	2.5	**2.1**	2.1	<0.5	47	NA	NA	**5.4**	0.7	<5.0
	11/2/2010	300.0/8015B	**3.5**	**1300**	NL	<1.0	<1.0	<5.0	26	NA	NA	**6.0**	0.68	
	9/16/2010	300.0/8015B	**2.9**	**1400**	NL	<4.0	<4.0	<5.0	48	NA	NA	**7.7**	0.71	
	7/20/2010	300.0	**2.9**	**1500**	2.6	<4.0	<4.0	<2.5	57	7.18	6400	NA	NA	
	3/3/2010 [3]	300.0/8015B	**2.1**	**1600**	2.7	<4.0	<4.0	<0.5	88	NA	NA	**3.9**	0.88	
	7/27/2009	300.0	**2.1**	**1600**	NL	<4.0	<4.0	<0.5	73	7.03	6200	NA	NA	
	7/10/2008	300.0	**1.7**	**1800**	NL	<2.0	<2.0	<0.5	110	6.92	7400	NA	NA	
	5/24/2007	300.0	**1.9**	**1800**	NL	<2.0	<2.0	<0.5	120	NL	NL	NL	NL	
	10/26/2006	300.0	**2.0**	**3700**	NL	<2.0	<2.0	<2.5	120	6.87	NA	NA	NA	
GWM-2	11/13/2014		No Samples - DRY											
	11/11/2013		Not enough water for sampling											
	9/3/2013 [4]	300.0/8015B	0.84	**990**	3.6	**44**	**44**	<2.5	**990**	NA	NA	<1.0	<0.05	<5.0
	6/12/2013	300.0/8015B	<1.0	**960**	3.5	<1.0	<1.0	<5.0	**1000**	NA	NA	<1.0	<0.05	<5.0
	3/18/2013	300.0/8015B	1.6	**1100**	3.8	<2.0	<2.0	<2.5	**1300**	NA	NA	<1.0	0.052	<5.0
	11/28/2012	300.0/8015B	**3.8**	**1000**	7.5	<0.5	**15**	<2.5	**1500**	NA	NA	<1.0	<0.5	<5.0
	8/21/2012	300.0/8015B	**2.8**	**1200**	3.4	<0.5	**14**	<2.5	**1400**	NA	NA	<1.0	<0.25	<5.0
	6/12/2012	300.0/8015B	**3.5**	**1200**	4.0	<0.5	**24**	<2.5	**1400**	NA	NA	<1.0	<0.25	<5.0
	3/20/2012	300.0/8015B	**3.6**	**1500**	4.4	<0.5	**38**	<2.5	**1300**	NA	NA	**2.4**	<0.25	<5.0
	12/14/2011	300.0/8015B	0.48	**2100**	4.0	**25**	**25**	<10	**1000**	NA	NA	<1.0	<0.05	<5.0
	9/26/2011	300.0/8015B	1.6	**2200**	4.9	**52**	**52**	<2.5	**1200**	NA	NA	<1.0	<0.05	<5.0
	6/15/2011	300.0/8015B	**3.1**	**2200**	4.9	**66**	**66**	<2.5	**1100**	NA	NA	<1.0	<0.05	<5.0
	2/16/2011	300.0/8015B	0.43	**910**	3.3	**2.6**	2.6	<0.5	**660**	NA	NA	<1.0	<0.05	
	10/4/2010	300.0/8015B	0.52	**1800**	3.4	<4.0	<4.0	<0.5	**740**	NA	NA	<1.0	<0.05	
	9/16/2010	300.0/8015B	0.46	**1400**	NL	<4.0	<4.0	<5.0	**700**	NA	NA	<1.0	<0.05	
	2/28/2008	8015B	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	<0.05	
GWM-3	11/13/2014		No Samples - DRY											
	11/11/2013		No Samples - DRY											
	9/3/2013 [4]		No Samples - DRY											
	6/12/2013		No Samples - DRY											
	3/18/2013		No Samples - DRY											
	11/28/2012	300.0/8015B	**5.6**	**1200**	7.8	<0.5	8.8	<2.5	**1500**	NA	NA	<1.0	0.088	<5.0
	8/21/2012	300.0/8015B	**4.9**	**1200**	2.5	<0.5	**43**	<10	**1500**	NA	NA	<1.0	<0.25	<5.0
	6/12/2012	300.0/8015B	**4.4**	**1400**	3.5	<0.5	6.2	<2.5	**1400**	NA	NA	<1.0	<0.25	<5.0
	3/20/2012	300.0/8015B	**4.9**	**1300**	2.8	<0.5	**18**	<2.5	**1600**	NA	NA	**2.7**	<0.25	<5.0
	12/14/2011	300.0/8015B	**5.0**	**1400**	2.5	**51**	**51**	<10	**1800**	NA	NA	**1.3**	<0.05	<5.0
	9/26/2011	300.0/8015B	**5.3**	**1000**	2.5	**130**	**130**	<2.5	**2500**	NA	NA	**2.7**	<0.05	<5.0
	6/15/2011	300.0/8015B	**5.5**	**610**	2.3	<2.0	<2.0	<2.5	**1900**	NA	NA	**1.1**	0.12	<5.0
	2/16/2011	300.0/8015B	**4.2**	**1100**	2.1	**61**	**61**	<0.5	**1900**	NA	NA	<1.0	<0.05	<5.0
	10/4/2010	300.0/8015B	**5.9**	**1800**	2.3	**61**	**61**	<0.5	**1500**	NA	NA	**1.3**	0.12	
	9/16/2010	300.0/8015B	**4.7**	**2000**	NL	**66**	**66**	<5.0	**1500**	NA	NA	**3.7**	0.066	

DEFINITIONS

NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other Standards for Domestic Water
1) NMED Table 6 (unknown oil). TPH Screening Guidelines for Potable Ground Water (GW-1). (Jun 2013)
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table

NOTES

2) Per NMED "Approval with Modifications Annual Ground Water Monitoring Report 2010, Rev. 1", dated 12/12/12, Comment 7(a) added MRO to data tables.
3) GWM-1 sample schedule is on an annual basis. For this sampling period, technician used the unapproved Facility Work Plan (FWP) at the beginning of 2010. which called for this well to be sampled on a quarterly basis. The FWP was approved on August 25, 2010.
4) Quarterly sampling combined with 2013 Annual sampling event.

8.4.2 GWM-1, GWM-2, GWM-3

Total Metals Analytical Result Summary

			Parameters											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	0.01	**0.05**	**1**	**1**	0.05	**0.2**	**0.05**	**0.002**	**0.03**	**10**
40 CFR 141.62 MCL (June 2015)			**0.01**	2	**0.005**	NE	NE	NE	**0.015**	NE	0.05	0.002	0.03	NE
EPA RSL for Tap Water (June 2015)			0.000052	3.8	0.0092	NE	0.8	14	0.015	0.43	0.1	0.00063	0.06	6
Well ID	**DATE SAMPLED**	**METHOD**												
GWM-1	11/13/2014	200.7/200.8	**0.16**	0.51	<0.002	<0.006	0.0082	**17**	0.013	**2.2**	<0.05	<0.0002	0.015	0.027
	9/12/2014	200.7/200.8	**0.14**	0.67	<0.002	<0.006	<0.006	**13**	0.0042	**2.6**	0.019	<0.0002	0.015	0.018
	6/5/2014	200.7/200.8	**0.13**	0.54	<0.002	<0.006	<0.006	**13 B**	0.008	**2.5**	0.019	<0.0002	0.012	0.021
	3/11/2014	200.7/200.8	**0.12**	0.49	<0.002	<0.006	<0.006	**14**	0.0062	**2.5**	0.015	<0.0002	0.015	0.018
	11/11/2013	200.7/200.8	**0.13**	0.51	<0.002	<0.006	0.015	**17**	**0.017**	**2.2**	0.014	<0.0002	0.015	0.038
	9/3/2013 [4]	200.7/200.8	**0.12**	0.85	<0.002	<0.006	<0.006	**15**	0.0041	**2.8**	0.01	<0.0002	0.01	0.024
	6/12/2013	200.7/200.8	**0.15**	0.93	<0.002	<0.006	<0.006	**11**	NL	**3.1**	0.013	<0.0002	0.0073	0.019
	3/18/2013	200.7/200.8	**0.12**	0.88	<0.002	<0.006	<0.006	**8**	0.0059	**2.9**	0.0039	<0.0002	0.0055	0.012
	11/28/2012	200.7/200.8	**0.092**	0.73	<0.002	<0.006	0.021	**10**	0.012	**2.7**	0.0049	<0.0002	0.016	0.021
	8/21/2012	200.7/200.8	**0.09**	**1.1**	<0.002	<0.006	0.0091	**9.8**	0.0056	**3.1**	0.0075	<0.0002	0.0052	0.019
	6/12/2012	200.7/200.8	**0.066**	0.84	<0.002	<0.006	<0.006	**8.7**	0.011	**2.7**	0.0093	<0.001	0.011	0.019
	3/20/2012	200.7/200.8	**0.073**	**1.1**	<0.002	<0.006	<0.006	**8.9**	0.0058	**3**	0.01	<0.001	0.0069	0.016
	12/14/2011	200.7/200.8	**0.097**	0.67	<0.002	<0.006	0.029	**15**	**0.023**	**2.5**	0.0047	<0.0002	0.02	0.041
	9/26/2011 [2]	200.7/200.8	**0.12**	**1.5**	<0.002	<0.006	<0.006	**17**	<0.005	**2.8**	0.0082	<0.0002	0.007	0.025
	6/15/2011	200.7/200.8	**0.14**	**1.5**	<0.002	<0.006	<0.006	**17**	0.01	**2.8**	0.015	<0.0002	0.0084	0.026
	2/16/2011	200.7/200.8	**0.16**	0.94	<0.002	0.0089	0.0089	**17**	0.0098	**3**	0.02	<0.0002	0.015	0.038
	11/2/2010	6010B	**0.14**	**1.4**	<0.002	<0.006	<0.006	**7.9**	0.0095	**3**	<0.05	<0.0002	0.009	0.025
	9/16/2010	6010B	**0.12**	0.87	<0.002	<0.006	0.0098	**15**	0.012	**2.9**	<0.05	<0.0002	0.015	0.023
	7/20/2010	6010B	**0.16**	**1.2**	<0.002	<0.006	0.019	**20**	0.011	**3**	<0.05	<0.0002	0.011	0.031
	3/3/2010 [1]	6010B	**0.098**	0.42	<0.002	<0.006	0.0072	**15**	0.0078	**3**	<0.05	<0.0002	0.0224	0.03
	7/27/2009	6010B	**0.114**	0.53	<0.002	<0.006	<0.006	**14**	0.0072	**3.2**	<0.001	<0.0002	0.0159	0.025
	7/10/2008	6010B	**0.07**	0.45	<0.002	<0.006	0.014	**14**	0.01	**3.6**	<0.05	<0.0002	NL	<0.05
	5/24/2007	6010B	**0.081**	0.44	<0.002	<0.006	NL	NL	<0.005	NL	<0.05	<0.0002	NL	NL
	10/26/2006	6010B	**0.077**	0.53	<0.002	<0.006	NL	NL	NL	NL	NL	<0.0002	NL	NL
GWM-2 [3]	11/13/2014		No Samples - DRY											
	11/11/2013		Not enough water for sampling											
	9/3/2013 [4]	200.7/200.8	0.0076	0.059	<0.002	<0.006	0.016	0.87	0.0094	**1.1**	0.014	<0.0002	**0.16**	0.026
	6/12/2013	200.7/200.8	<0.01	0.068	<0.002	<0.006	0.012	**1.6**	NA	**1.1**	0.019	<0.0002	**0.17**	0.021
	8/21/2012	200.7/200.8	0.0066	0.04	<0.002	<0.006	0.045	0.44	0.0071	**0.45**	0.0099	<0.0002	**0.12**	0.025
GWM-3 [3]	11/13/2014		No Samples - DRY											
	11/11/2013		No Samples - DRY											
	9/3/2013 [4]		No Samples - DRY											
	6/12/2013		No Samples - DRY											
	3/18/2013		No Samples - DRY											
	8/21/2012	200.7/200.8	0.0033	0.04	<0.002	<0.006	0.22	**1.7**	**0.07**	**1**	0.0092	<0.0002	**0.067**	0.47

DEFINITIONS	**STANDARDS**
NE = Not established	WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
NA = Not analyzed	a) Human Health Standards; b) Other standards for Domestic Water
NL = Not listed on laboratory analysis	40 CFR 141.62 Detection Limits for Inorganic Contaminants
Bold and highlighted values represent values above the applicable standards	EPA Regional Screening Level (RSL) Summary Table

NOTES

1) Used unapproved Facility Work Plan (FWP) at beginning of year which required quarterly sampling. This well is sampled on an annual basis.

2) 9/26/2011 Quarterly sampling combined with Annual sampling event

3) As part of the Annual sampling requirement - Metals (Total and Dissolved) were analyzed.

4) Quarterly sampling combined with 2013 Annual sampling event.

8.4.3 GWM-1, GWM-2, GWM-3
Dissolved Metals Analytical Result Summary

			Parameters														
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Sodium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1.0**	0.01	NE	**0.05**	**1.0**	**1.0**	0.05	NE	**0.2**	NE	**0.05**	NE	**0.03**	**10.0**
Well ID	**DATE SAMPLED**	**METHOD**															
GWM-1	11/13/2014	200.7/200.8	**0.14**	0.45	<0.002	250	<0.006	<0.006	**15**	<0.01	59	**2.3**	2.1	<0.01	1100	0.014	0.029
	9/12/2014	200.7/200.8	**0.13**	0.78	<0.002	280	<0.006	<0.006	**11**	2.6E-03	63	**2.4**	3.5	0.02	1100	0.015	0.023
	6/5/2014	200.7/200.8	**0.13**	0.56	<0.002	NL	<0.006	<0.006	**12**	<0.005	NL	**2.6**	NL	0.018	NL	0.011	0.065
	3/11/2014	200.7/200.8	**0.081**	0.47	<0.002	NL	<0.006	<0.006	**2.4**	<0.001	NL	**2.5**	NL	<0.01	NL	0.015	0.021
	11/11/2013	200.7/200.8	**0.11**	0.51	<0.002	250	<0.006	<0.006	**11**	3.7E-03	59	**2.2**	3.7	0.015	1200	0.014	0.11
	9/3/2013 [4]	200.7/200.8	**0.12**	0.83	<0.002	290	<0.006	<0.006	**13**	<0.005	64	**2.7**	1.6	0.013	1100	0.011	0.1
	6/12/2013	200.7/200.8	**0.12**	0.87	<0.002	300	<0.006	<0.006	**8.1**	2.4E-03	66	**3.2**	4.1	0.02	1000	6.8E-03	0.017
	3/18/2013	200.7/200.8	**0.11**	0.83	<0.002	260	<0.006	<0.006	**6.0**	0.006	65	**2.8**	3.7	<0.005	860	0.005	0.013
	11/28/2012	200.7/200.8	**0.084**	0.83	<0.002	280	<0.006	<0.006	**8.7**	3.7E-03	71	**2.9**	2.6	5.5E-03	1000	0.019	0.11
	8/21/2012	200.7/200.8	**0.082**	**1.1**	<0.002	320	<0.006	<0.006	**6.8**	<0.005	75	**3.1**	4.1	7.6E-03	990	3.8E-03	0.03
	6/12/2012	200.7/200.8	**0.054**	**1.1**	<0.002	290	<0.006	<0.006	**4.0**	<0.005	68	**2.9**	2.9	9.9E-03	980	5.5E-03	0.016
	3/20/2012	200.7/200.8	**0.073**	0.97	<0.002	320	<0.006	<0.006	**9.4**	5.2E-03	75	**3.0**	2.5	9.6E-03	1100	0.006	0.067
	12/14/2011	200.7/200.8	**0.088**	0.52	<0.01	280	<0.03	<0.03	**11**	<0.025	65	**2.3**	<5.0	6.7E-03	1200	0.02	<0.05
	9/26/2011	200.7/200.8	**0.12**	**1.3**	<0.002	300	<0.006	<0.006	**14**	<0.005	71	**2.7**	<5.0	0.012	1200	8.1E-03	0.028
	6/15/2011	200.7/200.8	**0.1**	**1.4**	<0.01	270	<0.03	<0.03	**14**	<0.025	65	**2.7**	<5.0	0.025	1000	7.5E-03	0.063
	2/16/2011	200.7/200.8	**0.15**	0.95	<0.01	310	<0.03	<0.03	**14**	<0.025	73	**2.9**	6.4	0.014	1200	0.013	<0.05
	11/2/2010	6010B	<0.2	**1.3**	<0.002	330	<0.006	<0.006	**5.2**	9.4E-03	75	**3.0**	2.9	<0.05	1100	0.007	NL
	9/16/2010	6010B	**0.12**	**1.2**	<0.002	310	<0.006	<0.006	**15**	8.6E-03	76	**2.9**	2.8	<0.25	1200	0.01	NL
	7/20/2010 [2]	6010B	**0.15**	**1.1**	<0.002	310	<0.006	<0.006	**14**	5.6E-03	70	**2.9**	3.1	<0.05	1200	NL	<0.05
	3/2/2010 [1]	6010B	**0.074**	0.38	<0.002	280	<0.006	<0.006	**12**	8.4E-03	57	**2.7**	2.9	<0.05	1200	0.028	0.059
GWM-2 [3]	11/13/2014		No Samples - DRY														
	6/5/2014		No Samples - DRY														
	3/11/2014		No Samples - DRY														
	11/11/2013		Not enough water for sampling														
	9/3/2013 [4]	200.7/200.8	8.4E-03	0.036	<0.002	410	<0.006	0.014	0.19	8.1E-03	67	**1.1**	1.7	0.018	1000	**0.17**	0.059
	6/12/2013	200.7/200.8	9.3E-03	0.029	<0.002	410	<0.006	0.011	0.12	8.1E-03	70	**1.3**	5.7	0.023	1100	**0.17**	0.02
	3/18/2013	CATIONS	NA	NA	NA	420	NA	NA	NA	NA	72	NA	4.5	NA	1100	NA	NA
	11/28/2012	CATIONS	NA	NA	NA	370	NA	NA	NA	NA	81	NA	2.9	NA	1300	NA	NA
	8/21/2012	200.7/200.8	6.9E-03	0.033	<0.002	430	<0.006	0.041	0.13	0.012	82	**0.55**	4.2	0.012	1300	**0.12**	0.039
	6/12/2012	CATIONS	NA	NA	NA	420	NA	NA	NA	NA	79	NA	2.8	NA	1400	NA	NA
	3/20/2012	CATIONS	NA	NA	NA	620	NA	NA	NA	NA	120	NA	4.1	NA	1500	NA	NA
	12/14/2011	CATIONS	NA	NA	NA	530	NA	NA	NA	NA	95	NA	2.9	NA	1500	NA	NA
	9/26/2011	CATIONS	NA	NA	NA	620	NA	NA	NA	NA	110	NA	4.2	NA	1600	NA	NA
	6/15/2011	CATIONS	NA	NA	NA	570	NA	NA	NA	NA	120	NA	4.2	NA	1600	NA	NA
	2/16/2011	CATIONS	NA	NA	NA	450	NA	NA	NA	NA	74	NA	3.7	NA	1000	NA	NA
	10/4/2010	CATIONS	NA	NA	NA	420	NA	NA	NA	NA	77	NA	3.0	NA	910	NA	NA
	9/16/2010	CATIONS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GWM-3 [3]	11/13/2014		No Samples - DRY														
	6/5/2014		No Samples - DRY														
	3/11/2014		No Samples - DRY														
	11/11/2013		No Samples - DRY														
	9/3/2013 [4]		No Samples - DRY														
	6/12/2013		No Samples - DRY														
	3/18/2013		No Samples - DRY														
	11/28/2012	CATIONS	NA	NA	NA	340	NA	NA	NA	NA	70	NA	4.3	NA	1200	NA	NA
	8/21/2012	200.7/200.8	<0.005	0.029	<0.002	390	<0.006	0.23	0.88	**0.063**	75	**1.7**	4.9	9.9E-03	1200	**0.066**	0.46
	6/12/2012	CATIONS	NA	NA	NA	400	NA	NA	NA	NA	78	NA	<10	NA	1300	NA	NA
	3/20/2012	CATIONS	NA	NA	NA	480	NA	NA	NA	NA	87	NA	3.7	NA	1400	NA	NA
	12/14/2011	CATIONS	NA	NA	NA	440	NA	NA	NA	NA	79	NA	4.6	NA	1300	NA	NA
	9/26/2011	CATIONS	NA	NA	NA	500	NA	NA	NA	NA	91	NA	5.1	NA	1300	NA	NA
	6/15/2011	CATIONS	NA	NA	NA	470	NA	NA	NA	NA	83	NA	5.7	NA	1200	NA	NA
	2/16/2011	CATIONS	NA	NA	NA	450	NA	NA	NA	NA	81	NA	7.9	NA	1200	NA	NA
	10/4/2010	CATIONS	NA	NA	NA	450	NA	NA	NA	NA	89	NA	7.6	NA	1300	NA	NA
	9/16/2010	CATIONS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table

NOTES
1) Used unapproved FWGWMP sampling guidelines for first quarter 2010 which lists this well to be sampled on a quarterly basis. (GWM-1 is on an annual sampling schedule)
2) Began using approved 2010 FWGWMP (August 25, 2010)
3) As part of the Annual sampling requirement - Metals (Total and Dissolved) were analyzed.
4) Quarterly sampling combined with 2013 Annual sampling event.

8.4.4 GWM-1, GWM-2, GWM-3

Volatile and Semi-Volatile Organic Compound Analytical Result Summary

			Parameters									
			1,2,4-Trimethyl benzene (mg/L)	1,3,5-Trimethyl benzene (mg/L)	Naphthalene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	Acetone (mg/L)	Isopropyl benzene (mg/L)	n-Butyl benzene (mg/L)	n-Propyl benzene (mg/L)	2,4-Dimethyl phenol (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			**0.015**	**0.12**	**0.00017**	**0.0011**	**0.036**	**14.1 [1]**	**0.447 [1]**	**1**	**0.66**	**0.354 [1]**
Well ID	**DATE SAMPLED**	**METHOD**										
GWM-1	11/13/2014	8260B	0.0057	<0.005	<0.01	<0.02	<0.02	<0.05	<0.005	<0.015	<0.005	NA
	9/12/2014	8260B	0.0098	0.0012	<0.002	0.013	<0.004	<0.01	0.0014	<0.003	0.003	NA
	6/5/2014	8260B	0.011	0.0012	<0.002	**0.012**	<0.004	0.02	0.0017	<0.003	0.0021	NA
	3/11/2014	8260B	0.007	<0.001	<0.002	**0.0068**	<0.004	<0.01	0.0011	<0.003	0.0016	NA
	11/11/2013	8260B	0.0052	<0.001	<0.002	**0.0047**	<0.004	<0.01	0.0012	<0.003	0.0018	NA
	9/3/2013 [6]	8260B/8270C	0.011	<0.005	<0.01	<0.02	<0.02	<0.05	<0.005	<0.015	<0.005	0.077
	6/12/2013	8260B	0.013	0.0027	<0.002	**0.018**	<0.004	0.013	0.0012	<0.003	0.0018	NA
	3/18/2013	8260B	**0.019**	<0.005	<0.01	<0.02	<0.02	<0.05	<0.005	<0.015	<0.005	NA
	11/28/2012	8260B	<0.01	<0.01	<0.02	<0.04	<0.04	<0.1	<0.01	<0.03	<0.01	NA
	8/21/2012	8260B/8270C	0.0097	0.0019	<0.002	**0.013**	<0.004	<0.01	0.0011	<0.003	0.0022	0.032
	6/12/2012	8260B	0.0049	<0.001	<0.002	**0.0063**	<0.004	0.011	<0.001	<0.001	0.0016	NA
	3/20/2012	8260B	0.0018	<0.001	<0.002	<0.004	<0.004	0.011	<0.001	<0.001	0.0011	NA
	12/14/2011	8260B	0.004	<0.001	<0.002	**0.0052**	<0.004	<0.01	0.0013	<0.001	0.0022	NA
	9/26/2011 [5]	8260B	**0.019**	0.0029	**0.0044**	**0.028**	<0.004	<0.01	0.0019	<0.01	0.0027	NA
	6/15/2011	8260B	**0.018**	0.0031	**0.0055**	**0.024**	0.0062	<0.01	0.0018	<0.01	0.0028	NA
	2/16/2011	8260B	0.008	<0.001	<0.002	**0.01**	<0.004	<0.01	0.0014	<0.001	0.0018	NA
	11/2/2010	8260B	0.0075	<0.001	<0.02	**0.011**	<0.004	<0.01	<0.001	0.0016	0.0012	NA
	9/16/2010 [4]	8260B	0.012	0.0019	NA	NA	NA	NA	NA	NA	NA	NA
	7/20/2010 [3]	8260B/8270C	0.013	<0.001	**0.0035**	**0.0072**	<0.004	0.012	0.0016	0.0019	0.0015	0.052
	3/3/2010 [2]	8260B	0.0081	<0.005	<0.01	<0.02	<0.02	<0.05	<0.005	<0.005	<0.005	NA
	7/27/2009	8260B/8270C	0.0064	0.0011	**0.0024**	**0.0097**	<0.004	<0.01	0.0026	<0.001	0.0002	0.064
	7/10/2008	8260B	0.0046	<0.002	<0.002	<0.008	<0.008	<0.02	<0.002	<0.002	<0.002	0.028
	5/24/2007	8260B/8270C	<0.01	<0.01	<0.02	<0.04	<0.04	<0.1	<0.01	<0.01	<0.01	<0.01
GWM-2	11/13/2014		No samples - DRY									
	11/11/2013		Not enough water for sampling									
	9/3/2013 [6]	8206B	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.001	<0.003	<0.001	<0.01
	6/12/2013	8260B	<0.001	<0.001	<0.002	<0.004	<0.004	0.011	<0.001	<0.003	<0.001	NA
	3/18/2013	8260B	<0.001	<0.001	<0.002	<0.004	<0.004	0.011	<0.001	<0.003	<0.001	NA
	6/15/2011	8260B	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.001	<0.001	<0.001	NA
	2/16/2011	8260B	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.001	<0.001	<0.001	NA
GWM-3	11/13/2014		No samples - DRY									
	11/11/2013		No Samples - DRY									
	9/3/2013 [6]		No Samples - DRY									
	6/12/2013		No Samples - DRY									
	3/18/2013		No Samples - DRY									
	6/15/2011	8260B	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.001	<0.001	<0.001	NA
	2/16/2011	8260B	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.001	<0.001	<0.001	NA

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other Standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table
1. NMED Tap Water (Dec 2014)

NOTES:
2) Used unapproved 2010 Facility Wide Ground Water Monitoring Plan (FWGWMP) first quarter 2010.
3) Began using approved 2010 FWGWMP (August 25, 2010).
4) Method 8260B volatiles short list only run
5) 9/26/2011 Quarterly sampling combined with Annual sampling event
6) Quarterly sampling combined with 2013 Annual sampling event.

8.5 NAPIS-1, NAPIS-2, NAPIS-3, KA-3
BTEX Analytical Result Summary

			Parameters				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	**0.75**	0.75	**0.62**	NE
40 CFR 141.62 MCL (June 2015)			**0.005**	1.0	**0.7**	10	NE
EPA RSL for Tap Water (June 2015)			4.5E-04	1.1	0.0015	0.19	**0.143** [1]
Well ID	**DATE SAMPLED**	**METHOD**					
NAPIS 1	11/11/2014	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	9/11/2014	8021B	0.0014	<0.001	<0.001	<0.0015	<0.001
	6/5/2014	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	3/10/2014	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	11/12/2013	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	9/3/2013 [3]	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	6/12/2013	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	3/18/2013	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	11/28/2012	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	8/21/2012	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	6/12/2012	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	3/20/2012	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	12/14/2011	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	9/27/2011	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	6/15/2011	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	3/2/2011	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	11/2/2010	8260	<0.001	<0.001	<0.001	<0.003	<0.0015
	9/15/2010	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	6/8/2010	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	3/8/2010	8021B	<0.001	<0.001	<0.001	<0.002	NL
	11/23/2009	8260B	<0.001	1.6E-03	<0.001	<0.002	<0.0025
	8/11/2009	8260B	<0.001	<0.001	<0.001	<0.002	<0.0025
	5/28/2009	8260B	<0.001	<0.001	<0.001	<0.002	<0.0025
	3/24/2009	8260B	<0.001	0.001	<0.001	<0.002	<0.0025
	11/10/2008	8260B	<0.001	<0.001	<0.001	<0.002	<0.0025
	9/30/2008	8260B	<0.001	<0.001	<0.001	<0.002	NL
	7/9/2008	8260B	<0.001	<0.001	<0.001	<0.002	<0.0025
	4/11/2008	8260B	<0.001	<0.001	<0.001	<0.002	<0.0025

8.5 NAPIS-1, NAPIS-2, NAPIS-3, KA-3
BTEX Analytical Result Summary

			Parameters				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	**0.75**	0.75	**0.62**	NE
40 CFR 141.62 MCL (June 2015)			**0.005**	1.0	**0.7**	10	NE
EPA RSL for Tap Water (June 2015)			4.5E-04	1.1	0.0015	0.19	**0.143** [1]
Well ID	**DATE SAMPLED**	**METHOD**					
NAPIS 2	11/11/2014	8021B	**0.016**	<0.001	5.2E-03	<0.002	**0.34**
	9/11/2014	8021B	**0.027**	<0.001	7.0E-03	<0.0015	**0.29**
	6/5/2014	8021B	**0.086**	0.0021	2.8E-02	0.0037	**0.2**
	3/10/2014	8021B	**0.067**	<0.001	2.8E-02	<0.002	**0.21**
	11/12/2013	8021B	0.001	<0.001	8.3E-03	<0.002	**0.25**
	9/3/2013 [3]	8260B	**0.018**	<0.001	0.013	1.6E-03	**0.24**
	6/12/2013	8021B	**0.013**	<0.001	0.047	<0.002	**0.3**
	3/18/2013	8021B	**0.07**	<0.001	0.056	2.2E-03	**0.38**
	11/28/2012	8021B	**0.016**	<0.002	0.003	<0.004	**0.36**
	8/21/2012	8260B	**0.01**	<0.005	<0.005	<0.0075	**0.16**
	6/12/2012	8021B	**0.018**	<0.01	0.012	<0.02	**0.34**
	3/20/2012	8021B	**0.019**	<0.01	0.011	<0.02	**0.37**
	12/14/2011	8021B	**0.022**	<0.005	8.9E-03	<0.01	**0.33**
	9/27/2011	8021B	**0.035**	<0.005	<0.005	<0.01	**0.33**
	6/15/2011	8260B	**0.027**	<0.005	0.018	<0.0075	**0.28**
	3/2/2011	8021B	**0.04**	<0.005	0.014	<0.01	**0.34**
	11/2/2010	8260	**0.015**	<0.005	<0.005	<0.0015	**0.27**
	9/15/2010	8260B	**0.066**	<0.005	8.3E-03	<0.015	**0.23**
	6/10/2010	8021B	**0.14**	<0.005	9.6E-03	<0.001	**0.23**
	3/8/2010	8260B	**0.083**	1.4E-03	0.016	2.1E-03	**0.25**
	11/23/2009	8260B	**0.032**	0.001	9.3E-03	<0.002	0.094
	8/11/2009	8260B	**0.057**	<0.001	0.022	<0.002	0.089
	5/28/2009	8260B	**0.028**	<0.005	5.3E-03	<0.01	**0.13**
	3/24/2009	8260B	**0.019**	1.1E-03	8.1E-03	<0.002	0.09
	11/10/2008	8260B	**0.025**	<0.001	0.011	<0.002	**0.18**
	9/30/2008	8260B	**0.016**	<0.001	1.6E-03	4.1E-03	NL
	7/9/2008	8260B	**0.013**	<0.001	0.011	5.6E-03	**0.2**
	4/11/2008	8260B	**0.91**	0.019	0.051	0.12	**0.32**

8.5 NAPIS-1, NAPIS-2, NAPIS-3, KA-3
BTEX Analytical Result Summary

			Parameters				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	**0.75**	0.75	**0.62**	NE
40 CFR 141.62 MCL (June 2015)			**0.005**	1.0	**0.7**	10	NE
EPA RSL for Tap Water (June 2015)			4.5E-04	1.1	0.0015	0.19	**0.143** [1]
Well ID	**DATE SAMPLED**	**METHOD**					
NAPIS 3	11/13/2014	8021B	<0.001	<0.001	<0.001	<0.0015	<0.001
	9/11/2014	8021B	0.0038	<0.001	0.0019	<0.0015	0.011
	6/5/2014	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	3/10/2014	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	11/12/2013	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	9/3/2013 [3]	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	6/12/2013	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	3/18/2013	8021B	<0.002	<0.002	<0.002	<0.004	<0.005
	11/28/2012	8021B	<0.002	<0.002	<0.002	<0.004	<0.005
	10/2/2012 [2]	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	6/12/2012	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	3/20/2012	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	12/14/2011	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	9/27/2011	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	6/15/2011	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	3/2/2011	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	11/2/2010	8260	<0.001	<0.001	<0.001	<0.0015	<0.0015
	9/15/2010	8021B	0.001	<0.001	<0.001	<0.002	<0.0025
	6/10/2010	8021B	**0.2**	<0.001	0.012	<0.002	0.08
	3/8/2010	8021B	**0.072**	<0.001	0.001	<0.002	NL
	11/23/2009	8260B	<0.001	<0.001	<0.001	<0.002	<0.0025
	8/31/2009	8260B	<0.001	<0.001	<0.001	<0.002	<0.0025
	6/15/2009	8260B	<0.001	<0.001	<0.001	<0.002	<0.0025
	3/25/2009	8260B	<0.001	<0.001	<0.001	<0.002	<0.0025
	11/10/2008	8260B	<0.001	<0.001	<0.001	<0.002	<0.0025

8.5 NAPIS-1, NAPIS-2, NAPIS-3, KA-3
BTEX Analytical Result Summary

			Parameters				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	**0.75**	0.75	**0.62**	NE
40 CFR 141.62 MCL (June 2015)			**0.005**	1.0	**0.7**	10	NE
EPA RSL for Tap Water (June 2015)			4.5E-04	1.1	0.0015	0.19	**0.143** [1]
Well ID	**DATE SAMPLED**	**METHOD**					
KA 3	11/11/2014	8021B	<0.001	<0.001	<0.001	<0.002	1.3E-02
	9/11/2014	8021B	<0.001	<0.001	<0.001	<0.0015	<0.001
	6/5/2014	8021B	<0.001	<0.001	<0.001	<0.002	5.6E-03
	3/10/2014	8021B	<0.001	<0.001	<0.001	<0.002	3.9E-03
	11/12/2013	8021B	2.4E-03	<0.001	1.8E-03	<0.002	6.5E-03
	9/3/2013 [3]	8260B	3.4E-03	<0.001	1.4E-03	<0.0015	**0.2**
	6/12/2013	8021B	**0.009**	<0.001	8.3E-03	<0.002	0.031
	3/18/2013	8021B	**0.011**	<0.001	0.011	<0.002	0.017
	11/28/2012	8021B	<0.002	<0.002	<0.002	<0.004	<0.005
	8/21/2012	8260B	<0.001	<0.001	<0.001	<0.0015	0.023
	6/12/2012	8021B	**0.013**	<0.001	4.5E-03	<0.002	0.028
	3/20/2012	8021B	**0.015**	<0.002	4.2E-03	<0.004	0.035
	12/14/2011	8021B	**0.024**	<0.001	4.5E-03	<0.002	0.057
	9/27/2011	8021B	**0.064**	<0.001	0.011	<0.002	0.099
	6/15/2011	8260B	<0.001	<0.001	<0.001	<0.0015	0.077
	3/2/2011	8021B	<0.005	<0.005	<0.005	<0.01	0.088
	11/2/2010	8260	**0.23**	<0.01	0.014	<0.03	0.1
	9/15/2010	8260B	**0.52**	<0.01	0.031	<0.03	0.11
	6/10/2010	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	3/8/2010	8021B	<0.01	<0.01	<0.01	<0.01	NL
	11/23/2009	8260B	<0.001	<0.001	<0.001	<0.002	0.077
	8/31/2009	8260B	<0.001	<0.001	<0.001	<0.002	**0.17**
	5/28/2009	8260B	3.3E-03	1.2E-03	<0.001	<0.002	**0.13**
	3/25/2009	8260B	<0.001	<0.001	<0.001	<0.002	0.11
	7/9/2008	8260B	<0.001	<0.001	<0.001	<0.002	<0.0025
	11/10/2008	8260B	<0.001	<0.001	<0.001	<0.002	**0.13**
	9/30/2008	8260B	Not enough water for sampling				

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other Standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table
1. NMED Tap Water (Dec 2014)

NOTES
2) Was not sampled in September due to low recharge rate.
3) Quarterly combined with 2013 Annual sampling event.

8.5.1 NAPIS-1, NAPIS-2, NAPIS-3, KA-3

General Chemistry and DRO/GRO Analytical Result Summary

			Parameters											
			Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Phosphorus (mg/L)	Sulfate (mg/L)	pH	Specific Conductance (µS/cm)	DRO (mg/L)	GRO (mg/L)	MRO [2] (mg/L)
WQCC 20NMAC 6.2.3103			**1.6**	**250.0**	NE	NE	**10**	NE	**600.0**	**6 TO 9**	NE	**0.2 [1]**	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	**1.0**	10	NE	NE	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			0.8	NE	NE	1.6	32	**4.0E-04**	NE	NE	NE	NE	NE	NE
Well ID	**DATE SAMPLED**	**METHOD**												
NAPIS 1	11/11/2014	300.0/8015B	**0.69**	110	1.5	**5.1**	5.1	<0.5	130	NA	NA	<1	<0.05	
	9/11/2014	300.0/8015B	0.46	91	1.1	**7.1**	7.1	<0.5	110	NA	NA	<1	<0.05	<5
	6/5/2014	300.0/8015B	0.4	86	1.4	**14**	**14**	<0.5	140	NA	NA	<1	<0.05	<5
	3/10/2014	300.0/8015B	**<0.5**	79	1.7	<0.5	29	<2.5	180	NA	NA	<1	<0.05	<5
	11/12/2013	300.0/8015B	0.42	120	1.6	<0.1	**30**	<0.5	210	NA	NA	<1.0	<0.05	NA
	9/3/2013 [6]	300.0/8015B	0.53	110	0.4	**34**	**34**	<0.5	69	NA	NA	<1.0	<0.05	<5.0
	6/12/2013	300.0/8015B	<1.0	89	2.0	**3.3**	3.3	<5.0	35	NA	NA	<1.0	<0.05	<5.0
	3/18/2013	300.0/8015B	0.63	97	1.8	**1.1**	1.1	<2.5	39	NA	NA	<1.0	<0.05	<5.0
	11/28/2012	300.0/8015B	1.1	110	2.0	<0.5	1.4	<2.5	70	NA	NA	<1.0	<0.05	<5.0
	8/21/2012	300.0/8015B	0.54	96	1.8	<0.5	2.6	<2.5	52	NA	NA	<1.0	<0.05	<5.0
	6/12/2012	300.0/8015B	0.88	120	1.7	<0.5	2.9	<2.5	68	NA	NA	<1.0	<0.05	<5.0
	3/20/2012	300.0/8015B	0.49	100	1.6	<0.1	3.3	<0.5	56	NA	NA	<1.0	<0.05	<5.0
	12/14/2011	300.0/8015B	0.67	150	2.0	**4.7**	4.7	<10	82	NA	NA	<1.0	<0.05	<5.0
	9/27/2011	300.0/8015B	1.1	180	2.2	**58**	**58**	<2.5	110	NA	NA	<1.0	<0.05	<5.0
	6/15/2011	300.0/8015B	0.52	140	1.8	<0.1	6.2	<0.5	78	NA	NA	<1.0	0.11	<5.0
	3/2/2011	300.0/8015B	0.42	180	2.1	**9.5**	9.5	<0.5	92	NA	NA	<1.0	<0.05	<5.0
	11/2/2010	300.0/8015B	0.96	200	NL	<2.0	6.9	<0.5	98	NA	NA	<1.0	<0.05	
	9/15/2010	300.0/8015B	0.5	189	NL	**11.2**	**11.2**	**0.019**	65	NA	NA	<1.0	<0.05	
	6/8/2010	300.0/8015B	0.73	170	2.2	**4.0**	4.0	<0.5	56	7.86	1800	<1.0	<0.05	
	3/8/2010	300.0/8015B	0.75	130	1.7	**2.0**	2.0	<0.5	52	NA	NA	<1.0	<0.05	
	11/23/2009	300.0/8015B	1.4	170	NL	**1.8**	1.8	<0.5	100	7.39	2000	<1.0	<0.05	
	8/11/2009	300.0/8015B	1.2	160	NL	0.54	0.54	<0.5	93	7.67	1800	<1.0	<0.05	
	5/28/2009	300.0/8015B	1.2	150	NL	0.31	0.31	<0.5	71	7.82	1900	<1.0	<0.05	
	3/24/2009	300.0/8015B	0.69	120	NL	<1.0	<1.0	<0.5	38	7.69	2000	<1.0	<0.05	
	11/10/2008	300.0/8015B	0.73	160	NL	<0.1	1.6	<0.05	63	7.3	1900	<1.0	<0.05	
	9/30/2008	8015B	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	<0.05	
	7/9/2008	300.0/8015B	1.4	180	NL	<1.0	<1.0	<0.5	98	7.27	1900	<1.0	<0.05	
	4/11/2008	300.0/8015B	0.79	170	NL	0.55	0.55	<0.5	<0.5	7.26	2000	<1.0	<0.05	

8.5.1 NAPIS-1, NAPIS-2, NAPIS-3, KA-3

General Chemistry and DRO/GRO Analytical Result Summary

			Parameters											
			Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Phosphorus (mg/L)	Sulfate (mg/L)	pH	Specific Conductance (µS/cm)	DRO (mg/L)	GRO (mg/L)	MRO [2] (mg/L)
WQCC 20NMAC 6.2.3103			**1.6**	**250.0**	NE	NE	**10**	NE	**600.0**	**6 TO 9**	NE	**0.2 [1]**	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	**1.0**	10	NE	NE	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			0.8	NE	NE	1.6	32	**4.0E-04**	NE	NE	NE	NE	NE	NE
Well ID	**DATE SAMPLED**	**METHOD**												
NAPIS 2	11/11/2014	300.0/8015B	1.6	**330**	1.4	<1	<1	<2.5	11	NA	NA	<1	0.6	<5
	9/11/2014	300.0/8015B	1.6	**360**	1.1	<1	<1	<0.5	11	NA	NA	**1.3**	0.41	<5
	6/5/2014	300.0/8015B	1.3	**330**	0.94	<1	<1	<0.5	4.8	NA	NA	**1.5**	0.62	<5
	3/10/2014	300.0/8015B	1.5	220	1.6	<1	<1	<5	10	NA	NA	**1.8**	0.64	<5
	11/12/2013	300.0/8015B	**1.7**	**260**	1.4	<0.1	<0.1	<0.5	23	NA	NA	**1.4**	0.41	NA
	9/3/2013 [6]	300.0/8015B	**1.8**	**290**	0.37	**5.2**	5.2	<0.5	7.8	NA	NA	<1.0	0.47	<5.0
	6/12/2013	300.0/8015B	1.6	230	1.2	<1.0	<1.0	<5.0	7.8	NA	NA	**1.9**	0.74	<5.0
	3/18/2013	300.0/8015B	1.6	**270**	1.2	<1.0	<1.0	<2.5	4.9	NA	NA	**2.9**	0.65	<5.0
	11/28/2012	300.0/8015B	**1.7**	**370**	1.7	<0.5	<0.5	<2.5	11	NA	NA	<1.0	0.52	<5.0
	8/21/2012	300.0/8015B	1.6	**370**	1.4	<0.5	<0.5	<2.5	11	NA	NA	<1.0	1.4	<5.0
	6/12/2012	300.0/8015B	**1.7**	**350**	1.5	<0.5	<0.5	<2.5	7.9	NA	NA	<1.0	1.3	<5.0
	3/20/2012	300.0/8015B	0.49	**330**	0.94	<1.0	<1.0	<0.5	5.3	NA	NA	**4.7**	1.4	<5.0
	1/30/2012 [4]	300.0/8015B	1.1	**420**	1.4	<1.0	<1.0	<2.5	<2.5	7.12	2200	NA	NA	NA
	12/14/2011 [3]	300.0/8015B	NA	NA	NA	NA	NA	NA	NA	NA	NA	**3.4**	0.61	<5.0
	9/27/2011	300.0/8015B	**1.8**	**270**	1.2	**80**	**80**	<2.5	6.0	NA	NA	**3.1**	0.69	<5.0
	6/15/2011	300.0/8015B	1.4	**380**	<2.0	<0.5	<2.0	<2.5	3.3	NA	NA	**1.8**	0.97	<5.0
	3/2/2011	300.0/8015B	1.3	**360**	1.3	<1.0	<1.0	<2.5	3.7	NA	NA	**2.8**	1.3	<5.0
	11/2/2010	300.0/8015B	**1.7**	230	NL	<1.0	<1.0	<0.5	7.8	NA	NA	**5.1**	0.57	
	9/15/2010	300.0/8015B	1.3	220	NL	<0.5	<0.5	**0.01**	6.0	NA	NA	**5.3**	1.0	
	6/10/2010	300.0/8015B	1.2	**340**	1.2	<1.0	<1.0	<2.5	8.7	7.8	1800	**6.3**	1.3	
	3/8/2010	300.0/8015B	1.4	**320**	1.0	<1.0	<1.0	<0.05	11	NA	NA	**3.8**	1.0	
	11/23/2009	300.0/8015B	1.6	220	NL	<1.0	<1.0	<0.05	13	7.16	1500	**2.7**	0.78	
	8/11/2009	300.0/8015B	**1.7**	**250**	NL	<1.0	<1.0	<0.05	17	7.56	1500	**2.9**	0.62	
	5/28/2009	300.0/8015B	**1.7**	210	NL	0.16	0.16	<0.05	22	7.51	1400	**3.4**	0.53	
	3/24/2009	300.0/8015B	1.5	240	NL	<1.0	<1.0	<0.05	23	7.47	1800	**4.3**	0.37	
	11/10/2008	300.0/8015B	1.4	200	NL	<1.0	<1.0	<0.05	32	7.21	1600	**4.0**	0.59	
	9/30/2008	8015B	NA	NA	NA	NA	NA	NA	NA	NA	NA	**3.9**	0.48	
	7/9/2008	300.0/8015B	1.1	**270**	NL	<1.0	<1.0	<0.5	33	7.18	2000	**2.4**	0.74	
	4/11/2008	300.0/8015B	0.92	**360**	NL	<1.0	<1.0	<0.5	42	7.0	2100	**1.5**	2.2	

8.5.1 NAPIS-1, NAPIS-2, NAPIS-3, KA-3

General Chemistry and DRO/GRO Analytical Result Summary

			Parameters											
			Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Phosphorus (mg/L)	Sulfate (mg/L)	pH	Specific Conductance (µS/cm)	DRO (mg/L)	GRO (mg/L)	MRO [2] (mg/L)
WQCC 20NMAC 6.2.3103			**1.6**	**250.0**	NE	NE	**10**	NE	**600.0**	**6 TO 9**	NE	**0.2 [1]**	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	**1.0**	10	NE	NE	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			0.8	NE	NE	1.6	32	**4.0E-04**	NE	NE	NE	NE	NE	NE
Well ID	**DATE SAMPLED**	**METHOD**												
NAPIS 3	11/13/2014	300.0/8015B	0.35	**890.0**	5.3	19	19	<0.5	400	NA	NA	<1	<0.05	<5
	9/11/2014	300.0/8015B	1.1	**160.0**	1.2	1.1	1.1	<0.5	61	NA	NA	<1	<0.05	<5
	6/5/2014	300.0/8015B	0.3	**910.0**	5.3	19	19	<0.5	400	NA	NA	<1	<0.05	<5
	3/10/2014	300.0/8015B	<0.5	**920.0**	4.9	<0.5	**20.0**	<2.5	430	NA	NA	<1	<0.05	<5
	11/12/2013	300.0/8015B	0.36	**990**	5.0	<2.0	**20**	<2.5	380	NA	NA	<1.0	<0.05	NA
	9/3/2013 [6]	300.0/8015B	0.27	**980**	5.0	**20**	**20**	<0.5	410	NA	NA	<1.0	<0.05	<5.0
	6/12/2013	300.0/8015B	<1.0	**940**	4.8	**17**	**17**	<5.0	400	NA	NA	<1.0	<0.05	<5.0
	3/18/2013	300.0/8015B	1.3	**940**	4.8	**17**	**17**	<2.5	380	NA	NA	<1.0	<0.1	<5.0
	11/28/2012	300.0/8015B	0.68	**880**	3.5	<0.5	**14**	<2.5	280	NA	NA	<1.0	<0.1	<5.0
	10/2/2012 [5]	300.0/8015B	0.84	**990**	4.9	**20**	**20**	<2.5	400	7.86	NA	<1.0	<0.05	<5.0
	6/12/2012	300.0/8015B	0.55	**1000**	5.3	<0.5	**19**	<2.5	450	NA	NA	<1.0	<0.05	<5.0
	3/20/2012	300.0/8015B	0.59	**970**	4.4	<0.5	**19**	<2.5	390	NA	NA	<1.0	<0.05	<5.0
	12/14/2011	300.0/8015B	0.29	**1100**	4.5	**19**	**19**	<10	420	NA	NA	<1.0	<0.05	<5.0
	9/27/2011	300.0/8015B	<0.5	**1000**	5.1	**49**	**49**	<2.5	400	NA	NA	<1.0	<0.05	<5.0
	6/15/2011	300.0/8015B	1.5	**530**	2.3	<0.5	3.5	<2.5	170	NA	NA	<1.0	<0.05	<5.0
	3/2/2011	300.0/8015B	0.44	**1100**	4.7	**14**	**14**	<0.05	420	NA	NA	<1.0	<0.05	<5.0
	11/2/2010	300.0/8015B	0.48	**1100**	NL	**18**	**18**	<0.5	430	NA	NA	<1.0	<0.05	
	9/15/2010	300.0/8015B	NL	**1040**	NL	**24.1**	**24.1**	**0.023**	290	NA	NA	<1.0	<0.05	
	6/10/2010	300.0/8015B	1.5	**260**	1.1	<1.0	<1.0	<0.5	39	7.84	1600	**1.8**	0.89	
	3/8/2010	300.0/8015B	0.46	**410**	1.5	**5.5**	5.5	<0.5	400	NA	NA	<1.0	<0.5	
	11/23/2009	300.0/8015B	0.49	**1100**	NL	**15**	**15**	<0.5	370	7.91	4400	<1.0	<0.05	
	8/31/2009	300.0/8015B	0.47	**1000**	NL	**14**	**14**	<0.5	<10	8.07	4000	<1.0	<0.05	
	6/15/2009	300.0/8015B	0.46	**1200**	NL	**18**	**18**	<0.5	330	8.23	4200	<1.0	<0.05	
	3/25/2009	300.0/8015B	0.43	**1200**	NL	<1.0	**14**	<0.5	340	8.11	5200	<1.0	<0.05	
	11/10/2008	300.0/8015B	1.1	**1100**	NL	<1.0	2.6	<0.5	310	8.05	4300	<1.0	<0.05	
	9/30/2008	300.0/8015B	Not enough water to sample											
	7/9/2008	300.0/8015B	0.46	**1100**	NL	**9.1**	9.1	<0.5	270	8.29	4200	<1.0	<0.05	

8.5.1 NAPIS-1, NAPIS-2, NAPIS-3, KA-3
General Chemistry and DRO/GRO Analytical Result Summary

			Parameters											
			Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Phosphorus (mg/L)	Sulfate (mg/L)	pH	Specific Conductance (µS/cm)	DRO (mg/L)	GRO (mg/L)	MRO [2] (mg/L)
WQCC 20NMAC 6.2.3103			**1.6**	**250.0**	NE	NE	**10**	NE	**600.0**	**6 TO 9**	NE	**0.2 [1]**	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	**1.0**	10	NE	NE	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			0.8	NE	NE	1.6	32	**4.0E-04**	NE	NE	NE	NE	NE	NE
Well ID	**DATE SAMPLED**	**METHOD**												
KA 3	11/11/2014	300.0/8015B	1.1	160	1.2	<1	<1	<0.5	54	NA	NA	<1	<0.05	
	9/11/2014	300.0/8015B	0.45	**760**	4.4	19	19	<0.5	420	NA	NA	<1	<0.05	<5
	6/5/2014	300.0/8015B	1	180	1.6	7.7	7.7	<0.5	95	NA	NA	<1	<0.05	<5
	3/10/2014	300.0/8015B	1.1	140	1.8	<0.5	13	<2.5	72	NA	NA	<1	<0.05	<5
	11/12/2013	300.0/8015B	1.3	110	1.4	0.2	9.3	<0.5	54	NA	NA	<1.0	<0.05	NA
	9/3/2013 [6]	300.0/8015B	1.1	170	1.0	**20**	**20**	<0.5	39	NA	NA	<1.0	<0.05	<5.0
	6/12/2013	300.0/8015B	1.4	190	1.1	<1.0	<1.0	<5.0	33	NA	NA	<1.0	0.072	<5.0
	3/18/2013	300.0/8015B	**1.8**	180	1.2	**2.4**	2.4	<2.5	81	NA	NA	<1.0	0.063	<5.0
	11/28/2012	300.0/8015B	0.98	**870**	4.0	**2.8**	9.9	<2.5	270	NA	NA	<1.0	<0.1	<5.0
	8/21/2012	300.0/8015B	<2.0	**250**	1.2	<0.1	0.31	<0.5	43	NA	NA	<1.0	0.1	<5.0
	6/12/2012	300.0/8015B	1.3	**710**	3.9	**2.1**	**11**	<2.5	220	NA	NA	<1.0	0.14	<5.0
	3/20/2012	300.0/8015B	**2.0**	**440**	1.9	<1.0	**15**	<2.5	220	NA	NA	**1.8**	0.16	<5.0
	12/14/2011	300.0/8015B	1.3	**260**	1.1	<1.0	<1.0	<0.5	38	NA	NA	<1.0	0.15	
	9/27/2011	300.0/8015B	1.5	**290**	1.3	**48**	**48**	<2.5	48	NA	NA	**2.1**	0.35	
	6/15/2011	300.0/8015B	0.51	**970**	4.5	<0.5	**18**	<0.5	370	NA	NA	<1.0	<0.25	
	3/2/2011	300.0/8015B	1.2	**600**	2.4	**4.3**	4.3	<0.5	150	NA	NA	<1.0	<0.25	
	11/2/2010	300.0/8015B	**1.7**	**260**	NL	<1.0	<1.0	<5.0	38	NA	NA	**1.7**	0.68	
	9/15/2010	300.0/8015B	1.4	**277**	NL	<0.5	<0.5	**0.013**	37	NA	NA	**3.0**	1.9	
	6/10/2010	300.0/8015B	0.38	**1100**	4.7	**17**	**17**	<0.05	390	8.21	3600	<1.0	<0.05	
	3/8/2010	300.0/8015B	1.6	**410**	1.5	**5.5**	5.5	<0.05	90	NA	NA	<1.0	0.47	
	11/23/2009	300.0/8015B	1.3	**610**	NL	**3.2**	3.2	<0.05	120	7.31	2900	<1.0	0.19	
	8/31/2009	300.0/8015B	2.4	230	NL	<2.0	<2.0	<0.05	50	7.58	1500	**1.4**	0.52	
	5/28/2009	300.0/8015B	1.6	**260**	NL	0.22	0.22	<0.05	66	7.71	1700	<1.0	0.32	
	3/25/2009	300.0/8015B	1.5	**340**	NL	<1.0	0.9	<0.05	76	7.64	2400	<1.0	0.18	
	11/10/2008	300.0/8015B	0.46	**590**	NL	**2.0**	**11**	<0.05	140	7.34	2700	<1.0	0.15	
	9/30/2008	300.0/8015B	Not enough water to sample											

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analyses
BOLD values represent values above the applicable standard

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other standards for Domestic Water
1) NMED Table 6-2 (Unknown oil), TPH Screening Guidelines for Potable Ground Water (GW-1). (JUN 2012)
40 CFR 141.62 Detection limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table

NOTES
2) Per NMED "Approval with Modifications Annual Ground Water Monitoring Report 2010, Rev. 1", dated 12/12/12, Comment 7(a) added MRO to data tables.
3) 12/14/11 - General Chemistry parameters missed this quarter. Notified NMED and instructed to re-sample for general chemistry parameters only.
4) Resampled for General Chemistry parameters only.
5) Was not sampled in September due to low recharge rate.
6) Quarterly combined with 2013 Annual sampling event.

8.5.2 NAPIS-1, NAPIS-2, NAPIS-3, KA-3
Total Metals Analytical Result Summary

			Parameters										
			Arsenic (mg/L)	Barium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	**0.05**	**1**	**1**	**0.05**	**0.2**	**0.05**	**0.002**	**0.03**	**10**
40 CFR 141.62 MCL (June 2015)			**0.01**	2	0.1	1.3	NE	**0.015**	NE	0.05	0.002	0.03	NE
EPA RSL for Tap Water (June 2015)			0.000052	3.8	NE	0.8	14	0.015	0.43	0.1	0.00063	0.06	6
Well ID	**DATE SAMPLED**	**METHOD**											
NAPIS 1	11/11/2014	200.7/200.8	<0.01	0.13	<0.006	<0.006	0.79	0.001	**0.24**	<0.01	<0.0002	0.022	0.01
	9/11/2014	200.7/200.8	<0.01	0.13	<0.006	<0.006	0.24	<0.001	0.12	0.012	<0.0002	0.012	<0.01
	6/5/2014	200.7/200.8	<0.005	0.15	<0.006	<0.006	**1.2**	<0.005	0.12	0.01	<0.0002	0.014	0.012
	3/10/2014	200.7/200.8	0.0018	0.14	<0.006	<0.006	0.28	<0.001	0.095	0.0055	<0.0002	0.013	0.012
	11/12/2013	200.7/200.8	0.0034	0.19	<0.006	<0.006	0.36	<0.001	0.17	0.01	<0.0002	0.012	0.011
	9/3/2013 [3]	200.7/200.8	0.0026	0.17	<0.006	<0.006	0.57	<0.001	0.089	0.0073	<0.0002	0.0099	<0.01
	6/12/2013	200.7/200.8	0.0027	0.13	<0.006	<0.006	0.25	NL	0.068	0.0076	<0.0002	0.011	<0.01
	3/18/2013	200.7/200.8	<0.0025	0.13	<0.006	<0.006	**1.4**	<0.005	0.14	0.0039	<0.0002	0.017	0.011
	11/28/2012	200.7/200.8	<0.0025	0.12	<0.006	<0.006	**1.1**	<0.005	0.099	0.0027	<0.001	0.03	0.013
	8/21/2012	200.7/200.8	<0.0025	0.13	<0.006	<0.006	0.066	<0.005	0.018	0.0043	<0.0002	0.0094	<0.01
	6/2/2012	200.7/200.8	0.0031	0.27	0.0068	<0.06	**7.5**	<0.005	**0.36**	0.0052	<0.001	**0.032**	0.037
	3/20/2012	200.7/200.8	<0.0025	0.13	<0.006	<0.006	0.99	<0.005	0.039	0.0053	<0.0002	0.012	<0.01
	12/14/2011	200.7/200.8	<0.0025	0.19	<0.006	<0.006	**2.9**	<0.005	0.12	0.0033	<0.0002	0.019	0.017
	9/27/2011	200.7/200.8	<0.0025	0.13	<0.006	<0.006	0.59	<0.005	0.092	0.0067	<0.0002	**0.046**	<0.01
	6/15/2011	200.7/200.8	0.004	0.19	<0.006	<0.006	**2.2**	<0.005	0.058	0.01	<0.0002	0.013	0.012
	3/2/2011	200.7/200.8	<0.0025	0.17	<0.006	<0.006	1	<0.005	0.035	<0.05	NL	0.021	<0.01
	11/2/2010	6010B	<0.02	0.26	0.0062	<0.006	**6.4**	<0.005	0.16	<0.05	<0.0002	**0.045**	0.027
	9/15/2010	6010B	<0.02	0.19	<0.006	<0.006	0.56	<0.005	0.044	<0.05	<0.0002	0.018	<0.02
	6/8/2010	6010B	<0.02	0.18	<0.006	NL	NL	<0.005	NL	<0.05	<0.0002	NL	NL
	3/8/2010	6020A	<0.001	0.133	0.00106	0.00264	0.548	<0.001	0.0147	<0.001	<0.0001	**0.273**	0.00485
	11/23/2009	6010B	<0.02	0.2	0.0077	NL	NL	<0.005	NL	<0.05	<0.0002	NL	NL
	8/11/2009	6010B	<0.02	0.11	<0.006	NL	NL	<0.005	NL	<0.05	<0.0002	NL	NL
	5/28/2009	6010B	<0.02	0.091	<0.006	NL	NL	<0.005	NL	<0.05	<0.0002	NL	NL
	3/24/2009	6010B	<0.02	0.1	<0.006	NL	NL	<0.005	NL	<0.05	<0.0002	NL	NL
	10/14/2008	6010B	<0.02	0.17	<0.01	NL	NL	<0.005	NL	<0.02	<0.0002	NL	NL

8.5.2 NAPIS-1, NAPIS-2, NAPIS-3, KA-3

Total Metals Analytical Result Summary

			Parameters										
			Arsenic (mg/L)	Barium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	**0.05**	**1**	**1**	**0.05**	**0.2**	**0.05**	**0.002**	**0.03**	**10**
40 CFR 141.62 MCL (June 2015)			**0.01**	2	0.1	1.3	NE	**0.015**	NE	0.05	0.002	0.03	NE
EPA RSL for Tap Water (June 2015)			0.000052	3.8	NE	0.8	14	0.015	0.43	0.1	0.00063	0.06	6
Well ID	**DATE SAMPLED**	**METHOD**											
NAPIS 2	11/11/2014	200.7/200.8	<0.01	**1.7**	<0.006	<0.006	**2.9**	<0.001	**1.4**	<0.01	<0.0002	<0.001	0.013
	9/11/2014	200.7/200.8	0.01	**2.1**	<0.006	0.012	**3.5**	0.003	**1.3**	0.011	<0.0002	<0.001	0.017
	6/5/2014	200.7/200.8	<0.005	**2**	<0.006	0.0097	**3.9**	<0.005	**1.3**	0.0095	<0.0002	<0.005	0.013
	3/10/2014	200.7/200.8	0.006	**1.5**	<0.006	<0.006	**2.9**	<0.001	**1.4**	0.0071	<0.0002	<0.001	<0.01
	11/12/2013	200.7/200.8	0.0081	**1.4**	<0.006	0.0097	**3.2**	0.0013	**1.4**	0.0077	<0.0002	<0.001	0.018
	9/3/2013 [3]	200.7/200.8	0.0063	**2**	<0.006	<0.006	**3.9**	0.0014	**1.4**	0.0045	<0.0002	<0.001	0.012
	6/12/2013	200.7/200.8	0.007	**2**	<0.006	<0.006	**3.2**	NL	**1.5**	0.0051	<0.0002	<0.001	<0.01
	3/18/2013	200.7/200.8	0.0073	**1.6**	<0.006	<0.006	**2.9**	<0.005	**1.3**	<0.0025	<0.0002	<0.0025	0.015
	11/28/2012	200.7/200.8	0.0069	**1.7**	<0.006	<0.006	**3.3**	0.0052	1.6	<0.0025	<0.0002	<0.0025	<0.01
	8/21/2012	200.7/200.8	0.0097	**1.7**	<0.006	<0.006	**3.1**	<0.005	**1.7**	0.0031	<0.0002	<0.0025	<0.01
	6/12/2012	200.7/200.8	0.01	**1.9**	<0.006	<0.06	**3.8**	<0.005	**1.9**	0.0035	<0.001	<0.0025	<0.01
	3/20/2012	200.7/200.8	**0.011**	**2.1**	<0.006	0.0071	**5**	<0.005	**1.6**	0.0036	<0.0002	<0.0025	0.015
	12/14/2011	200.7/200.8	0.0099	**1.7**	<0.006	<0.006	**4.1**	<0.005	**1.4**	<0.0025	<0.0002	<0.0025	0.011
	9/27/2011	200.7/200.8	**0.012**	**1.7**	<0.006	<0.006	**4.2**	<0.005	**1.3**	0.0034	<0.0002	<0.0025	0.016
	6/15/2011	200.7/200.8	**0.012**	**2.1**	<0.006	<0.006	**5.4**	<0.005	**1.5**	0.0063	<0.0002	<0.0025	<0.01
	3/2/2011	200.7/200.8	**0.011**	**2.4**	<0.006	0.0075	**5.4**	<0.005	**1.3**	<0.05	NL	<0.0025	<0.01
	11/2/2010	6010B	<0.02	**1.2**	<0.006	<0.006	**4.2**	<0.005	**1.2**	<0.05	<0.0002	NL	<0.02
	9/15/2010	6010B	<0.02	**1.4**	<0.006	<0.006	**4.3**	<0.005	**1.1**	<0.05	<0.0002	<0.001	<0.02
	6/10/2010	6010B	<0.02	**1.7**	<0.006	NL	NL	<0.005	NL	<0.05	<0.0002	NL	NL
	3/8/2010	6020A	0.00457	**2.07**	0.00105	0.00246	**4.71**	0.00138	**1.25**	<0.001	<0.0001	<0.001	0.00707
	11/23/2009	6010B	<0.02	**1.1**	<0.006	NL	NL	<0.005	NL	<0.05	<0.0002	NL	NL
	8/11/2009	6010B	<0.02	0.94	<0.006	NL	NL	<0.005	NL	<0.05	<0.0002	NL	NL
	5/28/2009	6010B	<0.02	0.65	<0.006	NL	NL	<0.005	NL	<0.05	<0.0002	NL	NL

8.5.2 NAPIS-1, NAPIS-2, NAPIS-3, KA-3

Total Metals Analytical Result Summary

			Parameters										
			Arsenic (mg/L)	Barium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	**0.05**	**1**	**1**	**0.05**	**0.2**	**0.05**	**0.002**	**0.03**	**10**
40 CFR 141.62 MCL (June 2015)			**0.01**	2	0.1	1.3	NE	**0.015**	NE	0.05	0.002	0.03	NE
EPA RSL for Tap Water (June 2015)			0.000052	3.8	NE	0.8	14	0.015	0.43	0.1	0.00063	0.06	6
Well ID	**DATE SAMPLED**	**METHOD**											
NAPIS 3	11/13/2014	200.7/200.8	<0.05	0.11	0.01	<0.006	**2.1**	0.0034	0.07	<0.05	<0.0002	**0.039**	0.063
	9/11/2014	200.7/200.8	<0.01	0.22	<0.006	<0.006	0.14	<0.001	**0.55**	<0.01	<0.0002	0.019	<0.01
	6/5/2014	200.7/200.8	0.0076	0.23	0.016	<0.006	**5.8**	0.0073	**0.16**	0.032	<0.0002	**0.032**	0.14
	3/10/2014	200.7/200.8	<0.01	0.22	0.013	0.0073	**4.3**	0.0053	**0.12**	0.027	<0.0002	**0.036**	0.091
	11/12/2013	200.7/200.8	0.0097	0.69	0.029	0.021	**13**	**0.019**	**0.7**	0.03	<0.0002	**0.038**	0.24
	9/3/2013 [3]	200.7/200.8	0.0052	0.19	0.009	0.0061	**3.4**	0.0039	0.16	0.019	<0.0002	**0.038**	0.043
	6/12/2013	200.7/200.8	0.0064	0.85	0.036	0.03	**15**	NL	**0.57**	0.016	<0.0002	**0.039**	0.26
	3/18/2013	200.7/200.8	**0.016**	**3.8**	**0.13**	0.16	**62**	**0.097**	**3.8**	0.0089	0.0016	**0.052**	1.1
	11/28/2012	200.7/200.8	0.0048	0.57	0.018	0.018	**9.9**	0.0081	**0.46**	0.0097	<0.0002	**0.04**	0.12
	10/2/2012 [2]	200.7/200.8	0.0042	0.18	<0.006	<0.006	**1.8**	<0.005	0.11	0.016	<0.0002	**0.037**	0.02
	6/12/2012	200.7/200.8	0.0051	0.11	0.0075	<0.006	**2.4**	0.0052	0.082	0.017	<0.001	**0.041**	0.057
	3/20/2012	200.7/200.8	0.006	0.16	0.017	0.0083	**5.5**	0.0082	0.12	0.017	<0.0002	**0.038**	0.22
	12/14/2011	200.7/200.8	0.0044	0.16	0.019	<0.006	**6**	0.0081	0.11	0.011	<0.0002	**0.041**	0.23
	9/27/2011	200.7/200.8	0.0072	0.27	0.044	0.012	**2**	0.014	**0.21**	**0.2**	<0.0002	**0.041**	0.51
	6/15/2011	200.7/200.8	0.007	0.2	<0.006	<0.006	0.72	<0.005	**1**	0.012	<0.0002	0.013	<0.01
	3/2/2011	200.7/200.8	<0.0025	0.078	<0.006	<0.006	0.49	<0.005	0.017	<0.05	NL	**0.044**	0.014
	11/2/2010	6010B	<0.02	0.096	0.0075	0.012	**2.6**	0.011	0.12	<0.05	<0.0002	**0.032**	0.59
	9/15/2010	6010B	<0.02	0.11	**0.098**	0.014	**3.9**	0.012	0.15	<0.05	<0.0002	**0.035**	0.36
	6/10/2010	6010B	<0.02	0.54	<0.006	NL	NL	<0.005	NL	<0.05	<0.0002	NL	NL
	3/8/2010	6020A	0.00158	0.0979	0.00396	0.00319	0.338	0.00123	0.0176	0.00373	<0.0002	**0.0319**	0.00941
	11/23/2009	6010B	<0.02	0.15	0.0072	NL	NL	<0.005	NL	<0.05	<0.0002	NL	NL
	8/31/2009	6010B	<0.02	0.092	<0.01	NL	NL	<0.005	NL	<0.02	<0.0002	NL	NL
	6/15/2009	6010B	<0.02	0.14	<0.01	NL	NL	<0.005	NL	<0.02	<0.0002	NL	NL
	3/25/2009	6010B	<0.02	0.13	<0.01	NL	NL	<0.005	NL	<0.05	<0.0002	NL	NL

8.5.2 NAPIS-1, NAPIS-2, NAPIS-3, KA-3
Total Metals Analytical Result Summary

			Parameters										
			Arsenic (mg/L)	Barium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	**0.05**	**1**	**1**	**0.05**	**0.2**	**0.05**	**0.002**	**0.03**	**10**
40 CFR 141.62 MCL (June 2015)			**0.01**	2	0.1	1.3	NE	**0.015**	NE	0.05	0.002	0.03	NE
EPA RSL for Tap Water (June 2015)			0.000052	3.8	NE	0.8	14	0.015	0.43	0.1	0.00063	0.06	6
Well ID	**DATE SAMPLED**	**METHOD**											
KA 3	11/11/2014	200.7/200.8	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL
	9/11/2014	200.7/200.8	0.011	0.07	<0.006	0.0084	**1**	0.0015	0.035	0.034	<0.0002	**0.047**	0.018
	6/5/2014	200.7/200.8	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL
	3/10/2014	200.7/200.8	<0.005	0.11	<0.006	<0.006	0.95	<0.001	**0.26**	0.0082	<0.0002	**NL**	0.016
	11/12/2013	200.7/200.8	0.0033	0.16	<0.006	<0.006	0.22	<0.001	**0.44**	0.0082	<0.0002	0.021	0.01
	9/3/2013 [3]	200.7/200.8	0.0022	0.17	<0.006	<0.006	0.33	<0.001	**0.42**	0.0034	<0.0002	0.013	0.013
	6/12/2013	200.7-200.8	0.0019	0.16	<0.006	<0.006	0.4	NL	**0.35**	0.003	<0.0002	0.014	<0.01
	3/18/2013	200.7/200.8	<0.0025	0.079	<0.006	<0.006	0.62	0.0058	**0.58**	<0.0025	<0.0002	0.02	<0.01
	11/28/2012	200.7/200.8	0.006	**1.3**	0.036	0.013	**30**	<0.005	**1.7**	0.01	<0.0002	**0.032**	0.092
	8/21/2012	200.7/200.8	0.0028	0.3	<0.006	0.007	0.32	<0.005	**0.81**	<0.0025	<0.0002	0.0043	0.014
	6/12/2012	200.7/200.8	0.0057	0.61	0.022	0.0092	**15**	<0.005	**0.93**	0.012	<0.001	0.027	0.055
	3/20/2012	200.7/200.8	0.0065	0.99	0.033	0.017	**24**	<0.005	**1.8**	0.0088	<0.0002	0.023	0.095
	12/14/2011	200.7/200.8	0.0038	0.34	<0.006	<0.006	**1.1**	<0.005	**1.1**	<0.0025	<0.0002	0.0045	0.013
	9/27/2011	200.7/200.8	0.0063	0.3	<0.006	<0.006	**2.2**	<0.005	**1.1**	0.003	<0.0002	0.0058	0.024
	6/15/2011	200.7/200.8	0.0089	0.22	0.028	<0.006	**9.4**	0.014	0.16	0.03	<0.0002	**0.035**	0.32
	3/2/2011	200.7/200.8	0.0063	0.44	<0.006	<0.006	0.64	<0.005	**1.4**	<0.05	NL	0.015	<0.01
	11/2/2010	6010B	<0.02	0.6	<0.006	<0.006	**1.2**	<0.005	**1.4**	<0.05	<0.0002	NL	<0.02
	9/15/2010	6010B	<0.02	0.47	**0.096**	<0.006	**1.6**	<0.005	**1.3**	<0.05	<0.0002	0.003	<0.02
	6/10/2010	6010B	<0.02	0.17	0.0064	NL	NL	<0.005	NL	<0.05	<0.0002	NL	<0.02
	3/8/2010	6020A	**0.011**	0.335	0.00136	0.0114	**2.35**	0.00303	**2.1**	<0.001	<0.0001	0.00652	0.0211
	11/23/2009	6010B	<0.02	0.55	<0.006	NL	NL	<0.005	NL	<0.05	<0.0002	NL	NL
	8/31/2009	6010B	<0.02	0.22	<0.01	NL	NL	<0.005	NL	<0.02	<0.0002	NL	NL
	5/28/2009	6010B	<0.02	0.29	<0.006	NL	NL	<0.005	NL	<0.05	<0.0002	NL	NL
	3/25/2009	6010B	<0.02	0.22	<0.006	NL	NL	0.0055	NL	<0.05	<0.0002	NL	NL

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
1) National Primary Drinking Water Regulation (May 2009); Action Level
EPA Regional Screening Level (RSL) Summary Table

NOTES
2) Was not sampled in September due to low recharge rate.
3) Quarterly combined with 2013 Annual sampling event.

8.5.3 NAPIS-1, NAPIS-2, NAPIS-3, KA-3
Dissolved Metals Analytical Result Summary

			Parameters													
			Arsenic (mg/L)	Barium (mg/L)	Calcium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Sodium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	NE	**0.05**	**1**	**1**	0.05	NE	**0.2**	NE	**0.05**	NE	**0.03**	**10**
40 CFR 141.62 MCL (June 2015)			**0.01**	2	NE	0.1	1.6	NE	**0.015**	NE	NE	NE	0.05	NE	0.03	NE
EPA RSL for Tap Water (June 2015)			0.000045	2.9	NE	NE	0.62	11	NE	NE	0.32	NE	0.078	NE	0.047	4.7
Well ID	**DATE SAMPLED**	**METHOD**														
NAPIS 1	11/11/2014	200.7/200.8	<0.01	0.12	93	<0.006	<0.006	<0.02	<0.001	16	0.065	<1	<0.01	320	0.012	0.05
	9/11/2014	200.7/200.8	<0.005	0.13	94	<0.006	<0.006	<0.02	<0.01	16	0.13	1.3	0.012	330	<0.01	0.01
	6/5/2014	200.7/200.8	<0.005	0.12	NL	<0.006	<0.006	0.025	<0.001	NL	0.059	NL	0.013	NL	0.01	<0.01
	3/10/2014	200.7/200.8	<0.005	0.12	95	<0.006	<0.006	<0.02	<0.001	17	0.053	<1	<0.005	330	0.013	0.017
	11/12/2013	200.7/200.8	<0.005	0.17	110	<0.006	<0.006	<0.02	<0.005	19	0.071	<1.0	0.011	330	0.011	<0.01
	9/9/2013 [4]	200.7/200.8	<0.005	0.15	87	<0.03	<0.03	<0.1	<0.005	15	0.064	<5.0	0.0085	340	<0.01	<0.05
	6/12/2013	200.7/200.8	0.0034	0.13	77	<0.006	<0.006	0.057	<0.001	12	0.027	1.4	0.011	340	0.011	<0.01
	3/18/2013	200.7/200.8	0.0016	0.091	56	<0.006	<0.006	<0.02	<0.005	11	0.0041	<1.0	0.0034	270	0.017	<0.01
	11/28/2012	200.7/200.8	0.0019	0.093	58	<0.006	<0.006	<0.02	<0.001	11	0.0098	<1.0	0.0041	400	0.029	0.013
	8/21/2012	200.7/200.8	0.0021	0.12	73	<0.006	<0.006	<0.02	<0.005	13	0.011	<1.0	0.0043	350	0.011	0.017
	6/12/2012	200.7/200.8	0.0023	0.1	70	<0.006	<0.006	0.025	<0.005	13	0.0037	<1.0	0.0062	330	0.014	0.014
	3/20/2012	200.7/200.8	0.0018	0.11	80	<0.006	<0.006	<0.02	<0.005	15	0.0061	<1.0	0.006	350	0.01	0.022
	12/14/2011	200.7/200.8	0.0017	0.12	84	<0.006	<0.006	0.27	<0.005	15	0.0068	<5.0	0.0039	380	0.021	<0.01
	9/27/2011	200.7/200.8	0.0029	0.12	71	<0.006	<0.006	<0.02	<0.005	13	0.056	2	0.0092	400	**0.032**	0.011
	6/15/2011	200.7/200.8	0.0047	0.14	83	<0.006	<0.006	<0.020	<0.005	15	0.0023	<1.0	0.017	340	0.016	0.028
	3/2/2011	200.7/200.8	0.0013	0.15	97	<0.006	<0.006	0.032	<0.005	18	<0.002	1.5	<0.05	380	0.017	<0.01
	11/2/2010	6010B	<0.1	0.13	75	<0.006	<0.006	0.057	<0.005	14	0.016	<5.0	<0.25	420	**0.034**	NL
	9/15/2010	6010B	<0.02	0.18	100	<0.006	<0.006	0.29	0.0064	18	0.0066	<1.0	<0.05	370	0.011	NL
	6/8/2010	6010B	<0.2	0.13	72	<0.006	NL	NL	<0.005	13	NL	<1.0	<0.05	370	NL	NL
	3/8/2010	6020A	0.00108	0.139	65.5	<0.001	0.00205	<0.01	<0.001	11.5	<0.001	0.829	0.000124	322	0.0279	0.0258
	11/23/2009	6010B	NL	0.2	58	0.0077	NL	NL	<0.005	13	NL	3.7	NL	390	NL	NL
	8/11/2009	6010B	NL	0.11	56	<0.006	NL	NL	<0.005	11	NL	1.7	NL	380	NL	NL
	5/28/2009	6010B	NL	0.091	57	<0.006	NL	NL	<0.005	11	NL	<1.0	NL	390	NL	NL
	3/24/2009	6010B	NL	0.1	67	<0.006	NL	NL	<0.005	12	NL	<1.0	NL	340	NL	NL
	11/10/2008	6010B	<0.02	0.13	78	<0.006	NL	NL	<0.005	14	NL	1.2	<0.25	390	NL	NL
	9/30/2008	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/9/2008	6010B	NL	NL	70	NL	NL	NL	NL	12	NL	2.1	NL	430	NL	NL
	4/11/2008	6010B	NL	NL	72	NL	NL	NL	NL	13	NL	1.5	NL	370	NL	NL

8.5.3 NAPIS-1, NAPIS-2, NAPIS-3, KA-3
Dissolved Metals Analytical Result Summary

			Parameters													
			Arsenic (mg/L)	Barium (mg/L)	Calcium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Sodium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	NE	**0.05**	**1**	**1**	0.05	NE	**0.2**	NE	**0.05**	NE	**0.03**	**10**
40 CFR 141.62 MCL (June 2015)			**0.01**	2	NE	0.1	1.6	NE	**0.015**	NE	NE	NE	0.05	NE	0.03	NE
EPA RSL for Tap Water (June 2015)			0.000045	2.9	NE	NE	0.62	11	NE	NE	0.32	NE	0.078	NE	0.047	4.7
Well ID	**DATE SAMPLED**	**METHOD**														
NAPIS 2	11/11/2014	200.7/200.8	0.0076	0.27	99	<0.006	<0.006	**1.8**	<0.001	18	**1.3**	<1	0.0062	410	<0.001	0.019
	9/11/2014	200.7/200.8	0.007	1.9	98	<0.006	<0.006	**1.6**	<0.01	18	**1.2**	1.1	0.011	410	<0.01	0.047
	6/5/2014	200.7/200.8	0.0064	1.6	NL	<0.006	<0.006	**2.6**	<0.005	NL	**1.4**	NL	0.01	NL	<0.001	<0.01
	3/10/2014	200.7/200.8	0.0053	1.8	88	<0.006	<0.006	**1.8**	<0.001	17	**1.2**	<1	<0.005	350	<0.001	0.012
	11/12/2013	200.7/200.8	0.0077	**1.5**	79	<0.006	<0.006	**1.8**	<0.001	16	**1.3**	<1.0	0.008	310	<0.001	<0.01
	9/9/2013 [4]	200.7/200.8	0.0069	**1.7**	90	<0.006	<0.006	**2.6**	<0.005	17	**1.3**	<1.0	0.006	350	<0.01	0.021
	6/12/2013	200.7/200.8	0.0068	**1.9**	92	<0.006	<0.006	**1.7**	<0.001	16	**1.6**	1.7	0.0071	360	<0.001	0.01
	3/18/2013	200.7/200.8	0.0062	**1.5**	77	<0.006	<0.006	**1.1**	<0.005	15	**1.2**	<1.0	0.0024	280	<0.002	<0.01
	11/28/2012	200.7/200.8	0.0083	**1.7**	100	<0.006	<0.006	**2.9**	<0.001	22	**1.8**	<1.0	0.0034	330	<0.001	0.011
	8/21/2012	200.7/200.8	**0.014**	**2.7**	110	<0.006	<0.006	**1.9**	<0.005	21	**1.6**	<1.0	3.4	380	<0.001	0.016
	6/12/2012	200.7/200.8	0.0089	**1.8**	93	<0.006	<0.006	**2.7**	<0.005	19	**1.6**	<1.0	0.0047	350	<0.001	0.18
	3/20/2012	200.7/200.8	0.0093	**1.8**	94	<0.006	<0.006	**3**	<0.005	18	**1.5**	<1.0	0.0042	350	<0.001	0.07
	12/14/2011	200.7/200.8	0.0089	**1.8**	NL	<0.006	<0.006	**3.2**	<0.005	NL	**1.3**	NL	0.0028	NL	<0.001	<0.01
	9/27/2011	200.7/200.8	**0.011**	**1.4**	79	<0.006	<0.006	**2.2**	<0.005	15	**1.2**	<1.0	0.005	330	<0.001	0.015
	6/15/2011	200.7/200.8	**0.012**	**1.7**	85	<0.006	<0.006	**3.2**	<0.005	17	**1.3**	<1.0	0.0095	310	<0.001	0.041
	3/2/2011	200.7/200.8	**0.013**	0.055	44	<0.006	<0.006	**4.8**	<0.005	7.6	<0.002	5.8	<0.05	380	<0.001	<0.01
	11/2/2010	6010B	<0.1	**1.4**	73	<0.006	<0.006	**2.9**	<0.005	14	**1.2**	<1.0	<0.05	320	NL	NL
	9/15/2010	6010B	<0.02	**1.5**	69	<0.006	<0.006	**3.7**	<0.005	13	**1**	<1.0	<0.05	310	<0.001	NL
	6/10/2010	6010B	<0.02	**1.7**	80	<0.006	NL	NL	<0.005	16	NL	<1.0	<0.05	320	NL	NL
	3/8/2010	6020A	0.00473	**1.73**	85	<0.001	<0.001	**3.82**	<0.001	15.7	**1.06**	0.278	<0.001	319	<0.001	0.0531
	11/23/2009	6010B	NL	**1.1**	56	<0.006	NL	NL	<0.005	11	NL	<1.0	NL	350	NL	NL
	8/11/2009	6010B	NL	0.94	57	<0.006	NL	NL	<0.005	11	NL	<1.0	NL	300	NL	NL
	5/28/2009	6010B	NL	0.65	51	<0.006	NL	NL	<0.005	9.9	NL	<1.0	NL	290	NL	NL
	3/24/2009	6010B	NL	0.76	53	<0.006	NL	NL	<0.005	10	NL	<1.0	NL	280	NL	NL
	11/10/2008	6010B	<0.02	0.42	65	<0.006	NL	NL	0.0065	9.7	NL	<1.0	<0.05	330	NL	NL
	9/30/2008	6010B	NL	NL	70	NL	NL	NL	NL	13	NL	<1.0	NL	360	NL	NL
	4/11/2008	6010B	NL	NL	110	NL	NL	NL	NL	19	NL	1.3	NL	380	NL	NL

8.5.3 NAPIS-1, NAPIS-2, NAPIS-3, KA-3
Dissolved Metals Analytical Result Summary

			Parameters													
			Arsenic (mg/L)	Barium (mg/L)	Calcium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Sodium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	NE	**0.05**	**1**	**1**	0.05	NE	**0.2**	NE	**0.05**	NE	**0.03**	**10**
40 CFR 141.62 MCL (June 2015)			**0.01**	2	NE	0.1	1.6	NE	**0.015**	NE	NE	NE	0.05	NE	0.03	NE
EPA RSL for Tap Water (June 2015)			0.000045	2.9	NE	NE	0.62	11	NE	NE	0.32	NE	0.078	NE	0.047	4.7
Well ID	**DATE SAMPLED**	**METHOD**														
NAPIS 3	11/13/2014	200.7/200.8	<0.01	0.041	37	<0.006	<0.006	<0.02	<0.01	6.1	<0.002	3	<0.05	880	**0.039**	0.089
	9/11/2014	200.7/200.8	<0.005	0.22	63	<0.006	<0.006	<0.02	<0.01	10	0.47	1.6	0.0089	300	0.014	0.011
	6/5/2014	200.7/200.8	**0.011**	0.094	NL	0.0073	<0.006	**2.6**	<0.01	NL	0.058	NL	0.045	NL	**0.034**	0.07
	3/10/2014	200.7/200.8	<0.01	0.053	40	<0.006	<0.006	0.24	<0.001	6.5	0.0073	3.5	0.011	890	**0.039**	0.017
	11/12/2013	200.7/200.8	0.0076	0.055	37	<0.006	<0.006	0.15	<0.001	5.8	0.0047	4.5	0.029	820	**0.036**	0.024
	9/9/2013 [4]	200.7/200.8	0.0063	0.058	43	<0.006	<0.006	0.17	<0.001	6.8	0.0075	2.9	0.023	950	**0.041**	0.028
	6/12/2013	200.7/200.8	0.0077	0.094	48	<0.006	<0.006	0.57	0.0014	6.7	0.038	5.4	0.032	900	**0.038**	0.019
	3/18/2013	200.7/200.8	0.0048	0.18	48	<0.006	0.0065	**4.6**	<0.005	7.8	**0.25**	5.4	0.012	810	**0.037**	0.037
	11/28/2012	200.7/200.8	0.0052	0.14	84	<0.006	0.014	**15**	0.01	11	**0.39**	4.9	0.012	930	**0.035**	0.1
	10/2/2012 [3]	200.7/200.8	0.004	0.11	51	<0.006	<0.006	**3.2**	<0.005	7.5	0.14	4	0.013	890	**0.038**	0.035
	6/12/2012	200.7/200.8	0.005	0.054	37	<0.006	<0.006	0.024	<0.005	6.2	<0.002	3.7	0.019	870	**0.039**	0.015
	3/20/2012	200.7/200.8	0.0039	0.063	40	0.0079	<0.006	0.51	<0.005	6.4	0.014	3.9	0.017	920	**0.032**	0.084
	12/14/2011	200.7/200.8	0.0037	0.052	41	<0.006	<0.006	0.12	<0.005	6.9	0.0047	<5.0	0.013	960	**0.04**	0.018
	9/27/2011	200.7/200.8	0.0064	0.058	38	<0.006	<0.006	0.14	<0.005	6.2	0.0035	4.3	0.025	1000	**0.038**	0.018
	6/15/2011	200.7/200.8	0.0085	0.17	98	<0.006	<0.006	0.057	<0.005	17	**0.92**	1.4	0.019	490	0.013	0.27
	3/2/2011	200.7/200.8	<0.001	0.057	42	<0.006	<0.006	<0.02	<0.005	7.6	<0.002	5.7	<0.05	970	**0.039**	<0.01
	11/2/2010	6010B	<0.02	0.081	42	<0.006	<0.006	0.025	<0.005	7	0.01	4.2	<0.05	990	**0.035**	NL
	9/15/2010	6010B	<0.02	0.066	39	<0.006	<0.006	0.021	<0.005	6.3	0.0021	3.9	<0.05	910	**0.032**	NL
	6/10/2010	6010B	<0.02	0.62	87	<0.006	NL	NL	<0.005	15	NL	<1.0	<0.05	260	NL	NL
	3/8/2010	6020A	0.00312	0.0641	41.5	0.00271	0.00222	<0.01	<0.001	6.8	0.00138	4.49	0.00364	835	0.0296	0.034
	11/23/2009	6010B	NL	0.15	46	0.0072	NL	NL	<0.005	8.8	NL	5.4	NL	930	NL	NL
	8/11/2009	6010B	NL	0.092	39	<0.01	NL	NL	<0.005	6.4	NL	4	NL	870	NL	NL
	6/15/2009	6010B	NL	0.14	49	<0.01	NL	NL	<0.005	6.8	NL	4.2	NL	840	NL	NL
	3/24/2009	6010B	NL	0.13	47	<0.006	NL	NL	<0.005	6.5	NL	3.9	NL	880	NL	NL
	11/10/2008	6010B	<0.02	0.13	41	<0.006	NL	NL	<0.005	6.6	NL	4.4	<0.5	960	NL	NL
	9/30/2008	6010B	Not enough water to sample													
	7/9/2008	6010B	NL	NL	65	NL	NL	NL	NL	7.8	NL	4.1	NL	910	NL	NL

8.5.3 NAPIS-1, NAPIS-2, NAPIS-3, KA-3
Dissolved Metals Analytical Result Summary

			Parameters													
			Arsenic (mg/L)	Barium (mg/L)	Calcium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Sodium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	NE	**0.05**	**1**	**1**	0.05	NE	**0.2**	NE	**0.05**	NE	**0.03**	**10**
40 CFR 141.62 MCL (June 2015)			**0.01**	2	NE	0.1	1.6	NE	**0.015**	NE	NE	NE	0.05	NE	0.03	NE
EPA RSL for Tap Water (June 2015)			0.000045	2.9	NE	NE	0.62	11	NE	NE	0.32	NE	0.078	NE	0.047	4.7
Well ID	**DATE SAMPLED**	**METHOD**														
KA 3	11/11/2014	200.7/200.8	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL
	9/11/2014	200.7/200.8	**0.011**	0.041	43	<0.006	<0.006	<0.02	<0.01	6.9	<0.002	5.2	0.035	910	**0.039**	<0.01
	6/5/2014	200.7/200.8	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL
	3/10/2014	200.7/200.8	<0.005	0.093	68	<0.006	<0.006	<0.02	<0.001	11	**0.38**	1.1	<0.005	330	**0.048**	0.012
	11/12/2013	200.7/200.8	0.0036	0.18	81	<0.006	<0.006	<0.02	<0.001	12	**0.37**	1.9	0.0091	310	0.02	0.011
	9/9/2013 [4]	200.7/200.8	<0.005	0.15	75	<0.006	<0.006	<0.02	<0.005	12	**0.37**	<1.0	0.0056	300	0.011	0.03
	6/12/2013	200.7/200.8	0.003	0.14	83	<0.006	<0.006	<0.02	<0.001	12	**0.31**	2.3	0.0077	310	0.015	<0.01
	3/18/2013	200.7/200.8	0.0019	0.063	74	<0.006	<0.006	<0.02	<0.005	12	**0.53**	2.5	0.0029	260	0.019	0.022
	11/28/2012	200.7/200.8	0.0046	0.15	78	<0.006	<0.006	**4.2**	0.0046	16	**0.61**	3	0.0087	590	0.024	0.021
	8/21/2012	200.7/200.8	0.0031	0.17	77	<0.006	<0.006	<0.02	<0.005	13	**0.39**	1.8	0.0047	430	0.013	0.022
	6/12/2012	200.7/200.8	0.0038	0.094	68	<0.006	<0.006	0.15	<0.005	12	**0.38**	1.6	0.0072	450	0.015	0.012
	3/20/2012	200.7/200.8	0.0033	0.068	93	0.011	<0.006	0.35	<0.005	16	**0.35**	2.8	0.0085	550	0.018	0.033
	12/14/2011	200.7/200.8	0.0034	0.31	72	<0.006	<0.006	0.14	<0.005	12	**0.95**	<1.0	0.0021	330	0.0042	<0.01
	9/27/2011	200.7/200.8	0.006	0.2	75	<0.006	<0.006	0.083	<0.005	13	**0.89**	1.2	0.0057	380	0.0067	0.018
	6/15/2011	200.7/200.8	0.01	0.063	39	<0.006	<0.006	<0.02	<0.005	6.7	0.0026	3.8	0.042	940	**0.034**	0.044
	3/2/2011	200.7/200.8	0.0062	0.024	4	<0.006	<0.006	0.11	<0.005	<1.0	0.04	1.6	<0.05	200	0.01	<0.01
	11/2/2010	6010B	<0.1	0.62	81	<0.006	<0.006	0.32	<0.005	14	**1.4**	<1.0	<0.05	330	NL	NL
	9/15/2010	6010B	<0.02	0.47	68	<0.006	<0.006	0.56	<0.005	11	**1.2**	<1.0	<0.05	260	0.001	NL
	6/10/2010	6010B	<0.02	0.078	38	<0.006	NL	NL	<0.005	6.5	NL	4.1	<0.05	NL	NL	NL
	3/8/2010	6020A	0.00976	0.344	96.2	<0.001	0.00428	**1.55**	<0.001	15.6	**1.86**	1.2	0.00102	385	0.00696	0.0382
	11/23/2009	6010B	NL	0.55	100	<0.006	NL	NL	<0.005	19	NL	2	NL	480	NL	NL
	8/11/2009	6010B	NL	0.22	53	<0.01	NL	NL	<0.005	8.9	NL	0.73	NL	330	NL	NL
	5/28/2009	6010B	NL	0.29	71	<0.006	NL	NL	<0.005	11	NL	<1.0	NL	330	NL	NL
	3/25/2009	6010B	NL	0.22	67	<0.006	NL	NL	<0.005	10	NL	<1.0	NL	360	NL	NL
	11/10/2008	6010B	<0.02	0.2	65	<0.006	NL	NL	0.0095	11	NL	1.8	<0.5	570	NL	NL

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
1) National Primary Drinking Water Regulation (May 2009), Action Level
EPA Regional Screening Level (RSL) Summary Table

NOTES

3) Was not sampled in September due to low recharge rate.
4) Quarterly combined with 2013 Annual sampling event.

8.5.4 NAPIS-1, NAPIS-2, NAPIS-3, KA-3

Volatile and Semi-Volatile Organic Compound Analytical Result Summary

			Parameters																	
			Acenaphthene (mg/L)	Aniline (mg/L)	Benz (a)anthracene (mg/L)	Bis(2-ethylhexyl) phthalate (mg/L)	Fluorene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	2-Methyl phenol (mg/L)	Naphthalene (mg/L)	Phenanthrene (mg/L)	3+4-Methyl phenol (mg/L)	Phenol (mg/L)	1,1-Dichloro ethane (mg/L)	Isopropyl benzene (mg/L)	n-Butyl benzene (mg/L)	n-Propyl benzene (mg/L)	sec-Butyl benzene (mg/L)	1,2,4-Trimethyl benzene (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	**0.005**	**0.025**	NE	NE	NE	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	**0.006**	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			**0.535 [1]**	**0.013**	**0.000343 [1]**	0.056	**0.288 [1]**	**0.0011**	**0.036**	**0.93**	**0.00165 [1]**	NE	**0.0015**	5.8	0.0027	**0.447 [1]**	**1**	**0.66**	**2**	**0.015**
Well ID	**DATE SAMPLED**	**METHOD**																		
NAPIS 1	11/11/2014	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01						
	9/11/2014	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.004	<0.004	<0.02	<0.002	<0.01	<0.01	<0.01	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001
	6/5/2014	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01						<0.001
	3/10/2014	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01						
	11/12/2013	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	9/3/2013 [5]	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	6/12/2013	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	3/18/2013	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	12/5/2012 [4]	8270C/8260B	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	8/21/2012	8270C/8260B	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	6/12/2012	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	3/20/2012	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	1/30/2012	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	12/14/2011	8270C	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA								
	9/27/2011	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	6/15/2011	8270C/8260B	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	3/2/2011	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	NL	<0.01	<0.01	<0.01	<0.01								
	11/2/2010	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	NL	<0.01	<0.01	<0.01	<0.01								
	9/15/2010	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	NL	<0.01	<0.01	<0.1	<0.01								
	6/8/2010	8310	<0.0025	NL	NL	NL	<0.0008	<0.002	<0.002	NL	<0.002	<0.0006								
	3/8/2010	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	NL	<0.01	<0.01	<0.01	<0.01								
	11/23/2009	8310	NL	NL	<0.00007	NL	<0.0008	<0.002	<0.002	NL	<0.002	<0.006								
	8/11/2009	8310	NL	NL	<0.00007	NL	<0.0008	<0.002	<0.002	NL	<0.002	<0.006								
	5/28/2009	8310	NL	NL	<0.00007	NL	<0.0008	<0.002	<0.002	NL	<0.002	<0.006								
	3/24/2009	8310	NL	NL	<0.00007	NL	<0.0008	<0.002	<0.002	NL	<0.002	<0.006								

8.5.4 NAPIS-1, NAPIS-2, NAPIS-3, KA-3

Volatile and Semi-Volatile Organic Compound Analytical Result Summary

			Parameters																	
			Acenaphthene (mg/L)	Aniline (mg/L)	Benz (a)anthracene (mg/L)	Bis(2-ethylhexyl) phthalate (mg/L)	Fluorene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	2-Methyl phenol (mg/L)	Naphthalene (mg/L)	Phenanthrene (mg/L)	3+4-Methyl phenol (mg/L)	Phenol (mg/L)	1,1-Dichloro ethane (mg/L)	Isopropyl benzene (mg/L)	n-Butyl benzene (mg/L)	n-Propyl benzene (mg/L)	sec-Butyl benzene (mg/L)	1,2,4-Trimethyl benzene (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	**0.005**	**0.025**	NE	NE	NE	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	**0.006**	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			**0.535 [1]**	**0.013**	**0.000343 [1]**	0.056	**0.288 [1]**	**0.0011**	**0.036**	**0.93**	**0.00165 [1]**	NE	**0.0015**	5.8	0.0027	**0.447 [1]**	**1**	**0.66**	**2**	**0.015**
Well ID	**DATE SAMPLED**	**METHOD**																		
NAPIS 2	11/11/2014	8270C	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05						
	9/11/2014	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.004	<0.004	<0.02	**0.004**	<0.01	<0.01	<0.01	<0.001	0.0011	<0.003	0.0017	<0.001	<0.001
	6/5/2014	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01						0.0029
	3/10/2014	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01						
	11/12/2013	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NA	NA	NA	NA	NA	NA
	9/3/2013 [5]	8270C/8260B	<0.01	<0.01	<0.01	<0.01	<0.01	**0.0094**	<0.004	<0.01	**0.0048**	<0.01	<0.01	<0.01	<0.001	0.0028	<0.003	0.0022	0.0015	1.7E-03 [6]
	6/12/2013	8270C/8260B	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NA	NA	NA	NA	NA	
	3/18/2013	8270C/8260B	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NA	NA	NA	NA	NA	
	12/5/2012 [4]	8270C/8260B	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NA	NA	NA	NA	NA	
	8/21/2012	8270C/8260B	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	<0.015	<0.005	<0.005	
	6/12/2012	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.016**	NA	NA	NA	NA	NA	
	3/20/2012	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	**0.015**	<0.01	0.015	<0.01	<0.01	**0.034 [2]**	**0.078 [2]**	NA	NA	NA	NA	NA	
	12/14/2011	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	**0.01**	<0.01	<0.01	<0.01	<0.01			NA	NA	NA	NA	NA	
	9/27/2011	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	**0.012**	<0.01	<0.01	**0.011**	<0.01			NA	NA	NA	NA	NA	
	6/15/2011	8270C/8260B	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01			**0.005**	<0.005	<0.005	<0.005	<0.005	
	3/2/2011	8270C	<0.01	<0.01	<0.01	0.01	0.012	NL	<0.01	<0.01	**0.015**	<0.01			NA	NA	NA	NA	NA	
	11/2/2010	8270C	0.01	<0.01	<0.01	<0.01	0.011	NL	<0.01	<0.01	<0.01	<0.01			NA	NA	NA	NA	NA	
	9/15/2010	8270C	<0.01	<0.01	<0.01	<0.01	<0.05	NL	<0.01	<0.01	<0.01	<0.01			NA	NA	NA	NA	NA	
	6/10/2010	8310	<0.0025	NL	<0.00007	NL	0.011	**0.033**	<0.002	NL	**0.089**	0.005			NA	NA	NA	NA	NA	
	3/8/2010	8270C/8260B	<0.05	<0.05	<0.05	<0.05	<0.05	NL	<0.05	<0.05	**0.0036**	<0.05			0.0028	0.0028	0.0014	0.0042	0.002	
	11/23/2009	8310	NL	NL	<0.00007	NL	0.009	<0.002	<0.002	NL	**0.046**	0.0017								
	8/11/2009	8310	NL	NL	<0.00007	NL	0.0073	<0.002	<0.002	NL	<0.002	0.0037								
	5/28/2009	8310	NL	NL	<0.00007	NL	<0.0008	**0.0042**	0.0023	NL	**0.03**	<0.006								
	3/24/2009	8310	NL	NL	<0.00014	NL	<0.0016	<0.004	<0.004	NL	<0.004	<0.00012								
	11/10/2008	8310	<0.005	NL	<0.00007	NL	0.00099	<0.002	<0.002	NL	<0.002	<0.006								

8.5.4 NAPIS-1, NAPIS-2, NAPIS-3, KA-3

Volatile and Semi-Volatile Organic Compound Analytical Result Summary

			Parameters																	
			Acenaphthene (mg/L)	Aniline (mg/L)	Benz (a)anthracene (mg/L)	Bis(2-ethylhexyl) phthalate (mg/L)	Fluorene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	2-Methyl phenol (mg/L)	Naphthalene (mg/L)	Phenanthrene (mg/L)	3+4-Methyl phenol (mg/L)	Phenol (mg/L)	1,1-Dichloro ethane (mg/L)	Isopropyl benzene (mg/L)	n-Butyl benzene (mg/L)	n-Propyl benzene (mg/L)	sec-Butyl benzene (mg/L)	1,2,4-Trimethyl benzene (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	**0.005**	**0.025**	NE	NE	NE	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	**0.006**	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			**0.535 [1]**	**0.013**	**0.000343 [1]**	0.056	**0.288 [1]**	**0.0011**	**0.036**	**0.93**	**0.00165 [1]**	NE	**0.0015**	5.8	0.0027	**0.447 [1]**	**1**	**0.66**	**2**	**0.015**
Well ID	**DATE SAMPLED**	**METHOD**																		
NAPIS 3	11/13/2014	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01						<0.001
	9/11/2014	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.004	<0.004	<0.02	<0.002	<0.01	<0.01	<0.01	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001
	6/5/2014	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01						<0.001
	3/10/2014	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01						
	11/12/2013	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	9/3/2013 [5]	8270C/8260B	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	6/12/2013	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	3/18/2013	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	12/5/2012 [4]	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	10/2/2012 [3]	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	6/12/2012	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	3/20/2012	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	12/14/2011	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	9/27/2011	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	6/15/2011	8270C/8260B	<0.01	<0.01	<0.01	<0.01	<0.01	<0.004	<0.01	<0.01	<0.01	<0.01								
	3/2/2011	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	NL	<0.01	<0.01	<0.01	<0.01								
	11/2/2010	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	NL	<0.01	<0.01	<0.01	<0.01								
	9/15/2010	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	NL	<0.01	<0.01	<0.01	<0.01								
	6/10/2010	8310	<0.005	NL	NL	NL	0.0049	**0.05**	<0.002	NL	**0.045**	0.0045								
	3/8/2010	8270C/8260B	<0.01	<0.01	<0.01	<0.01	<0.01	NL	<0.01	<0.01	<0.01	<0.01								
	11/23/2009	8310	NL	NL	<0.00007	NL	<0.0008	<0.002	<0.002	NL	<0.002	<0.006								
	8/31/2009	8310	NL	NL	<0.00007	NL	<0.0008	<0.002	<0.002	NL	<0.002	<0.006								
	6/15/2009	8310	NL	NL	<0.00007	NL	<0.0008	<0.002	<0.002	NL	<0.002	<0.006								
	3/25/2009	8310	NL	NL	<0.00007	NL	<0.0008	<0.002	<0.002	NL	<0.002	<0.006								

8.5.4 NAPIS-1, NAPIS-2, NAPIS-3, KA-3

Volatile and Semi-Volatile Organic Compound Analytical Result Summary

			Parameters																	
			Acenaphthene (mg/L)	Aniline (mg/L)	Benz (a)anthracene (mg/L)	Bis(2-ethylhexyl) phthalate (mg/L)	Fluorene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	2-Methyl phenol (mg/L)	Naphthalene (mg/L)	Phenanthrene (mg/L)	3+4-Methyl phenol (mg/L)	Phenol (mg/L)	1,1-Dichloro ethane (mg/L)	Isopropyl benzene (mg/L)	n-Butyl benzene (mg/L)	n-Propyl benzene (mg/L)	sec-Butyl benzene (mg/L)	1,2,4-Trimethyl benzene (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	**0.005**	**0.025**	NE	NE	NE	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	**0.006**	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			**0.535 [1]**	**0.013**	**0.000343 [1]**	0.056	**0.288 [1]**	**0.0011**	**0.036**	**0.93**	**0.00165 [1]**	NE	**0.0015**	5.8	0.0027	**0.447 [1]**	**1**	**0.66**	**2**	**0.015**
Well ID	**DATE SAMPLED**	**METHOD**																		
KA-3	11/11/2014	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01						
	9/11/2014	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.004	<0.004	<0.02	<0.002	<0.01	<0.01	<0.01	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001
	6/5/2014	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01						<0.001
	3/10/2014	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01						
	11/12/2013	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	9/3/2013 [5]	8270C/8260B	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	6/12/2013	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	3/18/2013	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	12/5/2012 [4]	8270C/8260B	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	8/21/2012	8270C/8260B	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	6/12/2012	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	3/20/2012	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	12/14/2011	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	**0.035**	<0.01	<0.01	**0.019**	<0.01								
	9/27/2011	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01								
	6/15/2011	8270C/8260B	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0.04	<0.01	<0.01	<0.01	<0.01								
	3/2/2011	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	NL	<0.01	<0.01	<0.01	<0.01								
	11/2/2010	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	NL	<0.01	<0.01	**0.013**	<0.01								
	9/15/2010	8270C/8260B	<0.01	<0.01	<0.01	<0.01	<0.01	NL	<0.01	<0.01	**0.011**	<0.01								
	6/10/2010	8310	<0.005	NL	<0.00007	NL	0.0008	<0.002	<0.002	0.0045	<0.002	<0.0006								
	3/8/2010	8270C/8260B	<0.01	<0.01	<0.01	<0.01	<0.01	NL	<0.01	<0.01	<0.01	<0.01								
	11/23/2009	8310	NL	NL	<0.00007	NL	0.0029	**0.022**	<0.002	NL	**0.033**	0.0025								
	8/31/2009	8310	NL	NL	<0.00007	NL	<0.0008	<0.002	<0.002	NL	<0.002	<0.006								
	5/28/2009	8310	NL	NL	<0.00007	NL	<0.0008	<0.002	<0.002	NL	**0.047**	<0.006								
	3/25/2009	8310	NL	NL	<0.00007	NL	<0.0008	<0.002	<0.002	NL	<0.002	<0.0006								

DEFINITIONS

NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or less.
a) Human Health Standards; b) Other Standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table
1) NMED Tap Water (Dec 2014)

NOTES

2) 3+4 Methylphenol and Phenol detected for the first time first quarter 2010.
3) Not sampled in September due to low recharge rate.
4) 8270C analysis was missed during the 4th quarter sampling on 11/28/12.
5) Quarterly combined with 2013 Annual Sampling event.
6) 1,2,4-Trimethylbenzene detected for the first time during 2013 Annual sampling event.

8.6 LEAK DETECTION UNITS (East LDU, West LDU, Oil Sump LDU)
BTEX and DRO/GRO Analytical Result Summary

			Parameters							
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	DRO (mg/L)	GRO (mg/L)	MRO [3] (mg/L)
WQCC 20NMAC 6.2.3103			0.01	0.75	0.75	0.62	NE	0.2 [1]	NE	NE
40 CFR 141.62 MCL (June 2015)			0.005	1	0.7	10	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			0.00045	1.1	0.0015	0.19	0.143 [2]	NE	NE	NE
SAMPLE ID	DATE SAMPLED	METHOD								
East LDU[4]	11/11/2014	8021B/8015B	1.7	4.8	0.72	8.2	<0.5	17	38	
	6/3/2014	8021B/8015B	8.9	21	2.3	19	<0.5	29	130	<5
	3/10/2014	8021B/8015B	9.8	27	3.8	25	<0.5	310	200	<50
	11/12/2013	8021B/8015B	0.19	0.17	0.13	5.6	<0.5	410	32	NA
	6/12/2013	8021B/8015B	9.4	2.2	0.51	6.1	<0.5	18	38	<5.0
	3/18/2013	8021B/8015B	12	4.6	0.61	7	<0.5	28	50	<5.0
	11/28/2012	8021B/8015B	1.1	0.89	0.51	6.7	<0.25	19	27	<5.0
	8/21/2012	8021B/8015B	1.2	0.33	0.46	5.7	<0.25	10	17	<5.0
	6/12/2012	8021B/8015B	1.3	1.1	0.46	6.3	<0.25	27	24	<5.0
	3/20/2012	8021B/8015B	1.4	3.1	0.56	8	<0.5	30	31	<5.0
	12/14/2011	8021B/8015B	1.8	4.2	0.56	6.7	<0.25	33	33	<5.0
	9/26/2011	8021B/8015B	2.8	7.2	0.68	7	<0.13	34	43	<50
	6/15/2011	8260B/8015B	1.8	0.28	0.32	3.8	<0.02	27	13	<5.0
	3/3/2011	8021B/8015B	2.6	7.2	0.45	3.9	<0.5	35	83	<5.0
	11/11/2010	8021B/8015B	10	28	1.3	9	<0.05	63	100	
	9/20/2010	8021B/8015B	10	20	1.1	8.1	<0.13	120	100	
	3/18/2010	8021B/8015B	9.1	17	1.4	9.9	NL	16000	120	
West LDU[5]	9/11/2014	8021B/8015B	0.87	0.3	0.11	0.94	<0.12	6.6	6.7	<5
	6/3/2014	8021B/8015B	0.52	0.035	0.18	2.8	<0.05	8	12	<5
	3/10/2014	8021B/8015B	0.7	0.14	0.17	3.3	<0.25	14	13	<5
	11/12/2013	8021B/8015B	2.8	3.7	0.31	6	<0.25	17	30	NA
	9/5/2013 [6]	8021B/8015B	1.5	3.1	0.28	7.8	<0.25	110	47	<50
	6/12/2013	8021B/8015B	6	3	0.49	5.2	<0.25	4.7	31	<5.0
	3/18/2013	8021B/8015B	3.9	0.42	0.38	4	<0.25	2.6	20	<5.0
	11/28/2012	8021B/8015B	2	1.9	0.57	5.1	<0.25	5.7	25	<5.0
	8/21/2012	8021B/8015B	1.8	3.2	0.66	3.1	<0.25	4	18	<5.0
	6/12/2012	8021B/8015B	1.4	3.5	0.41	5.7	<0.25	9	27	<5.0
	3/20/2012	8021B/8015B	1.6	6	0.69	7.6	<0.012	6.9	42	<5.0
	12/14/2011	8021B/8015B	2.3	8.3	0.83	7.2	<0.25	22	45	<5.0
	9/26/2011	8021B/8015B	3.6	9.3	0.59	5.5	<0.025	14	45	<5.0
	6/15/2011	8260B/8015B	0.094	0.33	0.029	0.26	<0.01	13	2.2	<5.0
	3/3/2011	8021B/8015B	6.1	17	0.92	7.9	<0.5	15	40	<5.0
	11/11/2010	8021B/8015B	7	18	0.9	6.1	<0.001	16	67	
	9/20/2010	8021B/8015B	3.1	5.8	0.36	2.9	<0.0025	9	26	
	3/18/2010	8021B/8015B	2.7	4.2	0.19	1.4	NL	16	24	

8.6 LEAK DETECTION UNITS (East LDU, West LDU, Oil Sump LDU)
BTEX and DRO/GRO Analytical Result Summary

			Parameters							
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	DRO (mg/L)	GRO (mg/L)	MRO [3] (mg/L)
WQCC 20NMAC 6.2.3103			0.01	**0.75**	0.75	**0.62**	NE	**0.2** [1]	NE	NE
40 CFR 141.62 MCL (June 2015)			**0.005**	1	**0.7**	10	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			0.00045	1.1	0.0015	0.19	**0.143** [2]	NE	NE	NE
SAMPLE ID	**DATE SAMPLED**	**METHOD**								
Oil Sump LDU[6]	6/12/2013	8021B/8015B	**4.5**	**9.5**	**0.72**	**6.3**	<0.5	**17**	42	<5.0
	3/18/2013	8021B/8015B	**5.1**	**8.8**	**0.71**	**5.5**	<0.5	**20**	40	<5.0
	11/28/2012	8021B/8015B	**2.7**	**6.6**	**0.57**	**5.4**	<0.5	**13**	37	<5.0
	8/21/2012	8021B/8015B	**1.8**	**6**	**0.59**	**5.5**	<0.5	**8.8**	28	<5.0
	6/12/2012	8021B/8015B	**2.1**	**6.2**	**0.59**	**5.1**	<0.5	**18**	36	<5.0
	3/20/2012	8021B/8015B	**2**	**8.1**	**0.89**	**6.9**	<0.5	**42**	45	<5.0
	12/14/2011	8021B/8015B	**3.4**	**7.5**	**0.76**	**7.4**	<0.5	**14**	52	<5.0
	9/26/2011	8021B/8015B	**3.5**	**10**	**0.76**	**6.4**	<0.5	**18**	49	<50
	6/15/2011	8260B/8015B	**3**	**7.1**	0.48	**3.9**	<0.2	**20**	38	<5.0
	3/3/2011	8021B/8015B	**5.6**	**13**	**1.2**	**7.9**	<0.5	**680**	120	<15
	11/11/2010	8021B/8015B	**8.8**	**19**	**1.6**	**10**	<0.2	**390**	110	
	9/20/2010	8021B/8015B	**9.4**	**29**	**6.1**	**40**	<0.5	**1400**	650	
	3/18/2010	8021B/8015B	**5.6**	**33**	**6.4**	**38**	<0.95	**35**	69	

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
1) NMED Table 6 (unknown oil). TPH Screening Guidelines for Potable Ground Water (GW-1). (Jun 2012)
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table
2) NMED Tap Water (Dec 2014)

NOTES
3) Per NMED "Approval with Modifications Annual Ground Water Monitoring Report 2010, Rev. 1", dated 12/12/12, Comment 7(a) added MRO to data tables.
4) No samples collected in Q3-2014, not enough water to sample.
5) No samples collected in Q4-2014, not enough water to sample.
6) No samples collected during 2014, not enough water to sample.

8.6.1 LEAK DETECTION UNITS (East LDU, West LDU, Oil Sump LDU)
Total Metals Analytical Result Summary

			Parameters											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	0.01	**0.05**	**1**	**1**	0.05	**0.2**	**0.05**	**0.002**	**0.03**	**10**
40 CFR 141.62 MCL (June 2015)			**0.01**	2	**0.005**	0.1	1.3	NE	**0.015**	NE	0.05	0.002	0.03	NE
EPA RSL for Tap Water (June 2015)			0.000052	3.8	0.0092	NE	0.8	14	0.015	0.43	0.1	0.00063	0.06	6
SAMPLE ID	**DATE SAMPLED**	**METHOD**												
East LDU[1]	11/11/2014	200.7/200.8	**0.0015**	0.12	<0.002	**0.22**	<0.006	**19**	<0.001	**5.4**	<0.001	<0.0002	<0.001	0.18
	6/3/2014	200.7/200.8	**0.019**	0.33	<0.002	**0.54**	<0.006	**1.1**	<0.005	**1.5**	<0.005	<0.0002	<0.005	0.027
	3/10/2014	200.7/200.8	**0.0093**	0.2	<0.002	**0.71**	<0.006	**4.4**	<0.005	**3.1**	<0.005	0.00022	<0.005	0.12
	11/12/2013	200.7/200.8	**0.012**	0.35	<0.01	**0.44**	<0.03	0.32	<0.005	**0.26**	0.0063	<0.0002	<0.005	<0.05
	6/12/2013	200.7/200.8	0.007	0.56	<0.002	**0.72**	<0.006	0.091	<0.005	**0.56**	0.0081	<0.0002	<0.005	<0.01
	3/18/2013	200.7/200.8	0.0059	0.48	<0.002	**0.76**	<0.006	0.09	<0.005	**0.62**	0.0027	<0.0002	<0.0025	<0.01
	11/28/2012	200.7/200.8	0.0095	0.53	<0.002	**0.71**	<0.006	0.23	<0.005	**1.1**	0.0036	<0.0002	<0.0025	<0.01
	8/21/2012	200.7/200.8	0.0094	0.67	<0.002	**0.51**	<0.006	0.099	<0.005	**1.2**	<0.05	<0.0002	<0.0025	<0.01
	6/12/2012	200.7/200.8	0.0099	0.6	<0.002	**0.31**	<0.006	0.17	<0.005	**1.2**	0.0065	<0.001	<0.005	<0.01
	3/20/2012	200.7/200.8	0.0032	0.44	<0.002	**0.11**	<0.006	**2.3**	<0.005	**0.58**	0.0026	<0.0002	<0.0025	0.064
	12/14/2011	200.7/200.8	0.0082	0.34	<0.002	**0.14**	<0.006	0.54	<0.005	**0.42**	<0.0025	<0.0002	<0.0025	0.018
	9/26/2011	200.7/200.8	0.0039	0.59	<0.002	**0.12**	<0.006	0.58	<0.005	**0.56**	<0.0025	<0.0002	<0.0025	0.036
	6/15/2011	200.7/200.8	**0.027**	0.94	<0.002	**0.14**	0.13	**31**	**0.047**	**1.3**	0.037	<0.0002	<0.0025	3.3
	3/3/2011	200.7/200.8	0.0058	0.48	<0.002	0.035	<0.006	0.57	<0.005	**0.39**	<0.05	<0.0002	<0.0025	0.014
	11/11/2010	6010B	<0.1	0.94	<0.01	**0.12**	<0.03	**1.1**	<0.025	**1.6**	<0.25	<0.0002	<0.001	<0.1
	9/20/2010	6010B	<0.02	0.54	<0.002	0.039	<0.006	**7.6**	<0.005	**0.8**	<0.05	<0.0008	<0.005	0.21
	3/18/2010	6010B	<0.1	**1.3**	<0.01	**0.25**	0.073	**24**	<0.025	**2**	<0.25	<0.0008	<0.001	1.3

8.6.1 LEAK DETECTION UNITS (East LDU, West LDU, Oil Sump LDU)

Total Metals Analytical Result Summary

			Parameters											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	0.01	**0.05**	**1**	**1**	0.05	**0.2**	**0.05**	**0.002**	**0.03**	**10**
40 CFR 141.62 MCL (June 2015)			**0.01**	2	**0.005**	0.1	1.3	NE	**0.015**	NE	0.05	0.002	0.03	NE
EPA RSL for Tap Water (June 2015)			0.000052	3.8	0.0092	NE	0.8	14	0.015	0.43	0.1	0.00063	0.06	6
SAMPLE ID	**DATE SAMPLED**	**METHOD**												
West LDU[2]	9/11/2014	200.7/200.8	**0.0031**	0.52	<0.002	**0.28**	<0.006	**5.1**	0.0013	**0.73**	0.0034	<0.0002	<0.001	0.57
	6/3/2014	200.7/200.8	<0.005	0.15	<0.002	**0.058**	<0.006	**16**	<0.005	**2**	<0.005	<0.0002	<0.005	0.5
	3/10/2014	200.7/200.8	<0.005	0.069	<0.002	**0.15**	<0.006	**9**	<0.001	**3.8**	<0.005	<0.0002	<0.001	0.68
	11/12/2013	200.7/200.8	0.0099	0.18	<0.002	**0.16**	<0.006	**0.34**	<0.005	**1.4**	0.014	<0.0002	<0.005	0.032
	9/5/2013	200.7/200.8	0.0088	0.23	<0.002	**0.32**	<0.006	**37**	<0.005	**2**	<0.02	<0.0002	<0.005	1.1
	6/12/2013	200.7/200.8	0.0053	0.22	<0.002	0.036	<0.006	0.31	<0.005	**0.29**	0.0097	<0.0002	<0.005	<0.01
	3/18/2013	200.7/200.8	0.0036	0.15	<0.002	0.046	<0.006	0.71	<0.005	**0.32**	<0.0025	<0.0002	<0.0025	0.026
	11/28/2012	200.7/200.8	0.0031	0.17	<0.002	**0.079**	<0.006	0.72	<0.005	**0.57**	<0.0025	<0.0002	<0.0025	0.016
	8/21/2012	200.7/200.8	<0.0025	0.4	<0.002	0.036	<0.006	0.26	<0.005	**0.22**	<0.05	<0.0002	<0.0025	<0.01
	6/12/2012	200.7/200.8	0.0038	0.36	<0.002	0.02	<0.006	0.16	<0.005	0.2	0.0049	<0.001	<0.0025	<0.01
	3/20/2012	200.7/200.8	0.0028	0.21	<0.002	0.011	<0.006	**1.3**	<0.005	**0.22**	0.0035	<0.0002	<0.0025	0.014
	12/14/2011	200.7/200.8	**0.011**	**1.4**	<0.002	**0.082**	0.045	**9.1**	**0.016**	**0.34**	<0.005	**0.0036**	<0.0025	0.87
	9/26/2011	200.7/200.8	0.0041	0.23	<0.002	**0.072**	<0.006	**1.5**	<0.005	**0.89**	0.0048	0.00027	<0.0025	0.064
	6/15/2011	200.7/200.8	**0.012**	0.65	<0.002	**0.093**	<0.006	**1.3**	<0.005	**1.1**	0.025	<0.0002	<0.0025	0.061
	3/3/2011	200.7/200.8	0.0083	0.49	<0.002	**0.08**	<0.006	**4.1**	<0.005	**1.3**	<0.05	<0.0002	<0.0025	0.067
	11/11/2010	6010B	<0.02	0.5	<0.002	**0.15**	<0.006	0.66	<0.005	**0.68**	<0.05	<0.0002	<0.001	<0.02
	9/20/2010	6010B	<0.02	0.27	<0.002	**0.067**	<0.006	0.31	NL	**0.84**	<0.05	<0.0002	<0.05	<0.02
	3/18/2010	6010B	<0.02	0.2	<0.002	**2.4**	<0.006	**5.3**	<0.005	**3.1**	<0.05	<0.0008	<0.001	<0.05

8.6.1 LEAK DETECTION UNITS (East LDU, West LDU, Oil Sump LDU)
Total Metals Analytical Result Summary

			Parameters											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	0.01	**0.05**	**1**	**1**	0.05	**0.2**	**0.05**	**0.002**	**0.03**	**10**
40 CFR 141.62 MCL (June 2015)			**0.01**	2	**0.005**	0.1	1.3	NE	**0.015**	NE	0.05	0.002	0.03	NE
EPA RSL for Tap Water (June 2015)			0.000052	3.8	0.0092	NE	0.8	14	0.015	0.43	0.1	0.00063	0.06	6
SAMPLE ID	**DATE SAMPLED**	**METHOD**												
Oil Sump LDU[3]	6/12/2013	200.7/200.8	**0.018**	0.43	<0.002	**0.12**	<0.006	0.42	<0.005	**1.1**	0.015	<0.0002	<0.005	0.022
	3/18/2013	200.7/200.8	**0.018**	0.33	<0.002	**0.11**	<0.006	0.61	<0.005	**1.1**	0.0049	<0.0002	<0.0025	0.03
	11/28/2012	200.7/200.8	**0.011**	0.34	<0.002	**0.085**	<0.006	0.8	<0.005	**1.1**	0.0046	<0.0002	<0.0025	0.041
	8/21/2012	200.7/200.8	**0.011**	0.45	<0.002	**0.069**	<0.006	0.86	<0.005	**1.1**	<0.05	<0.0002	<0.0025	0.055
	6/12/2012	200.7/200.8	**0.017**	0.56	<0.002	**0.052**	0.018	**5.8**	0.0086	**0.84**	0.0097	**0.0031**	<0.005	0.43
	3/20/2012	200.7/200.8	**0.02**	0.52	<0.002	0.048	0.0093	**4.5**	0.0065	**0.82**	0.012	0.0017	<0.0025	0.22
	12/14/2011	200.7/200.8	**0.012**	0.24	0.002	0.034	<0.006	0.59	<0.005	**0.37**	0.004	<0.0002	<0.0025	0.018
	9/26/2011	200.7/200.8	**0.031**	**1.8**	0.0022	**0.16**	**0.62**	**120**	**0.2**	**0.93**	0.0072	**0.0077**	0.0026	**11**
	6/15/2011	200.7/200.8	0.0065	0.5	<0.01	0.039	<0.03	0.38	<0.025	**0.35**	0.004	<0.0002	<0.0025	<0.05
	3/3/2011	200.7/200.8	0.0098	0.62	<0.002	**0.072**	<0.006	**9.4**	0.0056	**0.81**	<0.05	**0.0024**	<0.0025	0.47
	11/10/2010	6010B	<0.1	**7.2**	<0.01	**0.18**	0.25	**150**	**0.11**	**2.3**	<0.25	**0.017**	<0.004	**7.9**
	9/20/2010	6010B	<0.1	**15**	<0.01	**0.23**	0.59	**130**	**0.24**	**1.6**	<0.25	**0.011**	0.016	**13**
	3/18/2010	6010B	<2.0	<2.0	<0.2	**1.1**	**4.5**	NL	**1.7**	**3.3**	<5.0	<0.004	**0.0461**	**88**

DEFINITIONS	**STANDARDS**
NE = Not established	WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
NA = Not analyzed	a) Human Health Standards; b) Other standards for Domestic Water
NL = Not listed on laboratory analysis	40 CFR 141.62 Detection Limits for Inorganic Contaminants
Bold and highlighted values represent values above the applicable standards	EPA Regional Screening Level (RSL) Summary Table

NOTES

1) No samples collected in Q3-2014, not enough water to sample.
2) No samples collected in Q4-2014, not enough water to sample.
3) No samples collected during 2014, not enough water to sample.

8.6.2 LEAK DETECTION UNITS (East LDU, West LDU, Oil Sump LDU)
Dissolved Metals Analytical Result Summary

			Parameters											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	0.01	**0.05**	**1**	**1**	0.05	**0.2**	**0.05**	**0.05**	**0.03**	**10**
SAMPLE ID	DATE SAMPLED	METHOD												
East LDU[1]	11/11/2014	200.7/200.8	**0.0013**	0.074	<0.002	**0.18**	<0.006	**1.4**	<0.001	**4.9**	<0.001	<0.005	<0.001	<0.01
	6/3/2014	200.7/200.8	**0.021**	0.32	<0.002	**0.52**	<0.006	0.025	<0.005	**1.5**	0.056	<0.005	<0.005	0.021
	3/10/2014	200.7/200.8	<0.01	0.19	<0.002	**0.71**	<0.006	**2.9**	<0.01	**3**	0.051	<0.005	<0.01	0.11
	11/12/2013	200.7/200.8	0.0097	0.34	<0.002	**0.44**	<0.006	0.08	<0.005	**0.25**	0.0078	<0.005	<0.005	0.019
	6/12/2013	200.7/200.8	0.0063	0.56	<0.002	**0.69**	<0.006	0.049	<0.005	**0.56**	0.02	<0.005	<0.005	<0.01
	3/18/2013	200.7/200.8	0.0063	0.45	<0.002	**0.77**	<0.006	0.047	0.0052	**0.62**	0.0056	<0.005	<0.001	<0.01
	11/28/2012	200.7/200.8	0.01	0.51	<0.002	**0.69**	<0.006	0.055	<0.005	**1**	0.015	<0.005	<0.02	0.025
	8/21/2012	200.7/200.8	0.0062	0.62	<0.002	**0.46**	<0.006	0.044	<0.005	**1.2**	<0.05	<0.005	<0.001	<0.01
	6/12/2012	200.7/200.8	0.0051	0.59	<0.002	**0.28**	<0.006	0.062	<0.005	**1.1**	0.0092	<0.005	<0.005	0.011
	3/20/2012	200.7/200.8	<0.005	0.42	<0.002	**0.11**	<0.006	0.9	<0.005	**0.6**	<0.005	<0.005	<0.005	0.035
	12/14/2011	200.7/200.8	0.0035	0.31	<0.002	**0.12**	<0.006	0.21	<0.005	**0.39**	0.0018	<0.005	<0.001	<0.01
	9/26/2011	200.7/200.8	0.0036	0.58	<0.002	**0.11**	<0.006	0.057	<0.005	**0.55**	0.0019	<0.005	<0.001	0.026
	6/15/2011	200.7/200.8	**0.016**	0.11	<0.01	**0.11**	<0.03	**1.2**	<0.025	**1.2**	0.037	<0.025	<0.01	<0.05
	3/3/2011	200.7/200.8	<0.005	0.48	<0.002	0.034	<0.006	0.11	<0.005	**0.38**	<0.05	<0.005	<0.005	<0.01
	11/11/2010	6010B	<0.02	0.33	<0.002	0.046	<0.006	0.16	<0.005	**0.59**	<0.05	<0.005	<0.001	<0.05
	9/20/2010	6010B	<0.02	0.31	<0.002	0.033	<0.006	0.14	<0.005	**0.73**	<0.05	<0.005	<0.005	<0.05
	3/18/2010	6010B	<0.04	0.21	<0.004	**0.22**	<0.012	0.86	<0.01	**2**	<0.1	<0.01	<0.001	<0.1

8.6.2 LEAK DETECTION UNITS (East LDU, West LDU, Oil Sump LDU)
Dissolved Metals Analytical Result Summary

			Parameters											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	0.01	**0.05**	**1**	**1**	0.05	**0.2**	**0.05**	**0.05**	**0.03**	**10**
SAMPLE ID	DATE SAMPLED	METHOD												
West LDU[2]	9/11/2014	200.7/200.8	<0.005	0.49	<0.002	**0.27**	<0.006	**1.3**	<0.01	**0.64**	<0.005	<0.005	<0.01	0.26
	6/3/2014	200.7/200.8	<0.002	0.082	<0.002	**0.043**	<0.006	0.92	<0.001	**1.9**	0.0027	<0.005	0.0011	0.022
	3/10/2014	200.7/200.8	<0.001	0.061	<0.002	**0.11**	<0.006	**2.6**	<0.001	**3.6**	0.0023	<0.005	<0.001	0.088
	11/12/2013	200.7/200.8	0.01	0.17	<0.002	**0.14**	<0.006	0.093	<0.005	**1.3**	0.044	<0.005	<0.005	0.023
	9/5/2013	200.7/200.8	0.0086	0.23	<0.002	**0.28**	<0.006	**29**	<0.005	**2**	0.015	<0.025	<0.005	0.35
	6/12/2013	200.7/200.8	<0.01	0.22	<0.002	0.036	<0.006	0.19	<0.01	**0.29**	**0.11**	<0.005	<0.01	<0.01
	3/18/2013	200.7/200.8	<0.005	0.13	<0.002	0.04	<0.006	0.07	<0.005	**0.31**	0.013	<0.005	<0.005	<0.01
	11/28/2012	200.7/200.8	<0.005	0.16	<0.002	**0.071**	<0.006	0.38	<0.005	**0.55**	0.013	<0.005	<0.05	0.04
	8/21/2012	200.7/200.8	0.002	0.38	<0.002	0.032	<0.006	0.15	<0.005	**0.21**	<0.05	<0.005	<0.001	0.014
	6/12/2012	200.7/200.8	<0.005	0.35	<0.002	0.019	<0.006	0.09	<0.005	**0.2**	0.0075	<0.005	<0.005	<0.01
	3/20/2012	200.7/200.8	0.0018	0.21	<0.002	0.013	<0.006	0.61	<0.005	**0.22**	0.0038	<0.005	<0.001	0.02
	12/14/2011	200.7/200.8	0.0071	0.3	<0.002	**0.066**	<0.006	**1.3**	<0.005	**0.31**	<0.005	<0.005	<0.005	0.04
	9/26/2011	200.7/200.8	0.0044	0.21	NL	**0.067**	<0.006	0.14	<0.005	**0.86**	0.0075	<0.005	<0.001	0.013
	6/15/2011	200.7/200.8	**0.013**	0.61	<0.01	**0.091**	<0.03	0.33	<0.025	**1.1**	0.031	<0.025	<0.005	<0.05
	3/3/2011	200.7/200.8	<0.005	0.46	<0.002	**0.077**	<0.006	**2.1**	<0.005	**1.3**	<0.05	<0.005	<0.005	0.012
	11/11/2010	6010B	<0.02	0.56	<0.002	**0.18**	<0.006	0.22	<0.005	**0.81**	<0.05	<0.005	<0.001	<0.05
	9/20/2010	6010B	<0.02	0.25	<0.002	**0.062**	<0.006	0.12	<0.005	**0.81**	<0.05	<0.005	<0.005	<0.05
	3/18/2010	6010B	<.01	0.16	<0.01	**2.3**	<0.03	**3.2**	<0.025	**2.9**	<0.25	<0.025	<0.001	<0.25

8.6.2 LEAK DETECTION UNITS (East LDU, West LDU, Oil Sump LDU)
Dissolved Metals Analytical Result Summary

			Parameters											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	0.01	**0.05**	**1**	**1**	0.05	**0.2**	**0.05**	**0.05**	**0.03**	**10**
SAMPLE ID	DATE SAMPLED	METHOD												
Oil Sump LDU[3]	6/12/2013	200.7/200.8	<0.02	0.43	<0.002	**0.11**	<0.006	0.13	<0.02	**1.2**	**0.074**	<0.005	<0.02	<0.01
	3/18/2013	200.7/200.8	**0.011**	0.29	<0.002	**0.1**	<0.006	0.15	<0.005	**1.1**	0.013	<0.005	<0.05	0.026
	11/28/2012	200.7/200.8	**0.014**	0.32	<0.002	**0.08**	<0.006	0.37	<0.005	**1.1**	0.013	<0.005	<0.02	0.06
	8/21/2012	200.7/200.8	**0.011**	0.4	<0.002	**0.061**	<0.006	0.19	<0.005	**1.1**	<0.05	<0.005	<0.001	0.015
	6/12/2012	200.7/200.8	0.0095	0.35	<0.002	0.046	<0.006	0.51	<0.005	**0.83**	0.012	<0.005	<0.005	0.016
	3/20/2012	200.7/200.8	0.007	0.23	<0.002	0.047	<0.006	0.33	<0.005	**0.79**	0.02	<0.005	<0.005	0.024
	12/14/2011	200.7/200.8	0.0062	0.23	<0.002	0.03	<0.006	0.28	<0.005	**0.35**	0.011	<0.005	<0.001	0.015
	9/26/2011	200.7/200.8	0.0062	0.24	<0.002	**0.058**	<0.006	0.1	<0.005	**0.53**	0.011	<0.005	<0.001	0.015
	6/15/2011	200.7/200.8	0.0048	0.46	<0.01	0.033	<0.03	<0.1	<0.025	**0.33**	0.0041	<0.025	<0.002	<0.05
	3/3/2011	200.7/200.8	<0.005	0.049	<0.002	**0.054**	<0.006	**2.4**	<0.005	**0.75**	**0.071**	<0.005	<0.005	0.01
	11/10/2010	6010B	<0.02	0.19	<0.002	0.037	<0.006	0.15	0.0075	**1.2**	<0.05	<0.005	<0.001	<0.05
	9/20/2010	6010B	<0.02	0.32	<0.002	0.03	<0.006	0.12	0.0056	**1.1**	<0.05	<0.005	<0.025	<0.05

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table

NOTES
1) No samples collected in Q3-2014, not enough water to sample.
2) No samples collected in Q4-2014, not enough water to sample.
3) No samples collected during 2014, not enough water to sample.

8.6.3 LEAK DETECTION UNITS (East LDU, West LDU, Oil Sump LDU)
Volatile Organic Compound Analytical Result Summary

			Parameters							
			1,2,4-Trimethyl benzene (mg/L)	1,3,5-Trimethyl benzene (mg/L)	Naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	Acetone (mg/L)	Isopropyl benzene (mg/L)	4-Methyl-2-pentanone (mg/L)	n-Propyl benzene (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			**0.015**	**0.12**	**0.00165 [1]**	**0.036**	**14.1 [1]**	**0.447 [1]**	**1.2**	**0.66**
SAMPLE ID	**DATE SAMPLED**	**METHOD**								
East LDU[2]	11/11/2014	8260B	NA	NA	NA	NA	NA	NA	NA	NA
	6/3/2014	8260B	**3.6**	**1.2**	NA	NA	NA	NA	NA	NA
	3/10/2014	8260B	**5.8**	**1.9**	NA	NA	NA	NA	NA	NA
	6/12/2013	8021B	**0.8**	**0.28**	NA	NA	NA	NA	NA	NA
	3/18/2013	8021B	**0.9**	**0.29**	NA	NA	NA	NA	NA	NA
	11/28/2012	8021B	NA	NA	NA	NA	NA	NA	NA	NA
	8/21/2012	8021B	**0.84**	**0.28**	NA	NA	NA	NA	NA	NA
	6/12/2012	8021B	**0.94**	**0.3**	NA	NA	NA	NA	NAN	NA
	6/15/2011	8260B	**0.54**	**0.16**	**0.11**	**0.095**	<0.2	0.023	0.23	0.044
	11/11/2010	8260B	NA	NA	NA	NA	NA	NA	NA	NA
	9/20/2010	8021B	**0.81**	**0.26**	NA	NA	NA	NA	NA	NA
West LDU[3]	9/11/2014	8260B	**0.41**							
	6/3/2014	8260B	**0.76**	**0.25**	NA	NA	NA	NA	NA	NA
	3/10/2014	8260B	**0.57**	**0.19**	NA	NA	NA	NA	NA	NA
	9/5/2013 [3]	8021B	**1.8**	**0.62**	NA	NA	NA	NA	NA	NA
	6/12/2013	8021B	**0.69**	**0.23**	NA	NA	NA	NA	NA	NA
	3/18/2013	8021B	**0.61**	**0.21**	NA	NA	NA	NA	NA	NA
	11/28/2012	8021B	NA	NA	NA	NA	NA	NA	NA	NA
	8/21/2012	8021B	**0.55**	**0.24**	NA	NA	NA	NA	NA	NA
	6/12/2012	821B	**0.81**	**0.26**	NA	NA	NA	NA	NA	NA
	6/15/2011	8260B	**0.041**	0.015	<0.02	<0.04	<0.1	<0.01	<0.1	<0.01
	11/11/2010	8260B	NA	NA	NL	NL	NL	NL	NL	NL
	9/20/2010	8021B	**0.34**	**0.1**	NA	NA	NA	NA	NA	NA
Oil Sump LDU[4]	6/12/2013	8021B	**0.8**	**0.25**	NA	NA	NA	NA	NA	NA
	3/18/2013	8021B	**0.74**	**0.23**	NA	NA	NA	NA	NA	NA
	11/28/2012	8021B	NA	NA	NA	NA	NA	NA	NA	NA
	8/21/2012	8021B	**0.85**	**0.27**	NA	NA	NA	NA	NA	NA
	6/12/2012	8021B	**0.9**	**0.28**	NA	NA	NA	NA	NA	NA
	6/15/2011	8260B	**0.5**	<0.2	<0.4	<0.8	5.3	<0.2	<2.0	<0.2
	11/11/2010	8260B	NA	NA	NA	NA	NA	NA	NA	NA
	9/20/2010	8021B	**12**	**4.6**	NA	NA	NA	NA	NA	NA

8.6.3 LEAK DETECTION UNITS (East LDU, West LDU, Oil Sump LDU)
Volatile Organic Compound Analytical Result Summary

			Parameters							
			1,2,4-Trimethyl benzene (mg/L)	1,3,5-Trimethyl benzene (mg/L)	Naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	Acetone (mg/L)	Isopropyl benzene (mg/L)	4-Methyl-2-pentanone (mg/L)	n-Propyl benzene (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			**0.015**	**0.12**	**0.00165 [1]**	**0.036**	**14.1 [1]**	**0.447 [1]**	**1.2**	**0.66**
SAMPLE ID	**DATE SAMPLED**	**METHOD**								

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or less.
a) Human Health Standards; b) Other Standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table
1) NMED Tap Water (Dec 2014)

NOTES:
2) No samples collected in Q3-2014, not enough water to sample.
3) No samples collected in Q4-2014, not enough water to sample.
4) No samples collected during 2014, not enough water to sample.

8.7 OAPIS-1

BTEX Analytical Result Summary

			Parameters				
			Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	**0.75**	0.75	**0.62**	NE
40 CFR 141.62 MCL (June 2015)			**0.005**	1.0	**0.7**	10	NE
EPA RSL for Tap Water (June 2015)			4.5E-04	1.1	0.0015	0.19	**0.143** [1]
Well ID	**DATE SAMPLED**	**METHOD**					
OAPIS-1	11/11/2014	8260B	**0.15**	<0.005	0.01	<0.0075	**0.4**
	9/12/2014	8260B	**0.12**	<0.005	0.013	<0.0075	**0.32**
	6/5/2014	8260B	**0.096**	<0.002	0.01	4.9E-03	**0.36**
	3/10/2014	8260B	**0.07**	<0.001	0.0068	3.3E-03	**0.45**
	11/11/2013	8260B	**0.089**	<0.001	0.01	2.9E-03	**0.43**
	9/3/2013	8260B	**0.081**	<0.005	0.012	<0.0075	**0.42**
	6/12/2013	8260B	**0.071**	<0.002	0.01	3.3E-03	**0.51**
	3/18/2013	8260B	**0.027**	<0.005	<0.005	0.0075	**0.42**

DEFINITIONS

NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards: b) Other Standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table
1. NMED Tap Water (Dec 2014)

NOTES:

8.7.1 OAPIS-1

General Chemistry and DRO/GRO Analytical Result Summary

			Parameters									
			Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Phosphorus (mg/L)	Sulfate (mg/L)	DRO (mg/L)	GRO (mg/L)	MRO (mg/L)
WQCC 20NMAC 6.2.3103			**1.6**	**250**	NE	NE	**10**	NE	**600**	**0.2[1]**	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	**1.0**	10	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			0.8	NE	NE	1.6	32	**4.0E-04**	NE	NE	NE	NE
Well ID	**DATE SAMPLED**	**METHOD**										
OAPIS-1	11/11/2014	300.0/8015B	**1.9**	**1700**	4.8	<2	<2	<2.5	23	**9.2**	0.79	<5
	9/12/2014	300.0/8015B	1.2	**1700**	4.8	<1	<1	<2.5	22	**6.8**	0.75	<5
	6/5/2014	300.0/8015B	**1.3**	**1400**	6.1	<2	<2	<2.5	22	**11**	0.7	<5
	3/10/2014	300.0/8015B	**1.7**	**1700**	4.8	<1	<1	<5	37	**6.4**	0.71	<5
	11/11/2013	300.0/8015B	**2.0**	**1600**	4.3	**5.4**	5.4	<2.5	38	**23**	0.81	NA
	9/3/2013	300.0/8015B	1.6	**1800**	4.2	<1.0	<1.0	<2.5	38	**10**	0.73	7.5
	6/12/2013	300.0/8015B	1.6	**1800**	4.6	<1.0	<1.0	<5.0	41	**7.1**	0.94	<5.0
	3/18/2013	300.0/8015B	**1.8**	**1600**	4.6	<2.0	<2.0	<2.5	65	**6.0**	0.48	<5.0

DEFINITIONS

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other Standards for Domestic Water

1) NMED Table 6 (unknown oil). TPH Screening Guidelines for Potable Ground Water (GW-1). (Jun 2013)

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

NOTES

8.7.2 OAPIS-1

Total Metals Analytical Result Summary

			Parameters												
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)	Cyanide (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	0.01	**0.05**	**1**	**1**	0.05	**0.2**	**0.05**	**0.002**	**0.03**	**10**	**0.2**
40 CFR 141.62 MCL (June 2015)			**0.01**	2	**0.005**	0.1	1.3	NE	**0.015**	NE	0.05	0.002	0.03	NE	0.2
EPA RSL for Tap Water (June 2015)			0.000052	3.8	0.0092	NE	0.8	14	0.015	0.43	0.1	0.00063	0.06	6	0.000087
Well ID	**DATE SAMPLED**	**METHOD**													
OAPIS-1	11/11/2014	200.7/200.8	**0.016**	0.75	<0.002	<0.006	<0.006	**8.4**	0.0073	**1.9**	0.03	<0.0002	0.03	0.031	0.0587
	9/12/2014	200.7/200.8	**0.016**	0.93	<0.002	0.022	0.06	**12**	**0.029**	**2.4**	0.035	<0.0002	**0.034**	0.15	0.0908
	6/5/2014	200.7/200.8	**0.016**	0.93	<0.002	0.022	0.06	**12**	**0.029**	**2.4**	0.035	<0.0002	**0.034**	0.15	0.0753
	3/10/2014	200.7/200.8	**0.013**	0.71	<0.002	0.011	0.025	**8.6**	**0.017**	**2.1**	0.026	<0.0002	**0.039**	0.054	0.0846
	11/1/2013	200.7/200.8	**0.013**	0.69	<0.002	0.012	0.017	**12**	0.012	**2.1**	0.023	<0.0002	**0.044**	0.063	0.0765
	9/3/2013	200.7/200.8	**0.012**	0.7	<0.002	0.012	0.015	**8.5**	0.0091	**2**	0.018	<0.0002	**0.045**	0.06	0.087
	6/12/2013	200.7/200.8	**0.012**	0.75	<0.002	0.011	0.024	**10**	NL	**2.4**	0.022	<0.0002	**0.049**	0.058	0.0689
	3/18/2013	200.7/200.8	0.0082	0.61	<0.002	0.01	0.026	**7.9**	0.0085	**2.1**	0.0075	<0.0002	**0.065**	0.062	

DEFINITIONS	**STANDARDS**
NE = Not established	WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
NA = Not analyzed	a) Human Health Standards; b) Other standards for Domestic Water
NL = Not listed on laboratory analysis	40 CFR 141.62 Detection Limits for Inorganic Contaminants
Bold and highlighted values represent values above the applicable standards	EPA Regional Screening Level (RSL) Summary Table

NOTES

8.7.3 OAPIS-1

Dissolved Metals Analytical Result Summary

			Parameters															
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1.0**	0.01	NE	**0.05**	**1.0**	**1.0**	0.05	NE	**0.2**	NE	**0.05**	**0.05**	NE	**0.03**	**10.0**
Well ID	**DATE SAMPLED**	**METHOD**																
OAPIS-1	11/11/2014	200.7/200.8	<0.02	0.68	<0.002	170	<0.006	<0.006	**7.6**	<0.001	31	**1.8**	4.8	0.022	<0.005	1300	0.022	0.029
	9/12/2014	200.7/200.8	**0.018**	0.78	<0.002	170	<0.006	<0.006	**7.2**	<0.001	33	**1.8**	6.0	0.034	<0.005	1400	0.029	0.021
	6/5/2014	200.7/200.8	**0.011**	0.8	<0.002	NL	0.0082	0.025	**10**	**2.0E-02**	NL	**2.2**	NL	0.014	<0.005	NL	**0.039**	0.1
	3/10/2014	200.7/200.8	0.0083	0.61	<0.002	160	<0.006	<0.006	**5.4**	7.9E-03	28	**2**	4.5	0.0084	<0.005	1300	**0.039**	0.046
	11/11/2013	200.7/200.8	**0.013**	0.59	<0.002	140	<0.006	<0.006	**6.4**	1.4E-03	26	**2.1**	4.8	0.026	<0.025	1300	**0.042**	0.056
	9/3/2013	200.7/200.8	**0.012**	0.55	<0.002	160	<0.006	<0.006	**5.2**	<0.005	29	**2.0**	3.9	0.023	<0.005	1300	**0.047**	0.05
	6/12/2013	200.7/200.8	**0.013**	0.65	<0.002	160	<0.006	<0.006	**6.2**	1.8E-03	28	**2.7**	7.5	0.03	<0.025	1200	**0.053**	0.038
	3/18/2013	200.7/200.8	7.4E-03	0.44	<0.002	120	<0.006	<0.006	**1.8**	6.3E-03	24	**1.9**	6.9	9.4E-03	<0.005	1100	**0.062**	0.046

DEFINITIONS

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

NOTES

8.7.4 OAPIS-1

Volatile and Semi-Volatile Organic Compound Analytical Result Summary

			Parameters											
			1,2,4-Trimethyl benzene (mg/L)	1,3,5-Trimethyl benzene (mg/L)	Naphthalene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	Acetone (mg/L)	Isopropyl benzene (mg/L)	n-Butyl benzene (mg/L)	n-Propyl benzene (mg/L)	2,4-Dimethyl phenol (mg/L)	1,1-Dichloroethane (mg/L)	Phenol (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	**0.025**	**0.005**
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			**0.015**	**0.12**	**0.00165 [1]**	**0.0011**	**0.036**	**14.1 [1]**	**0.447 [1]**	**1**	**0.66**	**0.354 [1]**	0.0027	5.8
Well ID	**DATE SAMPLED**	**METHOD**												
OAPIS-1	11/11/2014	8260B/8270C	<0.005	<0.005	<0.01	**0.032**	<0.02	<0.05	<0.005	<0.015	<0.005	<0.05	<0.005	<0.05
	9/12/2014	8260B/8270C	<0.005	<0.005	<0.01	**0.03**	<0.02	<0.05	<0.005	<0.015	<0.005	0.028	<0.005	<0.01
	6/5/2014	8260B/8270C	0.0066	<0.002	<0.004	**0.03**	<0.008	<0.02	0.0022	<0.006	0.0023	0.032	<0.002	<0.01
	3/10/2014	8260B/8270C	0.0025	<0.001	<0.002	**0.013**	<0.004	0.016	0.0015	<0.003	0.0016	<0.01	<0.001	<0.01
	11/11/2013	8260B/8270C	0.0016	<0.001	<0.002	**0.014**	<0.004	<0.01	0.0025	<0.003	0.0025	<0.01	0.0011	<0.01
	9/3/2013	8260B/8270C	<0.005	<0.005	<0.01	<0.02	<0.02	<0.05	<0.005	<0.015	<0.005	0.022	<0.005	<0.01
	6/12/2013	8260B/8270C	0.002	<0.002	<0.004	**0.014**	<0.008	<0.02	0.0022	<0.006	0.0023	0.023	<0.002	<0.01
	3/18/2013	8260B/8270C												**0.01**

DEFINITIONS

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other Standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

1. NMED Tap Water (Dec 2014)

NOTES:

8.8 STP-1 to NW
BTEX Analytical Results Summary

			Parameters				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	**0.75**	0.75	**0.62**	NE
40 CFR 141.62 MCL (June 2015)			**0.005**	1	**0.7**	10	NE
EPA RSL for Tap Water (June 2015)			4.5E-04	1.1	0.0015	0.19	**0.143 [1]**
Well ID	**DATE SAMPLED**	**METHOD**					
STP1-NW	11/18/2014	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	6/16/2014	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other Standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table
1. NMED Tap Water (Dec 2014)

NOTES

8.8.1 STP-1 to NW

General Chemistry and DRO/GRO Analytical Results Summary

			Parameters									
			Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Phosphorus (mg/L)	Sulfate (mg/L)	DRO (mg/L)	GRO (mg/L)	MRO [2] (mg/L)
WQCC 20NMAC 6.2.3103			**1.6**	**250**	NE	NE	**10**	NE	**600**	**0.2[1]**	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	**1**	10	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			0.8	NE	NE	NE	32	**0.0004**	NE	NE	NE	NE
Well ID	**DATE SAMPLED**	**METHOD**										
STP1-NW	11/18/2014	300.0/8015D	0.29	**1800**	2.8	<2.0	**18**	<0.5	120	<1.0	<0.05	<5.0
	6/16/2014	300.0/8015D	0.85	**1000**	2.2	**15**	**15**	<0.5	160	<1.0	<0.05	<5.0

DEFINITIONS

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other standards for Domestic Water

1) NMED Table 6-2 (Unknown Oil). TPH Screening Guidelines for Potable Ground Water (GW-1). (JUN 2012)

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

NOTES

2) Per NMED "Approval with Modifications Annual Ground Water Monitoring Report 2010, Rev. 1", dated 12/12/12, Comment 7(a) added MRO to data tables.

8.8.2 STP-1 to NW
Total Metals Analytical Results Summary

			Parameters												
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	**0.01**	0.05	1	**1**	0.05	**0.2**	**0.05**	0.05	0.002	**0.03**	**10**
40 CFR 141.62 MCL (June 2015)			**0.01**	2	0.005	NE	NE	NE	**0.015[1]**	NE	0.05	NE	**0.002**	0.03	NE
EPA RSL for Tap Water (June 2015)			0.000052	3.8	0.0092	NE	0.8	14	0.015	0.43	0.1	0.094	0.00063	0.06	6
Well ID	**DATE SAMPLED**	**METHOD**													
STP1-NW	11/18/2014	200.7/200.8	<0.01	0.13	<0.002	<0.006	<0.006	0.15	<0.001	0.032	0.024	<0.005	<0.0002	0.03	0.032
	6/16/2014	200.7/200.8	<0.01	0.11	<0.002	<0.006	<0.006	0.42	<0.01	0.055	0.028	<0.005	<0.0002	**0.065**	0.26

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
1) National Primary Drinking Water Regulation (May 2009); Action Level
EPA Regional Screening Level (RSL) Summary Table

NOTES

8.8.3 STP-1 to NW
Dissolved Metals Analytical Results Summary

			Parameters											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1.0**	0.01	**0.05**	**1.0**	**1.0**	0.05	**0.2**	0.05	0.05	**0.03**	**10**
Well ID	**DATE SAMPLED**	**METHOD**												
STP1-NW	11/18/2014	200.7/200.8	<0.01	0.12	<0.002	<0.006	<0.006	0.026	<0.001	0.028	0.023	<0.005	0.026	0.058
			<0.01	0.083	<0.002	<0.006	<0.006	0.047	<0.01	0.04	0.022	<0.005	**0.077**	0.33

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
1) National Primary Drinking Water Regulation (May 2009); Action Level
EPA Regional Screening Level (RSL) Summary Table

NOTES

8.8.4 STP-1 to NW

Volatile Organic and Semi Volatile Organic Compounds Analytical Results Summary

			PARAMETERS
			Bis(2-ethylhexyl) phthalate (mg/L)
WQCC 20NMAC 6.2.3103			NE
40 CFR 141.62 MCL (June 2015)			**0.006**
EPA RSL for Tap Water (June 2015)			0.0056
Well ID	**DATE SAMPLED**	**METHOD**	
STP1-NW	11/18/2014	8260B	**0.011**
	6/16/2014	8270/8260B	<0.01
NOTES:			
NE = Not establishes			
NA = Not analyzed			
NL = Not listed on laboratory analysis			
Bold and highlighted values represent values above the applicable standards			
STANDARDS			
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS			
Concentration or less.			
a) Human Health Standards; b) Other Standards for Domestic Water			
EPA Regional Screening Level (RSL) Summary Table (June 2011)			

8.9 OW-13, OW-14, OW-29, OW-30
BTEX Analytical Result Summary

			Parameters				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	0.75	0.75	0.62	NE
40 CFR 141.62 MCL (June 2015)			0.005	1	0.7	10	NE
EPA RSL for Tap Water (June 2015)			0.00045	1.1	0.0015	0.19	0.143 [1]
Well ID	DATE SAMPLED	METHOD					
OW-13	11/10/2014	8260B	<0.001	<0.001	<0.001	<0.0015	0.027
	9/15/2014	8260B	<0.001	<0.001	<0.001	<0.0015	0.023
	6/3/2014	8260B	<0.001	<0.001	<0.001	<0.0015	0.02
	3/7/2014	8260B	<0.001	<0.001	<0.001	<0.0015	0.023
	11/11/2013	8260B	<0.001	<0.001	<0.001	<0.0015	0.017
	9/4/2013	8260B	<0.001	<0.001	<0.001	<0.0015	0.014
	6/13/2013	8260B	<0.001	<0.001	<0.001	<0.0015	0.015
	3/19/2013	8260B	<0.001	<0.001	<0.001	<0.0015	0.012
	11/27/2012	8260B	<0.001	<0.001	<0.001	<0.0015	0.011
	8/23/2012	8260B	<0.001	<0.001	<0.001	<0.0015	0.0092
	6/14/2012	8260B	<0.001	<0.001	<0.001	<0.0015	0.0079
	3/21/2012	8260B	<0.001	<0.001	<0.001	<0.0015	0.0082
	12/13/2011	8260B	<0.001	<0.001	<0.001	<0.0015	0.0065
	10/25/2011	8260B	<0.001	<0.001	<0.001	<0.0015	0.0062
	6/20/2011	8260B	<0.001	<0.001	<0.001	<0.0015	0.0048
	2/24/2011	8260B	<0.001	<0.001	<0.001	<0.0015	0.004
	11/8/2010	8260B	<0.001	<0.001	<0.001	<0.0015	0.0038
	9/22/2010	8260B	<0.001	<0.001	<0.001	<0.0015	0.0031
	6/7/2010	8021B	<0.001	<0.001	<0.001	<0.0015	0.0027
	3/25/2010	8021B	<0.001	<0.001	<0.001	<0.0015	0.0023
	11/3/2009	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	7/28/2009	8021B	<0.001	<0.001	<0.001	<0.0015	0.0023
	5/14/2009	8260B	<0.001	<0.001	<0.001	<0.002	<0.0025
	2/24/2009	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	11/13/2008	8260B	<0.001	<0.001	<0.001	<0.002	0.0016
	8/19/2008	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	12/27/2007	8260B	<0.001	<0.001	<0.001	<0.0015	0.0013
	10/27/2006	8260B	<0.001	<0.001	<0.001	<0.0015	<0.0025

8.9 OW-13, OW-14, OW-29, OW-30
BTEX Analytical Result Summary

			Parameters				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	0.75	0.75	0.62	NE
40 CFR 141.62 MCL (June 2015)			0.005	1	0.7	10	NE
EPA RSL for Tap Water (June 2015)			0.00045	1.1	0.0015	0.19	0.143 [1]
Well ID	DATE SAMPLED	METHOD					
OW-14	11/10/2014	8260B	3.6	0.015	0.17	<0.015	0.81
	9/15/2014	8260B	3.8	<0.02	0.16	<0.03	0.82
	6/3/2014	8260B	3.7	<0.02	0.12	<0.03	0.93
	3/7/2014	8260B	4	0.026	0.14	0.032	1.1
	11/11/2013	8260B	3.3	0.046	0.13	0.019	1.1
	9/4/2013	8260B	2.6	<0.005	0.063	<0.0075	0.94
	6/13/2013	8260B	3.4	<0.01	0.073	<0.015	1.3
	3/19/2013	8260B	2.8	<0.01	0.065	<0.015	1.3
	11/27/2012	8260B	2.7	<0.01	0.056	<0.015	1.4
	8/23/2012	8260B	2.1	<0.01	0.037	<0.015	1.6
	6/14/2012	8260B	2.6	<0.01	0.053	<0.015	1.2
	3/21/2012	8260B	2.3	<0.01	0.051	<0.015	1.4
	12/13/2011	8260B	1.5	<0.005	0.036	<0.0075	1.3
	10/24/2011	8260B	1.4	<0.005	0.045	<0.0075	1.4
	6/20/2011	8260B	1.8	0.0015	0.061	<0.0015	1.6
	2/24/2011	8260B	1.3	0.0019	0.042	<0.0015	1.4
	11/8/2010	8260B	0.63	<0.001	0.018	<0.0015	1.3
	9/22/2010	8260B	0.47	<0.001	0.0083	<0.0015	1.4
	6/7/2010	8260B	0.33	0.0018	0.0085	<0.0015	1.4
	3/24/2010	8260B	0.25	<0.005	0.01	<0.0075	1.5
	11/12/2009	8021B	0.034	0.003	0.0064	<0.002	1.2
	7/30/2009	8021B	0.074	0.0033	<0.001	<0.0015	1.3
	5/12/2009	8260B	0.11	0.0029	0.0049	<0.002	0.97
	2/23/2009	8260B	0.013	0.0014	0.0055	<0.001	1
	11/12/2008	8260B	0.0082	<0.001	<0.001	<0.0015	0.91
	8/21/2008	8260B	0.0035	<0.001	<0.001	<0.0015	1.3
	1/1/2008	8260B	0.014	<0.001	<0.001	<0.0015	0.92
	12/28/2006	8260B	0.0042	<0.001	0.0025	<0.003	0.18
	10/27/2006	8260B	0.0034	<0.001	<0.001	<0.003	0.016

8.9 OW-13, OW-14, OW-29, OW-30
BTEX Analytical Result Summary

			Parameters				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	0.75	0.75	0.62	NE
40 CFR 141.62 MCL (June 2015)			0.005	1	0.7	10	NE
EPA RSL for Tap Water (June 2015)			0.00045	1.1	0.0015	0.19	0.143 [1]
Well ID	DATE SAMPLED	METHOD					
OW-29	11/11/2014	8260B	<0.005	<0.005	<0.005	<0.0075	**3**
	9/15/2014	8260B	<0.005	<0.005	<0.005	<0.0075	**2.5**
	6/2/2014	8260B	<0.001	<0.001	<0.001	<0.0015	**2**
	3/7/2014	8260B	<0.001	<0.001	<0.001	<0.0015	**2.1**
	11/11/2013	8260B	<0.002	<0.002	<0.002	<0.003	**1.7**
	9/4/2013	8260B	<0.001	<0.001	<0.001	<0.0015	**1.3**
	6/13/2013	8260B	<0.001	<0.001	<0.001	<0.0015	**1.4**
	3/19/2013	8260B	<0.001	<0.001	<0.001	<0.0015	**1.1**
	11/27/2012	8260B	<0.001	<0.001	<0.001	<0.0015	**0.9**
	8/23/2012	8260B	<0.001	<0.001	<0.001	<0.0015	**1**
	6/14/2012	8260B	<0.001	<0.001	<0.001	<0.0015	**0.47**
	3/21/2012	8260B	<0.001	<0.001	<0.001	<0.0015	**0.62**
	12/13/2011	8260B	<0.001	<0.001	<0.001	<0.0015	**0.49**
	10/24/2011	8260B	<0.001	<0.001	<0.001	<0.0015	**0.47**
	6/20/2011	8260B	<0.001	<0.001	<0.001	<0.0015	**0.47**
	2/24/2011	8260B	<0.001	<0.001	<0.001	<0.0015	**0.3**
	11/9/2010	8260B	<0.001	<0.001	<0.001	<0.0015	**0.22**
	9/22/2010	8260B	<0.001	<0.001	<0.001	<0.0015	**0.19**
	6/7/2010	8260B	<0.001	<0.001	<0.001	<0.0015	**0.15**
	3/25/2010	8260B	<0.001	<0.001	<0.001	<0.0015	**0.12**
	11/3/2009	8021B	<0.001	<0.001	<0.001	<0.002	0.082
	7/29/2009	8021B	<0.001	<0.001	<0.001	<0.0015	0.049
	5/14/2009	8260B	<0.001	<0.001	<0.001	<0.002	0.041
	2/25/2009	8260B	<0.001	<0.001	<0.001	<0.002	0.021
	11/14/2008	8260B	<0.001	<0.001	<0.001	<0.0015	0.015
	8/19/2008	8206B	<0.001	<0.001	<0.001	<0.0015	0.0092
	12/28/2007	8260B	<0.001	<0.001	<0.001	<0.0015	0.0043
	10/24/2006	8260B	<0.001	<0.001	<0.001	<0.003	<0.0025

8.9 OW-13, OW-14, OW-29, OW-30
BTEX Analytical Result Summary

			Parameters				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			**0.01**	**0.75**	**0.75**	**0.62**	**NE**
40 CFR 141.62 MCL (June 2015)			**0.005**	**1**	**0.7**	**10**	**NE**
EPA RSL for Tap Water (June 2015)			0.00045	1.1	0.0015	0.19	**0.143 [1]**
Well ID	**DATE SAMPLED**	**METHOD**					
OW-30	11/11/2014	8260B	<0.005	<0.005	<0.005	<0.0075	**3.6**
	9/17/2014	8260B	<0.001	<0.001	<0.001	<0.0015	**2.8**
	6/3/2014	8260B	<0.001	<0.001	<0.001	<0.0015	**2.7**
	3/7/2014	8260B	<0.001	<0.001	<0.001	<0.0015	**2.9**
	11/11/2013	8260B	<0.001	<0.001	<0.001	<0.0015	**2.6**
	9/4/2013	8260B	<0.001	<0.001	<0.001	<0.0015	**2.1**
	6/17/2013	8260B	<0.001	<0.001	<0.001	<0.0015	**2.5**
	3/19/2013	8260B	<0.005	<0.005	<0.005	<0.0075	**2**
	11/27/2012	8260B	<0.001	<0.001	<0.001	<0.0015	**2.2**
	8/23/2012	8260B	<0.001	<0.001	<0.001	<0.0015	**2.3**
	6/14/2012	8260B	<0.001	<0.001	<0.001	<0.0015	**1.5**
	3/21/2012	8260B	<0.001	<0.001	<0.001	<0.0015	**1.6**
	12/15/2011	8260B	<0.001	<0.001	<0.001	<0.0015	**1.3**
	10/24/2011	8260B	<0.001	<0.001	<0.001	<0.0015	**1.3**
	6/20/2011	8260B	<0.001	<0.001	<0.001	<0.0015	**1.3**
	2/24/2011	8260B	<0.001	<0.001	<0.001	<0.0015	**1.1**
	11/8/2010	8260B	<0.001	<0.001	<0.001	<0.0015	**1.1**
	9/27/2010	8260B	<0.001	<0.001	<0.001	<0.0015	**1.1**
	6/4/2010	8260B	<0.001	<0.001	<0.001	<0.0015	**1**
	3/24/2010	8260B	<0.005	<0.005	<0.005	<0.0075	**1.1**
	11/2/2009	8021B	<0.001	<0.001	<0.001	<0.002	**1.1**
	7/30/2009	8021B	<0.001	<0.001	<0.001	<0.0015	**1.1**
	5/13/2009	8260B	<0.001	<0.001	<0.001	<0.002	**1.1**
	2/23/2009	8260B	<0.001	<0.001	<0.001	<0.002	**1**
	11/12/2008	8260B	<0.001	<0.001	<0.001	<0.0015	**0.88**
	8/20/2008	8260B	<0.001	<0.001	<0.001	<0.0015	**1.1**
	12/28/2007	8260B	<0.001	<0.001	<0.001	<0.0015	**0.29**
	10/27/2006	8260B	<0.001	<0.001	<0.001	<0.003	<0.0025

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other Standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table
1. NMED Tap Water (Dec 2014)

NOTES

8.9.1 OW-13, OW-14, OW-29, OW-30
DRO/GRO/CATIONS/ANIONS Analytical Result Summary

			Parameters								
			DRO (mg/L)	GRO (mg/L)	MRO (mg/L)	Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Phosphorous (mg/L)	Sulfate (mg/L)	Nitrate + Nitrite as N (mg/L)
WQCC 20NMAC 6.2.3103			**0.2[1]**	NE	NE	**1.6**	**250**	NE	NE	**600**	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	4	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			NE	NE	NE	0.62	NE	NE	**0.0004**	NE	**0.125**
Well ID	**DATE SAMPLED**	**METHOD**									
OW-13	9/15/2014 [2]	8015D/300.0	<1	<0.05	<5	0.22	28	0.39	<0.5	150	**<1**
	9/4/2013 [2]	8015D/300.0	<1.0	<0.05	<5.0	0.28	28	0.39	<0.5	160	**2.6**
OW-14	9/15/2014 [2]	8015D/300.0	**4.5**	8.2	<5	0.21	**330**	1.5	<0.5	2.6	**<1**
	9/4/2013 [2]	8015D/300.0	**7.8**	7.6	<5.0	0.21	**350**	2.5	<0.5	3.2	**5.9**
OW-29	9/15/2014 [2]	8015D/300.0	<1	0.52	<5	0.3	160	0.77	<0.5	73	**<1**
	9/4/2013 [2]	8015D/300.0	<1.0	0.88	<5.0	0.43	160	0.94	<0.5	84	**3.9**
OW-30	9/17/2014 [2]	8015D/300.0	<1	1.3	<5	0.2	180	0.63	<0.5	45	**<1**
	9/4/2013 [2]	8015D/300.0	<1.0	1.4	<5.0	0.26	170	0.77	<0.5	55	**4.6**

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other Standards for Domestic Water
1) NMED Table 6 (unknown oil). TPH Screening Guidelines for Potable Ground Water (GW-1).
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table

NOTES
2) Quarterly combined with 2013/2014 Annual sampling event which required addition of these analyses.

8.9.2 OW-13, OW-14, OW-29, OW-30
Total Metals Analytical Result Summary

			Parameters												
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	0.01	**0.05**	**1**	**1**	0.05	**0.2**	**0.05**	**0.05**	**0.002**	**0.03**	**10**
40 CFR 141.62 MCL (June 2015)			**0.01**	2	**0.005**	0.1	1.3	NE	**0.015**	NE	0.05	NE	0.002	0.03	NE
EPA RSL for Tap Water (June 2015)			0.000052	3.8	0.0092	NE	0.8	14	0.015	0.43	0.1	9.40E-02	6.30E-04	0.06	6
Well ID	**DATE SAMPLED**	**METHOD**													
OW-13	11/10/2014	200.7/200.8	0.001	0.024	<0.002	<0.006	0.021	0.058	<0.001	0.038	1.1E-03	<0.005	<0.0002	0.018	0.01
	9/15/2014 [3]	200.7/200.8	0.0011	0.018	<0.002	<0.006	<0.006	<0.02	<0.001	0.017	1.8E-03	<0.005	<0.0002	0.018	<0.01
	6/3/2014	200.7/200.8	<0.005	0.02	<0.002	<0.006	<0.006	<0.02	<0.001	0.02	<0.005	<0.005	<0.0002	0.016	<0.01
	3/7/2014	200.7/200.8	0.0011	0.02	<0.002	<0.006	<0.006	<0.02	<0.001	0.023	<0.001	<0.005	<0.0002	0.018	<0.01
	11/11/2013	200.7/200.8	<0.001	0.019	<0.002	<0.006	<0.006	<0.02	<0.001	0.021	1.2E-03	<0.005	<0.0002	0.016	<0.01
	9/4/2013 [3]	200.7/200.8	<0.001	0.019	<0.002	<0.006	<0.006	<0.02	<0.001	0.025	<0.001	<0.005	<0.0002	0.017	<0.01
	6/13/2013	200.7/200.8	<0.001	0.019	<0.002	<0.006	<0.006	<0.02	NL	0.02	<0.001	<0.005	<0.0002	0.017	<0.01
	3/19/2013 [2]	200.7/200.8	<0.0025	0.018	<0.002	<0.006	<0.006	<0.02	<0.005	0.021	<0.0025	<0.005	<0.0002	0.018	<0.01
	8/23/2012	200.7/200.8	<0.0025	0.024	<0.002	<0.006	<0.006	<0.02	<0.005	0.01	<0.0025	<0.005	<0.0002	0.017	<0.01
OW-14	11/10/2014	200.7/200.8	0.0091	**1.8**	<0.002	<0.006	<0.006	**4.6**	<0.001	**2.2**	<0.01	<0.005	<0.0002	7.7E-03	<0.01
	9/15/2014 [3]	200.7/200.8	0.014	**1.9**	<0.002	<0.006	<0.006	**4.7**	<0.001	**2.3**	0.018	<0.005	<0.0002	7.9E-03	<0.01
	6/3/2014	200.7/200.8	**0.011**	**1.7**	<0.002	<0.006	<0.006	**4.8**	<0.001	**2.3**	0.017	<0.005	<0.0002	7.6E-03	<0.01
	3/7/2014	200.7/200.8	0.01	**1.7**	<0.002	<0.006	<0.006	**4.7**	<0.001	**2.4**	0.01	<0.005	<0.0002	9.7E-03	<0.01
	11/11/2013	200.7/200.8	**0.011**	**1.5**	<0.002	<0.006	<0.006	**4.4**	<0.001	**2.2**	0.015	<0.005	<0.0002	9.4E-03	<0.01
	9/4/2013 [2]	200.8	0.01	**1.5**	<0.002	<0.006	<0.006	**4.5**	<0.001	**2.1**	0.011	<0.025	<0.0002	9.3E-03	<0.01
	6/13/2013	200.7/200.8	**0.011**	**1.5**	<0.002	<0.006	<0.006	**4.5**	0.007	**2.4**	0.014	<0.005	<0.0002	0.011	<0.01
	3/19/2013 [2]	200.7/200.8	0.01	**1.3**	<0.002	<0.006	<0.006	**4.4**	<0.005	**2.1**	3.8E-03	<0.005	<0.0002	0.009	<0.01
	8/23/2012	200.7/200.8	**0.012**	**1.2**	<0.002	<0.006	<0.006	**4.2**	<0.005	**2.3**	6.6E-03	<0.005	<0.0002	9.5E-03	<0.01
OW-29	11/11/2014	200.7/200.8	<0.005	0.063	<0.002	<0.006	<0.006	0.33	<0.001	**0.29**	<0.005	<0.005	<0.0002	**0.055**	<0.01
	9/15/2014 [3]	200.7/200.8	<0.01	0.058	<0.002	<0.006	<0.006	0.2	<0.001	**0.26**	<0.01	<0.005	<0.0002	**0.053**	<0.01
	6/2/2014	200.7/200.8	<0.005	0.063	<0.002	<0.006	<0.006	0.37	<0.001	**0.29**	0.0055	<0.005	<0.0002	**0.052**	<0.01
	3/7/2014	200.7/200.8	0.0014	0.063	<0.002	<0.006	<0.006	0.4	<0.001	**0.3**	<0.005	<0.005	<0.0002	**0.056**	<0.01
	11/11/2013	200.7/200.8	0.0018	0.061	<0.002	<0.006	<0.006	0.38	<0.001	**0.28**	0.0042	<0.005	<0.0002	**0.053**	<0.01
	9/4/2013 [3]	200.7/200.8	<0.001	0.061	<0.002	<0.006	<0.006	0.34	<0.001	**0.028**	2.7E-03	<0.005	<0.0002	**0.056**	0.018
	6/13/2013	200.7/200.8	0.0013	0.065	<0.002	<0.006	<0.006	0.52	NL	**0.32**	3.3E-03	<0.005	<0.0002	**0.056**	<0.01
	3/19/2013 [2]	200.7/200.8	<0.0025	0.059	<0.002	<0.006	<0.006	0.47	<0.005	**0.29**	<0.0025	<0.005	<0.0002	**0.057**	<0.01
	8/23/2012	200.7/200.8	<0.0025	0.058	<0.002	<0.006	<0.006	0.16	<0.005	0.25	<0.0025	<0.005	<0.0002	**0.055**	<0.01
OW-30	11/11/2014	200.7/200.8	<0.005	0.093	<0.002	<0.006	<0.006	0.18	<0.001	0.036	<0.005	<0.005	<0.0002	**0.05**	<0.01
	9/17/2014 [3]	200.7/200.8	0.0015	0.087	<0.002	<0.006	<0.006	0.076	<0.001	0.031	3.4E-03	<0.005	<0.0002	**0.051**	<0.01
	6/3/2014	200.7/200.8	<0.005	0.56	<0.002	0.014	<0.006	**5.8**	0.0064	**0.35**	5.5E-03	<0.005	<0.0002	**0.048**	0.015
	3/7/2014	200.7/200.8	0.0033	**1.3**	<0.002	0.031	0.0072	**13**	0.013	**0.71**	<0.005	<0.005	<0.0002	**0.054**	0.029
	11/11/2013	200.7/200.8	0.0018	0.11	<0.002	<0.006	<0.006	0.47	<0.001	0.047	4.1E-03	<0.005	<0.0002	**0.053**	<0.01
	9/4/2013 [3]	200.7/200.8	0.0012	0.081	<0.002	<0.006	<0.006	0.051	<0.001	0.025	2.9E-03	<0.005	<0.0002	**0.055**	<0.01
	6/17/2013	200.7/200.8	0.0013	0.079	<0.002	<0.006	<0.006	0.055	<0.005	0.026	2.7E-03	<0.005	<0.0002	**0.054**	<0.01
	3/19/2013 [2]	200.7/200.8	<0.0025	0.078	<0.002	<0.006	<0.006	0.052	<0.005	0.02	<0.0025	<0.005	<0.0002	**0.057**	<0.01
	8/23/2012	200.7/200.8	<0.0025	0.078	<0.002	<0.006	<0.006	0.058	<0.005	0.018	<0.0025	<0.005	<0.0002	**0.056**	<0.01

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
1. National Primary Drinking Water Regulation (May 2009); Action Level
EPA Regional Screening Level (RSL) Summary Table

NOTES
2) Additon of WQCC Metals per NMED's Comment 12 from "Approval with Modifications Annual Ground Water Monitoring Report, Rev 1, dated 12/12/12", to monitor upgradient wells.
3) Quarterly combined with 2013 Annual sampling event which required addition of these analyses.

8.9.3 OW-13, OW-14, OW-29, OW-30
Dissolved Metals Analytical Result Summary

			Parameters											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1.0**	0.01	**0.05**	**1.0**	**1.0**	0.05	**0.2**	**0.05**	**0.05**	**0.03**	**10.0**
Well ID	**DATE SAMPLED**	**METHOD**												
OW-13	11/10/2014	200.7/200.8	0.0011	0.019	<0.002	<0.006	<0.006	<0.02	<0.01	0.022	<0.001	<0.005	0.016	0.063
	9/15/2014 [2]	200.7/200.8	0.0015	0.018	<0.002	<0.006	<0.006	<0.02	<0.001	0.018	0.0026	<0.005	0.017	<0.01
	6/3/2014	200.7/200.8	0.0012	0.017	<0.002	<0.006	<0.006	<0.02	<0.005	0.017	0.0022	<0.005	0.015	<0.01
	3/7/2014	200.7/200.8	<0.001	0.019	<0.002	<0.006	<0.006	<0.02	<0.001	0.02	<0.001	<0.005	0.018	0.017
	11/11/2013	200.7/200.8	0.0012	0.02	<0.002	<0.006	<0.006	<0.02	<0.001	0.021	0.002	<0.005	0.016	0.014
	9/4/2013 [2]	200.7/200.8	<0.005	0.019	<0.002	<0.006	<0.006	<0.02	<0.005	0.024	<0.005	<0.005	0.017	<0.01
	6/13/2013	200.7/200.8	0.0011	0.019	<0.002	<0.006	<0.006	<0.02	<0.001	0.021	2.4E-03	<0.005	0.017	0.048
	3/19/2013 [1]	200.7/200.8	<0.001	0.018	<0.002	<0.006	<0.006	<0.02	<0.005	0.019	<0.001	<0.005	0.017	<0.01
	8/23/2012	200.7/200.8	<0.001	0.022	<0.002	<0.006	<0.006	<0.02	<0.005	0.011	<0.001	<0.005	0.016	0.016
OW-14	11/10/2014	200.7/200.8	<0.01	**1.8**	<0.002	<0.006	<0.006	**4.5**	<0.01	**2.2**	<0.01	<0.005	<0.01	0.036
	9/15/2014 [2]	200.7/200.8	**0.013**	**1.8**	<0.002	<0.006	<0.006	**4.5**	<0.001	**2.2**	1.7E-02	<0.005	7.1E-03	<0.01
	6/3/2014	200.7/200.8	**0.011**	**1.7**	<0.002	<0.006	<0.006	**4.6**	<0.005	**2.3**	1.8E-02	<0.005	8.3E-03	0.017
	3/7/2014	200.7/200.8	0.0084	**1.6**	<0.002	<0.006	<0.006	**4.2**	<0.001	**2.1**	<0.005	<0.005	9.7E-03	<0.01
	11/11/2013	200.7/200.8	0.012	**1.6**	<0.002	<0.006	<0.006	**4.6**	<0.001	**2.3**	1.5E-02	<0.005	9.3E-03	0.021
	9/4/2013 [2]	200.7/200.8	0.01	**1.5**	<0.002	<0.006	<0.006	**4.5**	<0.001	**2.1**	0.011	<0.025	9.3E-03	<0.01
	6/13/2013	200.7/200.8	**0.012**	**1.4**	<0.002	<0.006	<0.006	**4.6**	<0.001	**2.3**	0.017	<0.005	0.011	<0.01
	3/19/2013 [1]	200.7/200.8	9.3E-03	**1.3**	<0.002	<0.006	<0.006	**4.1**	<0.005	**2.1**	4.5E-03	<0.005	8.7E-03	<0.01
	8/23/2012	200.7/200.8	0.01	**1.1**	<0.002	<0.006	<0.006	**4.4**	<0.005	**2.3**	6.7E-03	<0.005	9.1E-03	0.039
OW-29	11/11/2014	200.7/200.8	<0.01	0.061	<0.002	<0.006	<0.006	0.23	<0.01	**0.28**	<0.01	<0.005	**0.054**	0.029
	9/15/2014 [2]	200.7/200.8	<0.01	0.061	<0.002	<0.006	<0.006	0.18	<0.001	**0.26**	<0.01	<0.005	**0.054**	<0.01
	6/2/2014	200.7/200.8	<0.005	0.057	<0.002	<0.006	<0.006	0.2	<0.005	**0.28**	6.4E-03	<0.005	**0.054**	<0.01
	3/7/2014	200.7/200.8	<0.005	0.059	<0.002	<0.006	<0.006	0.28	<0.001	**0.29**	<0.005	<0.005	**0.053**	<0.01
	11/11/2013	200.7/200.8	1.9E-03	0.063	<0.002	<0.006	<0.006	0.33	<0.001	**0.3**	5.2E-03	<0.005	**0.053**	0.028
	9/4/2013 [2]	200.7/200.8	<0.005	0.062	<0.002	<0.006	<0.006	0.31	<0.005	**0.28**	<0.005	<0.005	**0.06**	<0.01
	6/13/2013	200.7/200.8	1.8E-03	0.06	<0.002	<0.006	<0.006	0.45	<0.001	**0.31**	5.5E-03	<0.005	**0.055**	0.017
	3/19/2013 [1]	200.7/200.8	0.001	0.054	<0.002	<0.006	<0.006	0.34	<0.005	**0.27**	1.1E-03	<0.005	**0.054**	<0.01
	8/23/2012	200.7/200.8	0.001	0.056	<0.002	<0.006	<0.006	0.046	<0.005	**0.24**	1.9E-03	<0.005	**0.053**	<0.01
OW-30	11/11/2014	200.7/200.8	<0.01	0.086	<0.002	<0.006	<0.006	0.051	<0.01	0.034	<0.01	<0.005	**0.05**	0.029
	9/17/2014 [2]	200.7/200.8	<0.005	0.086	<0.002	<0.006	<0.006	0.067	<0.005	0.033	<0.005	<0.005	**0.049**	0.012
	6/3/2014	200.7/200.8	<0.005	0.17	<0.002	<0.006	<0.006	**2.3**	<0.005	0.082	<0.01	<0.005	**0.051**	<0.01
	3/7/2014	200.7/200.8	<0.005	0.29	<0.002	0.014	<0.006	**7.2**	0.0023	0.18	<0.005	<0.005	**0.05**	0.012
	11/11/2013	200.7/200.8	1.7E-03	0.084	<0.002	<0.006	<0.006	0.06	<0.001	0.031	4.6E-03	<0.005	**0.05**	0.022
	9/4/2013 [2]	200.7/200.8	<0.005	0.08	<0.002	<0.006	<0.006	0.04	<0.005	0.028	<0.005	<0.005	**0.059**	<0.01
	6/13/2013	200.7/200.8	1.9E-03	0.078	<0.002	<0.006	<0.006	0.048	<0.005	0.025	5.5E-03	<0.005	**0.054**	0.01
	3/19/2013 [1]	200.7/200.8	1.1E-03	0.073	<0.002	<0.006	<0.006	0.051	<0.005	0.023	2.3E-03	<0.005	**0.054**	<0.01
	8/23/2012	200.7/200.8	0.001	0.074	<0.002	<0.006	<0.006	<0.02	<0.005	0.015	1.7E-03	<0.005	**0.052**	0.036

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table

NOTES:
1) Additon of WQCC Metals per NMED's Comment 12 from "Approval with Modifications Annual Ground Water Monitoring Report, Rev 1, dated 12/12/12", to monitor upgradient wells.
2) Quarterly combined with 2013 Annual sampling event which required addition of these analyses.

8.9.4 OW-13, OW-14, OW-29, OW-30 x

Volatile Organic Compound Analytical Result Summary

			Parameters													
			1,2,4-Trimethyl benzene (mg/L)	1,3,5-Trimethylbenzene (mg/L)	1,2-Dichloro ethane (EDC) (mg/L)	Naphthalene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methylnaphthalene (mg/L)	1,1-Dichloroethane (mg/L)	Isopropylbenzene (mg/L)	n-Butylbenzene (mg/L)	n-Propylbenzene (mg/L)	2,4-Dimethylphenol (mg/L)	Acetone (mg/L)	Sec-butylbenzene (mg/L)	Chloroethane (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	0.01	NE	NE	NE	**0.025**	NE	NE	NE			NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	**0.005**	NE	NE	NE	NE	NE	NE	NE			NE	NE
EPA RSL for Tap Water (June 2015)			**0.015**	**0.12**	0.00017	**0.00165 [1]**	**0.0011**	**0.036**	0.0027	**0.447 [1]**	**1**	**0.66**	**0.354 [1]**	**14.1 [1]**	**2**	**20.9 [1]**
Well ID	**DATE SAMPLED**	**METHOD**														
OW-13	11/10/2014	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.001	<0.001	<0.003	<0.001		<0.01	<0.001	<0.002
	9/15/2014 [2]	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.001	<0.001	<0.003	<0.001	<0.01	<0.01	<0.001	<0.002
	6/3/2014	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.001	<0.001	<0.003	<0.001		<0.01	<0.001	<0.002
	3/7/2014	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.001	<0.001	<0.003	<0.001		<0.01	<0.001	<0.002
	11/11/2013	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.003	<0.001			<0.001	
	9/4/2013 [2]	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.003	<0.001			<0.001	
	6/13/2013	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.003	<0.001			<0.001	
	3/19/2013	8260B	<0.005		<0.005	<0.01	<0.004		<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	
	11/27/2012	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	
	8/23/2012	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	
	6/14/2012	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	3/21/2012	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	12/13/2011	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	10/25/2011	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001			<0.001	
	6/20/2011	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001			<0.001	
	2/24/2011	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001			<0.001	
	11/8/2010	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001			<0.001	
	9/22/2010	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001			<0.001	
	6/7/2010	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001			<0.001	
	3/25/2010	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001			<0.001	
	11/3/2009	8021B[1]	<0.001		NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	
	7/28/2009	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001			<0.001	
	5/14/2009	8021B[1]	<0.001		NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	
	2/24/2009	8021B[1]	<0.001		NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	
	11/13/2008	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001			<0.001	
	8/19/2008	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001			<0.001	
	12/27/2007	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001			<0.001	
	10/27/2006	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001			<0.001	

8.9.4 OW-13, OW-14, OW-29, OW-30 x

Volatile Organic Compound Analytical Result Summary

			Parameters													
			1,2,4-Trimethyl benzene (mg/L)	1,3,5-Trimethylbenzene (mg/L)	1,2-Dichloro ethane (EDC) (mg/L)	Naphthalene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methylnaphthalene (mg/L)	1,1-Dichloroethane (mg/L)	Isopropylbenzene (mg/L)	n-Butylbenzene (mg/L)	n-Propylbenzene (mg/L)	2,4-Dimethylphenol (mg/L)	Acetone (mg/L)	Sec-butylbenzene (mg/L)	Chloroethane (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	0.01	NE	NE	NE	**0.025**	NE	NE	NE			NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	**0.005**	NE	NE	NE	NE	NE	NE	NE			NE	NE
EPA RSL for Tap Water (June 2015)			**0.015**	**0.12**	0.00017	**0.00165 [1]**	**0.0011**	**0.036**	0.0027	**0.447 [1]**	**1**	**0.66**	**0.354 [1]**	**14.1 [1]**	**2**	**20.9 [1]**
Well ID	**DATE SAMPLED**	**METHOD**														
OW-14	11/10/2014	8260B	<0.01	<0.01	<0.01	<0.02	**0.044**	<0.04	<0.01	<0.01	<0.03	<0.01		<0.1	<0.01	<0.02
	9/15/2014 [2]	8260B	<0.02	<0.02	<0.02	<0.04	<0.08	<0.08	<0.02	<0.02	<0.06	<0.02	<0.01	<0.2	<0.02	<0.04
	6/3/2014	8260B	<0.02	<0.02	<0.02	<0.04	<0.08	<0.08	<0.02	<0.02	<0.06	<0.02		<0.2	<0.02	<0.04
	3/7/2014	8260B	<0.01	<0.01	<0.01	<0.02	<0.04	<0.04	<0.01	<0.01	<0.03	<0.01		<0.1	<0.01	<0.02
	11/11/2013	8260B	<0.005		<0.005	<0.01	**0.027**		<0.005	0.0066	<0.015	<0.005			<0.005	
	9/4/2013 [2]	8260B	<0.005		<0.005	<0.01	**0.024**		<0.005	0.006	<0.015	<0.005			<0.005	
	6/13/2013	8260B	<0.01		<0.01	<0.02	<0.04		<0.01	<0.01	<0.03	<0.01			<0.01	
	3/19/2013	8260B	<0.01		<0.01	<0.02	<0.04		<0.01	<0.01	<0.03	<0.01			<0.01	
	11/27/2012	8260B	<0.01		<0.01	<0.02	<0.04		<0.01	<0.01	<0.03	<0.01			<0.01	
	8/23/2012	8260B	<0.01		<0.01	<0.02	<0.04		<0.01	<0.01	<0.03	<0.01			<0.01	
	6/14/2012	8260B	<0.01		<0.01	<0.02	<0.04		<0.01	<0.01	<0.01	<0.01			<0.01	
	3/21/2012	8260B	<0.01		<0.01	<0.02	<0.04		<0.01	<0.01	<0.01	<0.01			<0.01	
	12/13/2011	8260B	<0.005		<0.005	<0.01	**0.021**		<0.005	0.0071	<0.005	<0.005	<0.005	<0.005	<0.005	
	10/24/2011	8260B	<0.005		<0.005	<0.01	**0.022**		<0.005	0.0082	<0.005	<0.005			<0.005	
	6/20/2011	8260B	0.0011		0.0017	0.0021	**0.02**		0.0012	0.0068	<0.001	0.0021			0.0024	
	2/24/2011	8260B	0.0013		0.0016	<0.002	**0.019**		<0.001	0.0048	<0.001	0.0013			0.0027	
	11/8/2010	8260B	0.0012		0.0015	<0.002	**0.022**		<0.001	0.0037	<0.001	<0.001			0.0027	
	9/22/2010	8260B	<0.001		0.0022	<0.002	**0.022**		<0.001	0.0029	<0.001	<0.001			0.0028	
	6/7/2010	8260B	0.0011		0.0015	<0.002	**0.02**		<0.001	0.0026	<0.001	<0.001			0.0024	
	3/24/2010	8260B	<0.005	<0.005	<0.005	<0.01	<0.02	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
	11/12/2009	8021B[1]	0.0027		NL	NL	NL		NL	NL	NL	NL	NL	NL	NL	
	7/30/2009	8260B	<0.001		0.0017	<0.002	**0.021**		<0.001	0.0033	0.0011	<0.001			0.0026	
	5/12/2009	8021B[1]	0.0016		NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	
	2/23/2009	8021B[1]	0.0016		NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	
	11/12/2008	8260B	<0.001		0.0018	<0.002	**0.016**	NL	<0.001	0.0015	<0.001	<0.001			0.0025	
	8/21/2008	8260B	<0.001		<0.001	<0.002	**0.012**		<0.001	0.0016	<0.001	<0.001			0.002	
	1/1/2008	8260B	<0.001		<0.001	<0.002	**0.027**		<0.001	<0.001	0.052	<0.001			0.0057	
	12/28/2006	8260B	<0.001		0.0018	<0.002	<0.004		0.016	<0.001	0.015	<0.001			0.0025	
	10/27/2006	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001			<0.001	

8.9.4 OW-13, OW-14, OW-29, OW-30 x

Volatile Organic Compound Analytical Result Summary

			Parameters													
			1,2,4-Trimethyl benzene (mg/L)	1,3,5-Trimethylbenzene (mg/L)	1,2-Dichloro ethane (EDC) (mg/L)	Naphthalene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methylnaphthalene (mg/L)	1,1-Dichloroethane (mg/L)	Isopropylbenzene (mg/L)	n-Butylbenzene (mg/L)	n-Propylbenzene (mg/L)	2,4-Dimethylphenol (mg/L)	Acetone (mg/L)	Sec-butylbenzene (mg/L)	Chloroethane (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	0.01	NE	NE	NE	**0.025**	NE	NE	NE			NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	**0.005**	NE	NE	NE	NE	NE	NE	NE			NE	NE
EPA RSL for Tap Water (June 2015)			**0.015**	**0.12**	0.00017	**0.00165 [1]**	**0.0011**	**0.036**	0.0027	**0.447 [1]**	**1**	**0.66**	**0.354 [1]**	**14.1 [1]**	**2**	**20.9 [1]**
Well ID	**DATE SAMPLED**	**METHOD**														
OW-29	11/11/2014	8260B	<0.005	<0.005	<0.005	<0.01	<0.02	<0.02	<0.005	<0.005	<0.015	<0.005		<0.05	<0.005	<0.01
	9/15/2014 [2]	8260B	<0.005	<0.005	<0.005	<0.01	<0.02	<0.02	<0.005	<0.005	<0.015	<0.005	<0.01	<0.05	<0.005	<0.01
	6/2/2014	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.001	<0.001	<0.003	<0.001		<0.01	<0.001	<0.002
	3/7/2014	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.001	<0.001	<0.003	<0.001		<0.01	<0.001	<0.002
	11/11/2013	8260B	<0.002		<0.002	<0.004	<0.008		<0.002	<0.002	<0.006	<0.002			<0.002	
	9/4/2013 [2]	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.003	<0.001			<0.001	
	6/13/2013	8260B	<0.001		<0.001	<0.002	<0.004		<0.004	<0.001	<0.003	<0.001			<0.001	
	3/19/2013	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.003	<0.001			<0.001	
	11/27/2012	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.003	<0.001			<0.001	
	8/23/2012	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.003	<0.001			<0.001	
	6/13/2012	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001			<0.001	
	3/21/2012	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001			<0.001	
	12/14/2011	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	10/24/2011	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001			<0.001	
	6/20/2011	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001			<0.001	
	2/24/2011	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001			<0.001	
	11/9/2010	8260B	<0.001		<0.001	<0.002	<0.004	<0.004	<0.001	<0.001	<0.001	<0.001			<0.001	
	9/22/2010	8260B	<0.001		<0.001	<0.002	<0.004	<0.004	<0.001	<0.001	<0.001	<0.001			<0.001	
	6/7/2010	8260B	<0.001		<0.001	<0.002	<0.004	<0.004	<0.001	<0.001	<0.001	<0.001			<0.001	
	3/25/2010	8260B	<0.001		<0.001	<0.002	<0.004	<0.004	<0.001	<0.001	<0.001	<0.001			<0.001	
	11/2/2009	8021B	<0.001		NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	
	7/29/2009	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001			<0.001	
	5/13/2009	8021B	<0.001		NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	
	2/24/2009	8021B	<0.001		NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	
	11/14/2008	8260B	<0.001		0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	8/19/2008	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001			<0.001	
	12/28/2007	8260B	<0.001		<0.001	<0.002	<0.004	<0.004	<0.001	<0.001	<0.001	<0.001			<0.001	
	10/24/2006	8260B	<0.001		<0.001	<0.002	<0.004	<0.004	<0.001	<0.001	<0.001	<0.001			<0.001	

8.9.4 OW-13, OW-14, OW-29, OW-30

Volatile Organic Compound Analytical Result Summary

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			Parameters													
			1,2,4-Trimethyl benzene (mg/L)	1,3,5-Trimethylbenzene (mg/L)	1,2-Dichloro ethane (EDC) (mg/L)	Naphthalene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methylnaphthalene (mg/L)	1,1-Dichloroethane (mg/L)	Isopropylbenzene (mg/L)	n-Butylbenzene (mg/L)	n-Propylbenzene (mg/L)	2,4-Dimethylphenol (mg/L)	Acetone (mg/L)	Sec-butylbenzene (mg/L)	Chloroethane (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	0.01	NE	NE	NE	**0.025**	NE	NE	NE			NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	**0.005**	NE	NE	NE	NE	NE	NE	NE			NE	NE
EPA RSL for Tap Water (June 2015)			**0.015**	**0.12**	0.00017	**0.00165 [1]**	**0.0011**	**0.036**	0.0027	**0.447 [1]**	**1**	**0.66**	**0.354 [1]**	**14.1 [1]**	**2**	**20.9 [1]**
Well ID	**DATE SAMPLED**	**METHOD**														
OW-30	11/11/2014	8260B	<0.005	<0.005	<0.005	<0.01	<0.02	<0.02	<0.005	<0.005	<0.015	<0.005		<0.05	<0.005	<0.01
	9/17/2014 [2]	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.001	<0.001	<0.003	<0.001	<0.01	<0.01	<0.001	<0.002
	6/3/2014	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.001	<0.001	<0.003	<0.001		<0.01	<0.001	<0.002
	3/7/2014	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.001	<0.001	<0.003	<0.001		<0.01	<0.001	<0.002
	11/11/2013	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.003	<0.001			<0.001	4.7E-03 [3]
	9/4/2013 [2]	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.003	<0.001			<0.001	
	6/17/2013	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.003	<0.001			<0.001	
	3/19/2013	8260B	<0.005		<0.005	<0.01	<0.02		<0.02	<0.005	<0.015	<0.005			<0.005	
	11/27/2012	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.003	<0.001			<0.001	
	8/23/2012	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.003	<0.001			<0.001	
	6/14/2012	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001			<0.001	
	3/21/2012	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001			<0.001	
	12/15/2011	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001			<0.001	
	10/24/2011	8260B	<0.001		<0.001	<0.002	<0.004	<0.004	<0.001	<0.001	<0.001	<0.001			<0.001	
	6/20/2011	8260B	<0.001		<0.001	<0.002	<0.004	<0.004	<0.001	<0.001	<0.001	<0.001			<0.001	
	2/24/2011	8260B	<0.001		<0.001	<0.002	<0.004	<0.004	<0.001	<0.001	<0.001	<0.001			<0.001	
	11/8/2010	8260B	<0.001		<0.001	<0.002	<0.004	<0.004	<0.001	<0.001	<0.001	<0.001			<0.001	
	9/27/2010	8260B	<0.001		<0.001	<0.002	<0.004	<0.004	<0.001	<0.001	<0.001	<0.001			<0.001	
	6/4/2010	8260B	<0.001		<0.001	<0.002	<0.004	<0.004	<0.001	<0.001	<0.001	<0.001			<0.001	
	3/24/2010	8260B	<0.001		<0.001	<0.002	<0.004	<0.004	<0.001	<0.001	<0.001	<0.001			<0.001	
	11/2/2009	8021B	`<0.001		NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	
	7/30/2009	8260B	<0.001		0.0013	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001			<0.001	
	5/13/2009	8021B	<0.001		NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	
	2/23/2009	8021B	<0.001		NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	
	11/12/2008	8260B	<0.001		0.0013	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	8/19/2008	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	12/28/2007	8260B	<0.001		0.0012	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
	10/27/2006	8260B	<0.001		<0.001	<0.002	<0.004		<0.001	<0.001	<0.001	<0.001			<0.001	

DEFINITIONS

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or less.

a) Human Health Standards; b) Other Standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

1. NMED Tap Water (Dec 2014)

NOTES

2) Quarterly combined with 2013 Annual sampling event which required addition of these analyses.

3) Detected for the first time.

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8.10 OW-50, OW-52

BTEX Analytical Result Summary

			Parameters				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	**0.75**	0.75	**0.62**	NE
40 CFR 141.62 MCL (June 2015)			**0.005**	1	**0.7**	10	NE
EPA RSL for Tap Water (June 2015)			0.00045	1.1	0.0015	0.19	**0.143 [1]**
Well ID	**DATE SAMPLED**	**METHOD**					
OW-50	9/15/2014	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	9/4/2013 [2]	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	11/27/2012	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	8/23/2012	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	6/13/2012	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	3/22/2012	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	12/15/2011	8260B	<0.005	<0.005	<0.005	<0.0075	<0.005
	10/25/2011	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	6/20/2011	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	3/1/2011	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	11/9/2010	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	9/27/2010	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	6/1/2010	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	3/16/2010	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	11/17/2009	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
OW-52	9/15/2014	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	9/4/2013 [2]	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	11/27/2012	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	8/23/2012	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	6/13/2012	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	3/22/2012	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	12/13/2011	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	10/25/2011	8021B	<0.001	<0.001	<0.001	<0.0015	<0.001
	6/20/2011	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	3/1/2011	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	11/9/2010	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	9/27/2010	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	6/1/2010	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	3/16/2010	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	11/17/2009	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001

DEFINITIONS

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other Standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

1. NMED Tap Water (Dec 2014)

NOTES

2) Sampling frequency changed to annual per concurrence by NMED in Comment 6 of NMED Disapproval Facility Wide Ground Water Monitoring Work Plan 2011 Updates 9/24/12.

8.10.1 OW-50, OW-52

General Chemistry and DRO/GRO Analytical Result Summary

			Parameters											
			Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Phosphorus (mg/L)	Sulfate (mg/L)	pH	Specific Conductance (µS/cm)	DRO (mg/L)	GRO (mg/L)	MRO [2] (mg/L)
WQCC 20NMAC 6.2.3103			**1.6**	**250.0**	NE	NE	**10**	NE	**600.0**	**6 to 9**	NE	**0.2 [1]**	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	**1.0**	10	NE	NE	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			0.8	NE	NE	1.6	32	**4.0E-04**	NE	NE	NE	NE	NE	NE
Well ID	**DATE SAMPLED**	**METHOD**												
OW-50	9/15/2014	300.0/8015B	0.45	30	0.26	<0.1	<0.1	<0.5	150	8.42	903	<1	<0.05	<5
	9/4/2013 [3]	300.0/8015B	0.5	26	0.18	**2**	2	<0.5	140	8.36	1100	<1.0	<0.05	<5.0
	11/27/2012	300.0/8015B	0.54	28	<0.5	<1.0	<1.0	<2.5	160	8.28	1100	<1.0	<0.05	<5.0
	8/23/2012	300.0/8015B	0.42	26	0.22	<1.0	<1.0	<0.5	140	8.13	1100	<1.0	<0.05	<5.0
	6/13/2012	300.0/8015B	0.54	27	0.27	<1.0	<1.0	<0.5	140	8.28	1000	<1.0	<0.05	<5.0
	3/22/2012	300.0/8015B	0.59	27	0.22	<0.1	0.15	<0.5	150	8.35	1000	<1.0	<0.05	<5.0
	12/15/2011	300.0/8015B	0.49	25	0.19	<1.0	<1.0	<0.5	140	8.29	1100	<1.0	<0.05	<5.0
	10/25/2011	300.0/8015B	0.49	26	0.15	NL	NL	<0.5	140	8.46	1100	<1.0	<0.05	<5.0
	6/20/2011	300.0/8015B	0.53	28	0.22	<0.1	<0.1	<0.5	150	8.67	1100	<1.0	<0.05	<5.0
	3/1/2011	300.0/8015B	0.49	26	0.2	<0.1	<0.1	<0.5	140	8.3	1000	<1.0	<0.05	<5.0
	11/9/2010	300.0/8015B	0.51	29	NL	<0.1	<0.1	<0.5	160	8.26	1100	<1.0	<0.05	
	9/27/2010	300.0/8015B	0.41	26	NL	<0.1	<0.1	<0.5	140	NA	NA	<1.0	<0.05	
	6/1/2010	300.0/8015B	0.53	27	0.22	<0.1	<0.1	<0.5	140	8.35	1000	<1.0	<0.05	
	3/16/2010	300.0/8015B	0.53	29	0.22	<0.1	<0.1	<0.5	150	8.34	1000	<1.0	<0.05	
	11/17/2009	8015B	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	<0.05	
OW-52	9/15/2014	300.0/8015B	0.5	27	0.19	<0.1	<0.1	<0.5	130	8.45	813	<1	<0.05	<5
	9/4/2013 [3]	300.0/8015B	0.5	27	0.17	**4.6**	4.6	<0.5	140	8.39	1000	<1.0	<0.05	<5.0
	11/27/2012	300.0/8015B	0.64	28	<0.5	<1.0	<1.0	<2.5	140	8.34	970	<1.0	<0.05	<5.0
	8/23/2012	300.0/8015B	0.49	25	0.16	<1.0	<1.0	<0.5	120	8.33	1000	<1.0	<0.05	<5.0
	6/13/2012	300.0/8015B	0.58	27	0.19	<1.0	<1.0	<0.5	140	8.36	960	<1.0	<0.05	<5.0
	3/22/2012	300.0/8015B	0.56	26	0.17	<0.1	<0.1	<0.5	130	8.35	990	<1.0	<0.05	<5.0
	12/13/2011	300.0/8015B	<0.5	27	0.17	<1.0	<1.0	<0.5	130	8.47	1000	<1.0	<0.05	<5.0
	10/25/2011	300.0/8015B	0.4	20	<0.1	**1.3**	1.3	<0.5	100	8.43	940	<1.0	<0.05	<5.0
	6/20/2011	300.0/8015B	0.56	24	0.19	<0.1	<0.1	<0.5	140	8.66	1100	<1.0	<0.05	<5.0
	3/1/2011	300.0/8015B	0.57	25	0.17	<0.1	<0.1	<0.5	130	8.42	990	<1.0	<0.05	<5.0
	11/9/2010	300.0/8015B	0.54	32	0.17	<0.1	<0.1	<0.5	140	8.27	1000	<1.0	<0.05	
	9/27/2010	300.0/8015B	0.52	27	NL	<0.1	<0.1	<0.5	140	NA	NA	<1.0	<0.05	
	6/1/2010	300.0/8015B	0.52	28	NL	<0.1	<0.1	<0.5	140	8.25	990	<1.0	<0.05	
	3/16/2010	300.0/8015B	0.56	31	0.18	<0.1	<0.1	<0.5	150	8.23	990	<1.0	<0.05	
	11/17/2009	8015B	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0	<0.05	

DEFINITIONS

NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other standards for Domestic Water
1) NMED Table 6 (unknown oil). TPH Screening Guidelines for Potable Ground Water (GW-1). (June 2012)
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table

NOTES

2) Per NMED "Approval with Modifications Annual Ground Water Monitoring Report 2010, Rev. 1", dated 12/12/12, Comment 7(a) added MRO to data tables.
3) Sampling frequency changed to annual per concurrence by NMED in Comment 6 of NMED Disapproval Facility Wide Ground Water Monitoring Work Plan 2011 Update, 9/24/12.

8.10.2 OW-50, OW-52

Total Metals Analytical Result Summary

			Parameters												
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	0.01	**0.05**	**1**	**1**	0.05	**0.2**	**0.05**	**0.05**	**0.002**	**0.03**	**10**
40 CFR 141.62 MCL (June 2015)			**0.01**	2	**0.005**	0.1	1.3	NE	**0.015**	NE	0.05	NE	0.002	0.03	NE
EPA RSL for Tap Water (June 2015)			0.000052	3.8	0.0092	NE	0.8	14	0.015	0.43	0.1	9.40E-02	6.30E-04	0.06	6
Well ID	**DATE SAMPLED**	**METHOD**													
OW-50	9/15/2014	200.7/200.8	0.0019	0.075	<0.002	<0.006	<0.006	0.6	<0.001	0.11	0.001	<0.005	<0.0002	1.0E-02	<0.01
	9/4/2013	200.7/200.8	0.0018	0.058	<0.002	<0.006	<0.006	0.18	0.0021	0.11	<0.001	<0.005	<0.0002	8.4E-03	0.013
	11/27/2012	200.7/200.8	<0.0025	0.12	<0.002	<0.006	<0.006	**1.3**	<0.005	0.12	<0.0025	<0.005	<0.0002	9.6E-03	<0.01
	8/23/2012	200.7/200.8	<0.0025	0.043	<0.002	<0.006	0.0086	0.071	<0.005	0.058	<0.0025	<0.005	<0.0002	0.008	0.011
	6/13/2012	200.7/200.8	<0.0025	0.081	<0.002	<0.006	<0.006	0.89	<0.005	0.1	<0.0025	<0.005	<0.0002	7.4E-03	<0.01
	3/22/2012	200.7/200.8	<0.0025	0.029	<0.002	<0.006	<0.006	0.31	<0.005	0.035	<0.0025	<0.005	<0.0002	0.011	<0.01
	12/15/2011	200.7/200.8	<0.0025	0.07	<0.002	<0.006	<0.006	0.51	<0.005	0.095	<0.0025	<0.005	<0.0002	8.7E-03	<0.01
	10/25/2011 [1]	200.7/200.8	<0.0025	0.041	<0.002	<0.006	<0.006	0.022	<0.005	0.082	<0.0025	<0.005	<0.002	7.2E-03	<0.01
	6/20/2011	200.7/200.8	<0.0025	0.046	<0.002	<0.006	<0.006	0.16	<0.005	0.085	<0.0025	<0.005	<0.0002	7.1E-03	<0.01
	3/1/2011	200.7/200.8	0.003	0.045	<0.002	<0.006	<0.006	0.24	<0.005	0.086	<0.05	<0.005	<0.0002	7.2E-03	<0.01
	11/9/2010	200.7/200.8	0.0031	0.038	<0.002	<0.006	<0.006	<0.02	<0.005	0.079	0.0055	<0.005	<0.0002	NL	0.02
	9/27/2010	6010B	<0.02	0.041	<0.002	<0.006	<0.006	0.15	<0.005	0.032	<0.05	<0.005	<0.0002	0.006	<0.02
	6/1/2010	6010B	<0.02	0.042	<0.002	<0.006	NL	NL	<0.005	NL	<0.05	<0.005	<0.0002	NL	<0.02
	3/16/2010	6010B	<0.02	0.038	<0.002	<0.006	<0.006	<0.05	<0.005	0.079	<0.05	<0.005	<0.0002	6.26E-03	<0.02
	11/17/2009	6010B	<0.02	0.042	<0.002	<0.006	NL	NL	<0.005	NL	<0.05	<0.005	<0.0002	NL	NL
OW-52	9/15/2014	200.7/200.8	<0.001	0.032	<0.002	<0.006	<0.006	0.31	<0.001	0.036	<0.001	<0.005	<0.0002	0.011	<0.01
	9/4/2013	200.7/200.8	<0.001	0.029	<0.002	<0.006	<0.006	0.22	<0.001	0.043	<0.001	<0.005	<0.0002	0.011	<0.01
	11/27/2012	200.7/200.8	<0.0025	0.029	<0.002	<0.006	<0.006	0.15	<0.005	0.029	<0.0025	<0.005	<0.0002	0.011	<0.01
	8/23/2012	200.7/200.8	<0.0025	0.029	<0.002	<0.006	0.014	0.3	<0.005	0.026	<0.0025	<0.005	<0.0002	7.6E-03	0.012
	6/13/2012	200.7/200.8	<0.0025	0.028	<0.002	<0.006	<0.006	0.17	<0.005	0.027	<0.0025	<0.005	<0.0002	0.01	<0.01
	3/22/2012	200.7/200.8	<0.0025	0.072	<0.002	<0.006	<0.006	0.52	<0.005	0.094	<0.0025	<0.005	<0.0002	7.6E-03	<0.01
	12/13/2011	200.7/200.8	<0.0025	0.034	<0.002	0.0069	<0.006	0.43	<0.005	0.039	<0.0025	<0.005	<0.0002	0.01	<0.01
	10/25/2011 [1]	200.7/200.8	<0.0025	0.025	<0.002	<0.006	<0.006	0.13	<0.005	0.032	<0.0025	<0.005	<0.0002	0.01	<0.01
	6/20/2011	200.7/200.8	<0.0025	0.026	<0.002	<0.006	<0.006	0.11	<0.005	0.036	<0.0025	<0.005	<0.002	0.012	<0.01
	3/1/2011	200.7/200.8	<0.0025	0.027	<0.002	<0.006	<0.006	0.35	<0.005	0.044	<0.05	<0.005	NL	3.6E-03	<0.01
	11/19/2010	200.7/200.8	<0.0025	0.026	<0.002	<0.006	<0.006	0.056	<0.005	0.028	0.0046	<0.005	<0.0002	NL	<0.01
	9/27/2010	6010B	<0.02	0.025	<0.002	<0.006	<0.006	0.065	<0.005	0.03	<0.05	<0.005	<0.0002	0.01	<0.02
	6/1/2010	6010B	<0.02	0.024	<0.002	<0.006	NL	NL	<0.005	NL	<0.05	<0.005	<0.0002	NL	NL
	3/16/2010	6010B	<0.02	0.027	<0.002	<0.006	<0.006	0.15	<0.005	0.032	<0.05	<0.005	<0.0002	1.03E-02	<0.02
	11/17/2009	6010B	<0.02	0.027	<0.002	<0.006	NL	NL	<0.005	NL	<0.05	<0.005	<0.0002	NL	NL

DEFINITIONS

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

1. National Primary Drinking Water Regulation (May 2009); Action Level

EPA Regional Screening Level (RSL) Summary Table

NOTES

1) *10/25/2011 - Quarterly sampling was combined with the Annual Sampling event*

Hall Laboratory analysis indicates that there was a constituent detected in the field blank submitted of 0.002mg/L of Toluene ON 10-25-11.

8.10.3 OW-50, OW-52

Dissolved Metals Analytical Result Summary

			Parameters														
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	0.01	NE	**0.05**	**1**	**1**	0.05	**0.2**	NE	**0.05**	**0.05**	NE	**0.03**	**10**
Well ID	**DATE SAMPLED**	**METHOD**															
OW-50	9/15/2014	200.7/200.8	0.0024	0.047	<0.002	24	<0.006	<0.006	<0.02	<0.001	0.091	1.1	0.0017	<0.005	240	0.0098	<0.01
	9/4/2013	200.7/200.8	<0.005	0.042	<0.002	22	<0.006	<0.006	<0.02	<0.005	0.1	1.4	<0.005	<0.005	220	<0.01	<0.01
	11/27/2012	200.7/200.8	0.0019	0.052	<0.002	21	<0.006	<0.006	0.41	<0.005	0.093	<1.0	<0.001	<0.005	220	0.0093	0.012
	8/23/2012	200.7/200.8	0.0019	0.04	<0.002	22	<0.006	<0.006	<0.02	<0.005	0.051	<1.0	<0.001	<0.005	230	0.0077	0.014
	6/13/2012	200.7/200.8	0.0019	0.041	<0.002	21	<0.006	<0.006	<0.02	<0.005	0.081	<1.0	<0.001	<0.005	240	0.0085	0.012
	3/22/2012	200.7/200.8	0.0019	0.041	<0.002	22	<0.006	<0.006	<0.02	<0.005	0.082	<1.0	<0.001	<0.005	250	0.0076	0.039
	12/15/2011	200.7/200.8	0.0018	0.04	<0.002	22	<0.006	<0.006	<0.1	<0.005	0.079	<5.0	<0.001	<0.005	220	0.0081	<0.01
	10/25/2011	200.7/200.8	0.0019	0.041	<0.002	22	<0.006	<0.006	<0.02	<0.005	0.082	<1.0	<0.001	<0.005	240	0.0074	<0.01
	6/20/2011	200.7/200.8	0.0022	NL	<0.002	24	<0.006	NL	<0.02	<0.005	0.088	<1.0	0.0013	<0.005	250	0.0075	0.021
	3/1/2011	200.7/200.8	0.0026	0.039	<0.002	21	<0.006	<0.006	<0.02	<0.005	0.082	<1.0	<0.05	<0.005	230	0.0069	0.081
	11/9/2010	200.7/200.8	NL	0.037	<0.002	NL	<0.006	<0.006	<0.02	<0.005	0.078	<1.0	0.0014	<0.005	NL	NL	<0.01
	9/27/2010	6010B	<0.02	0.04	<0.002	21	<0.006	<0.006	<0.02	<0.005	0.081	<1.0	<0.05	<0.005	220	0.006	0.064
	6/1/2010	6010B	<0.02	0.04	<0.002	20	<0.006	<0.006	<0.02	<0.005	0.083	<1.0	<0.05	<0.005	220	NL	<0.05
	3/16/2010	6010B	<0.02	0.036	<0.002	19	<0.006	<0.006	<0.02	<0.005	0.076	<1.0	<0.05	<0.005	210	0.00641	<0.05
OW-52	9/15/2014	200.7/200.8	<0.001	0.029	<0.002	7.5	<0.006	<0.006	0.051	<0.001	0.026	2	0.0012	<0.005	240	0.011	<0.01
	9/4/2013	200.7/200.8	<0.005	0.026	<0.002	4.4	<0.006	<0.006	0.063	<0.005	0.038	2.2	<0.005	<0.005	230	0.011	0.016
	11/27/2012	200.7/200.8	<0.001	0.027	<0.002	4.2	<0.006	<0.006	0.066	<0.005	0.025	1.2	<0.001	<0.005	220	0.011	0.011
	8/23/2012	200.7/200.8	<0.001	0.022	<0.002	4.4	<0.006	<0.006	<0.02	<0.005	0.0054	1.5	<0.001	<0.005	250	0.0072	0.039
	6/13/2012	200.7/200.8	<0.001	0.026	<0.002	4.2	<0.006	<0.006	0.076	<0.005	0.023	1.4	<0.001	<0.005	230	0.011	0.023
	3/22/2012	200.7/200.8	<0.001	0.025	<0.002	4.2	<0.006	<0.006	0.071	<0.005	0.03	1.2	<0.001	<0.005	250	0.01	0.084
	12/13/2011	200.7/200.8	<0.001	0.025	<0.002	4.1	<0.006	<0.006	0.08	<0.005	0.025	1.1	<0.001	<0.005	210	0.01	<0.01
	10/25/2011	200.7/200.8	<0.001	0.025	<0.002	4.2	<0.006	<0.006	0.12	<0.005	0.031	1.1	<0.001	<0.005	240	0.011	<0.01
	6/20/2011	200.7/200.8	<0.001	NL	<0.002	5.2	<0.006	NL	0.12	<0.005	0.037	1.2	0.0015	<0.005	240	0.013	0.024
	3/1/2011	200.7/200.8	<0.001	0.36	<0.02	93	<0.006	<0.006	0.064	<0.005	**0.68**	2.3	<0.05	<0.005	490	0.0071	<0.01
	11/9/2010	200.7/200.8	NL	0.025	<0.02	4.2	<0.006	<0.006	0.048	<0.005	0.027	1.2	NL	<0.005	240	NL	<0.01
	9/27/2010	6010B	<0.02	0.026	<0.002	4.3	<0.006	<0.006	0.058	<0.005	0.031	1.2	<0.05	<0.005	230	0.009	0.079
	6/1/2010	6010B	<0.02	0.026	<0.002	4	<0.006	<0.006	0.058	<0.005	0.032	1.2	<0.05	<0.005	230	0.00926	<0.05
	3/16/2010	6010B	<0.02	0.023	<0.002	3.9	<0.006	<0.006	0.034	<0.005	0.028	1.1	<0.05	<0.005	230	0.0092	<0.05

DEFINITIONS	**STANDARDS**
NE = Not established	WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
NA = Not analyzed	a) Human Health Standards; b) Other standards for Domestic Water
NL = Not listed on laboratory analysis	40 CFR 141.62 Detection Limits for Inorganic Contaminants
Bold and highlighted values represent values above the applicable standards	EPA Regional Screening Level (RSL) Summary Table

NOTES:

8.10.4 OW-50, OW-52

Semi Volatile Organic Compound Analytical Result Summary

			Parameters	
			Benzoic Acid (mg/L)	Bis(2-ethylhexyl)phthalate (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE
40 CFR 141.62 MCL (June 2015)			NE	**0.006**
EPA RSL for Tap Water (June 2015)			**75**	0.0056
Well ID	**DATE SAMPLED**	**METHOD**		
OW-50	9/15/2014	8270C	<0.02	<0.01
	9/4/2013	8270C	<0.04	<0.01
	12/5/2012 [2]	8270C	<0.02	<0.01
	8/23/2012	8270C	<0.02	<0.01
	6/13/2012	8270C	<0.02	<0.01
	3/22/2012	8270C	<0.02	<0.01
	12/15/2011	8270C	<0.02	<0.01
	10/25/2011	8270C	<0.02	<0.01
	6/20/2011	8270C	<0.02	<0.01
	3/1/2011	8270C	<0.02	<0.01
	11/9/2010	8270C	<0.02	<0.01
	9/27/2010	8270C	<0.02	<0.01
	6/1/2010	8270C	<0.02	<0.01
	3/16/2010	8270C	0.02	**0.011**
	11/17/2009	8270C	<0.02	<0.01

DEFINITIONS

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or less.

a) Human Health Standards; b) Other Standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

NOTES

2) Sampled for 8270C only. Samples not collected for this analysis during the 4th quarter sampling.

8.11 RW-1, RW-2, RW-5, RW-6
BTEX Analytical Result Summary

			Parameters				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	**0.75**	0.75	**0.62**	NE
40 CFR 141.62 MCL (June 2015)			**0.005**	1.0	**0.7**	10	NE
EPA RSL for Tap Water (June 2015)			4.5E-04	1.1	0.0015	0.19	**0.143** [1]
SAMPLE ID	**DATE SAMPLED**	**METHOD**					
RW-1 [2]	9/18/2014	8260B	**37**	**35**	**1.8**	**10**	**1.2**
	9/16/2013	8260B	**54**	**35**	**2.4**	**13**	**2.2**
	8/23/2012	8260B	**45**	**82**	**4.9**	**31**	**3.1**
	10/3/2011	8260B	**51**	**37**	**3.7**	**23**	**2.9**
RW-2 [2]	9/18/2014	8260B	**40**	**4.5**	**0.86**	**2.5**	**1.9**
	9/16/2013	8260B	**48**	**3.4**	**0.87**	**2.3**	**2.8**
	8/24/2012	8260B	**42**	**2.6**	**0.59**	**1.7**	**3.3**
	10/3/2011	8260B	**39**	**5.3**	**0.57**	**1.5**	**3.7**
RW-5 [2]	9/18/2014	8260B	**0.35**	<0.01	**0.11**	0.056	<0.01
	9/16/2013	8260B	**0.37**	<0.01	**0.11**	0.089	<0.01
	8/23/2012	8260B	**0.19**	<0.01	**0.26**	0.091	0.032
	10/4/2011	8260B	**0.56**	<0.01	**0.21**	0.26	0.095
RW-6 [2]	9/18/2014	8260B	**0.47**	0.23	**0.45**	1.3	0.046
	9/16/2013	8260B	**0.68**	<0.05	**0.18**	**1.1**	<0.05
	8/23/2012	8260B	**0.74**	0.052	**0.4**	**1.6**	0.073
	10/4/2011	8260B	**0.87**	0.029	**0.33**	<0.0015	<0.01

NOTES
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table
1. NMED Tap Water (Dec 2014)

NOTES:
2) Recovery wells added to the approved 2010 FWGWMP (8/25/10) annual sampling schedule.

8.11.1 RW-1, RW-2, RW-3, RW-5

General Chemistry Analytical Result Summary

			Parameters						
			Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Phosphorus (mg/L)	Sulfate (mg/L)
WQCC 20NMAC 6.2.3103			**1.6**	**250.0**	NE	NE	**10**	NE	**600.0**
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	**1.0**	10	NE	NE
EPA RSL for Tap Water (June 2015)			0.8	NE	NE	NE	32	**4.0E-04**	NE
SAMPLE ID	**DATE SAMPLED**	**METHOD**							
RW-1 [1]	9/16/2013	300.0	<0.5	**370**	2.8	<0.5	<0.5	<2.5	<2.5
	8/23/2012	300.0	<0.5	**380**	3.8	<1.0	<1.0	<2.5	<2.5
	10/3/2011	300.0	<0.5	**410**	3.3	**220**	**220**	<2.5	<2.5
RW-2 [1]	9/16/2013	300.0	0.27	84	0.16	<0.1	<0.1	<0.5	1.7
	8/24/2012	300.0	<0.5	90	1.7	<1.0	<1.0	<2.5	<2.5
	10/3/2011	300.0	<0.5	130	2.5	**67**	**67**	<2.5	<2.5
RW-5 [1]	9/16/2013	300.0	0.89	5.6	<0.1	<0.1	<0.1	<0.5	<0.5
	8/23/2012	300.0	0.8	11	<0.5	<1.0	<1.0	<2.5	<2.5
	10/4/2011	300.0	0.54	26	0.86	**14**	**14**	<2.5	<2.5
RW-6 [1]	9/16/2013	300.0	<0.5	45	0.56	<0.5	<0.5	<2.5	<2.5
	8/23/2012	300.0	<0.5	45	0.95	<1.0	<1.0	<2.5	<2.5
	10/4/2011	300.0	<0.5	80	0.91	<1.0	<1.0	<2.5	<2.5

NOTES

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

NOTES

1) Recovery wells added to the approved 2010 FWGWMP (8/25/10) annual sampling schedule.

8.11.2 RW-1, RW-2, RW-5, RW-6

Total Metals Analytical Result Summary

			Parameters												
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	0.01	**0.05**	**1**	**1**	0.05	**0.2**	**0.05**	**0.05**	**0.002**	**0.03**	**10**
40 CFR 141.62 MCL (June 2015)			**0.01**	2	**0.005**	0.1	1.3	NE	**0.015**	NE	0.05	NE	0.002	0.03	NE
EPA RSL for Tap Water (June 2015)			0.000052	3.8	0.0092	NE	0.8	14	0.015	0.43	0.1	0.094	0.00063	0.06	6
SAMPLE ID	**DATE SAMPLED**	**METHOD**													
RW-1 [1]	9/18/2014	200.7/200.8	**0.011**	**3.5**	<0.002	<0.006	<0.006	**9.6**	<0.001	**3.2**	0.0086	<0.005	<0.0002	0.0015	<0.01
	9/16/2013	200.7/200.8	0.0096	**4.9**	<0.002	0.0075	0.014	**19**	0.0053	**3.3**	0.01	<0.25	<0.0002	0.0019	0.044
	8/23/2012	200.7/200.8	0.01	**3.7**	<0.002	<0.006	<0.006	**6.9**	<0.005	**3.6**	0.0057	<0.005	<0.0002	0.0041	<0.01
	10/3/2011	200.7/200.8	0.01	**4.8**	<0.002	<0.006	0.035	**4.6**	<0.005	**3.3**	0.0075	<0.005	<0.0002	0.0043	0.06
RW-2 [1]	9/18/2014	200.7/200.8	0.0086	**4.1**	<0.002	<0.006	<0.006	**15**	0.0043	**2.6**	0.0057	<0.005	<0.0002	<0.001	0.016
	9/16/2013	200.7/200.8	0.0064	**3.9**	<0.002	<0.006	<0.006	**13**	0.0021	**2.3**	0.0074	<0.1	<0.0002	<0.001	0.026
	8/24/2012	200.7/200.8	0.0069	**3.7**	<0.002	<0.006	<0.006	**10**	<0.005	**2.1**	0.0044	<0.005	<0.0002	<0.0025	<0.01
	10/3/2011	200.7/200.8	0.0061	**3.1**	<0.002	<0.006	0.0098	**11**	<0.005	**2.2**	0.0069	<0.005	<0.0002	<0.0025	0.028
RW-5 [1]	9/18/2014	200.7/200.8	0.0019	**2**	<0.002	<0.006	<0.006	**2.8**	<0.001	**0.5**	<0.001	<0.005	<0.0002	<0.001	<0.01
	9/16/2013	200.7/200.8	0.0022	**2.3**	<0.002	<0.006	<0.006	**4**	<0.001	**0.59**	<0.001	<0.005	<0.0002	<0.001	<0.01
	8/23/2012	200.7/200.8	0.0033	**3.1**	<0.002	<0.006	<0.006	**5**	<0.005	**0.76**	<0.0025	<0.005	<0.0002	<0.0025	<0.01
	10/4/2011	200.7/200.8	0.0063	**3.7**	<0.002	<0.006	<0.006	**7.8**	<0.005	**0.97**	<0.0025	<0.005	<0.0002	<0.0025	0.013
RW-6 [1]	9/18/2014	200.7/200.8	**0.014**	**3.3**	<0.002	<0.006	<0.006	**6.8**	0.0067	**0.79**	0.0015	<0.005	<0.0002	<0.001	<0.01
	9/16/2013	200.7/200.8	**0.013**	**3.6**	<0.002	<0.006	<0.006	**11**	0.0069	**0.9**	0.0015	<0.005	<0.0002	<0.001	<0.01
	8/23/2012	200.7/200.8	**0.015**	**3.7**	<0.002	<0.006	<0.006	**7.4**	0.0093	**0.89**	<0.0025	<0.005	<0.0002	<0.0025	<0.01
	10/4/2011	200.7/200.8	**0.017**	**4.2**	<0.002	<0.006	<0.006	**11**	0.0093	**1.1**	<0.0025	<0.005	<0.0002	<0.0025	<0.01

DEFINITIONS

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Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

NOTES

1) Recovery wells added to the approved 2010 FWGWMP (8/25/10) annual sampling schedule.

8.11.3 RW-1, RW-2, RW-5, RW-6

Dissolved Metals Analytical Result Summary

			Parameters														
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	0.01	**0.05**	**1**	**1**	0.05	NE	**0.2**	NE	**0.05**	**0.05**	NE	**0.03**	**10**
SAMPLE ID	DATE SAMPLED	METHOD															
RW-1 [1]	9/18/2014	200.7/200.8	<0.01	**3.6**	<0.002	<0.006	<0.006	**9.6**	<0.001		**3.3**		<0.01	<0.005		0.0014	0.067
	9/16/2013	200.7/200.8	0.0082	**5.3**	<0.002	<0.006	<0.006	**11**	<0.001	39	**3.5**	1.3	0.012	<0.05	240	<0.001	0.017
	8/23/2012	200.7/200.8	0.009	**3.6**	<0.002	<0.006	<0.006	**7.6**	<0.005	39	**3.6**	1.3	0.0062	<0.005	250	0.0041	0.021
	10/3/2011	200.7/200.8	0.0071	**5**	<0.002	<0.006	<0.006	**5.2**	<0.005	40	**3.3**	1.1	0.013	<0.005	260	0.0028	0.067
RW-2 [1]	9/18/2014	200.7/200.8	<0.01	**3.8**	<0.002	<0.006	<0.006	**13**	<0.001		**2.4**		<0.01	<0.005		<0.001	0.023
	9/16/2013	200.7/200.8	0.0057	**3.9**	<0.002	<0.006	<0.006	**11**	<0.001	22	**2.2**	<1.0	0.0076	<0.1	190	<0.001	<0.01
	8/24/2012	200.7/200.8	0.0073	**3.5**	<0.002	<0.006	<0.006	**10**	<0.005	25	**2.1**	<1.0	0.0046	<0.005	200	<0.001	0.023
	10/3/2011	200.7/200.8	0.006	**2.8**	<0.002	<0.006	<0.006	**6.1**	<0.005	22	**2**	<1.0	0.01	<0.005	210	<0.001	<0.01
RW-5 [1]	9/18/2014	200.7/200.8	0.002	**1.9**	<0.002	<0.006	<0.006	**2.6**	<0.001		**0.5**		<0.001	<0.005		<0.001	0.049
	9/16/2013	200.7/200.8	0.002	**2.5**	<0.002	<0.006	<0.006	**3.3**	<0.001	7.5	**0.61**	<1.0	<0.001	<0.005	160	<0.001	<0.01
	8/23/2012	200.7/200.8	0.0022	**2.7**	<0.002	<0.006	<0.006	**3.7**	<0.005	9.9	**0.69**	<1.0	0.001	<0.005	190	<0.001	0.017
	10/4/2011	200.7/200.8	0.0048	**3.1**	<0.002	<0.006	<0.006	**5.4**	<0.005	14	**0.89**	<1.0	0.0035	<0.005	210	<0.001	<0.01
RW-6 [1]	9/18/2014	200.7/200.8	0.014	**3.2**	<0.002	<0.006	<0.006	**6.5**	0.0049		**0.75**		<0.005	<0.005		<0.001	0.024
	9/16/2013	200.7/200.8	0.0096	**3.6**	<0.002	<0.006	<0.006	**7.1**	0.0034	14	**0.87**	1.1	0.0025	<0.005	270	<0.001	0.032
	8/23/2012	200.7/200.8	**0.015**	**3.7**	<0.002	<0.006	<0.006	**8.3**	0.0091	15	**0.92**	<1.0	0.0016	<0.005	290	<0.001	0.021
	10/4/2011	200.7/200.8	**0.016**	**4.1**	<0.002	<0.006	<0.006	**10**	0.007	17	**1.1**	<1.0	0.0044	<0.005	270	<0.001	<0.01

DEFINITIONS

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STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table

NOTES

1) Recovery wells added to the approved 2010 FWGWMP (8/25/10) annual sampling schedule.

8.11.4 RW-1, RW-2, RW-5, RW-6

Volatile Organic Compound Analytical Result Summary

			Parameters									
			1,2,4-Trimethyl-benzene (mg/L)	1,3,5-Trimethyl-benzene (mg/L)	Naphthalene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	Chloromethane (mg/L)	Isopropyl benzene (mg/L)	4-Isopropyl toluene (mg/L)	n-Propyl benzene (mg/L)	Styrene (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	NE	NE	NE	NE	NE	NE	**0.1**
EPA RSL for Tap Water (June 2015)			**0.015**	**0.12**	**0.00165** [1]	**0.0011**	**0.036**	**0.0203** [1]	**0.447** [1]	NE	**0.66**	1.2
SAMPLE ID	**DATE SAMPLED**	**METHOD**										
RW-1 [2]	9/18/2014	8260B	<1	<1	<2	<4	<4	<3	<1	<1	<1	<1
	9/16/2013	8260B	**1.3**	<1.0	<2.0	<4.0	<4.0	<3.0	<1.0	<1.0	<1.0	<1.0
	8/23/2012	8260B	**2.8**	<1.0	<2.0	<4.0	<4.0	<0.03	<0.01	<0.01	<0.01	<0.01
	10/3/2011	8260B	**5.8**	**0.98**	**0.6**	**0.071**	**0.15**	<0.03	<0.01	<0.01	0.4	0.013
RW-2 [2]	9/18/2014	8260B	**0.15**	<0.1	<0.2	<0.4	<0.4	<0.3	<0.1	<0.1	<0.1	<0.1
	9/16/2013	8260B	**0.13**	<0.1	<0.2	<0.4	<0.4	<0.3	<0.1	<0.1	<0.1	<0.1
	8/24/2012	8260B	<0.1	<0.1	<0.2	<0.4	<0.4	<0.3	<0.1	<0.1	<0.1	<0.1
	10/3/2011	8260B	**0.098**	0.024	**0.057**	**0.054**	<0.04	**0.14**	<0.01	<0.01	0.036	<0.01
RW-5 [2]	9/18/2014	8260B	**0.045**	0.011	**0.1**	**0.084**	**0.11**	<0.03	0.012	<0.01	0.039	<0.01
	9/16/2013	8260B	**0.09**	0.022	**0.12**	**0.097**	**0.13**	<0.03	<0.01	<0.01	0.031	<0.01
	8/23/2012	8260B	**0.054**	0.016	**0.11**	**0.11**	**0.17**	<0.03	0.018	<0.01	0.068	<0.01
	10/4/2011	8260B	**0.13**	0.046	**0.17**	**0.11**	**0.16**	<0.03	0.017	0.01	0.04	<0.01
RW-6 [2]	9/18/2014	8260B	**0.17**	**0.17**	**0.57**	**0.19**	**0.28**	<0.03	0.045	0.011	0.11	<0.01
	9/16/2013	8260B	**0.28**	**0.14**	**0.48**	**0.2**	**0.27**	<0.15	<0.05	<0.05	<0.05	<0.05
	8/23/2012	8260B	**0.38**	**0.17**	**0.58**	**0.22**	**0.36**	<0.15	<0.05	<0.05	0.074	<0.05
	10/4/2011	8260B	**0.42**	**0.16**	**0.52**	**0.21**	**0.31**	<0.03	0.043	0.015	0.078	<0.01

DEFINITIONS

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STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less
a) Human Health Standards; b) Other Standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table

1. NMED Tap Water (Dec 2014)

NOTES:

2) Recovery wells added to the approved 2010 FWGWMP (8/25/10) annual sampling schedule.

8.11.5 RW-1, RW-2, RW-5, RW-6

Semi-Volatile Organic Compound Analytical Result Summary

			Parameters											
			Aniline (mg/L)	Benzoic Acid (mg/L)	Benzyl Alcohol (mg/L)	2,4-Dimethylphenol (mg/L)	2-Methyl naphthalene (mg/L)	1-Methylnaphthalene (mg/L)	2-Methylphenol (mg/L)	3+4-Methylphenol (mg/L)	Naphthalene (mg/L)	Phenanthrene (mg/L)	Phenol (mg/L)	Pyridine (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	**0.005**	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			**0.013**	**75**	**2**	**0.354** [1]	**0.036**	**0.0011**	**0.93**	**0.0015**	**0.00165** [1]	NE	5.8	**0.02**
SAMPLE ID	**DATE SAMPLED**	**METHOD**												
RW-1 [2]	9/18/2014	8270C	**0.021**	<0.02	<0.01	0.037	<4	<4	0.05	**0.062**	<2	<0.01	**0.044**	<0.01
	9/16/2013	8270C	**0.089**	<0.04	<0.01	0.087	**0.21**	**0.19**	0.14	**0.15**	**0.43**	0.011	**0.1**	<0.01
	8/23/2012	8270C	**0.16**	<0.2	<0.1	0.21	**0.61**	**0.3**	0.24	**0.16**	**0.89**	0.02	**0.11**	**0.031**
	10/3/2011	8270C	<0.1	<0.2	<0.1	<0.1	**1.1**	**0.5**	<0.1	<0.1	**1.3**	<0.1	<0.1	
RW-2 [2]	9/18/2014	8270C	**0.14**	<0.02	<0.01	0.084	<0.4	<0.4	0.0	**0.022**	<0.2	<0.01	0.061	<0.01
	9/16/2013	8270C	**0.22**	<0.04	<0.01	0.15	<0.01	**0.061**	0.048	**0.22**	**0.065**	<0.01	**0.095**	
	8/24/2012	8270C	**0.21**	<0.02	<0.01	0.22	<0.01	**0.043**	0.028	**0.025**	**0.043**	<0.01	**0.091**	
	10/3/2011	8270C	**0.15**	0.021	<0.01	0.16	<0.01	**0.023**	0.09	**0.032**	**0.026**	<0.01	**0.038**	
RW-5 [2]	9/18/2014	8270C	<0.01	<0.02	<0.01	<0.01	**0.11**	**0.084**	<0.02	<0.01	**0.1**	<0.01	<0.01	<0.01
	9/16/2013	8270C	<0.01	<0.04	<0.01	<0.01	**0.062**	**0.056**	<0.01	<0.01	**0.066**	<0.01	**0.018**	
	8/23/2012	8270C	<0.01	<0.02	<0.01	<0.01	**0.11**	**0.088**	<0.01	<0.01	**0.079**	<0.01	<0.01	
	10/4/2011	8270C	<0.01	<0.02	<0.01	<0.01	**0.13**	**0.1**	<0.01	<0.01	**0.11**	<0.01	<0.01	
RW-6 [2]	9/18/2014	8270C	<0.01	<0.02	<0.01	<0.01	**0.28**	**0.19**	<0.02	<0.01	**0.57**	<0.01	<0.01	<0.01
	9/16/2013	8270C	<0.01	<0.04	<0.01	<0.01	**0.51**	**0.44**	<0.01	<0.01	**0.66**	<0.01	<0.01	
	8/23/2012	8270C	<0.01	<0.02	<0.01	<0.01	**0.65**	**0.49**	<0.01	<0.01	**0.55**	<0.01	<0.01	
	10/4/2011	8270C	<0.1	<0.2	<0.1	<0.1	**0.59**	**0.42**	<0.1	<0.1	**0.46**	<0.1	<0.1	

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STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less

a) Human Health Standards; b) Other Standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

1. NMED Tap Water (Dec 2014)

NOTES

2) Recovery wells added to the approved 2010 FWGWMP (8/25/10) annual sampling schedule.

8.12 PW-2, PW-3, PW-4
BTEX Analytical Result Summary

			Parameters						
			Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)
WQCC 20NMAC 6.2.3103			0.01	**0.75**	0.75	**0.62**	NE	NE	**10**
40 CFR 141.62 MCL (June 2015)			**0.005**	1	**0.7**	10	NE	**1**	10
EPA RSL for Tap Water (June 2015)			0.00045	1.1	0.0015	0.19	**0.143** [1]	1.6	32
Well ID	**DATE SAMPLED**	**METHOD**							
PW-2	9/10/2014	8260B/Anions	<0.001	<0.001	<0.001	<0.0015	<0.001	NL	0.12
	12/15/2011 [2]	8260B/Anions	<0.001	<0.001	<0.001	<0.0015	<0.001	NL	0.15
	10/26/2011	8260B/Anions	<0.001	<0.001	<0.001	<0.0015	<0.001	<0.1	<0.1
	9/12/2008	8260B/Anions	<0.001	<0.001	<0.001	<0.0015	<0.01	<1.0	<1.0
	12/9/2004	8260B	<0.001	<0.001	<0.001	<0.0015	NA	<1.0	<1.0
PW-3	9/10/2014	8260B/Anions	<0.001	<0.001	<0.001	<0.0015	<0.001	NL	<0.1
	9/10/2013	8260B/Anions	<0.001	<0.001	<0.001	<0.0015	<0.001	NL	0.15
	8/24/2012	8260B/Anions	<0.001	<0.001	<0.001	<0.0015	<0.001	<1.0	<1.0
	10/31/2011	8260B/Anions	<0.001	<0.001	<0.001	<0.0015	<0.01	NL	<0.1
	9/23/2010	8260B/Anions	<0.001	<0.001	<0.001	<0.0015	<0.01	<1.0	<1.0
	8/21/2008	8260B/Anions	<0.001	<0.001	<0.001	<0.0015	<0.01	<0.01	0.13
	1/1/2008	8260B/Anions	<0.001	<0.001	<0.001	<0.0015	<0.01	<0.2	<0.2
	10/27/2006	8260B/Anions	<0.001	<0.001	<0.001	<0.0015	<0.01	<0.2	<0.2
PW-4	9/10/2013	8260B/Anions	<0.001	<0.001	<0.001	<0.0015	<0.001	NL	0.19
	7/28/2010	8260B/Anions	<0.001	<0.001	<0.001	<0.0015	<0.001	<0.01	0.14
	9/12/2008	8260B/Anions	<0.001	<0.001	<0.001	<0.0015	<0.01	<0.01	<0.02
	8/4/2004	8260B	<0.001	<0.001	<0.001	<0.0015	NA	<0.01	<0.02

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NA = Not analyzed
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STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other Standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table
1. NMED Tap Water (Dec 2014)

NOTES
2) Re-sampled on 12/15/2011 due to detection of PCE during the Annual sampling event on 10/26/2011. In the field blank submitted with the 10/26/11 sampling, toluene was detected at 0.0017 ppm.

8.12.1 PW-2, PW-3, PW-4

Total Metals Analytical Result Summary

			Parameters												
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Mercury (mg/L)	Cyanide (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	0.01	**0.05**	**1**	**1**	0.05	**0.2**	**0.05**	**0.002**	**0.2**	**0.03**	**10**
40 CFR 141.62 MCL (June 2015)			**0.01**	2	**0.005**	0.1	1.3	NE	**0.015**	NE	0.05	0.002	0.2	0.03	NE
EPA RSL for Tap Water (June 2015)			0.000052	3.8	0.0092	NE	0.8	14	0.015	0.43	0.1	0.00063	0.000087	0.06	6
Well ID	**DATE SAMPLED**	**METHOD**													
PW-2	9/10/2014	200.7/200.8	0.0033	0.014	<0.002	<0.006	<0.006	0.05	<0.001	<0.002	0.0014	<0.0002	<0.01	0.0024	<0.01
	12/15/2011 [1]	200.7/200.8	0.0055	0.12	<0.002	<0.006	<0.006	0.74	<0.005	0.011	<0.0025	<0.0002	<0.01	<0.0025	<0.01
	10/26/2011 [1]	200.7/200.8	<0.0025	0.016	<0.002	<0.006	<0.006	0.29	<0.005	0.058	<0.0025	<0.0002	<0.01	<0.0025	<0.01
	9/12/2008	6010B	<0.02	0.013	<0.002	<0.006	<0.006	0.07	<0.005	<0.002	<0.05	<0.0002	<0.01	0.0016	<0.05
PW-3	9/10/2014	200.7/200.8	0.0039	0.011	<0.002	<0.006	<0.006	0.3	<0.001	0.0025	0.0019	<0.0002	<0.01	0.0016	0.01
	9/10/2013	200.7/200.8	0.0038	0.011	<0.002	<0.006	<0.006	0.2	<0.001	0.0022	0.0011	<0.0002	<0.01	0.0015	0.014
	8/24/2012	200.7/200.8	0.004	0.011	<0.002	<0.006	<0.006	0.24	<0.005	<0.002	<0.0025	<0.0002	0.0085	<0.0025	0.027
	10/31/2011	200.7/200.8	0.0035	0.01	<0.002	<0.006	<0.006	0.09	<0.005	0.003	0.0012	<0.0002	<0.01	0.0014	0.023
	9/23/2010	6010B	<0.02	<0.02	<0.002	<0.006	0.032	0.47	0.0074	0.0046	<0.05	<0.0002	<0.005	0.001	0.037
	8/21/2008	6010B	<0.02	<0.02	<0.002	<0.006	<0.006	<0.05	<0.005	<0.0002	<0.25	<0.0002	<0.004	<6.3E-04	<0.05
	1/1/2008	6010B	<0.02	0.014	<0.002	<0.006	<0.006	0.2	0.0056	0.015	<0.5	<0.0002	<0.01	<0.1	0.041
	10/27/2006	6010B	<0.02	<0.02	<0.002	<0.006	<0.006	<0.05	<0.005	<0.0002	<0.05	<0.0002	<0.01	<0.1	<0.05
PW-4	9/10/2013	6010B	0.0029	0.014	<0.002	<0.006	<0.006	**1.5**	<0.001	0.014	0.0012	<0.0002	<0.01	0.0017	0.025
	7/28/2010	6010B	<0.02	<0.02	<0.002	<0.006	<0.006	0.23	<0.005	0.0044	<0.05	<0.0002	<0.01	0.0021	<0.02
	9/12/2008	6010B	<0.02	0.013	<0.002	<0.006	<0.006	0.11	<0.005	0.005	<0.05	<0.0002	<0.01	0.0014	<0.02

DEFINITIONS	**STANDARDS**
NE = Not established	WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
NA = Not analyzed	a) Human Health Standards; b) Other Standards for Domestic Water
NL = Not listed on laboratory analysis	40 CFR 141.62 Detection Limits for Inorganic Contaminants
Bold and highlighted values represent values above the applicable standards	EPA Regional Screening Level (RSL) Summary Table

NOTES

1) *PW-2 was re-sampled on 12/15/2011 due to detection of PCE during the Annual sampling event on 10/26/2011.*
In the field blank submitted with the 10/26/11 sampling, toluene was detected at 0.0017 ppm.

8.12.2 PW-2, PW-3, PW-4

Dissolved Metals Analytical Result Summary

			Parameters										
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	0.01	**0.05**	**1**	**1**	0.05	**0.2**	**0.05**	**0.03**	**10**
Well ID	**DATE SAMPLED**	**METHOD**											
PW-2	9/10/2014	200.7/200.8	0.0031	0.012	<0.002	<0.006	<0.006	0.042	<0.001	<0.002	0.0014	0.0024	0.012
	12/15/2011 [1]	200.7/200.8	0.0027	0.014	<0.002	<0.006	<0.006	0.23	<0.005	0.006	<0.001	0.0019	0.053
	10/26/2011	200.7/200.8	<0.001	0.016	<0.002	<0.006	<0.006	<0.02	<0.005	0.06	<0.001	0.0022	0.045
	9/12/2008	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PW-3	9/10/2014	200.7/200.8	0.0039	0.011	<0.002	<0.006	<0.006	0.13	<0.001	<0.002	0.002	0.0016	0.011
	9/10/2013	200.7/200.8	0.0037	0.011	<0.002	<0.006	<0.006	0.28	<0.001	0.0036	0.0014	0.0016	0.029
	8/24/2012	200.7/200.8	0.0034	0.011	<0.002	<0.006	<0.006	0.042	<0.005	<0.002	0.0012	0.0015	0.03
	10/31/2011	200.7/200.8	0.0033	0.011	<0.002	<0.006	<0.006	0.079	<0.005	0.0035	0.0012	0.0014	0.06
	9/23/2010	6010B	<0.02	<0.02	<0.002	<0.006	<0.006	0.098	<0.005	<0.002	<0.05	0.001	<0.05
	8/23/2008	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/1/2008	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/27/2006	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PW-4	9/10/2013	200.7/200.8	0.003	0.014	<0.002	<0.006	<0.006	0.12	<0.001	0.007	0.0012	0.0016	<0.01
	7/28/2010	6010B	<0.02	<0.02	<0.002	<0.006	<0.006	0.09	<0.005	0.0036	<0.05	0.00146	0.086
	9/12/2008	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

DEFINITIONS	**STANDARDS**
NE = Not established	WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
NA = Not analyzed	a) Human Health Standards; b) Other Standards for Domestic Water
NL = Not listed on laboratory analysis	40 CFR 141.62 Detection Limits for Inorganic Contaminants
Bold and highlighted values represent values above the applicable standards	EPA Regional Screening Level (RSL) Summary Table

RL > Standard

NOTES:

1) PW-2 was re-sampled on 12/15/2011 due to detection of PCE during the Annual sampling event on 10/26/2011.
In the field blank submitted with the 10/26/11 sampling, toluene was detected at 0.0017 ppm.

8.12.3 PW-2, PW-3, PW-4

Volatile and Semi Volatile Organic Compound Analytical Result Summary

			Parameters										
			2,4-Dimethylphenol (mg/L)	2-Methylnaphthalene (mg/L)	2-Methylphenol (mg/L)	3+4-Methylphenol (mg/L)	Naphthalene (mg/L)	Phenanthrene (mg/L)	Phenol (mg/L)	Tetrachloroethene (PCE) (mg/L)	1,2,4-Trimethyl benzene (mg/L)	1,3,5-Trimethyl benzene (mg/L)	n-Propyl benzene (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE		NE	**0.005**	NE	NE	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	NE		NE	NE	**0.005**	NE	NE	NE
EPA RSL for Tap Water (June 2015)			**0.354** [1]	**0.036**	**0.93**	**0.0015**	**0.00165** [1]	NE	5.8	0.011	**0.015**	**0.12**	**0.66**
Well ID	**DATE SAMPLED**	**METHOD**											
PW-2	9/10/2014	8270C/8260B	<0.01	<0.004	<0.02	<0.01	<0.002	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001
	12/15/2011 [4]	8270C/8260B	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	<0.001			
	10/26/2011	8270C/8260B	<0.01	<0.004	<0.01	<0.01		<0.01	<0.01	7.3E-03 [3]			
PW-3	9/10/2014	8270C/8260B	<0.01	<0.004	<0.02	<0.01	<0.002	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001
	9/10/2013	8270C/8260B	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	<0.001			
	8/24/2012	8270C/8260B	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	<0.001			
	10/31/2011	8270C/8260B	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01				
	11/1/2010	8270C	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01				
	9/23/2010	8270C	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01				
	8/21/2008	8270C	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01				
	1/1/2008 [2]	8270C	0.016	0.032	0.21	**0.36**		0.017	**0.8**				
PW-4	9/9/2013	8260B									6.8E-03 [5]	2.3E-03 [5]	1.3E-03 [5]

DEFINITIONS

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or less.

a) Human Health Standards; b) Other Standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

1) NMED Tap Water (Dec 2014)

NOTES

2) Due to inclement weather conditions in December 2007, the 2007 annual sampling was completed in January 2008.

3) PW-2: Detected for the first time. In the field blank submitted, toluene was detected at 0.0017 mg/L.

4) PW-2 was re-sampled due to the detection of PCE in the 10/26/2011 sample.

5) PW-4: Detected for the first time.

8.12.4 PW-2, PW-3, PW-4

Volatile Organic Compound Analytical Results Summary

			Parameters									
			1,2,4-Trimethylbenzene (mg/L)	1,3,5-Trimethylbenzene (mg/L)	Naphthalene (mg/L)	1-Methylnaphthalene (mg/L)	2-Methylnaphthalene (mg/L)	Isopropylbenzene (mg/L)	n-Butylbenzene (mg/L)	n-Propylbenzene (mg/L)	2,4-Dimethylphenol (mg/L)	Acetone (mg/L)
WQCC 20NMAC 6.2.3103												
EPA RSL for Tap Water (June 2015)			**0.015**	**0.12**	**0.00165 [1]**	**0.0011**	**0.036**	**0.447 [1]**	**1**	**0.66**	**0.354 [1]**	**14.1 [1]**
Well ID	**DATE SAMPLED**	**METHOD**										
PW-2	9/10/2014	8260B	<0.001	<0.001	<0.002	<0.004	<0.004	<0.001	<0.003	<0.001	<0.01	<0.01
PW-3	9/10/2014	8260B	<0.001	<0.001	<0.002	<0.004	<0.004	<0.001	<0.003	<0.001	<0.01	<0.01

DEFINITIONS

NE = Not establishes

NA = Not analyzed

NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or less.

a) Human Health Standards; b) Other Standards for Domestic Water

EPA Regional Screening Level (RSL) Summary Table (June 2011)

1) NMED Tap Water (Dec 2014)

NOTES

8.13 OW-1, OW-10

BTEX Analytical Result Summary

			Parameters				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	**0.75**	0.75	**0.62**	NE
40 CFR 141.62 MCL (June 2015)			**0.005**	1	**0.7**	10	NE
EPA RSL for Tap Water (June 2015)			0.00045	1.1	0.0015	0.19	**0.143** [1]
Well ID	**DATE SAMPLED**	**METHOD**					
OW-1	11/10/2014	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	9/11/2014	8260B	<0.002	<0.002	<0.002	<0.003	<0.002
	6/3/2014	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	3/7/2014	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	11/11/2013	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	9/4/2013 [2]	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	6/13/2013	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	3/19/2013	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	11/27/2012	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	8/22/2012	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	6/13/2012	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	3/22/2012	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	12/15/2011	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	10/27/2011	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	6/20/2011	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	3/1/2011	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	11/10/2010	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	9/21/2010	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	3/15/2010	8021B	<0.001	<0.001	<0.001	<0.0015	<0.001
OW-10	11/10/2014	8260B	<0.001	<0.001	<0.001	<0.0015	0.098
	9/12/2014	8260B	<0.001	<0.001	<0.001	<0.0015	0.11
	6/3/2014	8260B	<0.001	<0.001	<0.001	<0.0015	0.092
	3/7/2014	8260B	<0.001	<0.001	<0.001	<0.0015	0.079
	11/11/2013	8260B	<0.001	<0.001	<0.001	<0.0015	0.062
	9/4/2013 [2]	8260B	<0.001	<0.001	<0.001	<0.0015	0.065
	6/13/2013	8260B	<0.001	<0.001	<0.001	<0.0015	**0.22**
	3/19/2013	8260B	<0.001	<0.001	<0.001	<0.0015	**0.17**
	11/27/2012	8260B	<0.001	<0.001	<0.001	<0.0015	**0.23**
	8/22/2012	8260B	<0.001	<0.001	<0.001	<0.0015	0.044
	6/13/2012	8260B	<0.001	<0.001	<0.001	<0.0015	**0.13**
	3/22/2012	8260B	<0.001	<0.001	<0.001	<0.0015	0.031
	12/15/2011	8260B	<0.001	<0.001	<0.001	<0.0015	0.058
	10/26/2011	8260B	<0.001	<0.001	<0.001	<0.0015	0.038
	6/20/2011	8260B	<0.001	<0.001	<0.001	<0.0015	0.046
	2/28/2011	8260B	<0.001	<0.001	<0.001	<0.0015	0.036
	11/10/2010	8260B	<0.001	<0.001	<0.001	<0.0015	0.036
	9/21/2010	8260B	<0.001	<0.001	<0.001	<0.0015	0.037
	3/15/2010	8260B	<0.001	<0.001	<0.001	<0.0015	0.033

DEFINITIONS

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other Standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

1. NMED Tap Water (Dec 2014)

NOTES

2) Quarterly combined with 2013 Annual sampling event.

8.13.1 OW-1, OW-10

General Chemistry Analytical Result Summary

			Parameters										
			Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Phosphorus (mg/L)	Sulfate (mg/L)	pH	DRO (mg/L)	GRO (mg/L)	MRO [2] (mg/L)
WQCC 20NMAC 6.2.3103			**1.6**	**250**	NE	NE	**10**	NE	**600**	**6 - 9**	**0.2 [1]**	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	**1**	10	NE	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			0.8	NE	NE	NE	32	**0.0004**	NE	NE	NE	NE	NE
Well ID	**DATE SAMPLED**	**METHOD**											
OW-1	11/10/2014	300.0/8015B	0.3	72	0.27	<0.1	0.3	<0.5	170	NA	<1	<0.05	<5
	9/11/2014	300.0/8015B	<0.5	60	<0.5	<1	<1	<2.5	150	NA	<1	<0.05	<5
	6/3/2014	300.0/8015B	0.26	66	0.27	<1	<1	<0.5	160	NA	<1	<0.05	<5
	3/7/2014	300.0/8015B	0.3	65	0.27	<1	<1	<0.5	170	NA	<1	<0.05	<5
	11/11/2013	300.0/8015B	0.28	65	0.26	**4.7**	**4.7**	<0.5	170	NA	<1.0	<0.05	NA
	9/4/2013 [3]	300.0/8015B	0.3	66	0.22	**29**	**29**	<0.5	180	NA	<1.0	<0.05	<5.0
	6/13/2013	300.0/8015B	<1.0	61	<1.0	<1.0	<1.0	<5.0	180	NA	<1.0	<0.05	<5.0
	3/19/2013	300.0/8015B	<0.5	70	<0.5	<1.0	<1.0	<2.5	200	NA	<1.0	<0.05	<5.0
	11/27/2012	300.0/8015B	<0.5	72	0.75	<1.0	<1.0	<2.5	180	NA	<1.0	<0.05	<5.0
	8/22/2012	300.0/8015B	0.24	62	0.26	<1.0	<1.0	<0.5	170	NA	<1.0	<0.05	<5.0
	6/13/2012	300.0/8015B	0.34	61	0.26	<1.0	<1.0	NL	180	8.76	<1.0	<0.05	<5.0
	3/22/2012	300.0/8015B	0.34	62	0.27	<0.1	0.33	<0.5	170	NA	<1.0	<0.05	<5.0
	12/15/2011	300.0/8015B	0.31	63	0.25	<1.0	<1.0	<0.5	180	NA	<1.0	<0.05	NL
	10/27/2011	300.0/8015B	0.3	65	0.21	<1.0	<1.0	<0.5	180	NA	NL	<0.05	<5.0
	6/20/2011	300.0/8015B	0.33	64	0.3	<0.1	0.5	<0.5	180	8.87	<1.0	<0.05	<1.0
	3/1/2011	300.0/8015B	0.29	68	0.27	**1.1**	1.1	<0.5	180	NA	<1.0	<0.05	
	11/10/2010	300.0/8015B	0.31	64	NL	<1.0	<1.0	<0.5	180	NA	<1.0	<0.05	
	9/10/2010	300.0/8015B	0.32	60	NL	<1.0	<1.0	<0.5	190	NA	<1.0	<0.05	
	3/15/2010	300.0/8015B	0.33	58	0.24	**4.1**	4.1	<0.5	190	NA	<1.0	<0.05	
OW-10	11/10/2014	300.0/8015B	0.2	**1600**	0.69	<2	0.22	<0.5	200	NA	<1	0.087	<5
	9/12/2014	300.0/8015B	0.12	**1500**	1.4	<1	<1	<0.5	200	NA	<1	0.064	<5
	6/3/2014	300.0/8015B	<0.1	**1500**	1.2	<4	<4	<0.5	200	NA	<1	0.069	<5
	3/7/2014	300.0/8015B	0.2	**1200**	0.43	<1	<1	<0.5	190	NA	<1	<0.05	<5
	11/11/2013	300.0/8015B	0.17	**850**	0.73	**1.3**	1.3	<0.5	150	NA	<1.0	0.055	NA
	9/4/2013 [3]	300.0/8015B	0.19	**1200**	0.98	**11**	**11**	<0.5	180	NA	<1.0	0.051	<5.0
	6/13/2013	300.0/8015B	<1.0	**2400**	1.9	<1.0	<1.0	<5.0	250	NA	<1.0	0.15	<5.0
	3/19/2013	300.0/8015B	<0.5	**1700**	<0.5	<1.0	<1.0	<2.5	230	NA	<1.0	0.11	<5.0
	11/27/2012	300.0/8015B	<0.5	**2100**	11	<4.0	<4.0	<2.5	240	NA	<1.0	0.13	<5.0
	8/22/2012	300.0/8015B	0.34	**280**	0.59	<1.0	<1.0	<0.5	130	NA	<1.0	<0.05	<5.0
	6/13/2012	300.0/8015B	0.31	**980**	<2.0	<1.0	<1.0	<10	160	7.65	<1.0	0.14	<5.0
	3/22/2012	300.0/8015B	0.41	**260**	0.64	<0.1	0.59	<0.5	140	NA	<1.0	0.062	<5.0
	12/15/2011	300.0/8015B	0.31	**420**	0.54	<1.0	<1.0	<0.5	150	NA	<1.0	0.084	<5.0
	10/26/2011	300.0/8015B	0.34	**500**	0.82	<2.0	0.38	<0.5	140	NA	NL	<0.05	NL
	6/20/2011	300.0/8015B	<0.50	**300**	0.75	<2.0	0.52	<0.5	140	8.42	<1.0	0.053	<5.0
	2/28/2011	300.0/8015B	0.34	**490**	0.76	**1.1**	1.1	<0.5	140	NA	<1.0	0.062	<5.0
	11/10/2010	300.0/8015B	0.38	**450**	NL	<1.0	<1.0	<0.5	150	NA	<0.001	<0.05	
	9/21/2010	300.0/8015B	0.35	**790**	NL	<1.0	<1.0	<0.5	160	NA	<0.001	<0.05	
	3/15/2010	300.0/8015B	0.4	**390**	0.7	**2.2**	2.2	<0.5	150	NA	<0.001	0.064	

DEFINITIONS

NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other Standards for Domestic Water
1) NMED Table 6 (unknown oil). TPH Screening Guidelines for Potable Ground Water (GW-1). (Jun 2012)
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table

NOTES

2) Per NMED "Approval with Modifications Annual Ground Water Monitoring Report 2010, Rev. 1", dated 12/12/12, Comment 7(a) added MRO to data tables.
3) Quarterly combined with 2013 Annual sampling event.

8.13.2 OW-1, OW-10

Total Metals Analytical Result Summary

			Parameters											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Mercury (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	0.01	**0.05**	**1**	0.05	**0.2**	**0.05**	**0.05**	**0.03**	**0.002**	**10**
40 CFR 141.62 MCL (June 2015)			**0.01**	2	**0.005**	0.1	NE	**0.015**	NE	0.05	NE	0.03	0.002	NE
EPA RSL for Tap Water (June 2015)			0.000052	3.8	0.0092	NE	14	0.015	0.43	0.1	0.094	0.06	0.00063	6
Well ID	**DATE SAMPLED**	**METHOD**												
OW-1	11/10/2014	200.7/200.8	<0.001	0.036	<0.002	<0.006	0.27	<0.001	0.0067	0.0029	<0.005	**0.043**	<0.0002	<0.01
	9/11/2014	200.7/200.8	**0.013**	0.56	<0.002	**0.12**	**41**	**0.078**	**1.7**	<0.01	<0.005	**0.066**	<0.0002	0.19
	6/3/2014	200.7/200.8	<0.005	0.034	<0.002	<0.006	**1.7**	0.003	0.073	<0.005	<0.005	**0.042**	<0.0002	0.031
	3/7/2014	200.7/200.8	<0.001	0.041	<0.002	<0.006	0.28	<0.001	0.02	0.0034	<0.005	**0.042**	<0.0002	0.01
	11/11/2013	200.7/200.8	0.0012	0.048	<0.002	<0.006	**1.2**	0.0019	0.053	0.0036	<0.005	**0.039**	<0.0002	<0.01
	9/4/2013 [1]	200.7/200.8	0.0011	0.037	<0.002	<0.006	0.37	<0.001	0.02	0.0035	<0.005	**0.043**	<0.0002	<0.01
	6/13/2013	200.7/200.8	0.0061	0.26	<0.002	0.028	0.19	NL	**0.82**	0.0042	<0.005	**0.052**	<0.0002	0.07
	3/19/2013	200.7/200.8	<0.0025	0.035	<0.002	<0.006	0.088	<0.005	0.0074	0.0032	<0.005	**0.044**	<0.0002	<0.01
	11/27/2012	200.7/200.8	<0.0025	0.035	<0.002	<0.006	<0.006	<0.005	0.013	0.0026	<0.005	**0.045**	<0.0002	<0.01
	8/22/2012	200.7/200.8	<0.0025	0.039	<0.002	<0006	0.008	<0.005	0.027	0.0041	<0.005	**0.04**	<0.0002	<0.01
	6/13/2012	200.7/200.8	<0.0025	0.035	<0.002	<0.006	<0.006	<0.005	0.012	0.0042	<0.005	**0.039**	<0.0002	<0.01
	3/22/2012	200.7/200.8	<0.0025	0.045	<0.002	<0.006	<0.006	<0.005	0.058	0.0035	<0.005	**0.041**	<0.0002	0.01
	12/15/2011	200.7/200.8	<0.0025	0.066	<0.002	0.0072	**2.7**	<0.005	0.13	0.0037	<0.005	**0.046**	<0.0002	0.25
	10/27/2011	200.7/200.8	<0.0025	0.036	<0.002	<0.006	0.042	<0.005	0.013	0.0035	<0.005	**0.04**	<0.0002	<0.01
	6/20/2011	200.7/200.8	<0.0025	0.039	<0.002	<0.006	0.053	<0.005	0.016	0.0056	<0.005	**0.047**	<0.0002	<0.01
	3/1/2011	200.7/200.8	<0.0025	0.038	<0.002	<0.006	0.058	<0.005	0.013	<0.05	<0.005	**0.053**	NL	<0.01
	11/10/2010	6010B	<0.02	<0.02	<0.002	<0.006	<0.05	<0.005	0.0066	<0.05	<0.005	**0.039**	<0.0002	<0.02
	9/21/2010	6010B	<0.02	0.038	<0.002	<0.006	0.081	<0.005	0.023	<0.05	<0.005	**0.038**	<0.0002	<0.02
	3/15/2010	6010B	<0.02	0.031	<0.002	<0.006	0.16	<0.005	0.012	<0.05	<0.005	**0.0394**	<0.0002	<0.02
OW-10	11/10/2014	200.7/200.8	<0.005	0.082	<0.002	<0.006	<0.02	<0.001	0.18	<0.02	<0.005	**0.066**	<0.0002	<0.01
	9/12/2014	200.7/200.8	<0.01	0.086	<0.002	<0.006	<0.02	<0.001	0.18	0.017	<0.005	**0.065**	<0.0002	<0.01
	6/3/2014	200.7/200.8	<0.005	0.094	<0.002	<0.006	<0.02	<0.001	0.14	0.015	<0.005	**0.064**	<0.0002	<0.01
	3/7/2014	200.7/200.8	<0.005	0.071	<0.002	<0.006	<0.02	<0.001	0.086	0.012	<0.005	**0.06**	<0.0002	<0.01
	11/11/2013	200.7/200.8	0.0018	0.058	<0.002	<0.006	<0.02	<0.001	0.07	0.011	<0.005	**0.057**	<0.0002	<0.01
	9/4/2013 [1]	200.7/200.8	<0.005	0.084	<0.002	<0.006	<0.02	<0.001	0.12	0.011	<0.025	**0.061**	<0.0002	<0.01
	6/13/2013	200.7/200.8	<0.005	0.12	<0.002	<0.006	<0.02	NL	0.14	0.017	0.015	**0.076**	<0.0002	<0.01
	3/19/2013	200.7/200.8	<0.0025	0.11	<0.002	<0.006	<0.02	<0.005	0.16	0.0098	<0.005	**0.077**	<0.0002	<0.01
	11/27/2012	200.7/200.8	<0.0025	0.11	<0.002	<0.006	<0.006	<0.005	0.13	0.013	<0.005	**0.087**	<0.0002	<0.01
	8/22/2012	200.7/200.8	<0.0025	0.037	<0.002	<0.006	<0.006	<0.005	0.0034	0.0084	<0.005	**0.049**	<0.0002	<0.01
	6/13/2012	200.7/200.8	<0.0025	0.079	<0.002	<0.006	<0.006	<0.005	0.054	0.013	<0.005	**0.062**	<0.0002	<0.01
	3/22/2012	200.7/200.8	<0.0025	0.033	<0.002	<0.006	<0.006	<0.005	<0.002	0.0076	<0.005	**0.051**	<0.0002	<0.01
	12/15/2011	200.7/200.8	<0.0025	0.037	<0.002	<0.006	<0.02	<0.005	0.022	0.0089	<0.005	**0.058**	<0.0002	<0.01
	10/26/2011	200.7/200.8	<0.0025	0.045	<0.002	<0.006	<0.02	<0.005	0.043	0.0071	<0.005	**0.051**	<0.0002	<0.01
	6/20/2011	200.7/200.8	<0.0025	0.038	<0.002	<0.006	<0.02	<0.005	0.0086	0.013	<0.005	**0.057**	<0.0002	<0.01
	2/28/2011	200.7/200.8	<0.0025	0.045	<0.002	<0.006	<0.02	<0.005	0.03	<0.05	<0.005	**0.054**	NL	<0.01
	11/10/2010	6010B	<0.02	0.062	<0.002	<0.006	<0.02	<0.005	0.04	<0.05	<0.005	**0.052**	<0.0002	<0.02
	9/21/2010	6010B	<0.02	0.071	<0.002	<0.006	<0.02	<0.005	0.068	<0.05	<0.005	**0.057**	<0.0002	<0.02
	3/15/2010	6010B	<0.02	0.046	<0.002	<0.006	<0.02	<0.005	0.013	<0.05	<0.005	**0.0525**	<0.0002	<0.02

DEFINITIONS

NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table

NOTES

1) Quarterly combined with 2013 Annual sampling event.

8.13.3 OW-1, OW-10

Dissolved Metals Analytical Result Summary

			Parameters														
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1.0**	0.01	NE	**0.05**	**1.0**	**1.0**	0.05	**0.2**	NE	**0.05**	**0.05**	NE	**0.03**	**10.0**
Well ID	**DATE SAMPLED**	**METHOD**															
OW-1	11/10/2014	200.7/200.8	0.0013	0.033	<0.002	2.1	<0.006	<0.006	0.048	<0.02	<0.002	<1	0.0037	<0.005	310	**0.038**	0.031
	9/11/2014	200.7/200.8	0.0025	0.12	<0.002	17	0.0082	<0.006	**7.1**	**0.017**	**0.23**	2	0.0044	<0.005	330	**0.048**	0.078
	6/3/2014	200.7/200.8	0.0016	0.039	<0.002	NL	<0.006	<0.006	0.64	<0.005	0.025	NL	0.0066	<0.005	NL	**0.044**	0.013
	3/7/2014	200.7/200.8	<0.001	0.035	<0.002	2	<0.006	<0.006	<0.02	<0.001	0.0063	<1	0.0039	<0.005	320	**0.043**	0.012
	11/11/2013	200.7/200.8	0.0012	0.038	<0.002	1.9	<0.006	<0.006	<0.02	<0.001	0.0075	1	0.0046	<0.005	270	**0.041**	0.029
	9/4/2013 [1]	200.7/200.8	<0.005	0.033	<0.002	2.1	<0.006	<0.006	0.037	<0.005	0.0062	1.7	<0.005	<0.005	310	**0.045**	<0.01
	6/13/2013	200.7/200.8	0.0014	0.035	<0.002	2.4	<0.006	<0.006	0.35	<0.001	0.013	<1.0	0.0049	<0.005	290	**0.043**	0.25
	3/19/2013	200.7/200.8	0.0013	0.03	<0.002	2	<0.006	<0.006	<0.02	<0.005	<0.002	<1.0	0.0036	<0.005	290	**0.044**	0.037
	11/27/2012	200.7/200.8	0.0012	0.033	<0.01	<5.0	<0.03	<0.03	<0.1	<0.025	<0.01	<5.0	0.004	<0.025	280	**0.043**	<0.05
	8/22/2012	200.7/200.8	<0.001	0.029	<0.002	2.4	<0.006	<0.006	<0.02	<0.005	0.0086	<1.0	0.0036	<0.005	330	**0.041**	0.011
	6/13/2012	200.7/200.8	<0.001	0.036	<0.002	2.1	<0.006	<0.006	<0.02	<0.005	0.0067	1.1	0.0037	<0.005	320	**0.043**	0.015
	3/22/2012	200.7/200.8	<0.001	0.034	<0.002	2.2	<0.006	<0.006	<0.02	<0.005	0.005	<1.0	0.0037	<0.005	330	**0.039**	0.027
	12/15/2011	200.7/200.8	<0.001	0.018	<0.002	<5.0	<0.006	<0.006	0.19	<0.005	0.013	<5.0	0.0031	<0.005	310	**0.043**	0.018
	10/27/2011	200.7/200.8	<0.001	0.035	<0.002	2.3	<0.006	<0.006	<0.02	<0.005	0.0059	<1.0	0.0036	<0.005	330	**0.04**	<0.01
	6/20/2011	200.7/200.8	0.0014	0.034	<0.002	2	<0.006	<0.006	<0.02	<0.005	0.0045	<1.0	0.0062	<0.005	340	**0.043**	0.048
	3/1/2011	200.7/200.8	<0.001	0.037	<0.002	2.1	<0.006	<0.006	<0.02	<0.005	0.0041	1.7	<0.05	<0.005	310	**0.032**	<0.01
	11/10/2010	6010B	<0.02	0.037	<0.002	2.2	<0.006	<0.006	<0.02	<0.005	0.0046	<1.0	<0.05	<0.005	300	**0.04**	<0.05
	9/21/2010	6010B	<0.02	0.029	<0.002	2	<0.006	<0.006	<0.02	<0.005	0.0041	<1.0	<0.05	<0.005	310	**0.038**	<0.05
	3/15/2010	6010B	<0.02	0.028	<0.002	2	<0.006	<0.006	<0.02	<0.005	<0.002	<1.0	<0.05	<0.005	280	**0.0379**	<0.05
OW-10	11/10/2014	200.7/200.8	<0.01	0.039	<0.002	39	<0.006	<0.006	<0.02	<0.01	0.0099	1.1	0.013	<0.005	430	**0.057**	0.038
	9/12/2014	200.7/200.8	<0.005	0.099	<0.002	220	<0.006	<0.006	<0.02	<0.01	0.2	4.1	0.017	<0.005	1100	**0.064**	<0.01
	6/3/2014	200.7/200.8	<0.005	0.094	<0.002	NL	<0.006	<0.006	<0.02	<0.005	0.13	NL	0.017	<0.005	NL	**0.062**	<0.01
	3/7/2014	200.7/200.8	<0.005	0.071	<0.002	180	<0.006	<0.006	<0.02	<0.001	0.098	2.1	0.0095	<0.005	910	**0.057**	<0.01
	11/11/2013	200.7/200.8	0.0021	0.063	<0.002	110	<0.006	<0.006	<0.02	<0.001	0.066	2.8	0.013	<0.005	710	**0.054**	<0.01
	9/4/2013 [1]	200.7/200.8	<0.005	0.082	<0.002	170	<0.006	<0.006	<0.02	<0.005	0.12	3.5	0.011	<0.025	810	**0.066**	<0.01
	6/13/2013	200.7/200.8	0.0025	0.12	<0.002	250	<0.006	<0.006	<0.02	<0.001	0.14	2.6	0.019	0.012	1000	**0.076**	0.018
	3/19/2013	200.7/200.8	<0.005	0.1	<0.002	220	<0.006	<0.006	<0.02	<0.005	0.15	2.3	0.015	<0.005	900	**0.073**	<0.01
	11/27/2012	200.7/200.8	0.0017	0.11	<0.01	310	<0.03	<0.03	<0.1	<0.025	0.13	<5.0	0.015	<0.025	1200	**0.078**	0.05
	8/22/2012	200.7/200.8	0.001	0.034	<0.002	29	<0.006	<0.006	<0.02	<0.005	<0.002	1	0.0076	<0.005	410	**0.05**	<0.01
	6/13/2012	200.7/200.8	<0.002	0.08	<0.002	160	<0.006	<0.006	<0.02	<0.005	0.053	1.9	0.014	<0.005	740	**0.067**	0.026
	3/22/2012	200.7/200.8	<0.001	0.033	<0.002	32	<0.006	<0.006	<0.02	<0.005	0.0023	<1.0	0.0076	<0.005	400	**0.048**	0.024
	12/15/2011	200.7/200.8	<0.001	0.038	<0.002	49	<0.006	<0.006	<0.02	<0.005	0.023	1.1	0.0089	<0.005	430	**0.056**	<0.01
	10/26/2011	200.7/200.8	0.001	0.043	<0.002	64	<0.006	<0.006	<0.02	<0.005	0.04	<1.0	0.0079	<0.005	500	**0.05**	<0.01
	6/20/2011	200.7/200.8	0.002	0.034	<0.002	34	<0.006	<0.006	<0.02	<0.005	0.0055	<1.0	0.015	<0.005	400	**0.052**	0.16
	2/28/2011	200.7/200.8	<0.001	0.044	<0.002	62	<0.006	<0.006	<0.02	<0.005	0.029	3	<0.05	<0.005	490	**0.055**	<0.01
	11/10/2010	6010B	<0.02	0.047	<0.002	62	<0.006	<0.006	<0.02	<0.005	0.03	1.4	<0.05	<0.005	460	**0.052**	<0.05
	9/21/2010	6010B	<0.02	0.064	<0.002	100	<0.006	<0.006	<0.02	<0.005	0.055	1.8	<0.05	<0.005	580	**0.051**	0.088
	3/15/2010	6010B	<0.02	0.044	<0.002	48	<0.006	<0.006	<0.02	<0.005	0.012	<1.0	<0.05	<0.005	420	**0.0497**	<0.05

DEFINITIONS

NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table

NOTES

1) Quarterly combined with 2013 Annual sampling event.

8.13.4 OW-1, OW-10

Volatile Organic Compound Analytical Result Summary

			Parameter		
			1,1-Dichloroethane (mg/L)	1,2-Dichloroethane (EDC) (mg/L)	1,1-Dichloroethene (mg/L)
WQCC 20NMAC 6.2.3103			**0.025**	0.01	**0.005**
40 CFR 141.62 MCL (June 2015)			NE	**0.005**	0.007
EPA RSL for Tap Water (June 2015)			0.0027	0.00017	0.28
Well ID	**DATE SAMPLED**	**METHOD**			
OW-10	11/10/2014	8260B	0.0013	<0.001	0.0017
	9/12/2014	8260B	0.0016	0.0011	0.0018
	6/3/2014	8260B	0.0012	<0.001	0.0012
	3/7/2014	8260B	<0.001	<0.001	<0.001
	11/11/2013	8260B	<0.001	<0.001	<0.001
	9/4/2013 [1]	8260B	<0.001	<0.001	<0.001
	6/13/2013	8260B	0.0016	0.001	0.0019
	3/19/2013	8260B	0.0015	0.0013	0.0019
	11/27/2012	8260B	0.0016	0.0011	0.0021
	8/22/2012	8260B	<0.001		
	6/13/2012	8260B	<0.001		
	3/22/2012	8260B	<0.001		
	12/15/2011	8260B	<0.001		
	10/26/2011	8260B	<0.001		
	6/20/2011	8260B	0.0013		

DEFINITIONS

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

NOTES

1) Quarterly combined with 2013 Annual sampling event.

8.14 OW-11, OW-12

BTEX Analytical Result Summary

			Parameters				
			Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	**0.75**	0.75	**0.62**	NE
40 CFR 141.62 MCL (June 2015)			**0.005**	1.0	**0.7**	10	NE
EPA RSL for Tap Water (June 2015)			0.00045	1.1	0.0015	0.19	**0.143** [1]
Well ID	**DATE SAMPLED**	**METHOD**					
OW-11	9/12/2014	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	9/16/2013	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	8/22/2012	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	10/26/2011	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	7/28/2010	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	7/27/2009	8260B	<0.001	<0.001	<0.001	<0.0015	<0.0025
	8/14/2008	8260B	<0.001	<0.001	<0.001	<0.0015	<0.0025
	12/27/2007	8260B	<0.001	<0.001	<0.001	<0.0015	<0.0025
	10/24/2006	8260B	<0.001	<0.001	<0.001	<0.0015	<0.0025
OW-12	9/12/2014	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	9/10/2013	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	8/22/2012	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	10/26/2011	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	7/22/2010	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	7/29/2009	8260B	<0.001	<0.001	<0.001	<0.002	<0.0025
	8/19/2008	8260B	<0.001	<0.001	<0.001	<0.002	<0.001
	12/27/2007	8260B	<0.001	<0.001	<0.001	<0.002	<0.001
	10/27/2006	8260B	<0.001	<0.001	<0.001	<0.001	<0.0025

DEFINITIONS

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other Standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

1. NMED Tap Water (Dec 2014)

NOTES

8.14.1 OW-11, OW-12

General Chemistry Analytical Result Summary

			Parameters								
			Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Phosphorus (mg/L)	Sulfate (mg/L)	pH	Specific Conductance (µS/cm)
WQCC 20NMAC 6.2.3103			**1.6**	**250**	NE	NE	**10**	NE	**600**	**6 - 9**	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	**1.0**	10	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			0.8	NE	NE	1.6	32	**0.0004**	NE	NE	NE
Well ID	**DATE SAMPLED**	**METHOD**									
OW-11	9/12/2014	300.0	**2.3**	77	<0.1	<1	<1	<0.5	**960**	NA	NA
	9/16/2013	300.0	**2.6**	81	0.2	<0.1	0.34	<0.5	**960**	NA	NA
	8/22/2012	300.0	**1.7**	82	0.21	<1.0	<1.0	<10	**940**	NA	NA
	10/26/2011	300.0	**2.2**	95	0.19	<0.1	0.77	<0.5	**940**	NA	NA
	7/28/2010	300.0	**2.8**	89	0.21	<0.1	0.3	<0.5	**1100**	8.39	2800.0
	7/27/2009	300.0	**2.0**	97	NL	**1.2**	1.2	<0.5	**950**	8.41	2500.0
	8/14/2008	300.0	**2.2**	90	0.29	0.75	0.75	<0.5	**940**	8.39	2600.0
	12/27/2007	300.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/24/2006	300.0	**2.5**	86	NL	<0.1	<0.1	<0.5	**1100**	8.4	3100.0
OW-12	9/12/2014	300.0	0.47	19	0.14	<1	<1	<0.5	150	NA	NA
	8/22/2012 [1]	300.0	0.48	16	0.13	<1.0	<1.0	<0.5	150	NA	NA

DEFINITIONS

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

NOTES

1) General Chemistry analysis requested as part of the annual sampling

8.14.2 OW-11, OW-12

Total Metals Analytical Result Summary

			Parameters											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1.0**	0.01	**0.05**	**1.0**	**1.0**	0.05	**0.2**	**0.05**	**0.002**	**0.03**	**10**
40 CFR 141.62 MCL (June 2015)			**0.01**	2.0	**0.005**	0.1	1.3	NE	**0.015**	NE	0.05	0.002	0.03	NE
EPA RSL for Tap Water (June 2015)			5.20E-05	3.8	9.20E-03	NE	0.8	14	0.015	0.43	NE	6.30E-04	0.06	6
Well ID	**DATE SAMPLED**	**METHOD**												
OW-11	9/12/2014	200.7/200.8	0.0027	0.0083	<0.002	<0.006	<0.006	0.047	<0.001	0.021	0.0023	<0.0002	**0.25**	<0.01
	9/16/2013	200.7/200.8	0.0023	0.0084	<0.002	<0.006	<0.006	0.028	<0.001	0.019	0.0018	<0.0002	**0.25**	<0.01
	8/22/2012	200.7/200.8	<0.0025	0.0086	<0.002	<0.006	<0.006	0.041	<0.005	0.095	0.0032	<0.0002	**0.22**	<0.01
	10/26/2011	200.7/200.8	<0.0025	0.0077	<0.002	<0.006	<0.006	<0.02	<0.005	0.016	0.003	<0.0002	**0.21**	<0.01
	7/28/2010	6010B	<0.02	<0.02	<0.002	<0.006	<0.006	<0.05	<0.005	0.016	<0.05	<0.0002	**0.236**	<0.02
	7/27/2009	6010B	0.00202	<0.01	<0.002	<0.006	<0.006	<0.05	<0.005	0.016	0.00506	<0.0002	**0.216**	<0.02
	8/14/2008	6010B	<0.02	<0.01	<0.002	<0.006	<0.006	<0.05	<0.005	0.015	<0.05	<0.0002	**0.249**	<0.02
	12/27/2007	6010B	<0.02	<0.01	<0.002	<0.006	<0.006	<0.05	<0.005	0.016	<0.05	<0.0002	**0.22**	NL
	10/28/2006	6010B	<0.02	<0.02	<0.002	<0.006	<0.006	<0.05	<0.005	NL	<0.05	<0.0002	NL	NL
OW-12	9/12/2014	200.7/200.8	0.0021	0.024	<0.002	<0.006	<0.006	0.12	<0.001	0.0054	0.0011	<0.0002	0.014	<0.01
	9/10/2013	200.7/200.8	0.0019	0.027	<0.002	<0.006	<0.006	0.17	<0.001	0.009	<0.001	<0.0002	0.013	<0.01
	8/22/2012 [1]	200.7/200.8	<0.0025	0.028	<0.002	<0.006	<0.006	0.29	<0.005	0.013	<0.0025	<0.0002	0.013	<0.01

DEFINITIONS	**STANDARDS**
NE = Not established	WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
NA = Not analyzed	a) Human Health Standards; b) Other standards for Domestic Water
NL = Not listed on laboratory analysis	40 CFR 141.62 Detection Limits for Inorganic Contaminants
Bold and highlighted values represent values above the applicable standards	EPA Regional Screening Level (RSL) Summary Table

NOTES

1) Method 200.7/200.8 analysis requested as part of the annual sampling

8.14.3 OW-11, OW-12

Dissolved Metals Analytical Result Summary

			Parameters												
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Sodium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1.0**	0.01	**0.05**	**1.0**	**1.0**	0.05	**0.2**	NE	**0.05**	NE	**0.03**	**10**
Well ID	**DATE SAMPLED**	**METHOD**													
OW-11	9/12/2014	200.7/200.8	0.0026	0.008	<0.002	<0.006	<0.006	<0.02	<0.01	0.017	3.1	0.002	660	**0.25**	<0.01
	9/16/2013	200.7/200.8	0.0024	0.0084	<0.002	<0.006	<0.006	<0.02	<0.001	0.019	2.2	0.0024	630	**0.23**	0.021
	8/22/2012	200.7/200.8	0.0021	0.0084	<0.002	<0.006	<0.006	<0.02	<0.005	0.012	2	0.0034	640	**0.21**	0.024
	10/26/2011	200.7/200.8	0.002	0.0075	<0.002	<0.006	<0.006	<0.02	<0.005	0.016	1.6	0.0034	640	**0.22**	0.11
	7/28/2010	6010B	<0.02	<0.02	<0.002	<0.006	<0.006	<0.02	<0.005	0.016	1.8	<0.05	630	**0.215**	<0.05
	7/27/2009	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	8/14/2008	6010B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/27/2007	6010B	NA	<0.01	NA	NA	NA	<0.05	NA	0.016	1.6	NA	690	**0.22**	NA
	10/28/2006	6010B	NA	<0.02	NA	NA	NA	<0.05	NA	NA	NA	NA	NA	NA	NA
OW-12	9/12/2014	200.7/200.8	0.002	0.021	<0.002	<0.006	<0.006	0.037	<0.01	<0.002	1.7	0.0011	260	0.012	0.023
	9/10/2013	200.7/200.8	0.002	0.022	<0.002	<0.006	<0.006	0.048	<0.001	0.0021	1.3	<0.001	240	0.013	0.014
	8/22/2012 [1]	200.7/200.8	0.0018	0.021	<0.002	<0.006	<0.006	0.053	<0.005	0.0033	<1.0	<0.001	270	0.012	0.031

NOTES	**STANDARDS**
NE = Not established	WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
NA = Not analyzed	a) Human Health Standards; b) Other standards for Domestic Water
NL = Not listed on laboratory analysis	40 CFR 141.62 Detection Limits for Inorganic Contaminants
Bold and highlighted values represent values above the applicable standards	EPA Regional Screening Level (RSL) Summary Table

Notes:

1) Method 200.7/200.8 analysis requested as part of the annual sampling

8.14.4 OW-11, OW-12

Semi Volatile Organic Compound Analytical Result Summary

			Parameters
			Bis (2-ethylhexyl) phthalate (mg/L)
WQCC 20NMAC 6.2.3103			NE
40 CFR 141.62 MCL (June 2015)			**0.006**
EPA RSL for Tap Water (June 2015)			0.0056
WELL ID	**DATE SAMPLED**	**METHOD**	
OW-11	9/12/2014	8270C	<0.01
	9/16/2013	8270C	**0.011** [1]
OW-12	9/12/2014	8270C	<0.01

DEFINITIONS

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other Standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

NOTES:

1) Detected for the first time during the 2013 Annual sampling event.

8.15 MKTF Wells
BTEX Analytical Results Summary

			Parameters				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	**0.75**	0.75	**0.62**	NE
40 CFR 141.62 MCL (June 2015)			**0.005**	1.0	**0.7**	10	NE
EPA RSL for Tap Water (June 2015)			0.00045	1.1	0.0015	0.19	**0.143** [1]
Well ID	**DATE SAMPLED**	**METHOD**					
MKTF-1	6/6/2014	8260B	**8.7**	**7.1**	**0.92**	**4.3**	**0.42**
MKTF-2	11/14/2014	8260B	**0.2**	0.0022	0.0029	0.0016	0.059
	9/18/2014	8260B	**2.1**	0.044	0.34	<0.0075	0.1
	4/8/2013	8260B	**0.11**	<0.002	0.0035	0.0076	0.036
MKTF-4	11/13/2014	8260B	**0.18**	<0.01	0.28	0.26	**1.4**
	9/15/2014	8260B	**0.15**	<0.005	0.14	0.14	**1.4**
	6/4/2014	8260B	**0.67**	0.019	0.57	**0.68**	**1.8**
	4/11/2014	8260B	**1**	0.025	**0.8**	**1**	**2.4**
MKTF-9	11/14/2014	8260B	**0.81**	0.033	0.15	0.11	**0.77**
	9/18/2014	8260B	**0.75**	0.027	0.096	0.043	**0.76**
	6/5/2014	8260B	**1.3**	0.052	0.2	0.098	**1.2**
	4/14/2014	8260B	**1.1**	0.038	0.14	0.075	**1.2**
MKTF-10	11/14/2014	8260B	**11**	**20**	**1.7**	**7.6**	<0.02
	9/18/2014	8260B	**11**	**15**	**0.93**	**4**	<0.05
	6/6/2014	8260B	**12**	**14**	**0.74**	**3.4**	0.019
	4/11/2014	8260B	**14**	**19**	**1.5**	**6.9**	<0.05
MKTF-11	11/13/2014	8260B	**9.5**	**8.2**	**0.77**	**2.3**	0.08
	9/15/2014	8260B	**9.5**	**7.1**	**0.72**	**2**	0.083
	6/5/2014	8260B	**12**	**7.8**	**0.75**	0.018	0.096
	4/11/2014	8260B	**15**	**7.6**	**0.93**	**2.2**	**0.15**
MKTF-15	9/17/2014	8260B	**11**	**7**	**1.4**	**4.3**	**0.38**
	6/5/2014	8260B	**12**	**8.8**	**1.3**	**3.7**	**0.27**
	4/10/2014	8260B	**16**	**2.4**	**1.2**	**6.1**	**0.27**
MKTF-16	11/18/2014	8260B	**20**	**1.2**	**1.3**	**5.8**	**1.4**
	9/17/2014	8260B	**17**	**1.4**	**1.2**	**5.3**	**2.1**
	6/5/2014	8260B	**18**	**3.7**	**1.7**	**8.1**	**2**
	4/10/2014	8260B	**11**	**7.5**	**1.1**	**3.6**	**0.27**
MKTF-17	11/18/2014	8260B	**0.14**	<0.001	0.078	<0.0015	0.57
	9/18/2014	8260B	**0.55**	<0.01	0.24	<0.015	0.69
	6/6/2014	8260B	**2.6**	<0.01	0.48	0.068	1.1
	4/9/2014	8260B	**3.5**	<0.01	0.58	0.27	**1.3**
MKTF-18	11/18/2014	8260B	**0.096**	0.0076	0.09	0.047	0.1
	9/18/2014	8260B	**0.12**	0.013	0.069	0.042	0.12
	6/6/2014	8260B	**0.29**	0.014	0.036	0.055	0.14
	4/14/2014	8260B	**0.29**	0.015	0.058	0.044	**0.15**
MKTF-19	11/18/2014	8260B	**2.3**	<0.05	**0.74**	0.36	**9.7**
	9/24/2014	8260B	**1.8**	<0.05	**0.73**	**0.76**	**11**
	4/9/2014	8260B	**1.4**	<0.05	0.68	0.61	**9.7**
MKTF-20	11/18/2014	8260B	**4.4**	**1.3**	0.48	**10**	0.083
	4/11/2014	8260B	**25**	**17**	**2.8**	**14**	**0.38**
MKTF-21	4/11/2014	8260B	**7.2**	**13**	**2.1**	**11**	**0.58**
MKTF-22	11/18/2014	8260B	**1.6**	<0.01	0.09	<0.015	**3.9**
	4/10/2014	8260B	**2.3**	0.021	0.28	0.032	**3.7**
MKTF-23	11/17/2014	8260B	**3.6**	**3**	0.47	**4.5**	**0.57**
	9/23/2014	8260B	**2.7**	**1.4**	0.34	**1.6**	**0.48**
MKTF-24	11/14/2014	8260B	**1.6**	0.0095	0.049	0.0029	0.063
	9/24/2014	8260B	**1.6**	0.0087	0.058	<0.003	0.017
	4/8/2014	8260B	**0.45**	0.0067	0.065	0.0023	**0.18**

8.15 MKTF Wells
BTEX Analytical Results Summary

			Parameters				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	**0.75**	0.75	**0.62**	NE
40 CFR 141.62 MCL (June 2015)			**0.005**	1.0	**0.7**	10	NE
EPA RSL for Tap Water (June 2015)			0.00045	1.1	0.0015	0.19	**0.143** [1]
Well ID	**DATE SAMPLED**	**METHOD**					
MKTF-25	11/14/2014	8260B	**0.58**	<0.005	0.023	<0.0075	**0.18**
	9/23/2014	8260B	**0.53**	<0.01	0.012	<0.015	**0.23**
	4/8/2014	8260B	**1**	0.0092	0.13	0.013	**0.27**
MKTF-26	11/14/2014	8260B	**0.97**	0.011	<0.005	<0.0075	0.094
	9/24/2014	8260B	**1.6**	0.019	0.012	0.0016	0.084
	4/8/2014	8260B	**0.017**	<0.001	<0.001	<0.0015	0.049
MKTF-27	11/14/2014	8260B	<0.001	<0.001	<0.001	<0.0015	0.019
	9/24/2014	8260B	<0.001	<0.001	<0.001	<0.0015	0.011
	4/8/2014	8260B	<0.002	<0.002	<0.002	<0.003	0.038
MKTF-28	11/14/2014	8260B	<0.001	<0.001	<0.001	<0.0015	0.013
	9/24/2014	8260B	<0.001	<0.001	<0.001	<0.0015	0.016
	9/24/2014	8260B	<0.001	<0.001	<0.001	<0.0015	0.013
	4/9/2014	8260B	<0.001	<0.001	<0.001	<0.0015	0.012
MKTF-30	11/17/2014	8260B	<0.001	<0.001	<0.001	<0.015	0.037
	9/24/2014	8260B	<0.001	<0.001	<0.001	<0.0015	0.0059
	4/9/2014	8260B	<0.001	<0.001	<0.001	<0.0015	0.021
MKTF-31	11/17/2014	8260B	<0.001	<0.001	<0.001	<0.0015	0.058
	9/23/2014	8260B	<0.001	<0.001	<0.001	<0.0015	0.055
	4/8/2014	8260B	<0.001	<0.001	<0.001	<0.0015	0.055
MKTF-32	11/17/2014	8260B	<0.001	<0.001	<0.001	<0.0015	**0.4**
	9/23/2014	8260B	<0.005	<0.005	<0.005	<0.0075	**0.32**
	4/9/2014	8260B	<0.001	<0.001	<0.001	<0.0015	**0.15**
MKTF-33	11/17/2014	8260B	<0.001	<0.001	<0.001	<0.0015	**0.41**
	9/23/2014	8260B	<0.005	<0.005	<0.005	<0.0075	**0.45**
	4/9/2014	8260B	**0.028**	<0.001	<0.001	<0.0015	**0.36**
MKTF-34	11/17/2014	8260B	<0.001	<0.001	<0001	<0.0015	<0.001
	9/24/2014	8260B	<0.001	<0.001	<0001	<0.0015	<0.001
	4/9/2014	8260B	<0.002	<0.002	<0.002	<0.003	<0.002
MKTF-35	11/21/2014	8260B	**0.039**	<0.001	0.052	0.073	0.066
MKTF-36	11/21/2014	8260B	**8.4**	0.032	**1.5**	0.56	**7.2**
MKTF-37	11/21/2014	8260B	**0.14**	0.2	0.0093	**1.3**	0.027
MKTF-38	11/21/2014	8260B	0.0028	<0.001	0.0029	0.0031	0.0074
MKTF-40	11/21/2014	8260B	<0.001	<0.001	<0.001	<0.001	<0.001
MKTF-44	11/21/2014	8260B	<0.002	<0.002	<0.002	<0.003	<0.002

8.15 MKTF Wells
BTEX Analytical Results Summary

			Parameters				
			Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	**0.75**	0.75	**0.62**	NE
40 CFR 141.62 MCL (June 2015)			**0.005**	1.0	**0.7**	10	NE
EPA RSL for Tap Water (June 2015)			0.00045	1.1	0.0015	0.19	**0.143** [1]
Well ID	**DATE SAMPLED**	**METHOD**					

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other Standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table
1. NMED Tap Water (Dec 2014)

NOTES

ANNUAL

8.15.1 MKTF Wells
General Chemistry Analytical Results Summary

			Parameters									
			DRO (mg/L)	GRO (mg/L)	MRO (mg/L)	Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Phosphorus (mg/L)	Sulfate (mg/L)
WQCC 20NMAC 6.2.3103			0.2[1]	NE	NE	1.6	250	NE	NE	10	NE	600
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	NE	NE	NE	1.0	10	NE	NE
EPA RSL for Tap Water (June 2015)			NE	NE	NE	0.8	NE	NE	NE	32	4.0E-04	NE
Well ID	DATE SAMPLED	METHOD										
MKTF-1	6/6/2014	300.0/8015D	510	50	<50	0.6	400	0.96	<1	<1	<0.5	0.58
MKTF-2	11/14/2014	300.0/8015D	<1	0.61	<5	<1	830	1.2	<1	<1	<5	230
	9/18/2014	8015D	1.7	6.8	<5.0	NA	NA	NA	NA	NA	NA	NA
	6/6/2014	300.0/8015D	<1	1.5	<5	0.76	750	0.5	<1	<1	<0.5	200
	4/8/2014	300.0/8015D	<1.0	0.67	<5.0	0.29	540	0.1	<1.0	<1.0	<0.5	8
MKTF-4	11/13/2014	300.0/8015D	2.0	4.2	<5	1	250	2.1	<1	<1	<5	26
	9/15/2014	8015D	1.5	3.4	<5.0	NA	NA	NA	NA	NA	NA	NA
	6/4/2014	300.0/8015D	2.9	8.2	<5	0.7	190	1.8	<1	<1	<0.5	6.8
	4/11/2014	8015D	4.5	9.4	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTF-9	11/14/2014	300.0/8015D	2.1	4.4	<5	<1	180	1.2	<1	<1	<5	140
	9/18/2014	8015D	1.4	5.6	<5.0	NA	NA	NA	NA	NA	NA	NA
	6/5/2014	300.0/8015D	2.7	6.2	<5	0.43	180	1.1	<1	<1	<0.5	78
	4/14/2014	8015D	3.6	5.7	<5.0	NA	NA	NA	NA	NA	NA	
MKTF-10	11/14/2014	300.0/8015D	74	84	<50	270	260	<1	<2	<2	<5	<5
	9/18/2014	8015D	7.7	88	<5.0	NA	NA	NA	NA	NA	NA	NA
	6/6/2014	300.0/8015D	5.5	64	<5.0	NOT COLLECTED						
	4/11/2014	8015D	5.9	88	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTF-11	11/13/2014	300.0/8015D	1.8	35	<5	6.5	780	<1	<1	<1	<5	<5
	9/15/2014	8015D	1.8	57	<5.0	NA	NA	NA	NA	NA	NA	NA
	6/5/2014	300.0/8015D	2.6	48	<5	7.0	480	0.67	<1	<1	<0.5	11
	4/11/2014	300.0/8015D	2.7	53	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTF-15		300.0/8015D	4.1	71	<5.0	NA	NA	NA	NA	NA	NA	NA
	9/17/2014	8015D	17	88	<5.0	NA	NA	NA	NA	NA	NA	NA
	6/5/2014	300.0/8015D	10	57	<5	<2	5200	<2	<4	<4	<0.5	1.2
	4/10/2014	300.0/8015D	4.1	71	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTF-16	11/18/2014	300.0/8015D	2.7	53	<5	1.5	700	1.8	<0.5	<0.5	<2.5	<2.5
	9/17/2014	8015D	4.6	66	<5.0	NA	NA	NA	NA	NA	NA	NA
	6/5/2014	300.0/8015D	5.7	71	<5	1.1	540	1.7	<1	<1	<2.5	<2.5
	4/10/2014	300.0/8015D	3.5	67	<5.0	NA	NA	NA	NA	NA	NA	
MKTF-17	11/18/2014	300.0/8015D	1.4	1.2	<5.0	0.66	84	0.44	<0.1	<0.1	<0.5	200
	9/18/2014	8015D	1.5	3.3	<5.0	NA	NA	NA	NA	NA	NA	
	6/6/2014: 6/16/14[1]	300.0/8015D	4.2	8.3	<5.0	0.61	98	0.26	<0.1	<0.1	<0.5	60
	4/9/2014	300.0/8015D	2.6	8.6	<5.0	NA	NA	NA	NA	NA	NA	NA

8.15.1 MKTF Wells
General Chemistry Analytical Results Summary

			Parameters									
			DRO (mg/L)	GRO (mg/L)	MRO (mg/L)	Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Phosphorus (mg/L)	Sulfate (mg/L)
WQCC 20NMAC 6.2.3103			**0.2[1]**	NE	NE	**1.6**	**250**	NE	NE	**10**	NE	**600**
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	NE	NE	NE	**1.0**	10	NE	NE
EPA RSL for Tap Water (June 2015)			NE	NE	NE	0.8	NE	NE	NE	32	**4.0E-04**	NE
Well ID	**DATE SAMPLED**	**METHOD**										
MKTF-18	11/18/2014	300.0/8015D	**2.3**	1.4	<5.0	0.68	160	0.81	<0.5	<0.5	<2.5	<2.5
	9/18/2014	8015D	**3.1**	1.4	<5.0	NA	NA	NA	NA	NA	NA	NA
	6/6/2014	300.0/8015D	**7.8**	NA	<5	0.65	170	0.81	<1	<1	<0.5	0.95
	4/14/2014	300.0/8015D	**4.4**	2.2	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTF-19	11/18/2014	300.0/8015D	**13**	20	<5.0	<0.5	110	1.2	<0.5	<0.5	<2.5	<2.5
	9/24/2014	8015D	**61**	16	<5.0	NA	NA	NA	NA	NA	NA	NA
	4/9/2014	8015D	**17**	18	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTF-20	11/18/2014	8015D	**24**	45	<5.0	0.87	82	<0.5	<0.5	<0.5	<2.5	16
	4/11/2014	8015D	**16**	120	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTF-21	4/11/2014	8015D	**27**	78	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTF-22	11/17/2014	8015D	**1.6**	6.8	<5	0.38	96	<0.1	**7.1**	7.1	<0.5	19
	4/10/2014	8015D	**2.6**	10	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTF-23	11/17/2014	8015D	**7.7**	26	<5	0.43	**390**	<0.1	<1	<1	<0.5	5.9
	9/23/2014	8015D	**14**	23	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTF-24	11/14/2014	8015D	<1	5.7	<5	<1	**630**	1.4	<1	<1	<5	72
	9/24/2014	8015D	<1.0	6.3	<5.0	NA	NA	NA	NA	NA	NA	NA
	4/8/2014	8015D	<1.0	4.2	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTF-25	11/14/2014	300.0/8015D	<1	4.8	<5	<1	**880**	1.4	<1	<1	<5	35
	4/8/2014	8015D	1.2	6.9	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTF-26	11/14/2014	8015D	<1	2.0	<5	<1	**1500**	1.2	<2	<2	<5	160
	9/24/2014	8015D	<1.0	2.8	<5.0	NA	NA	NA	NA	NA	NA	NA
	4/8/2014	8015D	<1.0	0.2	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTF-27	11/14/2014	8015D	<1	<0.05	<5	<1	**2500**	1.8	<2	<2	<5	470
	9/24/2014	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA
	4/8/2014	8015D	<1.0	<0.01	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTF-28	11/14/2014	300.0/8015D	<1	<0.05	<5	<1	**540**	2.7	<1	<1	<5	260
	9/24/2014	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTF-29	9/24/2014	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA
	4/9/2014	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTF-30	11/17/2014	300.0/8015D	<1	0.054	<5	0.56	**1400**	1.3	<1	<1	<0.5	**730**
	9/24/2014	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA
	4/9/2014	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTF-31	11/17/2014	300.0/8015D	<1	0.068	<5	<0.1	**920**	<0.1	<1	<1	<0.5	82
	9/23/2014	8015D	<1.0	0.061	<5.0	NA	NA	NA	NA	NA	NA	NA
	4/8/2014	8015D	<1.0	0.11	<5.0	NA	NA	NA	NA	NA	NA	NA

8.15.1 MKTF Wells

General Chemistry Analytical Results Summary

			Parameters									
			DRO (mg/L)	GRO (mg/L)	MRO (mg/L)	Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Phosphorus (mg/L)	Sulfate (mg/L)
WQCC 20NMAC 6.2.3103			**0.2[1]**	NE	NE	**1.6**	**250**	NE	NE	**10**	NE	**600**
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	NE	NE	NE	**1.0**	10	NE	NE
EPA RSL for Tap Water (June 2015)			NE	NE	NE	0.8	NE	NE	NE	32	**4.0E-04**	NE
Well ID	**DATE SAMPLED**	**METHOD**										
MKTF-32	11/17/2014	300.0/8015D	<1	0.28	<5	0.27	**610**	1.3	<1	<1	<0.5	100
	9/23/2014	8015D	<1.0	0.23	<5.0	NA	NA	NA	NA	NA	NA	NA
	4/9/9/14	8015D	<1.0	0.22	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTF-33	11/17/2014	300.0/8015D	<1	0.36	<5	0.31	98	0.61	<1	<1	<0.5	360
	9/23/2014	8015D	<1.0	0.25	<5.0	NA	NA	NA	NA	NA	NA	NA
	4/9/2014	8015D	<1.0	0.21	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTF-34	11/17/2014	300.0/8015D	<1	<0.05	<5	0.54	**400**	2.2	6.6	6.6	<0.5	73
	9/24/2014	8015D	<1.0	0.25	<5.0	NA	NA	NA	NA	NA	NA	NA
	4/9/2014	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTF-35	11/21/2014	8015D	**3.3**	1.6	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTF-36	11/21/2014	8015D	**6.8**	25	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTF-37	11/21/2014	8015D	<1.0	8.7	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTF-38	11/21/2014	8015D	**3.8**	0.12	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTF-40	11/21/2014	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA
MKTF-44	11/21/2014	8015D	<1.0	<0.05	<5.0	NA	NA	NA	NA	NA	NA	NA

DEFINITIONS

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other standards for Domestic Water

1) NMED Table 6-2 (Unknown Oil). TPH Screening Guidelines for Potable Ground Water (GW-1). (JUN 2012)

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

1) SAMPLES FOR CATIONS/ANIONS/TOTAL METALS/8270 - Missed

8.15.2 MKTF Wells

Total Metals Analytical Result Summary

			Parameters												
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	0.01	**0.05**	**1**	**1**	0.05	**0.2**	**0.05**	**0.05**	**0.002**	**0.03**	**10**
40 CFR 141.62 MCL (June 2015)			**0.01**	2	**0.005**	NE	NE	NE	**0.015[1]**	NE	0.05	NE	0.002	0.03	NE
EPA RSL for Tap Water (June 2015)			0.000052	3.8	0.0092	NE	0.8	14	0.015	0.43	0.1	0.094	0.00063	0.06	6
Well ID	**DATE SAMPLED**	**METHOD**													
MKTF-1	6/6/2014	200.7/200.8	0.007	**4.7**	<0.002	0.035	0.038	**35**	**0.074**	**4.1**	0.0091	<0.005	<0.0002	<0.005	0.078
MKTF-2	11/14/2014	200.7/200.8	0.0059	0.22	<0.002	<0.006	0.012	**7**	0.0079	**0.68**	<0.01	<0.005	<0.0002	**0.073**	0.03
	9/18/2014	200.7/200.8	0.0017	0.15	<0.002	<0.006	<0.006	0.15	<0.001	**0.57**	0.0031	<0.005	<0.0002	0.013	<0.01
	6/6/2014	200.7/200.8	<0.005	0.2	<0.002	<0.006	<0.006	**4.2**	<0.005	**0.7**	0.0069	<0.005	<0.0002	**0.056**	0.017
MKTF-4	11/13/2014	200.7/200.8	0.0079	**1.9**	<0.002	0.0086	0.015	**15**	**0.023**	**2.5**	<0.05	<0.005	<0.0002	0.013	0.03
	9/15/2014	200.7/200.8	0.006	**2**	<0.002	0.015	0.021	**20**	**0.036**	**2.9**	0.0078	<0.005	<0.0002	0.02	0.044
	6/4/2014	200.7/200.8	0.0061	**1.4**	<0.002	0.0085	0.013	**7.9**	0.013	**2.1**	0.013	<0.005	<0.0002	0.009	0.02
MKTF-9	11/14/2014	200.7/200.8	<0.005	0.39	<0.002	<0.006	<0.006	**4.5**	0.0053	**2.7**	<0.01	<0.005	<0.0002	0.01	0.013
	9/18/2014	200.7/200.8	<0.005	0.33	<0.002	<0.006	<0.006	**2.4**	<0.001	**2.8**	<0.005	<0.005	<0.0002	0.012	<0.01
	6/5/2014	200.7/200.8	<0.005	0.58	<0.002	<0.006	<0.006	**6.7**	0.0058	**3.8**	0.0073	<0.005	<0.0002	0.006	0.015
MKTF-10	11/14/2014	200.7/200.8	<0.04	**45**	<0.004	0.099	0.24	**250**	**0.58**	**49**	<0.04	<0.01	<0.0004	**0.052**	0.31
	9/18/2014	200.7/200.8	<0.005	**12**	<0.002	<0.006	<0.006	**46**	0.0015	**15**	0.0032	<0.005	<0.0002	0.0013	<0.01
	6/6/2014	200.7/200.8	<0.005	**7.7**	<0.002	<0.006	<0.006	**25**	<0.005	**9.5**	0.0061	<0.005	<0.0002	<0.005	<0.01
MKTF-11	11/13/2014	200.7/200.8	0.0087	**1.7**	<0.002	<0.006	<0.006	**5.8**	<0.005	**3.4**	<0.005	<0.005	<0.0002	<0.005	0.012
	9/15/2014	200.7/200.8	0.0072	**1.4**	<0.002	<0.006	<0.006	**8.1**	0.0062	**3.1**	0.0029	<0.005	<0.0002	0.0058	0.021
	6/5/2014	200.7/200.8	0.0063	**1.2**	<0.002	0.0061	<0.006	**8.8**	0.0096	**2.8**	0.0055	<0.005	<0.0002	<0.005	0.038
MKTF-15	9/17/2015	200.7/200.8	<0.005	**29**	<0.002	<0.006	<0.006	**18**	<0.01	**9.8**	<0.005	<0.005	<0.0002	<0.01	0.023
	6/5/2014	200.7/200.8	<0.01	**25**	<0.002	0.0074	<0.006	**11**	0.011	**7.9**	<0.01	<0.005	<0.0002	<0.005	0.017
MKTF-16	11/18/2014	200.7/200.8	0.01	**1.1**	<0.002	<0.006	<0.006	**10**	0.0042	**1.3**	<0.05	<0.005	<0.0002	0.0016	0.05
	9/17/2014	200.7/200.8	**0.012**	0.8	<0.002	<0.006	<0.006	**8.6**	0.0031	**1.2**	<0.01	<0.005	<0.0002	<0.001	0.034
	6/5/2014	200.7/200.8	**0.023**	0.9	<0.002	<0.006	0.008	**7.9**	<0.005	**1.2**	0.013	<0.005	<0.0002	0.015	0.089
MKTF-17	11/18/2014	200.7/200.8	0.0051	0.21	<0.002	<0.006	<0.006	**2**	0.0031	**3**	<0.01	<0.005	<0.002	0.025	0.019
	9/18/2014	200.7/200.8	0.0055	0.21	<0.002	<0.006	<0.006	**1.8**	0.0016	**3.3**	0.0019	<0.005	<0.0002	0.022	0.013
	6/16/2014	200.7/200.8	0.0063	0.61	<0.002	0.013	0.012	**10**	**0.022**	**4.1**	0.0045	<0.005	<0.0002	0.027	0.036
MKTF-18	11/18/2014	200.7/200.8	0.0019	**2.5**	<0.002	<0.006	<0.006	**4**	0.0016	**1.8**	<0.01	<0.005	<0.0002	<0.001	0.02
	9/18/2014	200.7/200.8	0.0015	**2.6**	<0.002	<0.006	<0.006	**3.2**	0.0028	**2**	0.0025	<0.005	<0.0002	0.0015	0.018
	6/6/2014	200.7/200.8	**0.013**	**19**	<0.01	**0.11**	0.12	**81**	**0.29**	**17**	0.013	<0.025	<0.0002	0.022	0.31
MKTF-19	11/18/2014	200.7/200.8	**0.022**	**3.6**	<0.002	0.035	0.043	**47**	**0.079**	**5.6**	<0.01	<0.005	<0.0002	0.014	0.11
MKTF-20	11/18/2014	200.7/200.8	**0.017**	**4.5**	<0.002	0.022	0.12	**45**	**0.048**	**4.9**	<0.005	<0.005	<0.0002	0.0066	0.19
MKTF-22	11/17/2014	200.7/200.8	0.0028	**1.1**	<0.002	<0.006	<0.006	**15**	0.014	**3**	0.004	<0.005	<0.0002	0.0041	0.025
MKTF-23	11/17/2014	200.7/200.8	**0.011**	0.49	<0.002	<0.006	<0.006	**6.2**	0.005	**1.6**	0.0067	<0.005	<0.0002	0.016	0.035
MKTF-24	11/14/2014	200.7/200.8	<0.005	0.48	<0.002	0.0098	0.015	**6.9**	0.012	**1.9**	<0.01	<0.005	<0.0002	**0.038**	0.026
MKTF-25	11/14/2014	200.7/200.8	<0.005	0.37	<0.002	<0.006	0.011	**2.7**	0.0074	**3.6**	<0.01	<0.005	<0.0002	0.03	0.013
MKTF-26	11/14/2014	200.7/200.8	<0.005	0.15	<0.002	<0.006	<0.006	**1.3**	<0.005	**1.4**	<0.01	<0.005	<0.002	**0.077**	0.014
MKTF-27	11/14/2014	200.7/200.8	<0.005	0.13	<0.002	<0.006	<0.006	**3.4**	<0.005	**0.5**	<0.01	<0.005	<0.0002	**0.087**	0.024
MKTF-28	11/14/2014	200.7/200.8	0.0054	0.12	<0.002	<0.006	<0.006	**2**	<0.005	**0.38**	<0.05	<0.005	<0.0002	**0.11**	0.015
MKTF-30	11/17/2014	200.7/200.8	<0.005	0.26	<0.002	0.007	<0.006	**8**	0.009	**0.72**	0.01	<0.005	<0.0002	**0.039**	0.029

8.15.2 MKTF Wells

Total Metals Analytical Result Summary

			Parameters												
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	0.01	**0.05**	**1**	**1**	0.05	**0.2**	**0.05**	**0.05**	**0.002**	**0.03**	**10**
40 CFR 141.62 MCL (June 2015)			**0.01**	2	**0.005**	NE	NE	NE	**0.015[1]**	NE	0.05	NE	0.002	0.03	NE
EPA RSL for Tap Water (June 2015)			0.000052	3.8	0.0092	NE	0.8	14	0.015	0.43	0.1	0.094	0.00063	0.06	6
Well ID	**DATE SAMPLED**	**METHOD**													
MKTF-31	11/17/2014	200.7/200.8	<0.005	0.22	<0.002	0.007	<0.006	**2.9**	0.0041	**0.24**	0.008	<0.005	<0.0002	**0.05**	0.017
MKTF-32	11/17/2014	200.7/200.8	<0.005	0.091	<0.002	0.007	<0.006	**2**	0.0027	**0.23**	<0.01	<0.005	<0.0002	**0.067**	0.014
MKTF-33	11/17/2014	200.7/200.8	0.0016	0.18	<0.002	<0.006	<0.006	**3.3**	0.005	**0.92**	0.0031	<0.005	<0.0002	**0.067**	0.043
MKTF-34	11/17/2014	200.7/200.8	<0.01	0.17	<0.002	<0.006	<0.006	**2.4**	0.0014	0.075	<0.02	<0.005	<0.0002	0.026	0.037
SB-27	4/3/2014	200.7/200.8	<0.005	**2.1**	<0.002	<0.006	0.011	**9.2**	**0.016**	**2.8**	<0.005	<0.005	<0.0002	0.0061	0.024

DEFINITIONS

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

1) National Primary Drinking Water Regulation (May 2009); Action Level

EPA Regional Screening Level (RSL) Summary Table

NOTES

8.15.3 MKTF Wells

Dissolved Metals Analytical Result Summary

			Parameters													
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Silver (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	0.01	**0.05**	**1**	**1**	0.05	NE	**0.2**	**0.05**	**0.05**	**0.05**	**0.03**	**10**
Well ID	**DATE SAMPLED**	**METHOD**														
MKTF-1	6/6/2014	200.7/200.8	<0.005	**1.4**	<0.002	<0.006	<0.006	**4.7**	<0.005	NA	**1.7**	<0.005	0.013	NA	<0.01	0.028
MKTF-2	11/14/2014	200.7/200.8	<0.01	0.13	<0.002	<0.006	<0.006	**2.2**	<0.01	NA	**0.51**	<0.005	<0.01	NA	**0.059**	0.027
	9/18/2014	200.7/200.8	<0.005	0.15	<0.002	<0.006	<0.006	0.029	<0.001	NA	**0.59**	<0.005	<0.005	NA	0.0012	0.041
	6/6/2014	200.7/200.8	<0.005	0.13	<0.002	<0.006	<0.006	0.34	<0.005	NA	**0.56**	<0.005	0.012	NA	**0.056**	0.01
MKTF-4	11/13/2014	200.7/200.8	0.006	**1.3**	<0.002	<0.006	<0.006	**4.7**	<0.005	NA	**1.8**	<.005	<0.005	NA	0.013	0.01
	9/15/2014	200.7/200.8	<0.01	0.78	<0.002	<0.006	<0.006	**3.6**	0.0013	NA	**1.7**	<0.005	<0.1	NA	0.018	<0.1
	6/4/2014	200.7/200.8	0.0078	**1.9**	<0.002	<0.006	<0.006	**2.5**	<0.005	NA	**1.4**	<0.005	0.022	NA	<0.01	<0.01
MKTF-9	11/14/2014	200.7/200.8	<0.01	0.34	<0.002	<0.006	<0.006	**2.4**	<0.01	NA	**2.8**	<0.005	<0.01	NA	<0.01	0.017
	9/18/2014	200.7/200.8	<0.01	0.32	<0.002	<0.006	<0.006	**2.2**	<0.001	NA	**2.6**	<0.005	<0.01	NA	0.012	<0.01
	6/5/2014	200.7/200.8	<0.005	0.44	<0.002	<0.006	<0.006	**3.4**	<0.005	NA	**3.6**	<0.005	0.014	NA	<0.01	<0.01
MKTF-10	11/14/2014	200.7/200.8	<0.01	**17**	<0.002	<0.006	<0.006	**67**	<0.01	NA	**24**	<0.005	<0.01	NA	<0.01	0.018
	9/18/2014	200.7/200.8	<0.005	**11**	<0.002	<0.006	<0.006	**33**	<0.001	NA	**14**	<0.005	<0.005	NA	<0.001	<0.01
	6/6/2014	200.7/200.8	<0.005	**8.1**	<0.002	<0.006	<0.006	**18**	<0.005	NA	**9.2**	<0.005	0.011	NA	<0.01	<0.01
MKTF-11	11/13/2014	200.7/200.8	<0.01	**1.5**	<0.002	<0.006	<0.006	**3.4**	<0.001	NA	**3.2**	<0.005	0.0051	NA	0.0033	0.019
	9/15/2014	200.7/200.8	0.0086	**1.1**	<0.002	<0.006	<0.006	**2.7**	<0.001	NA	**2.4**	<0.005	<0.005	NA	0.004	<0.01
	6/6/2014	200.7/200.8	0.0064	**1.8**	<0.002	0.006	<0.006	**11**	**0.022**	NA	**3.6**	<0.005	0.01	NA	<0.01	0.036
MKTF-15	9/17/2014	200.7/200.8	<0.01	**27**	<0.002	<0.006	<0.006	**13**	<0.01	NA	**9**	<0.005	<0.01	NA	<0.01	<0.01
	6/5/2014	200.7/200.8	<0.005	**25**	<0.002	<0.006	<0.006	**11**	<0.005	NA	**7.5**	<0.005	<0.01	NA	<0.01	0.011
MKTF-16	11/18/2014	200.7/200.8	**0.011**	0.88	<0.002	<0.006	<0.006	**7.2**	<0.001	NA	**1.1**	<0.005	<0.01	NA	<0.001	0.019
	9/17/2014	200.7/200.8	**0.011**	0.81	<0.002	<0.006	<0.006	**7.3**	<0.001	NA	**1.1**	<0.005	<0.01	NA	<0.001	0.017
	6/5/2014	200.7/200.8	**0.013**	0.81	<0.002	<0.006	<0.006	**7.9**	<0.005	NA	**1.3**	<0.005	0.017	NA	<0.01	0.022
MKTF-17	11/18/2014	200.7/200.8	0.0047	0.14	<0.002	<0.006	<0.006	0.08	<0.001	NA	**2.8**	<0.005	<0.01	NA	0.022	0.027
	9/18/2014	200.7/200.8	0.0053	0.16	<0.002	<0.006	<0.006	0.27	<0.001	NA	**3.1**	<0.005	<0.005	NA	0.022	0.018
	6/16/2014	200.7/200.8	0.0054	0.24	<0.002	<0.006	<0.006	0.94	<0.005	NA	**3.3**	<0.005	<0.005	NA	0.022	0.14
MKTF-18	11/18/2014	200.7/200.8	0.002	**2.4**	<0.002	<0.006	<0.006	**3.4**	<0.001	NA	**1.7**	<0.005	<0.01	NA	<0.001	0.025
	9/18/2014	200.7/200.8	<0.005	**2.3**	<0.002	<0.006	<0.006	0.3	<0.001	NA	**1.7**	<0.005	<0.005	NA	0.0012	0.012
	6/6/2014	200.7/200.8	<0.005	**2.4**	<0.002	<0.006	<0.006	**4.5**	<0.005	NA	**2**	<0.005	0.0086	NA	<0.01	<0.01
MKTF-19	11/18/2014	200.7/200.8	**0.022**	**1.6**	<0.002	<0.006	<0.006	**11**	0.0019	NA	**3**	<0.005	<0.01	NA	<0.001	0.018
MKTF-20	11/18/2014	200.7/200.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MKTF-22	11/17/2014	200.7/200.8	<0.005	0.78	<0.002	<0.006	<0.006	**6.8**	<0.001	NA	**2.2**	<0.005	<0.005	NA	0.0053	0.024
MKTF-23	11/17/2014	200.7/200.8	0.01	0.57	<0.002	<0.006	<0.006	**3.1**	<0.001	NA	**1.7**	<0.005	<0.01	NA	0.013	0.018
MKTF-24	11/14/2014	200.7/200.8	<0.005	0.29	<0.002	<0.006	<0.006	**4.4**	<0.005	NA	**1.6**	<0.005	<0.005	NA	**0.038**	0.018

8.15.3 MKTF Wells

Dissolved Metals Analytical Result Summary

			Parameters													
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Silver (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	0.01	**0.05**	**1**	**1**	0.05	NE	**0.2**	**0.05**	**0.05**	**0.05**	**0.03**	**10**
Well ID	**DATE SAMPLED**	**METHOD**														
MKTF-25	11/14/2014	200.7/200.8	<0.005	0.28	<0.002	<0.006	<0.006	0.21	<0.005	NA	**3.1**	<0.005	<0.005	NA	0.03	0.1
MKTF-26	11/14/2014	200.7/200.8	<0.01	0.13	<0.002	<0.006	<0.006	0.18	<0.01	NA	**1.4**	<0.005	<0.01	NA	**0.066**	0.014
MKTF-27	11/14/2014	200.7/200.8	<0.01	0.094	<0.002	<0.006	<0.006	0.55	<0.01	NA	**0.28**	<0.005	<0.01	NA	**0.075**	0.03
MKTF-28	11/14/2014	200.7/200.8	<0.005	0.099	<0.002	<0.006	<0.006	0.63	<0.005	NA	**0.32**	<0.005	<0.02	NA	**0.12**	0.038
MKTF-30	11/17/2014	200.7/200.8	<0.01	0.036	<0.002	<0.006	<0.006	0.26	<0.001	NA	0.021	<0.005	<0.01	NA	**0.041**	0.039
MKTF-31	11/17/2014	200.7/200.8	<0.005	0.17	<0.002	<0.006	<0.006	<0.02	<0.001	NA	0.059	<0.005	0.0075	NA	**0.045**	0.027
MKTF-32	11/17/2014	200.7/200.8	<0.005	0.064	<0.002	<0.006	<0.006	0.21	<0.001	NA	0.094	<0.005	<0.01	NA	**0.059**	0.01
MKTF-33	11/17/2014	200.7/200.8	<0.005	0.064	<0.002	<0.006	<0.006	0.061	<0.001	NA	**0.24**	<0.005	<0.005	NA	**0.045**	0.016
MKTF-34	11/17/2014	200.7/200.8	<0.01	0.15	<0.002	<0.006	<0.006	<0.02	<0.001	NA	0.0041	<0.005	<0.02	NA	0.027	0.051

DEFINITIONS

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

1) National Primary Drinking Water Regulation (May 2009), Action Level

EPA Regional Screening Level (RSL) Summary Table

NOTES

8.15.4 MKTF Wells

Volatile Organic Compounds Analytical Results Summary

			Parameters																				
			1,2,4-Trimethyl benzene (mg/L)	1,3,5-Trimethyl benzene (mg/L)	1,2-Dichloro ethane (EDC) (mg/L)	Naphthalene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	Acetone (mg/L)	(Methyl ethyl ketone) 2-Butanone (mg/L)	cis-1,2-DCE (mg/L)	1,1-Dichloro ethane (mg/L)	1,1-Dichloro ethene (mg/L)	Isopropyl benzene (mg/L)	4-Isopropyl toluene (mg/L)	n-Butyl benzene (mg/L)	n-Propyl benzene (mg/L)	sec-Butyl benzene (mg/L)	Tetrachloro ethene (PCE) (mg/L)	1,1,1-Trichloro ethane (mg/L)	1,1,2-Trichloro ethane (mg/L)	Trichloro ethene (TCE) (mg/L)	Vinyl Chloride (mg/L)
WQCC 20NMAC 6.2.3103			NE	0.025	0.01	NE	NE	NE	NE	NE	NE	**0.025**	**0.005**	NE	NE	NE	NE	NE		**0.06**			
40 CFR 141.62 MCL (June 2015)			NE	0.0024	0.005	NE	NE	NE	NE	NE	**0.07**	NE	0.007	NE	NE	NE	NE	NE	**0.005**	0.2	**0.005**	**0.005**	**0.002**
EPA RSL for Tap Water (June 2015)			**0.015**	**0.12**	**0.0017**	**0.00017**	**0.0011**	**0.036**	**14.1** [1]	**5.56** [1]	0.036	0.0027	0.28	**0.447** [1]	NE	**1**	**0.66**	**2**	0.011	8	0.00028	0.00049	0.000019
Well ID	**DATE SAMPLED**	**METHOD**																					
MKTF-1	6/6/2014	8260B	**1.1**	**0.27**	<0.05	**0.3**	<0.2	<0.2	<0.5	<0.5	<0.05	**0.094**	<0.05	<0.05		<0.15	0.14	<0.05	<0.05	<0.05	<0.05	<0.05	
MKTF-2	11/14/2014	8260B	0.0021	<0.001	**0.016**	<0.002	<0.004	<0.004	<0.01	<0.01	0.011	**0.075**	0.078	0.0016	<0.001	<0.003	0.0012	<0.001	<0.001	0.0036	0.0024	**0.0071**	**0.0097**
	9/18/2014	8260B	**0.14**	<0.005	**0.0051**	**0.017**	**0.037**	<0.02	<0.05	<0.05	0.03	**0.098**	0.024	0.03	<0.005	<0.015	0.13	0.0068	<0.005	<0.005	<0.005	<0.005	<0.005
	6/6/2014	8260B	**0.031**	0.0019	**0.0081**	**0.0049**	<0.004	<0.004	0.012	<0.01	0.011	**0.07**	0.041	0.0031	NL	<0.003	0.009	<0.001	<0.001	0.0035	0.0012	0.0041	0.001
	4/8/2014	8260B	0.0035	<0.002	**0.0068**	<0.004	<0.008	<0.008	<0.02	<0.02	0.0052	**0.041**	**0.034**	<0.002	NL	<0.006	<00.02	<0.002		0.0022	<0.002	0.0034	NL
MKTF-4	11/13/2014	8260B	**0.2**	0.019	<0.01	**0.13**	**0.095**	**0.08**	<0.1	<0.1	0.014	**0.037**	0.059	0.016	<0.1	<0.03	0.029	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	9/15/2014	8260B	**0.096**	0.012	<0.005	**0.092**	**0.041**	0.033	<0.05	<0.05	0.014	**0.037**	0.074	0.011	<0.005	<0.015	0.019	<0.005	<0.005	<0.005	<0.005	0.0051	<0.005
	6/4/2014	8260B	**0.27**	0.049	<0.01	**0.31**	**0.13**	**0.17**	<0.1	<0.1	<0.01	0.011	0.021	0.02	NL	<0.03	0.046	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	4/11/2014	8260B	**0.51**	0.094	<0.02	**0.43**	**0.18**	**0.28**	<0.2	<0.2	<0.02	**0.028**	<0.02	0.028	NL	<0.06	0.077	<0.02	NL	<0.02	<0.02	<0.02	NL
MKTF-9	11/14/2014	8260B	**0.087**	<0.01	<0.01	**0.043**	**0.11**	<0.04	<0.1	<0.1	0.024	**0.035**	**0.068**	0.014	<0.01	<0.03	0.03	<0.01	<0.01	0.096	<0.01	0.011	<0.01
	9/18/2014	8260B	**0.038**	<0.01	<0.01	**0.03**	**0.042**	<0.04	<0.1	<0.1	0.021	**0.028**	**0.065**	<0.01	<0.01	<0.03	0.014	<0.01	<0.01	0.11	<0.01	<0.01	<0.01
	6/5/2014	8260B	**0.083**	<0.01	<0.1	**0.068**	**0.089**	<0.04	<0.1	<0.1	0.014	**0.026**	**0.041**	0.017	NL	<0.03	0.033	<0.01	<0.01	0.065	<0.01	<0.01	<0.01
	4/14/2014	8260B	**0.074**	<0.005	<0.005	**0.044**	**0.062**	<0.02	<0.05	<0.05	0.012	0.024	**0.046**	0.013	NL	<0.015	0.026	<0.005	NL	0.072	<0.05	**0.0089**	NL
MKTF-10	11/14/2014	8260B	**1.5**	**0.57**	<0.02	**0.36**	**0.24**	**0.38**	<0.2	<0.2	0.066	**0.039**	<0.02	0.12	0.034	0.084	0.36	0.04	<0.02	<0.02	<0.02	<0.2	<0.02
	9/18/2014	8260B	**0.5**	0.11	<0.05	**0.13**	<0.2	<0.2	<0.5	2.8	<0.05	**0.057**	<005	<0.05	<0.05	<0.15	0.068	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	6/6/2014	8260B	**0.27**	0.065	<0.01	**0.079**	<0.04	<0.04	0.21	1.8	0.033	**0.051**	<0.01	0.019	NL	<0.03	0.038	<0.01	<0.01	0.015	<0.01	<0.01	<0.01
	4/11/2014	8260B	**0.96**	**0.21**	<0.05	**0.2**	<0.2	<0.2	1.2	1	<0.05	<0.05	<0.05	<0.05	NL	<0.15	0.13	<0.05	NL	<0.05	<0.05	<0.05	NL
MKTF-11	11/13/2014	8260B	**0.4**	0.06	<0.02	**0.058**	<0.08	<0.08	<0.2	<0.2	<0.2	**0.047**	<0.02	0.029	<0.02	<0.06	0.078	<0.02	<0.02	<0.02	<0.02	<0.02	**0.054**
	9/15/2014	8260B	**0.36**	0.058	<0.05	<0.1	<0.2	<0.2	<0.5	<0.5	<0.5	**0.057**	<0.05	<0.05	<0.05	<0.15	0.069	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	6/5/2014	8260B	**0.27**	0.052	<0.005	**0.066**	<0.02	<0.02	0.29	0.17	0.016	**0.053**	<0.005	0.029	NL	<0.015	0.068	0.0078	<0.005	0.014	<0.005	<0.005	**0.018**
	4/11/2014	8260B	**0.41**	0.062	<0.05	<0.1	<0.2	<0.2	<0.5	<0.5	<0.05	**0.065**	<0.05	<0.05	NL	<0.15	0.097	<0.05	NL	<0.05	<0.05	<0.05	NL
MKTF-15	9/17/2014	8260B	**0.66**	**0.18**	<0.05	**0.12**	<0.2	<0.2	<0.5	<0.5	<0.05	<0.05	<0.05	0.068	<0.05	<0.15	0.14	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	6/5/2014	8260B	**0.33**	0.095	<0.005	**0.08**	0.03	0.035	0.29	0.062	<0.005	<0.005	<0.005	0.059	0.0059	<0.015	0.097	0.012	<0.005	<0.005	<0.005	<0.005	<0.005
	4/10/2014	8260B	**0.46**	0.11	<0.01	**0.072**	<0.04	<0.04	<0.1	<0.1	<0.01	<0.01	<0.01	0.053	NL	<0.03	0.094	0.012	NL	<0.01	<0.01	<0.01	NL
MKTF-16	11/18/2014	8260B	**1**	**0.36**	<0.05	**0.16**	<0.2	<0.2	<0.5	<0.5	<0.05	**0.081**	<0.05	<0.05	<0.05	<0.15	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	9/17/2014	8260B	**1.1**	**0.36**	<0.05	**0.26**	<0.2	<0.2	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.15	0.12	<0.05	<0.05	<0.05	<0.02	<0.05	<0.05
	6/5/2014	8260B	**1.2**	**0.36**	<0.05	**0.24**	<0.2	<0.2	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.15	0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	4/10/2014	8260B	**0.49**	0.12	<0.02	**0.07**	<0.08	<0.08	<0.2	<0.2	<0.02	<0.02	<0.02	0.053	NL	<0.06	0.099	<0.02	NL	<0.02	<0.02	<0.02	NL
MKTF-17	11/18/2014	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.001	<0.001	<0.001	0.0091	0.003	<0.003	0.013	0.0021	<0.001	<0.001	<0.001	<0.001	<0.001
	9/18/2014	8260B	<0.01	<0.01	<0.01	<0.02	<0.04	<0.04	<0.1	<0.1	<0.01	<0.01	<0.01	0.029	<0.01	<0.03	0.066	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	4/9/2014	8260B	**0.074**	<0.01	<0.01	**0.032**	<0.04	<0.04	<0.1	<0.1	<0.01	<0.01	<0.01	0.037	NL	<0.03	0.096	0.01	NL	<0.01	<0.01	<0.01	NL
MKTF-18	11/18/2014	8260B	**0.096**	0.023	<0.005	**0.088**	**0.2**	**0.082**	<0.05	<0.05	0.0056	<0.005	<0.005	0.0088	<0.015	<0.015	0.013	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	9/18/2014	8260B	**0.095**	0.025	<0.005	**0.097**	**0.15**	0.033	<0.05	<0.05	0.0073	<0.005	<0.005	0.0078	<0.005	<0.015	0.011	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	6/6/2014	8260B	**0.088**	0.029	<0.005	**0.068**	**0.13**	0.028	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015	0.0066	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	4/14/2014	8260B	**0.091**	0.024	<0.005	**0.077**	**0.13**	**0.043**	<0.05	<0.05	<0.005	<0.005	<0.005	0.0052	NL	<0.015	0.0076	<0.005	NL	<0.005	<0.05	<0.005	NL

8.15.4 MKTF Wells

Volatile Organic Compounds Analytical Results Summary

MKTF-19	11/18/2014	8260B	**0.83**	0.11	<0.05	**0.58**	**0.41**	**0.54**	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.15	0.11	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	9/24/2014	8260B	**0.69**	0.11	<0.05	**0.5**	**0.22**	**0.36**	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	<0.1	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	4/9/2014	8260B	**0.59**	0.099	<0.05	**0.43**	<0.2	**0.3**	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05	NL	<0.15	0.086	<0.05	NL	<0.05	<0.05	<0.05	NL
MKTF-20	11/18/2014	8260B	**1.8**	**0.53**	<0.5	**0.16**	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05	<0.15	0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	4/11/2014	8260B	**1.9**	**0.5**	<0.05	**3**	<0.2	<0.2	<0.5	<0.05	<0.05	<0.05	<0.05	0.076	NL	<0.15	0.26	<0.05	NL	<0.05	<0.05	<0.05	NL
MKTF-21	4/11/2014	8260B	**2.2**	**0.6**	<0.05	**0.49**	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	0.1	NL	<0.15	0.38	<0.05	NL	<0.05	<0.05	<0.05	NL
MKTF-22	11/17/2014	8260B	<0.01	<0.01	<0.01	<0.02	**0.058**	<0.04	<0.1	<0.1	0.01	0.015	<0.01	<0.01	<0.01	<0.03	0.013	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	4/10/2014	8260B	**0.089**	<0.01	<0.01	<0.02	**0.048**	<0.04	<0.1	<0.1	<0.01	<0.01	<0.01	0.015	NL	<0.03	0.033	<0.01	NL	<0.01	<0.01	<0.01	NL
MKTF-23	11/17/2014	8260B	**0.89**	**0.22**	<0.01	**0.15**	**0.074**	**0.11**	<0.1	<0.1	0.043	**0.15**	0.064	0.034	<0.01	<0.03	0.066	<0.01	<0.01	0.024	<0.01	<0.01	**0.022**
	9/23/2014	8260B	**0.54**	**0.15**	<0.01	**0.1**	<0.04	**0.041**	<0.1	<0.1	0.029	**0.092**	0.047	0.026	<0.01	<0.03	0.058	<0.01	<0.01	0.024	<0.01	<0.01	<0.01
MKTF-24	11/14/2014	8260B	0.0027	<0.001	**0.0096**	<0.002	0.0046	<0.004	<0.01	<0.01	0.039	**0.15**	0.058	0.018	<0.001	0.0058	0.028	0.004	<0.001	0.0046	0.0011	0.0049	**0.014**
	9/24/2014	8260B	0.0023	<0.002	**0.0098**	<0.004	<0.008	<0.008	<0.02	<0.02	0.044	**0.14**	0.067	0.024	<0.002	0.0087	0.039	0.0065	<0.002	<0.002	<0.002	0.005	<0.003
	4/8/2014	8260B	<0.001	<0.001	**0.014**	<0.002	<0.004	<0.004	<0.01	<0.01	0.057	**0.2**	0.088	0.02	NL	0.0091	0.038	0.005	0.0019	0.021	0.0014	**0.0052**	NL
MKTF-25	11/14/2014	8260B	<0.005	<0.005	**0.012**	<0.01	<0.02	<0.02	<0.05	<0.05	0.044	**0.23**	0.098	0.04	<0.005	<0.015	0.037	0.0066	<0.005	0.023	<0.005	**0.027**	**0.046**
	9/23/2014	8260B	<0.01	<0.01	<0.01	<0.02	<0.04	<0.04	<0.1	<0.1	0.046	**0.25**	0.1	0.038	<0.01	<0.03	0.041	<0.01	<0.01	0.03	<0.01	**0.024**	<0.01
	4/8/2014	8260B	0.0099	0.003	**0.01**	**0.03**	<0.008	<0.008	<0.02	<0.02	0.054	**0.33**	0.15	0.034	NL	0.014	0.039	0.0058	0.0033	0.076	<0.002	**0.03**	NL
MKTF-26	11/14/2014	8260B	<0.005	<0.005	**0.0093**	<0.01	<0.02	<0.02	<0.05	<0.05	0.011	**0.083**	0.043	<0.005	<0.005	<0.015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	**0.017**
	9/24/2014	8260B	<0.001	<0.001	**0.0081**	<0.002	<0.004	<0.004	<0.01	<0.01	0.013	**0.084**	0.032	0.0073	<0.001	<0.003	0.005	0.0013	<0.001	0.0025	0.0011	0.0017	<0.001
	4/8/2014	8260B	<0.001	<0.001	**0.013**	<0.002	<0.004	<0.004	<0.01	<0.01	0.0045	**0.083**	0.066	<0.001	NL	<0.003	<0.001	<0.001	NL	0.0017	0.0014	0.0029	NL
MKTF-27	11/14/2014	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.001	0.0028	<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	9/24/2014	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.001	0.002	<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	4/8/2014	8260B	<0.002	<0.002	<0.002	<0.004	<0.008	<0.008	<0.02	<0.02	<0.002	<0.002	<0.002	<0.002	NL	<0.006	<0.002	<0.002	NL	<0.002	<0.002	<0.002	NL
MKTF-28	11/14/2014	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	9/24/2014	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MKTF-29	9/24/2014	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	4/9/2014	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	NL	<0.003	<0.001	<0.001	NL	<0.001	<0.001	0.0014	NL
MKTF-30	11/17/2014	8260B	<0.001	<0.001	**0.0053**	<0.002	<0.004	<0.004	<0.01	<0.01	0.0039	**0.087**	0.0027	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	0.003	0.0011	0.0044	**0.0048**
	9/24/2014	8260B	<0.001	<0.001	**0.0044**	<0.002	<0.004	<0.004	<0.01	<0.01	0.0042	**0.068**	0.0035	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	0.0025	0.0011	0.004	<0.001
	4/9/2014	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.01	0.025	<0.001	<0.001	NL	<0.003	<0.001	<0.001	NL	<0.001	<0.001	0.0014	NL
MKTF-31	11/17/2014	8260B	<0.001	<0.001	**0.016**	<0.002	<0.004	<0.004	<0.01	<0.01	0.0018	**0.029**	0.034	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	0.0039	0.0016	0.0024	0.0019
	9/23/2014	8260B	<0.001	<0.001	**0.013**	<0.002	<0.004	<0.004	<0.01	<0.01	0.0018	0.022	0.041	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	0.0037	0.0016	0.0024	<0.001
	4/8/2014	8260B	<0.001	<0.001	**0.021**	<0.002	<0.004	<0.004	<0.01	<0.01	0.0016	**0.028**	**0.059**	<0.001	NL	<0.003	<0.001	<0.001	NL	0.0058	0.0018	0.003	NL
MKTF-32	11/17/2014	8260B	<0.001	<0.001	**0.028**	<0.002	<0.004	<0.004	<0.01	<0.01	0.0012	0.024	0.041	0.0011	<0.001	<0.003	<0.001	<0.001	<0.001	0.0011	0.0025	<0.001	0.002
	9/23/2014	8260B	<0.005	<0.005	**0.029**	<0.01	<0.02	<0.02	<0.05	<0.05	<0.005	0.023	0.054	<0.005	<0.005	<0.015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	4/9/2014	8260B	<0.001	<0.001	**0.03**	<0.002	<0.004	<0.004	<0.01	<0.01	<0.001	0.022	**0.036**	0.0025	NL	<0.003	<0.001	<0.001	NL	0.0015	0.0023	<0.001	NL
MKTF-33	11/17/2014	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	9/23/2014	8260B	<0.005	<0.005	<0.005	<0.01	<0.02	<0.02	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	4/9/2014	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	NL	<0.003	<0.001	<0.001	NL	<0.001	<0.001	<0.001	NL
MKTF-34	11/17/2014	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.001	0.0015	<0.001	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	0.0014	<0.001
	9/24/2014	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.001	<0.001	0.0011	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	0.0022	<0.001
	4/9/2014	8260B	<0.002	<0.002	<0.002	<0.004	<0.008	<0.008	<0.02	<0.02	<0.002	<0.002	0.0028	<0.002	NL	<0.006	<0.002	<0.002	NL	<0.002	<0.002	0.0029	NL
MKTF-35	11/21/2014	8260B	**0.12**	0.05	**0.04**	**0.04**	**0.038**	**0.059**	<0.01	<0.01	<0.001	<0.001	0.0011	0.0051	<0.001	0.0061	0.028	0.0027	<0.001	<0.001	<0.001	<0.001	<0.001
MKTF-36	11/21/2014	8260B	**0.27**	0.062	**0.59**	**0.59**	**0.34**	**0.53**	<0.1	<0.1	<0.1	<0.1	<0.1	0.041	<0.1	<0.03	0.099	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MKTF-37	11/21/2014	8260B	**0.51**	**0.14**	**0.017**	**0.35**	**0.047**	**0.084**	<0.01	<0.01	<0.001	**0.034**	0.21	0.078	0.0048	0.026	0.082	0.011	<0.001	<0.001	0.0017	**0.3**	<0.001
MKTF-38	11/21/2014	8260B	0.0046	0.0015	<0.001	**0.0055**	0.0088	0.0098	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	0.0014	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	0.0011	<0.001
MKTF-40	11/21/2014	8260B	<0.001	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.001	<0.001	0.0011	<0.001	<0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MKTF-44	11/21/2014	8260B	<0.002	<0.002	<0.002	<0.004	<0.008	<0.008	<0.02	<0.02	<0.002	<0.002	<0.002	<0.002	<0.002	<0.006	<0.002	<0.002	<0.002	<0.002	<0.002	0.0029	<0.002

NOTES:
NE = Not establishes
NA = Not analyzed
NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS
Concentration or less.
a) Human Health Standards; b) Other Standards for Domestic Water
EPA Regional Screening Level (RSL) Summary Table (June 2011)
1. NMED Tap Water (Dec 2014)

8.15.4 MKTF Wells

Semi Volatile Organic Compound Analytical Result Summary

			Parameters														
			Acenaphthene (mg/L)	Aniline (mg/L)	Benz (a)anthracene (mg/L)	Benzoic Acid (mg/L)	Bis(2-ethylhexyl) phthalate (mg/L)	Carbazole (mg/L)	2,4-Dimethylphenol (mg/L)	Fluorene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	2-Methyl phenol (mg/L)	3+4-Methylphenol (mg/L)	Naphthalene (mg/L)	Phenanthrene (mg/L)	Phenol (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	**0.005**
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	NE	**0.006**	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			**0.535 [2]**	**0.013**	**0.000343 [2]**	**75**	0.0056	NE	**0.354 [2]**	**0.288 [2]**	**0.0011**	**0.036**	**0.93**	**0.0015**	**0.00165 [2]**	NE	5.8
Well ID	**DATE SAMPLED**	**METHOD**															
MKTF-1	6/6/2014	8270C	<0.01	<0.01	<0.01	<0.02	NL	<0.01	0.05	0.02	**0.31**	**0.31**	0.06	**0.031**	**0.31**	0.028	**0.019**
MKTF-2	11/14/2014	8270C	<0.01	<0.01	<0.01	<0.02	**0.011**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	9/18/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	**0.023**	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01
	6/6/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01
MKTF-4	11/13/2014	8270C	<0.01	<0.01	<0.01	0.021	<0.01	0.017	<0.01	<0.01	**0.061**	**0.047**	<0.01	<0.01	**0.08**	<0.01	<0.01
	9/24/2014[1]	8270C	<0.01	<0.01	<0.01	0.021	<0.01	<0.01	<0.01	<0.01	**0.13**	**0.16**	<0.02	<0.01	**0.19**	<0.01	<0.01
	6/6/2014	8270C	<0.01	<0.01	<0.01	0.021	<0.01	0.011	<0.01	<0.01	**0.11**	**0.14**	<0.02	<0.01	**0.24**	<0.01	<0.01
MKTF-9	11/14/2014	8270C	<0.01	<0.01	<0.1	<0.02	**0.011**	<0.01	<0.01	<0.01	**0.049**	<0.01	<0.01	<0.01	**0.021**	<0.01	<0.01
	9/18/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	0.01	<0.01	<0.01	**0.031**	<0.01	<0.02	<0.01	**0.018**	<0.01	<0.01
	6/5/2014	8270C	<0.01	<0.01	<0.01	0.021	<0.01	0.01	<0.01	<0.01	**0.058**	0.014	<0.02	<0.01	**0.041**	<0.01	<0.01
MKTF-10	11/14/2014	8270C	<0.01	**0.054**	<0.01	<0.02	**0.01**	<0.01	0.063	<0.01	**0.046**	**0.051**	0.33	**0.4**	**0.099**	<0.01	**0.29**
	9/18/2014	8270C	<0.01	**0.073**	<0.01	<0.02	<0.01	<0.01	0.09	<0.01	**0.036**	**0.042**	0.32	**0.38**	**0.098**	<0.01	**0.25**
	6/6/2014	8270C	<0.01	**0.075**	<0.01	<0.01	<0.01	<0.01	0.11	<0.01	**0.04**	**0.053**	0.49	**0.61**	**0.14**	<0.01	**0.37**
MKTF-11	11/13/2014	8270C	<0.01	<0.01	<0.01	<0.02	**0.014**	<0.01	0.012	<0.01	**0.015**	<0.01	0.07	**0.046**	**0.031**	<0.01	**0.02**
	9/24/2014[1]	8270C	<0.01	**0.027**	<0.1	<0.01	<0.10	<0.1	0.19	<0.01	**0.024**	0.022	0.35	**0.24**	**0.067**	<0.01	**0.078**
	6/5/2014	8270C	<0.01	**0.025**	<0.01	<0.01	<0.01	<0.01	0.092	<0.01	**0.011**	<0.01	0.18	**0.13**	**0.046**	<0.01	**0.032**
MKTF-15	9/17/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	0.013	<0.01	**0.035**	**0.033**	0.024	<0.01	**0.048**	<0.01	<0.01
	6/5/2014	8270C	<0.01	<0.01	<0.01	0.023	<0.01	<0.01	0.013	<0.01	**0.021**	0.021	0.028	<0.01	**0.05**	<0.01	<0.01
MKTF-16	11/18/2014	8270C	<0.01	**0.018**	<0.01	<0.02	**0.014**	<0.01	0.08	<0.01	**0.047**	**0.051**	0.14	**0.016**	**0.13**	<0.01	**0.038**
	9/17/2014	8270C	<0.01	**0.024**	<0.01	<0.02	<0.01	<0.01	0.18	<0.01	**0.053**	**0.062**	0.15	**0.03**	**0.18**	<0.01	**0.031**
	6/16/2014	8270C	<0.01	0.011	<0.01	<0.02	<0.01	<0.01	0.17	<0.01	**0.037**	**0.042**	0.22	**0.16**	**0.14**	<0.01	**0.42**
MKTF-17	11/18/2014	8270C	<0.01	<0.01	<0.01	<0.02	**0.01**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01
	9/18/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01
	6/16/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	**0.039**
MKTF-18	11/18/2014	8270C	<0.01	<0.01	<0.01	<0.02	**0.012**	<0.01	<0.02	<0.01	**0.11**	0.036	<0.01	<0.01	**0.055**	<0.01	<0.01
	9/18/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	**0.12**	0.023	<0.02	<0.01	**0.059**	<0.01	<0.01
	6/6/2014	8270C	<0.014	<0.014	<0.014	<0.029	<0.014	<0.014	<0.014	<0.014	**0.064**	<0.014	<0.029	<0.014	**0.026**	<0.014	<0.014
MKTF-19	11/18/2014	8270C	<0.01	<0.01	<0.01	<0.02	**0.011**	<0.01	<0.01	<0.01	**0.11**	0.033	<0.01	<0.01	**0.054**	<0.01	<0.01
MKTF-20	11/18/2014	8270C	<0.01	<0.01	<0.01	<0.02	**0.014**	<0.01	0.61	<0.01	**0.11**	**0.066**	0.12	**0.051**	**0.1**	<0.01	**0.037**
MKTF-22	11/17/2014	8270C	<0.01	<0.01	<0.01	<0.02	**0.013**	<0.01	<0.01	<0.01	**0.045**	<0.01	<0.01	<0.01	<0.01	<0.01	**0.037**
MKTF-23	11/14/2014	8270C	<0.01	<0.01	<0.01	<0.02	**0.014**	<0.01	0.031	<0.01	**0.084**	**0.095**	0.058	**0.053**	**0.13**	<0.01	**0.037**
	9/23/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	0.027	<0.01	**0.075**	**0.079**	0.034	**0.025**	**0.13**	<0.01	**0.022**
MKTF-24	11/14/2014	8270C	<0.01	<0.01	<0.01	<0.02	**0.011**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01
	9/24/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01
MTKF-25	11/14/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	9/23/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01
MKTF-26	11/14/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01
	9/24/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01
MKTF-27	11/14/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01
	9/24/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01

8.15.4 MKTF Wells

Semi Volatile Organic Compound Analytical Result Summary

			Parameters														
			Acenaphthene (mg/L)	Aniline (mg/L)	Benz (a)anthracene (mg/L)	Benzoic Acid (mg/L)	Bis(2-ethylhexyl) phthalate (mg/L)	Carbazole (mg/L)	2,4-Dimethylphenol (mg/L)	Fluorene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	2-Methyl phenol (mg/L)	3+4-Methylphenol (mg/L)	Naphthalene (mg/L)	Phenanthrene (mg/L)	Phenol (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	**0.005**
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	NE	**0.006**	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			**0.535 [2]**	**0.013**	**0.000343 [2]**	**75**	0.0056	NE	**0.354 [2]**	**0.288 [2]**	**0.0011**	**0.036**	**0.93**	**0.0015**	**0.00165 [2]**	NE	5.8
Well ID	**DATE SAMPLED**	**METHOD**															
MKTF-28	11/14/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01
	9/24/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01
MKTF-29	9/24/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01
MKTF-30	11/17/2014	8270C	<0.01	<0.01	<0.01	<0.02	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01
	9/24/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01
MKTF-31	11/17/2014	8270C	<0.01	<0.01	<0.01	<0.02	0.013	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MKTF-32	11/17/2014	8270C	<0.01	<0.01	<0.01	<0.02	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	9/23/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01
MKTF-33	11/17/2014	8270C	<0.01	<0.01	<0.01	<0.02	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	9/23/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01
MKTF-34	11/17/2014	8270C	<0.01	<0.01	<0.01	<0.02	0.014	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	9/24/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01
MKTF-35	11/21/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	**0.034**	**0.045**	<0.01	<0.01	**0.036**	<0.01	<0.01
MKTF-36	11/21/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	**0.16**	0.23	<0.01	<0.01	**0.28**	<0.01	**0.015**
MKTF-37	11/21/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	**0.05**	**0.056**	<0.01	<0.01	**0.27**	<0.01	<0.01
MKTF-38	11/21/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01
MKTF-40	11/21/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01
MKTF-44	11/21/2014	8270C	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01

DEFINITIONS

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or less.

a) Human Health Standards; b) Other Standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

2. NMED Tap Water (Dec 2014)

NOTES

1. 8270 only re-sampled - original samples expired.

8.16 EVAPORATION PONDS (EP-1 thru EP-12B)
BTEX Analytical Result Summary

			Parameters				
			Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	0.75	0.75	0.62	NE
40 CFR 141.62 MCL (June 2015)			0.005	1.0	0.7	10	NE
EPA RSL for Tap Water (June 2015)			0.00045	1.1	0.0015	0.19	0.143 [1]
SAMPLE ID	DATE SAMPLED	METHOD					
EP-1	11/12/2014	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	3/5/2014	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	10/15/2013	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/28/2013	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/6/2012	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/29/2012	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/1/2011	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/23/2011	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/16/2010 [3]	8260B	<0.001	<0.001	<0.001	0.0078	<0.0015
	8/2/2010 [2]	8260B	<0.001	0.0077	<0.001	<0.0015	<0.001
	4/20/2010 [2]	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	6/17/2009	8260B	<0.001	0.024	0.0052	0.044	<0.001
	12/2/2008	8260B	**0.0083**	0.089	0.033	0.26	<0.001
	9/19/2008	8260B	0.0033	0.0058	0.0026	0.02	<0.001
	6/17/2008	8260B	<0.001	0.0056	0.0016	0.012	<0.001
	3/11/2008	8260B	**0.19**	0.47	0.0087	0.54	0.0059
	11/29/2007	8260B	**0.064**	0.23	0.048	0.31	<0.001
EP-2	11/12/2014	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	3/5/2014	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	10/15/2013	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/28/2013	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/6/2012	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/29/2012	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/1/2011	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/23/2011	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/16/2010 [3]	8260B	<0.001	0.003	0.0019	0.015	<0.0015
	8/2/2010 [2]	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	4/20/2010 [2]	8260B	<0.001	0.0013	<0.001	0.0043	<0.001
	6/17/2009	8260B	<0.001	0.015	<0.001	0.037	<0.001
	12/2/2008	8260B	0.0018	0.02	0.0072	0.057	<0.001
	9/19/2008	8260B	<0.001	0.0011	<0.001	0.0044	<0.01
	6/17/2008	8260B	<0.001	<0.001	<0.001	<0.0015	<0.01
	3/11/2008	8260B	0.0038	0.011	0.0021	0.014	<0.01
	11/29/2007	8260B	**0.021**	0.079	0.02	0.13	<0.01
EP-3	11/12/2014	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	3/5/2014	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	10/15/2013	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/28/2013	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/6/2012	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/29/2012	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/1/2011	8260B	<0.01	<0.01	<0.01	<0.01	<0.01
	5/23/2011	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/16/2010 [3]	8260B	<0.001	0.0012	<0.001	0.0057	<0.0015
	8/2/2010 [2]	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	4/20/2010 [2]	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	6/17/2009	8260B	<0.001	<0.001	<0.001	0.0017	<0.001
	12/2/2008	8260B	0.0011	0.012	0.0043	0.034	<0.001
	9/19/2008	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	6/17/2008	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	3/11/2008	8260B	<0.001	0.0019	<0.001	0.004	<0.001
	11/29/2007	8260B	<0.01	0.025	<0.01	0.038	<0.01

8.16 EVAPORATION PONDS (EP-1 thru EP-12B)
BTEX Analytical Result Summary

			Parameters				
			Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	0.75	0.75	0.62	NE
40 CFR 141.62 MCL (June 2015)			0.005	1.0	0.7	10	NE
EPA RSL for Tap Water (June 2015)			0.00045	1.1	0.0015	0.19	0.143 [1]
SAMPLE ID	DATE SAMPLED	METHOD					
EP-4	11/12/2014	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	3/5/2014	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	10/15/2013	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/28/2013	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/6/2012	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/29/2012	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/1/2011	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/23/2011	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/16/2010 [3]	8260B	<0.001	<0.001	<0.001	<0.003	<0.0015
	8/2/2010 [2]	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	4/20/2010 [2]	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	6/17/2009	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	12/2/2008	8260B	<0.001	0.008	0.0029	0.022	<0.001
	9/19/2008	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	6/17/2008	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	3/11/2008	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/29/2007	8260B	<0.01	0.011	<0.01	<0.015	<0.01
EP-5	11/12/2014	8260B	<0.005	<0.01	<0.01	<0.015	<0.01
	3/5/2014	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	10/15/2013	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/28/2013	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/6/2012	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/29/2012	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/1/2011	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/23/2011	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/16/2010 [3]	8260B	<0.001	<0.001	<0.001	<0.003	<0.001
	8/2/2010 [2]	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	4/20/2010 [2]	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	6/17/2009	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	12/2/2008	8260B	<0.001	0.0026	0.001	0.0072	<0.001
	9/19/2008	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	6/17/2008	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	3/11/2008	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/29/2007	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
EP-6	11/12/2014	8260B	<0.005	<0.01	<0.01	<0.015	<0.01
	3/5/2014	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	10/15/2013	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/28/2013	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/6/2012	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/29/2012	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	11/1/2011	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/23/2011	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/16/2010 [3]	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	8/2/2010 [2]	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	4/20/2010 [2]	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	6/17/2009	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	12/2/2008	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	9/19/2008	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	6/17/2008	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	3/11/2008	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/29/2007	8260B	<0.01	<0.01	<0.01	<0.015	<0.01

8.16 EVAPORATION PONDS (EP-1 thru EP-12B)
BTEX Analytical Result Summary

			Parameters				
			Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			0.01	0.75	0.75	0.62	NE
40 CFR 141.62 MCL (June 2015)			0.005	1.0	0.7	10	NE
EPA RSL for Tap Water (June 2015)			0.00045	1.1	0.0015	0.19	0.143 [1]
SAMPLE ID	DATE SAMPLED	METHOD					
EP-7	11/12/2014	8260B	<0.005	<0.01	<0.01	<0.015	<0.01
	3/5/2014	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	10/15/2013	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/28/2013	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/6/2012	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/29/2012	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/1/2011	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/23/2011	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/16/2010 [3]	8260B	<0.001	<0.001	<0.001	<0.003	<0.0015
	8/2/2010 [2]	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	4/20/2010 [2]	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	6/17/2009	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	12/2/2008	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	9/19/2008	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	6/17/2008	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	3/11/2008	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/29/2007	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
EP-8	11/12/2014	8260B	<0.005	<0.01	<0.01	<0.015	<0.01
	3/5/2014	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	10/15/2013	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/28/2013	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/6/2012	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/29/2012	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/1/2011	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/23/2011	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/16/2010 [3]	8260B	<0.001	<0.001	<0.001	<0.003	<0.0015
	8/2/2010 [2]	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	4/20/2010 [2]	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	6/17/2009	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	12/2/2008	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	9/19/2008	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	6/17/2008	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	3/11/2008	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/29/2007	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
EP-9	11/12/2014	8260B	<0.005	<0.01	<0.01	<0.015	<0.01
	3/5/2014	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	10/15/2013	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/28/2013	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/6/2012	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/29/2012	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/1/2011	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/23/2011	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/16/2010 [3]	8260B	<0.001	<0.001	<0.001	<0.003	<0.0015
	4/20/2010 [2]	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
EP-11	11/12/2014	8260B	<0.005	<0.01	<0.01	<0.015	<0.01
	3/5/2014	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	10/15/2013	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/28/2013	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/6/2012	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/29/2012	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/1/2011	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/23/2011	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/16/2010 [3]	8260B	<0.001	<0.001	<0.001	<0.003	<0.0015
	4/20/2010 [2]	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001

8.16 EVAPORATION PONDS (EP-1 thru EP-12B)
BTEX Analytical Result Summary

			Parameters				
			Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20NMAC 6.2.3103			**0.01**	**0.75**	**0.75**	**0.62**	**NE**
40 CFR 141.62 MCL (June 2015)			**0.005**	**1.0**	**0.7**	**10**	**NE**
EPA RSL for Tap Water (June 2015)			0.00045	1.1	0.0015	0.19	**0.143 [1]**
SAMPLE ID	**DATE SAMPLED**	**METHOD**					
EP-12A	11/12/2014	8260B	<0.005	<0.01	<0.01	<0.015	<0.01
	3/5/2014	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	10/15/2013	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/28/2013	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/6/2012	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/29/2012	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/1/2011	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/23/2011	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/16/2010 [3]	8260B	<0.001	<0.001	<0.001	<0.003	<0.0015
	4/20/2010 [2]	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
EP-12B	11/12/2014	8260B	<0.005	<0.01	<0.01	<0.015	<0.01
	3/5/2014	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	10/15/2013	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/28/2013	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/6/2012	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/29/2012	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/1/2011	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	5/23/2011	8260B	<0.01	<0.01	<0.01	<0.015	<0.01
	11/16/2010 [3]	8260B	<0.001	<0.001	<0.001	<0.003	<0.0015
	4/20/2010 [2]	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other Standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table
1. NMED Tap Water (Dec 2014)

NOTES
2) *Used the unapproved Facility Wide Ground Water Monitoring Plan (FWGWMP) sampling guidelines first quarter of 2010 which included the addition of evaporation ponds 9a, 11, 12A and 12B.*
3) *Used approved FWGWMP sampling guidelines beginning in the third quarter 2010. (approved August 25, 2010).*

8.16.1 EVAPORATION PONDS (EP-1 thru EP-12B)

General Chemistry Analytical Result Summary

			Parameters								
			Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Phosphorus (mg/L)	Sulfate (mg/L)	pH	Specific Conductance (µS/cm)
WQCC 20NMAC 6.2.3103			1.6	250	NE	NE	10	NE	600	6.6 - 8.6 [1]	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	1.0	10	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			0.8	NE	NE	NE	32	0.0004	NE	NE	NE
SAMPLE ID	DATE SAMPLED	METHOD									
EP-1	11/12/2014	300.0	24	4200	3.4	<10	<1	<5	5800	8	17000
	3/5/2014	300.0	18	1500	1.3	<1	<1	<5	2100	7.61	6800
	10/15/2013	300.0	21	1300	1.5	<2.0	<2.0	<5.0	2000	6.96	6900
	5/28/2013	300.0	20	1000	1.2	<1.0	<1.0	<5.0	1200	8.05	6200
	11/6/2012	300.0	72	570	2.5	<2.0	<2.0	<10	980	8.79	5500
	5/29/2012	300.0	34	3400	2.0	<0.5	<0.5	<2.5	1300	7.75	8800
	11/1/2011	300.0	240	3000	1.3	<10	<10	<2.5	1200	8.71	12000
	5/23/2011	300.0	590	200	1.4	<1.0	3.2	<5.0	980	5.49	6200
	11/16/2010 [3]	300.0	350	140	1.2	4.8	4.8	<2.5	1000	7.4	4300
	8/2/2010 [2]	300.0	99	310	<2.0	<4.0	<4.0	<10	870	7.68	3700
	4/20/2010 [2]	300.0	340	330	<5.0	<1.0	<1.0	<5.0	1500	8.36	5400
	6/17/2009	300.0	86	820	NL	<1.0	<1.0	<5.0	580	7.73	4400
	12/2/2008	300.0	110	360	NL	<1.0	<1.0	7.2	780	7.76	4400
	9/9/2008	300.0	99	150	NL	<1.0	<1.0	<5.0	7700	7.82	4500
	6/17/2008	300.0	120	120	NL	<1.0	<1.0	15	1100	7.57	4600
	3/11/2008	300.0	560	540	NL	<1.0	<1.0	<2.5	980	3.81	4900
EP-2	11/12/2014	300.0	40	2400	<1	<10	<1	<5	1300	7.97	8900
	3/5/2014	300.0	37	1900	3.4	<1	<1	<5	680	7.87	7600
	10/15/2013	300.0	70	1100	1.4	<2.0	<2.0	<5.0	680	8.33	6500
	5/28/2013	300.0	42	310	6.1	<1.0	<1.0	<5.0	1700	7.49	6000
	11/6/2012	300.0	84	290	<2.0	<2.0	<2.0	<10	820	8.31	6900
	5/29/2012	300.0	55	6600	2.6	<2.0	<0.5	<2.5	1300	7.6	20000
	11/1/2011	300.0	46	2700	1.5	<20	<20	<5.0	1700	8.35	15000
	5/23/2011	300.0	65	3700	1.3	<20	<20	<25	990	7.84	18000
	11/16/2010 [3]	300.0	41	3500	1.8	<10	<10	<2.5	970	7.38	14000
	8/2/2010 [2]	300.0	43	1600	<1.0	<4.0	<4.0	<2.5	970	7.91	6400
	4/20/2010 [2]	300.0	170	1100	2.3	<2.0	<0.5	<2.5	1200	7.56	5800
	6/17/2009	300.0	52	3500	NL	<2.1	<0.6	<2.5	1000	8.13	13000
	12/2/2008	300.0	37	1800	NL	<2.2	<0.7	<2.5	1000	7.8	8500
	9/9/2008	300.0	48	2800	NL	<1.0	<1.0	<2.5	960	7.97	10000
	6/17/2008	300.0	63	2900	NL	<1.0	<1.0	<2.5	1300	7.9	11000
	3/11/2008	300.0	63	2200	NL	<1.0	<1.0	<2.5	970	6.81	8400

8.16.1 EVAPORATION PONDS (EP-1 thru EP-12B)
General Chemistry Analytical Result Summary

			Parameters								
			Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Phosphorus (mg/L)	Sulfate (mg/L)	pH	Specific Conductance (µS/cm)
WQCC 20NMAC 6.2.3103			1.6	250	NE	NE	10	NE	600	6.6 - 8.6 [1]	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	1.0	10	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			0.8	NE	NE	NE	32	0.0004	NE	NE	NE
SAMPLE ID	DATE SAMPLED	METHOD									
EP-3	11/12/2014	300.0	34	4000	1	<10	<1	<5	1300	7.85	12000
	3/5/2014	300.0	23	3700	3.2	<1	<1	<5	670	7.85	12000
	10/15/2013	300.0	39	5200	1.3	<4.0	<4.0	<5.0	730	7.77	18000
	5/28/2013	300.0	21	6500	2.7	<10	<1.0	<5.0	1400	7.76	29000
	11/6/2012	300.0	77	2000	<2.0	<2.0	<2.0	<10	1200	7.84	12000
	5/29/2012	300.0	22	9500	2.4	<4.0	<4.0	<2.5	1400	7.68	27000
	11/1/2011	300.0	43	6400	1.2	<20	<20	<2.5	1600	8.24	17000
	5/23/2011	300.0	54	3700	1.4	<5.0	<1.0	<5.0	1100	8.02	19000
	11/16/2010 [3]	300.0	11	5100	1.4	<200	<200	<2.5	1000	7.66	16000
	8/2/2010 [2]	300.0	41	2800	1.2	<10	<10	<5.0	1100	7.76	9000
	4/20/2010 [2]	300.0	63	8400	<10	<40	<40	<2.5	1100	8.11	32000
	6/17/2009	300.0	48	3600	NL	<4.0	<4.0	<2.5	1100	8.13	14000
	12/2/2008	300.0	26	1800	NL	<2.0	<0.5	<2.5	980	7.86	8500
	9/9/2008	300.0	51	2800	NL	<1.0	<1.0	<5.0	1100	7.94	10000
	6/17/2008	300.0	44	3700	NL	<1.0	<1.0	<2.5	1400	7.91	13000
	3/11/2008	300.0	41	2700	NL	<1.0	<1.0	<2.5	1000	7.86	9800
EP-4	11/12/2014	300.0	33	4200	1.1	<10	<1	<5	1300	7.91	13000
	3/5/2014	300.0	18	4300	3.1	<1	<1	<5	650	7.84	14000
	10/15/2013	300.0	33	6000	1.4	<4.0	<4.0	<5.0	830	7.72	20000
	5/28/2013	300.0	19	7700	2.6	<10	<1.0	<5.0	1500	7.77	32000
	11/6/2012	300.0	46	4000	<2.0	<10	<10	<10	980	8.13	19000
	5/29/2012	300.0	20	6500	3.3	<2.0	<0.5	<2.5	1400	7.87	22000
	11/1/2011	300.0	39	4300	<2.0	<20	<20	<2.5	1600	7.76	18000
	5/23/2011	300.0	35	5300	<2.0	<5.0	<1.0	<5.0	1100	8.1	24000
	11/16/2010 [3]	300.0	22	4500	2.0	<20	<20	<2.5	1100	7.81	18000
	8/2/2010 [2]	300.0	35	2500	1.3	<10	<10	<2.5	1100	7.89	8700
	4/20/2010 [2]	300.0	67	8000	<2.0	<40	<40	<2.5	1000	8.05	26000
	6/17/2009	300.0	46	3400	NL	<4.0	<4.0	<2.5	1200	8.12	13000
	12/2/2008	300.0	27	2000	NL	<2.0	<0.5	<2.5	1000	7.89	9100
	9/9/2008	300.0	49	2900	NL	<1.0	<1.0	<5.0	1100	7.9	11000
	6/17/2008	300.0	34	4500	NL	<1.0	<1.0	<2.5	1500	7.94	15000
	3/11/2008	300.0	32	2800	NL	<1.0	<1.0	<2.5	1000	8.06	10000

8.16.1 EVAPORATION PONDS (EP-1 thru EP-12B)

General Chemistry Analytical Result Summary

			Parameters								
			Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Phosphorus (mg/L)	Sulfate (mg/L)	pH	Specific Conductance (µS/cm)
WQCC 20NMAC 6.2.3103			1.6	250	NE	NE	10	NE	600	6.6 - 8.6 [1]	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	1.0	10	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			0.8	NE	NE	NE	32	0.0004	NE	NE	NE
SAMPLE ID	DATE SAMPLED	METHOD									
EP-5	11/12/2014	300.0	27	13000	3.5	<10	<1	<5	2100	7.93	44000
	3/5/2014	300.0	12	5200	2.8	<1	<1	<5	740	7.83	16000
	10/15/2013	300.0	29	6500	1.6	<4.0	<4.0	<5.0	950	7.89	21000
	5/28/2013	300.0	17	8400	2.9	<10	<1.0	<5.0	1400	7.67	32000
	11/6/2012	300.0	16	5600	<2.0	<50	<2.0	<10	870	8.13	23000
	5/29/2012	300.0	21	6100	3.2	<4.0	<4.0	<2.5	1300	7.84	22000
	11/1/2011	300.0	26	4300	1.5	<20	<20	<2.5	1600	7.74	21000
	5/23/2011	300.0	27	6700	2.3	<5.0	<1.0	<10	1200	8.06	26000
	11/16/2010 [3]	300.0	20	4200	2.1	<20	<20	<2.5	1200	7.86	18000
	8/2/2010 [2]	300.0	39	4800	2.0	<10	<10	<2.5	1300	7.97	20000
	4/20/2010 [2]	300.0	53	12000	<10	<40	<40	<2.5	1100	8.04	40000
	6/17/2009	300.0	32	4400	NL	<4.0	<4.0	<2.5	1400	8.07	17000
	12/2/2008	300.0	29	2900	NL	<2.0	<0.5	<2.5	1200	7.82	14000
	9/9/2008	300.0	33	3000	NL	<1.0	<1.0	<5.0	890	7.93	10000
	6/17/2008	300.0	26	5400	NL	<1.0	<1.0	<2.5	1800	7.86	17000
	3/11/2008	300.0	41	2900	NL	<1.0	<1.0	<2.5	1100	7.82	10000
EP-6	11/12/2014	300.0	26	15000	4.3	<10	<1	<5	2200	7.99	48000
	3/5/2014	300.0	18	6900	2.3	<1	<1	<5	1500	7.69	23000
	10/15/2013	300.0	17	11000	3.1	<10	<10	<5.0	2200	7.66	38000
	5/28/2013	300.0	15	11000	4.4	<10	<1.0	<5.0	1900	7.7	41000
	11/6/2012	300.0	21	11000	<2.0	<0.5	<2.0	<10	2500	7.93	42000
	5/29/2012	300.0	20	8800	3.3	<4.0	<4.0	<2.5	2100	7.86	27000
	11/1/2011	300.0	24	6900	2.1	<20	<20	<2.5	2300	7.94	26000
	5/23/2011	300.0	18	6500	2.1	<20	<20	<2.5	1300	7.83	23000
	11/16/2010 [3]	300.0	25	6300	2.4	<20	<20	<2.5	1500	774	21000
	8/2/2010 [2]	300.0	21	7400	2.1	<40	<40	<2.5	1500	8.33	27000
	4/20/2010 [2]	300.0	29	4000	<10	<2.0	<2.0	<10	1100	7.66	8400
	6/17/2009	300.0	18	5100	NL	<4.0	<4.0	<10	1800	8.07	16000
	12/2/2008	300.0	28	5500	NL	<2.0	<0.5	<10	7600	7.7	19000
	9/9/2008	300.0	26	4900	NL	<4.0	<4.0	<5.0	1900	7.83	16000
	6/17/2008	300.0	29	6600	NL	<2.0	<0.5	<5.0	2600	7.64	25000
	3/11/2008	300.0	35	4100	NL	<4.0	<4.0	<5.0	1600	7.7	13000

8.16.1 EVAPORATION PONDS (EP-1 thru EP-12B)

General Chemistry Analytical Result Summary

			Parameters								
			Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Phosphorus (mg/L)	Sulfate (mg/L)	pH	Specific Conductance (µS/cm)
WQCC 20NMAC 6.2.3103			1.6	250	NE	NE	10	NE	600	6.6 - 8.6 [1]	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	1.0	10	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			0.8	NE	NE	NE	32	0.0004	NE	NE	NE
SAMPLE ID	DATE SAMPLED	METHOD									
EP-7	11/12/2014	300.0	44	61000	33	<40	<40	<5	12000	7.82	160000
	3/5/2014	300.0	28	41000	19	<10	<1	<5	8500	7.82	130000
	10/15/2013	300.0	24	52000	26	<40	<40	<50	11000	7.68	170000
	5/28/2013	300.0	28	55000	30	<10	<1.0	<5.0	11000	7.61	190000
	11/6/2012	300.0	37	81000	<500	<500	<2.0	<10	15000	7.76	210000
	5/29/2011	300.0	24	50000	25	<20	<20	<25	9500	7.72	150000
	11/1/2011	300.0	22	46000	13	<40	<40	<5.0	8100	7.82	120000
	5/23/2011	300.0	27	28000	16	<100	<100	<2.5	8400	7.79	120000
	11/16/2010 [3]	300.0	35	35000	20	<200	<200	<10	8400	7.85	84000
	8/2/2010 [2]	300.0	18	62000	27	<200	<200	<10	11000	7.41	180000
	4/20/2010 [2]	300.0	16	27000	54	<200	<50	<10	6900	7.31	150000
	6/17/2009	300.0	20	39000	NL	<10	<10	<10	10000	7.59	130000
	12/2/2008	300.0	35	42000	NL	<40	<40	<10	8300	7.55	140000
	9/9/2008	300.0	25	38000	NL	<4.0	<4.0	<5.0	8500	7.52	110000
	6/17/2008	300.0	29	64000	NL	<2.0	<0.5	<5.0	15000	7.34	180000
	3/11/2008	300.0	22	22000	NL	<4.0	<4.0	<5.0	5600	7.61	68000
EP-8	11/12/2014	300.0	41	61000	29	<40	<40	<50	11000	7.82	170000
	3/5/2014	300.0	27	39000	20	<10	<1	<5	7900	7.82	130000
	10/15/2013	300.0	33	110000	58	<40	<40	<50	18000	7.07	370000
	5/28/2013	300.0	29	47000	19	<10	<1.0	<5.0	8600	7.59	170000
	11/6/2012	300.0	71	250000	<500	<500	<500	<2500	31000	6.58	550000
	5/29/2012	300.0	33	67000	39	<20	<20	<25	9700	7.53	180000
	11/1/2011	300.0	27	27000	9.9	<20	<20	<2.5	3600	7.92	66000
	5/23/2011	300.0	43	170000	75	<100	<100	<5.0	18000	6.83	370000
	11/16/2010 [3]	300.0	44	81000	57	<200	<200	<10	12000	7.14	190000
	8/2/2010 [2]	300.0	43	110000	78	<100	<100	<10	22000	6.21	300000
	4/20/2010 [2]	300.0	46	49000	54	<200	<200	<10	6900	7.31	150000
	6/17/2009	300.0	57	180000	NL	<10	<10	<10	23000	6.73	310000
	12/2/2008	300.0	31	46000	NL	<40	<40	<10	8600	7.39	170000
	9/9/2008	300.0	26	17000	NL	<20	<20	<5.0	3400	7.75	51000
	6/17/2008	300.0	94	160000	NL	<10	<10	<5.0	20000	6.28	420000
	3/11/2008	300.0	25	3000	NL	<40	<40	<5.0	6100	7.47	94000

8.16.1 EVAPORATION PONDS (EP-1 thru EP-12B)
General Chemistry Analytical Result Summary

			Parameters								
			Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Phosphorus (mg/L)	Sulfate (mg/L)	pH	Specific Conductance (µS/cm)
WQCC 20NMAC 6.2.3103			1.6	250	NE	NE	10	NE	600	6.6 - 8.6 [1]	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	1.0	10	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			0.8	NE	NE	NE	32	0.0004	NE	NE	NE
SAMPLE ID	DATE SAMPLED	METHOD									
EP-9[2]	11/12/2014	300.0	22	98000	34	<100	<100	<5	12000	7.4	300000
	3/5/2014	300.0	18	56000	20	<10	8.1	<5	7800	7.7	160000
	10/15/2013	300.0	15	55000	21	<40	<40	<50	8100	7.45	180000
	5/28/2013	300.0	19	62000	24	<10	3.0	<5.0	8400	7.54	200000
	11/6/2012	300.0	13	46000	380	<40	<40	<10	6400	7.69	150000
	5/29/2012	300.0	21	63000	24	<20	<20	<25	7500	7.57	160000
	11/1/2011	300.0	20	76000	24	<100	<100	<10	9400	7.58	210000
	5/23/2011	300.0	19	57000	19	<200	<200	<10	7100	7.57	190000
	11/16/2010 [3]	300.0	21	76000	32	<200	<200	<10	8700	7.31	200000
	4/20/2010 [2]	300.0	20	38000	14	<200	<200	<10	5000	7.58	120000
EP-11[2]	11/12/2014	300.0	32	63000	32	<40	<40	<5	17000	7.74	180000
	3/5/2014	300.0	22	10000	6.3	<10	<1	<5	4300	7.76	36000
	10/15/2013	300.0	22	11000	5.9	<10	<10	<10	4500	7.92	81000
	5/28/2013	300.0	23	8900	5.7	<10	<1.0	<5.0	4000	7.88	39000
	11/6/2012	300.0	40	3500	<2.0	<2.0	<2.0	<10	1300	8.06	18000
	5/29/2012	300.0	22	8200	5.1	<4.0	<4.0	<2.5	3700	7.84	30000
	11/1/2011	300.0	29	5700	1.2	<20	<20	<5.0	1800	7.83	19000
	5/23/2011	300.0	23	16000	6.2	<40	<40	<2.5	3900	7.85	62000
	11/16/2010 [3]	300.0	28	14000	5.9	<40	<40	<5.0	3300	7.86	47000
	4/20/2010 [2]	300.0	18	17000	6.9	<100	<100	<10	4400	7.73	62000
EP-12A[2]	11/12/2014	300.0	43	3000	2.1	2.5	2.5	<5	1600	8.24	12000
	3/5/2014	300.0	34	1800	2.3	<1	<1	<5	1100	7.9	8000
	10/15/2013	300.0	43	1900	2.2	<2.0	<2.0	<5.0	1300	8.2	8600
	5/28/2013	300.0	29	3800	3.0	<1.0	<1.0	<5.0	1700	7.98	17000
	11/6/2012	300.0	35	4000	<2.0	<2.0	<2.0	<10	1400	8.09	19000
	5/29/2012	300.0	23	7600	5.0	<4.0	<4.0	<2.5	2300	7.88	25000
	11/1/2011	300.0	36	5400	1.2	<20	<20	<2.5	1500	8.05	18000
	5/23/2011	300.0	28	6400	2.5	<5.0	<1.0	<5.0	1400	8.08	26000
	11/16/2010 [3]	300.0	21	11000	4.5	<40	<40	<10	3100	8.07	39000
	4/20/2010 [2]	300.0	29	6400	<20	<20	<20	<25	1300	7.89	20000
EP-12B[2]	11/12/2014	300.0	38	1900	1.3	<2	<2	<5	1200	7.84	7600
	3/5/2014	300.0	38	1800	2.7	<1	<1	<5	710	7.97	7800
	10/15/2013	300.0	14	1300	1.5	<2.0	<2.0	<5.0	770	8.43	6800
	5/28/2013	300.0	32	3100	3.1	<1.0	<1.0	<5.0	1500	7.93	14000
	11/6/2012	300.0	71	1900	<2.0	<2.0	<2.0	<10	1100	7.91	12000
	5/29/2012	300.0	19	7000	3.6	<4.0	<10	<2.5	1500	7.75	25000
	11/1/2011	300.0	39	3600	5.3	<20	<20	<2.5	1500	8.12	18000
	5/23/2011	300.0	37	4800	1.9	<5.0	<1.0	<5.0	1100	8.07	22000
	11/16/2010 [3]	300.0	22	6100	3.0	<20	<20	<5.0	1700	7.74	22000
	4/20/2010 [2]	300.0	80	5000	<1.0	<5.0	<5.0	<25	950	8.06	9400

8.16.1 EVAPORATION PONDS (EP-1 thru EP-12B)

General Chemistry Analytical Result Summary

			Parameters								
			Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Phosphorus (mg/L)	Sulfate (mg/L)	pH	Specific Conductance (µS/cm)
WQCC 20NMAC 6.2.3103			**1.6**	**250**	NE	NE	**10**	NE	**600**	**6.6 - 8.6 [1]**	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	**1.0**	10	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			0.8	NE	NE	NE	32	**0.0004**	NE	NE	NE
SAMPLE ID	DATE SAMPLED	METHOD									

DEFINITIONS

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other standards for Domestic Water

1) NMAC 20.6.2.2101A General Requirements

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

NOTES

2) Used the unapproved Facility Wide Ground Water Monitoring Plan (FWGWMP) sampling guidelines for the first quarter of 2010 which included the addition of evaporation ponds 9a, 11, 12A and 12B.

3) *Used approved FWGWMP sampling guidelines beginning in the third quarter 2010. (approved August 25, 2010).*

8.16.2 EVAPORATION PONDS (EP-1 thru EP-12B)
BOD/COD/E-COLI Analytical Result Summary

			Parameters			
			BOD (mg/L)	COD (mg/L)	E-Coli (CFU/100ml)	Total Coliform (CFU/100ml)
WQCC 20NMAC 6.2.3103			<30[1]	<125[1]	< 500 organisms per 100 ml	
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			NE	NE	MCL[6]	
SAMPLE ID	DATE SAMPLED	METHOD				
EP-1	11/12/2014	SM5210B/E410.4/SM9223B	240	1700	NA	NL
	3/5/2014	SM5210B/E410.4/SM9223B	55	560	NA	NL
	10/16/2013	SM5210B/E410.4/SM9223B	<33.3	560	20	NL
	5/29/2013	SM5210B/E410.4/SM9223B	75	310	10	NL
	11/7/2012	SM5210B/E410.4/SM9223B	520	1100	10462	NL
	5/30/2012	SM5210B/E410.4/SM9223B	340	990	>24196	NL
	11/2/2011	SM5210B/9223B	960	2250	>2419.6	NL
	5/24/2011	SM5210B/9223B	440	1340	1986.3	NL
	11/17/2010	SM9223B/3014	1400	3200	<10	NL
	8/2-3/2010	SM5210B/E410.4/3014	290	346	>2419.6	NL
	4/21/2010[2]	SM5210B/E410.4/3014	1080	2210	>2419.6	>2419.6
	6/17/2009	SM5210B/E410.4/3014	179	344	Present	Present
	12/2/2008	SM5210B/E410.4/3014	ND	ND	>60000	NL
	9/9/2008	SM5210B/E410.4/3014	299	3000	58	NL
	6/17/2008	SM5210B/E410.4/3014	327	1230	ND	ND
	3/11/2008	SM5210B/E410.4/3014	556	965	Absent	NL
EP-2	11/13/2014	SM5210B/E410.4/SM9223B	NA	NA	>24196	NL
	11/12/2014	SM5210B/E410.4/SM9223B	170	580	NA	NL
	3/5/2014	SM5210B/E410.4/SM9223B	450	1000	>2419.6	NL
	10/16/2013	SM5210B/E410.4/SM9223B	420	1100	3282	NL
	5/29/2013	SM5210B/E410.4/SM9223B	210	700	31	NL
	11/7/2012	SM5210B/E410.4/SM9223B	750	1300	<10	NL
	5/30/2012	SM5210B/E410.4/SM9223B	100	860	4106	
	11/2/2011	SM5210B/9223B	530	1560	>2419.6	NL
	5/24/2011	SM5210B/9223B	230	737	648.8	NL
	11/17/2010	SM9223B/3014	550	1020	1553.1	NL
	8/2-3/2010	SM5210B/E410.4/3014	64	172	>2419.6	NL
	4/21/2010	SM5210B/E410.4/3014	1100	2060	>2419.6	>2419.6
	6/17/2009	SM5210B/E410.4/3014	83.6	192	Present	Present
	12/2/2008	SM5210B/E410.4/3014	ND	ND	>6000	NL
	9/9/2008	SM5210B/E410.4/3014	122	2500	300	NL
	6/17/2008	SM5210B/E410.4/3014	110	790	ND	ND
	3/11/2008	SM5210B/E410.4/3014	0.71	871	Absent	NL
EP-3	11/13/2014	SM5210B/E410.4/SM9223B	NA	NA	408	NL
	11/12/2014	SM5210B/E410.4/SM9223B	120	590	NA	NL
	3/5/2014	SM5210B/E410.4/SM9223B	440	990	122	NL
	10/16/2013	SM5210B/E410.4/SM9223B	320	870	121	NL
	5/29/2013	SM5210B/E410.4/SM9223B	120	1600	<10	NL
	11/7/2012	SM5210B/E410.4/SM9223B	390	900	10	NL
	5/30/2012	SM5210B/E410.4/SM9223B	69	980	10	NL
	11/2/2011	SM5210B/9223B	140	608	>2419.6	NL
	5/24/2011	SM5210B/9223B	190	574	1.0	NL
	11/17/2010	SM9223B/3014	120	560	40.8	NL
	8/2-3/2010	SM5210B/E410.4/3014	36	238	>2419.6	NL
	4/21/2010[2]	SM5210B/E410.4/3014	200	771	100.6	>2419.6
	6/17/2009	SM5210B/E410.4/3014	69.2	204	Present	Present
	12/2/2008	SM5210B/E410.4/3014	ND	ND	>6000	NL
	9/9/2008	SM5210B/E410.4/3014	73	950	300	NL
	6/17/2008	SM5210B/E410.4/3014	9639	691	ND	ND
	3/11/2008	SM5210B/E410.4/3014	323	871	Present	NL

8.16.2 EVAPORATION PONDS (EP-1 thru EP-12B)
BOD/COD/E-COLI Analytical Result Summary

			Parameters			
			BOD (mg/L)	COD (mg/L)	E-Coli (CFU/100ml)	Total Coliform (CFU/100ml)
WQCC 20NMAC 6.2.3103			<30[1]	<125[1]	< 500 organisms per 100 ml	
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			NE	NE	MCL[6]	
SAMPLE ID	DATE SAMPLED	METHOD				
EP-4	11/13/2014	SM5210B/E410.4/SM9223B	NA	NA	63	NL
	11/12/2014	SM5210B/E410.4/SM9223B	120	670	NA	NL
	3/5/2014	SM5210B/E410.4/SM9223B	500	1000	1	NL
	10/16/2013	SM5210B/E410.4/SM9223B	270	840	31	NL
	5/29/2013	SM5210B/E410.4/SM9223B	96	700	<10	NL
	11/7/2012	SM5210B/E410.4/SM9223B	230	880	<10	NL
	5/30/2012	SM5210B/E410.4/SM9223B	59	680	<10	NL
	11/2/2011	SM5210B/9223B	62	478	547.5	NL
	5/24/2011	SM5210B/9223B	190	639	4.1	NL
	11/17/2020	SM9223B/3014	140	440	12	NL
	8/2-3/2010	SM5210B/E410.4/3014	35	204	>2419.6	NL
	4/21/2010[2]	SM5210B/E410.4/3014	281	683	<1.0	>2419.6
	6/17/2009	SM5210B/E410.4/3014	71.1	222	Present	Present
	12/2/2008	SM5210B/E410.4/3014	ND	ND	2900	NL
	9/9/2008	SM5210B/E410.4/3014	68	850	54.5	NL
	6/17/2008	SM5210B/E410.4/3014	103	110	ND	ND
	3/11/2008	SM5210B/E410.4/3014	275	663	Present	NL
EP-5	11/13/2014	SM5210B/E410.4/SM9223B	NA	NA	<1	NL
	11/12/2014	SM5210B/E410.4/SM9223B	<20.55	NA	NA	NL
	3/5/2014	SM5210B/E410.4/SM9223B	>69.15	1000	NA	NL
	10/16/2013	SM5210B/E410.4/SM9223B	220	720	31	NL
	5/29/2013	SM5210B/E410.4/SM9223B	66	600	<10	NL
	11/7/2012	SM5210B/E410.4/SM9223B	150	1000	<10	NL
	5/30/2012	SM5210B/E410.4/SM9223B	35	760	10	NL
	11/2/2011	SM5210B/9223B	29	302	5.2	NL
	5/24/2011	SM5210B/9223B	150	413	1.0	NL
	11/17/2010	SM9223B/3014	76	320	4.1	NL
	8/2-3/2010	SM5210B/E410.4/3014	40	208	1960.8	NL
	4/21/2010[2]	SM5210B/E410.4/3014	123	782	2.0	>2419.6
	6/17/2009	SM5210B/E410.4/3014	41.9	210	Absent	Present
	12/2/2008	SM5210B/E410.4/3014	ND	ND	630	NL
	9/9/2008	SM5210B/E410.4/3014	59	667	54.5	NL
	6/17/2008	SM5210B/E410.4/3014	<128	575	ND	ND
	3/11/2008	SM5210B/E410.4/3014	178	506	Present	

8.16.2 EVAPORATION PONDS (EP-1 thru EP-12B)
BOD/COD/E-COLI Analytical Result Summary

			Parameters			
			BOD (mg/L)	COD (mg/L)	E-Coli (CFU/100ml)	Total Coliform (CFU/100ml)
WQCC 20NMAC 6.2.3103			<30[1]	<125[1]	< 500 organisms per 100 ml	
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			NE	NE	MCL[6]	
SAMPLE ID	DATE SAMPLED	METHOD				
EP-6	11/13/2014	SM5210B/E410.4/SM9223B	NA	NA	<1	NL
	11/12/2014	SM5210B/E410.4/SM9223B	<15.30	NA	NA	NL
	3/5/2014	SM5210B/E410.4/SM9223B	>171.97	600	<10	NL
	10/16/2013	SM5210B/E410.4/SM9223B	<25.5	940	<10	NL
	5/29/2013	SM5210B/E410.4/SM9223B	46	710	<10	NL
	11/7/2012	SM5210B/E410.4/SM9223B	10	1000	<1.0	NL
	5/30/2012	SM5210B/E410.4/SM9223B	18	710	<1.0	NL
	11/2/2011	SM5210B/9223B	7.3	252	47.3	NL
	5/24/2011	SM5210B/9223B	71	473	<1.0	NL
	11/17/2010	SM9223B/3014	<1200	168	8.6	NL
	8/2-3/2010	SM5210B/E410.4	15	172	1892	NL
	4/21/2010[2]	SM5210B/E410.5	54.8	290	1.0	>2419.6
	6/17/2009	SM5210B/E410.4	<60	126	Absent	Present
	12/2/2008	SM5210B/E410.4	ND	ND	17.3	NL
	9/9/2008	SM5210B/E410.4	47	949	90.9	NL
	6/17/2008	SM5210B/E410.4	<128	723	ND	ND
	3/11/2008	SM5210B/E410.4	126	847	Present	NL
EP-7	11/13/2014	SM5210B/E410.4/SM9223B	NA	NA	20	NL
	11/12/2014	SM5210B/E410.4/SM9223B	28	NA	NA	NL
	3/5/2014	SM5210B/E410.4/SM9223B	11	3900	<1	NL
	10/16/2013	SM5210B/E410.4/SM9223B	37	3200	<10	NL
	5/29/2013	SM5210B/E410.4/SM9223B	19	6000	<10	NL
	11/7/2012	SM5210B/E410.4/SM9223B	21	2300	<1.0	NL
	5/30/2012	SM5210B/E410.4/SM9223B	15	3200	<1.0	NL
	11/2/2011	SM5210B/9223B	15	1240	<1.0	NL
	5/24/2011	SM5210B/9223B	27	918	<1.0	NL
	11/17/2010	SM9223B/3014	380	920	<1.0	NL
	8/2-3/2010	SM5210B/E410.4/3014	5	870	<1.0	NL
	4/21/2010[2]	SM5210B/E410.4/3014	<60.0	1010	<1.0	96
	6/17/2009	SM5210B/E410.4/3014	<60	720	Absent	Present
	12/2/2008	SM5210B/E410.4/3014	ND	ND	<1.0	NL
	9/9/2008	SM5210B/E410.4/3014	47.8	3330	24.9	NL
	6/17/2008	SM5210B/E410.4/3014	17.7	4340	ND	ND
	3/11/2008	SM5210B/E410.4/3014	15.7	2118	Absent	NL
EP-8	11/13/2014	SM5210B/E410.4/SM9223B	NA	NA	10	NL
	11/12/2014	SM5210B/E410.4/SM9223B	27	NA	NA	NL
	3/5/2014	SM5210B/E410.4/SM9223B	13	2900	<1	NL
	10/16/2013	SM5210B/E410.4/SM9223B	6.8	9800	<10	NL
	5/29/2013	SM5210B/E410.4/SM9223B	22	4600	<10	NL
	11/7/2012	SM5210B/E410.4/SM9223B	10	13000	<10	NL
	5/30/2012	SM5210B/E410.4/SM9223B	4.5	3800	<1.0	NL
	11/2/2011	SM5210B/9223B	9.0	512	32.3	NL
	5/24/2011	SM5210B/9223B	46	3140	<1.0	NL
	11/17/2010	SM9223B/3014	400	1720	<1.0	NL
	8/2-3/2010	SM5210B/E410.4/3014	5	2520	<1.0	<1
	4/21/2010[2]	SM5210B/E410.4/3014	14.3	776	<1.0	2
	6/17/2009	SM5210B/E410.4/3014	<60.0	2160	Absent	Present
	12/2/2008	SM5210B/E410.4/3014	ND	ND	<1.0	NL
	9/9/2008	SM5210B/E410.4/3014	<16.0	3080	102	NL
	6/17/2008	SM5210B/E410.4/3014	8.2	16100	ND	ND
	3/11/2008	SM5210B/E410.4/3014	17.4	1770	Absent	NL

8.16.2 EVAPORATION PONDS (EP-1 thru EP-12B)
BOD/COD/E-COLI Analytical Result Summary

			Parameters			
			BOD (mg/L)	COD (mg/L)	E-Coli (CFU/100ml)	Total Coliform (CFU/100ml)
WQCC 20NMAC 6.2.3103			<30[1]	<125[1]	< 500 organisms per 100 ml	
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			NE	NE	MCL[6]	
SAMPLE ID	DATE SAMPLED	METHOD				
EP-9	11/13/2014	SM5210B/E410.4/SM9223B	4.2	NA	<1	NL
	3/5/2014	SM5210B/E410.4/SM9223B	15	**3700**	<1	NL
	10/16/2013	SM5210B/E410.4/SM9223B	<12.3	**4700**	<10	NL
	5/29/2013	SM5210B/E410.4/SM9223B	19	**7400**	<10	NL
	11/7/2012	SM5210B/E410.4/SM9223B	7.9	**1400**	<1.0	NL
	5/30/2012	SM5210B/E410.4/SM9223B	23	**2800**	<1.0	NL
	11/2/2011	SM5210B/9223B	9.0	**1870**	<1.0	NL
	5/24/2011	SM5210B/9223B	**43**	**1640**	<1.0	NL
	11/17/2010	SM9223B/3014	**350**	**1240**	<1.0	NL
	4/21/2010[2]	SM5210B/E410.4/3014	<60.0	**760**	<1.0	85.5
EP-11	11/13/2014	SM5210B/E410.4/SM9223B	NA	NA	<10	NL
	11/12/2014	SM5210B/E410.4/SM9223B	**89**	NA	NA	NL
	3/5/2014	SM5210B/E410.4/SM9223B	**48**	**570**	<10	NL
	10/16/2013	SM5210B/E410.4/SM9223B	**190**	**530**	20	NL
	5/29/2013	SM5210B/E410.4/SM9223B	30	**610**	<10	NL
	11/7/2012	SM5210B/E410.4/SM9223B	**130**	**620**	<10	NL
	5/30/2012	SM5210B/E410.4/SM9223B	20	**890**	<10	NL
	11/2/2011	SM5210B/9223B	**40**	**486**	461.1	NL
	5/24/2011	SM5210B/9223B	**52**	**711**	<1.0	NL
	11/17/2010	SM9223B/3014	**350**	**460**	4.1	NL
	4/21/2010	SM5210B/E410.4/3014	<60.0	**492**	<1.0	71.9
EP-12A	11/13/2014	SM5210B/E410.4/SM9223B	NA	NA	131	NL
	11/12/2014	SM5210B/E410.4/SM9223B	**<37.5**	NA	NA	NL
	3/5/2014	SM5210B/E410.4/SM9223B	**210**	**560**	<10	NL
	10/16/2013	SM5210B/E410.4/SM9223B	**270**	**930**	41	NL
	5/29/2013	SM5210B/E410.4/SM9223B	**100**	**1400**	<10	NL
	11/7/2012	SM5210B/E410.4/SM9223B	**150**	**650**	<10	NL
	5/29/2012	SM5210B/E410.4/SM9223B	22	**660**	<10	NL
	11/2/2011	SM5210B/9223B	**85**	**515**	**>2419.6**	NL
	5/24/2011	SM5210B/9223B	**130**	**582**	1.0	NL
	11/17/2010	SM9223B/3014	**330**	**300**	64.4	NL
	4/21/2010	SM5210B/E410.4/3014	**87.3**	**675**	47.6	**>2419.6**

8.16.2 EVAPORATION PONDS (EP-1 thru EP-12B)
BOD/COD/E-COLI Analytical Result Summary

			Parameters			
			BOD (mg/L)	COD (mg/L)	E-Coli (CFU/100ml)	Total Coliform (CFU/100ml)
WQCC 20NMAC 6.2.3103			<30[1]	<125[1]	< 500 organisms per 100 ml	
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			NE	NE	MCL[6]	
SAMPLE ID	**DATE SAMPLED**	**METHOD**				
EP-12B	11/13/2014	SM5210B/E410.4/SM9223B	NA	NA	**1012**	NL
	11/12/2014	SM5210B/E410.4/SM9223B	**110**	NA	NA	NL
	3/5/2014	SM5210B/E410.4/SM9223B	**430**	**810**	<10	NL
	10/16/2013	SM5210B/E410.4/SM9223B	**460**	**940**	231	NL
	5/29/2013	SM5210B/E410.4/SM9223B	**260**	**770**	31	NL
	11/7/2012	SM5210B/E410.4/SM9223B	**310**	**850**	<10	NL
	5/30/2012	SM5210B/E410.4/SM9223B	**37**	**920**	<10	NL
	11/2/2011	SM5210B/9223B	**130**	**618**	**>2419.6**	NL
	5/24/2011	SM5210B/9223B	**170**	**450**	3.0	NL
	11/17/2010	SM9223B/3014	**350**	**280**	12	NL
	4/21/2010[2]	SM5210B/E410.4/3014	**342**	**1070**	**1540.2**	**>2419.6**

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
ND = No data available
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/L TDS Concentrations or Less.
1. 20 NMAC 6.2.2101 General Requirements
EPA Regional Screening Level (RSL) Summary Table
6. Fecal coliform positive or e-coli positive triggers repeat samples if any repeat sample is total coliform positive. A routine sample that is total coliform positive and fecal coliform negative or e-coli negative triggers repeat samples if any repeat sample is fecal coliform positive or e-coli positive.

NOTES
2) Used the unapproved Facility Wide Ground Water Monitoring Plan (FWGWMP) sampling guidelines for the first quarter of 2010 which included the addition of evaporation ponds 9a, 11, 12A and 12B.

8.16.3 EVAPORATION PONDS (EP-1 thru EP-12B)
Total Metals Analytical Result Summary

			Parameters												
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	1	0.01	0.05	1	1	0.05	NE	0.2	0.05	0.002	0.03	10
40 CFR 141.62 MCL (June 2015)			0.01	2	0.005	0.1	1.3	NE	0.015	NE	NE	0.05	0.002	0.03	NE
EPA RSL for Tap Water (June 2015)			0.000052	3.8	0.0092	NE	0.8	14	0.015	NE	0.43	0.1	0.00063	0.06	6
SAMPLE ID	DATE SAMPLED	METHOD													
EP-1	11/12/2014	200.7/200.8	0.047	0.13	<0.002	0.048	<0.006	2.2	<0.005	NL	0.68	0.017	0.00032	<0.005	0.059
	3/5/2014	200.7/200.8	0.013	0.12	<0.002	0.018	<0.006	0.86	<0.01	NL	0.51	<0.01	<0.0002	<0.01	0.028
	10/15/2013	200.7/200.8	0.011	0.1	<0.002	0.018	<0.006	0.56	<0.01	120	0.46	<0.01	<0.0002	<0.01	0.025
	5/28/2013	200.7/200.8	0.0062	0.057	<0.002	0.0099	<0.006	0.4	<0.005	NL	0.39	0.0077	<0.0002	0.0016	0.019
	11/6/2012	200.7/200.8	0.0095	0.037	<0.002	0.0079	<0.006	3.1	<0.005	NL	0.6	0.011	0.0022	<0.0025	0.066
	5/29/2012	200.7/200.8	0.0091	0.074	<0.002	<0.006	0.014	2.3	<0.005	NL	0.15	0.0098	0.00082	<0.0025	0.17
	11/1/2011	200.7/200.8	0.0077	0.18	<0.002	0.013	0.021	7.3	<0.005	NL	0.14	0.0067	0.0045	<0.0025	0.43
	5/23/2011	200.7/200.8	0.014	0.077	<0.002	0.055	0.013	20	<0.005	8.2	0.36	<0.05	0.0015	<0.0025	0.23
	11/16/2010	6010B	<0.1	<0.1	<0.01	0.39	<0.03	14	<0.025	NL	0.19	<0.25	0.00067	<0.02	0.89
	8/2/2010	6010B	<0.5	<0.5	<0.05	<0.15	<0.15	15	<0.13	NL	0.43	<1.3	0.0016	NL	1.3
	4/20/2010 [2]	6010B	<0.1	0.27	<0.01	<0.03	<0.03	36	<0.025	12	0.24	<0.25	<0.0002	0.00581	0.49
	6/17/2009	6010B	0.008	0.01	<0.01	<0.05	<0.01	5.6	<0.05	12.5	0.2	0.015	<0.001	<0.001	0.28
	12/2/2008	6010B	<0.02	0.098	NL	<0.01	<0.02	7.6	<0.005	16	0.27	0.041	<0.0002	<0.001	0.36
	9/9/2008	6010B	<0.02	0.076	<0.002	<0.006	<0.006	NL	<0.005	14	0.22	<0.05	<0.0002	<0.001	0.12
EP-2	11/12/2014	200.7/200.8	<0.02	0.11	<0.002	0.012	<0.006	2.8	0.002	NL	0.24	<0.02	<0.0002	0.0071	0.025
	3/5/2014	200.7/200.8	0.012	0.12	<0.002	0.013	<0.006	1.2	<0.01	NL	0.36	0.023	<0.001	0.0051	0.02
	10/15/2013	200.7/200.8	0.011	0.093	<0.002	0.0081	<0.006	0.45	<0.01	30	0.2	0.012	<0.0002	<0.01	0.032
	5/28/2013	200.7/200.8	0.013	0.056	<0.002	0.017	<0.006	3.1	<0.005	NL	0.44	0.029	<0.0002	<0.001	0.045
	11/6/2012	200.7/200.8	0.0093	0.037	<0.002	0.014	<0.006	1.3	<0.005	NL	0.37	0.0053	0.00033	<0.0025	0.025
	5/29/2012	200.7/200.8	0.011	0.064	<0.002	<0.006	<0.006	0.99	<0.005	NL	0.15	0.011	<0.0002	<0.0025	0.032
	11/1/2011	200.7/200.8	0.0083	0.059	<0.002	0.008	<0.006	3.9	<0.005	NL	0.11	0.0062	0.0015	<0.005	0.12
	5/23/2011	200.7/200.8	0.014	0.024	<0.002	0.024	<0.006	2.6	<0.005	70	0.33	<0.05	<0.0002	<0.0025	0.037
	11/16/2010	200.7/200.8	<0.1	<0.11	<0.01	0.051	<0.03	7.9	<0.025	NL	0.41	<0.25	0.00045	<0.001	0.59
	8/2/2010	6010B	<0.2	<0.2	<0.02	<0.06	<0.06	2.4	<0.05	NL	0.23	<0.5	<0.0002	<0.001	<0.5
	4/20/2010 [2]	6010B	<0.1	<0.1	<0.01	<0.03	<0.03	17	<0.025	26	0.31	<0.25	0.00077	0.0083	<0.25
	6/17/2009	6010B	0.011	<0.1	<0.01	<0.05	<0.01	2.33	<0.05	75.3	0.17	0.011	<0.001	0.002	0.08
	12/2/2008	6010B	<0.02	0.061	NL	<0.01	<0.02	2.7	<0.005	56	0.19	0.022	<0.0002	<0.001	0.089
	9/9/2008	6010B	<0.02	0.1	NL	<0.006	<0.006	NL	<0.005	84	0.21	<0.25	0.1	0.00207	0.089
EP-3	11/12/2014	200.7/200.8	<0.02	0.1	<0.002	0.0098	<0.006	1.9	<0.02	NL	0.23	<0.02	<0.0002	<0.02	0.02
	3/5/2014	200.7/200.8	0.011	0.15	<0.01	<0.03	<0.03	1	<0.01	NL	0.41	0.019	<0.0002	<0.01	<0.05
	10/15/2013	200.7/200.8	0.014	0.11	<0.002	0.007	<0.006	0.76	<0.01	130	0.19	0.015	<0.0002	<0.01	0.023
	5/28/2013	200.7/200.8	0.013	0.079	<0.002	0.011	<0.006	0.89	<0.005	NL	0.22	0.013	<0.0002	<0.005	0.016
	11/6/2012	200.7/200.8	0.0095	0.039	<0.002	0.0076	<0.006	1.7	<0.005	NL	0.48	0.008	0.00044	<0.0025	0.031
	5/29/2012	200.7/200.8	0.013	0.081	<0.002	<0.006	<0.006	0.39	<0.005	NL	0.11	0.013	<0.0002	<0.005	<0.01
	11/1/2011	200.7/200.8	0.0076	0.061	<0.002	0.0069	<0.006	2.6	<0.005	NL	0.12	0.0065	0.00055	<0.005	0.06
	5/23/2011	200.7/200.8	0.015	0.034	<0.002	0.023	<0.006	2	<0.005	86	0.33	<0.05	<0.0002	<0.0025	0.033
	11/16/2010	6010B	<0.1	<0.1	<0.01	<0.03	<0.03	0.65	<0.025	NL	0.19	<0.25	<0.0002	<0.001	<0.1
	8/2/2010	6010B	<0.2	<0.2	<0.02	<0.06	<0.06	3	<0.05	NL	0.38	<0.5	<0.0002	<0.001	<0.5
	4/20/2010 [2]	6010B	<0.1	<0.1	<0.01	<0.03	<0.03	1.6	<0.025	140	0.39	<0.25	<0.0002	0.00326	<0.25
	6/17/2009	6010B	0.013	<0.1	<0.01	<0.05	<0.01	1.75	<0.05	89.5	0.22	0.013	<0.001	0.003	0.07
	12/2/2008	6010B	0.024	0.052	NL	<0.01	<0.02	1.8	<0.005	52	0.2	0.026	<0.0002	<0.001	<0.03
	9/9/2008	6010B	<0.02	0.11	NL	<0.006	<0.006	NL	<0.005	87	0.21	<0.25	<0.0002	0.00237	0.47

8.16.3 EVAPORATION PONDS (EP-1 thru EP-12B)
Total Metals Analytical Result Summary

			Parameters												
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	0.01	**0.05**	**1**	**1**	0.05	NE	**0.2**	**0.05**	**0.002**	**0.03**	**10**
40 CFR 141.62 MCL (June 2015)			**0.01**	2	**0.005**	0.1	1.3	NE	**0.015**	NE	NE	0.05	0.002	0.03	NE
EPA RSL for Tap Water (June 2015)			0.000052	3.8	0.0092	NE	0.8	14	0.015	NE	0.43	0.1	0.00063	0.06	6
SAMPLE ID	DATE SAMPLED	METHOD													
EP-4	11/12/2014	200.7/200.8	<0.02	0.11	<0.002	0.01	<0.006	**1.7**	<0.02	NL	**0.28**	<0.02	<0.0002	<0.02	0.023
	3/5/2014	200.7/200.8	**0.012**	0.14	<0.01	<0.03	<0.03	0.99	<0.01	NL	**0.43**	0.018	<0.0002	<0.01	<0.05
	10/15/2013	200.7/200.8	**0.012**	0.091	<0.002	0.0068	<0.006	0.38	<0.01	140	0.15	0.017	<0.0002	<0.01	0.018
	5/28/2013	200.7/200.8	**0.014**	0.082	<0.002	0.012	<0.006	0.58	<0.01	NL	0.18	<0.02	<0.0002	<0.01	0.015
	11/6/2012	200.7/200.8	**0.011**	0.061	<0.002	<0.006	<0.006	**1.2**	<0.005	NL	**0.52**	0.011	<0.0002	<0.0025	0.026
	5/29/2012	200.7/200.8	**0.015**	0.064	<0.002	0.006	<0.006	0.28	<0.005	NL	0.064	0.018	<0.0002	<0.0025	<0.01
	11/1/2011	200.7/200.8	0.0087	0.077	<0.002	<0.006	<0.006	**1.2**	<0.005	NL	**0.21**	0.0078	0.00022	<0.005	0.024
	5/23/2011	200.7/200.8	**0.012**	0.065	<0.002	0.024	<0.006	0.41	<0.005	130	**0.3**	<0.05	<0.0002	<0.0025	0.018
	11/16/2010	6010B	<0.1	<0.1	<0.01	<0.03	<0.03	0.5	<0.025	NL	0.17	<0.25	<0.0002	<0.001	<0.1
	8/2/2010	6010B	<0.2	<0.2	<0.02	<0.06	<0.06	0.76	<0.05	NL	**0.31**	<0.5	<0.0002	<.001	<0.5
	4/20/2010 [2]	6010B	<0.1	0.086	<0.002	<0.006	<0.006	**2**	<0.005	140	**0.37**	<0.05	<0.0002	0.00327	<0.05
	6/17/2009	6010B	**0.012**	<0.1	<0.01	<0.05	<0.01	**1.35**	<0.05	85.2	**0.22**	0.013	<0.001	0.002	0.08
	12/2/2008	6010B	<0.02	0.057	NL	<0.01	<0.02	**1.4**	<0.005	59	0.2	0.025	<0.0002	<0.001	<0.1
	9/9/2008	6010B	<0.02	0.13	NL	<0.006	<0.006	NL	<0.005	87	**0.23**	<0.25	<0.0002	0.00187	0.021
EP-5	11/12/2014	200.7/200.8	**0.032**	0.13	<0.002	0.0077	<0.006	0.62	<0.02	NL	**0.48**	<0.05	<0.0002	<0.05	0.012
	3/5/2014	200.7/200.8	**0.015**	0.12	<0.01	<0.03	<0.03	0.6	<0.01	NL	**0.55**	0.016	<0.0002	<0.01	<0.05
	10/15/2013	200.7/200.8	**0.013**	0.09	<0.002	0.0071	<0.006	0.33	<0.01	140	0.18	0.017	<0.0002	<0.01	0.016
	5/28/2013	200.7/200.8	**0.012**	0.084	<0.002	0.012	<0.006	0.47	<0.01	NL	0.16	<0.02	<0.0002	<0.01	0.014
	11/6/2012	200.7/200.8	**0.012**	0.062	<0.002	<0.006	<0.006	0.63	<0.005	NL	**0.39**	0.012	<0.0002	<0.0025	0.023
	5/29/2012	200.7/200.8	**0.015**	0.064	<0.002	<0.006	<0.006	0.28	<0.005	NL	0.07	0.018	<0.0002	<0.0025	<0.01
	11/1/2011	200.7/200.8	**0.011**	0.094	<0.002	0.0085	<0.006	0.39	<0.005	NL	**0.27**	0.0069	.<0.0002	<0.005	0.01
	5/23/2011	200.7/200.8	**0.018**	0.083	<0.002	0.022	<0.006	0.14	<0.005	130	0.19	<0.05	<0.0002	<0.0025	0.015
	11/16/2010	6010B	<0.1	<0.1	<0.02	0.043	<0.03	0.68	<0.025	NL	**0.22**	<0.25	<0.0002	<0.001	<0.1
	8/2/2010	6010B	<0.2	<0.2	<0.02	<0.06	<0.06	<0.5	<0.05	NL	0.069	<0.5	<0.002	<0.001	<0.5
	4/20/2010 [2]	6010B	<0.1	0.11	<0.01	<0.03	<0.03	**1.1**	<0.025	180	**0.45**	<0.25	<0.0002	0.00571	<0.05
	6/17/2009	6010B	**0.013**	<0.1	<0.01	<0.05	<0.01	0.5	<0.05	116	**0.27**	0.009	<0.001	0.002	0.02
	12/2/2008	6010B	<0.02	0.084	NL	<0.01	<0.02	0.9	<0.005	82	**0.26**	0.024	<0.0002	0.001	<0.03
	9/9/2008	6010B	<0.02	0.14	<0.002	<0.006	<0.006	NL	<0.005	82	0.17	<0.25	<0.0002	0.00142	<0.02
EP-6	11/12/2014	200.7/200.8	**0.034**	0.15	<0.002	0.0082	<0.006	**1.6**	<0.02	NL	**0.55**	<0.05	<0.0002	<0.05	<0.02
	3/5/2014	200.7/200.8	**0.015**	0.12	<0.002	0.0089	<0.006	0.67	<0.01	NL	**0.59**	0.018	<0.0002	<0.01	0.014
	10/15/2013	200.7/200.8	<0.05	0.099	<0.002	0.0099	<0.006	0.1	<0.05	230	**0.22**	<0.05	<0.0002	<0.05	<0.01
	5/28/2013	200.7/200.8	**0.023**	0.09	<0.002	0.0088	<0.006	0.13	<0.01	NL	0.13	<0.02	<0.0002	<0.002	<0.01
	11/6/2012	200.7/200.8	**0.023**	0.092	<0.002	0.0076	<0.006	0.14	<0.005	NL	0.086	0.024	<0.0002	<0.0025	<0.01
	5/29/2012	200.7/200.8	**0.017**	0.1	<0.002	0.0093	<0.006	0.28	<0.005	NL	**0.42**	0.016	<0.0002	<0.0025	0.013
	11/1/2011	200.7/200.8	**0.017**	0.11	<0.002	0.015	<0.006	0.15	<0.005	NL	**0.21**	0.0089	<0.0002	<0.005	<0.01
	5/23/2011	200.7/200.8	**0.02**	0.12	<0.002	0.019	<0.006	0.17	<0.005	110	0.14	<0.05	<0.0002	<0.005	0.01
	11/16/2010	6010B	<0.1	0.14	<0.01	0.04	<0.03	<0.03	<0.025	NL	**0.33**	<0.25	<0.0002	0.001	<0.1
	8/2/2010	6010B	<0.2	<0.2	<0.02	<0.06	<0.06	<0.5	<0.05	NL	**4.8**	<0.5	<0.0002	<0.001	<0.5
	4/20/2010 [2]	6010B	<0.02	0.064	<0.002	<0.006	<0.006	0.67	<0.005	0.89	**0.4**	<0.05	<0.0002	0.00185	<0.05
	6/17/2009	6010B	**0.015**	<0.1	<0.01	<0.05	<0.01	0.2	<0.05	131	**0.31**	0.005	<0.001	0.002	<0.01
	12/2/2008	6010B	**0.024**	0.12	NL	<0.01	<0.02	0.3	<0.005	130	**0.48**	<0.02	<0.0002	0.002	<0.03
	9/9/2008	6010B	<0.02	0.11	<0.002	<0.006	<0.006	NL	<0.005	130	**0.46**	<0.25	<0.0002	0.00125	<0.02

8.16.3 EVAPORATION PONDS (EP-1 thru EP-12B)
Total Metals Analytical Result Summary

			Parameters												
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	0.01	**0.05**	**1**	**1**	0.05	NE	**0.2**	**0.05**	**0.002**	**0.03**	**10**
40 CFR 141.62 MCL (June 2015)			**0.01**	2	**0.005**	0.1	1.3	NE	**0.015**	NE	NE	0.05	0.002	0.03	NE
EPA RSL for Tap Water (June 2015)			0.000052	3.8	0.0092	NE	0.8	14	0.015	NE	0.43	0.1	0.00063	0.06	6
SAMPLE ID	**DATE SAMPLED**	**METHOD**													
EP-7	11/12/2014	200.7/200.8	**0.14**	0.2	<0.01	<0.03	<0.03	0.72	<0.05	NL	**1.1**	<0.5	<0.0002	<0.05	<0.05
	3/5/2014	200.7/200.8	**0.15**	0.11	<0.01	<0.03	<0.03	0.28	<0.1	NL	**2**	**0.12**	<0.0002	<0.1	<0.05
	10/15/2013	200.7/200.8	**0.14**	0.099	<0.01	<0.3	<0.03	0.39	<0.05	1200	**0.54**	**0.16**	<0.0002	<0.05	<0.05
	5/28/2013	200.7/200.8	**0.13**	0.11	<0.1	<0.03	<0.03	0.14	<0.05	NL	**3.1**	**0.1**	<0.0002	<0.1	<0.05
	11/6/2012	200.7/200.8	**0.14**	0.081	<0.1	<0.03	<0.03	<0.1	<0.025	NL	**0.32**	<0.25	<0.0002	<0.02	<0.05
	5/29/2012	200.7/200.8	**0.078**	0.14	<0.002	0.014	<0.006	0.18	<0.005	NL	**0.74**	**0.077**	<0.0002	<0.02	0.011
	11/1/2011	200.7/200.8	**0.049**	0.098	<0.01	<0.03	<0.03	0.39	<0.025	NL	**0.83**	0.03	<0.0002	<0.02	<0.05
	5/23/2011	200.7/200.8	**0.079**	0.13	<0.01	<0.03	<0.03	0.16	<0.025	730	**2.5**	<0.25	<0.0002	<0.01	<0.05
	1/16/2010	6010B	<0.2	<0.2	<0.02	<0.06	<0.06	0.83	<0.05	NL	**3.3**	<0.5	<0.0002	0.003	<0.2
	8/2/2010	6010B	<1.0	<1.0	<0.1	<0.3	<0.3	<2.5	<0.25	NL	**3.9**	<2.5	<0.0002	NL	<2.5
	4/20/2010 [2]	6010B	**0.1**	<0.2	<0.01	<0.03	<0.03	0.28	<0.025	620	**2.7**	<0.25	<0.0002	0.00225	<0.25
	6/17/2009	6010B	**0.055**	0.1	<0.01	<0.05	0.03	0.14	**0.08**	944	**4.44**	0.033	<0.001	0.003	<0.02
	12/2/2008	6010B	<0.01	0.14	<0.02	<0.05	<0.1	<0.5	<0.25	1000	**1.8**	<0.1	<0.0002	0.002	<0.15
	9/9/2008	6010B	<0.20	0.11	<0.02	<0.006	<0.006	NL	<0.05	960	**5.8**	<0.5	<0.0002	0.00103	<0.02
EP-8	11/12/2014	200.7/200.8	**0.14**	0.2	<0.01	<0.03	<0.03	0.57	<0.05	NL	**1.2**	<0.5	<0.0002	<0.05	<0.05
	3/5/2014	200.7/200.8	**0.12**	0.12	<0.01	<0.03	<0.03	0.28	<0.1	NL	**2.2**	<0.1	<0.0002	<0.1	<0.05
	10/15/2013	200.7/200.8	**0.35**	0.24	<0.02	<0.06	<0.06	0.23	<0.1	3500	**18**	**0.3**	<0.0002	<0.1	<0.1
	5/28/2013	200.7/200.8	**0.12**	0.13	<0.01	<0.03	<0.03	0.16	<0.02	NL	**4**	<0.1	<0.001	<0.01	<0.05
	11/6/2012	200.7/200.8	**0.5**	0.23	<0.04	<0.12	<0.12	<0.2	<0.1	NL	**34**	<2.5	<0.0002	<0.05	<0.2
	5/29/2012	200.7/200.8	**0.15**	0.17	<0.002	0.018	0.0071	0.5	<0.005	NL	**8.6**	**0.12**	<0.0002	<0.02	0.025
	11/1/2011	200.7/200.8	**0.047**	0.13	<0.002	0.017	<0.006	0.17	<0.005	NL	**1.5**	0.026	.<0.0002	<0.005	0.012
	5/23/2011	200.7/200.8	**0.42**	0.23	<0.01	<0.03	<0.06	0.41	<0.025	3300	**20**	<0.25	<0.0002	<0.0025	0.1
	11/16/2010	6010B	<0.4	<0.4	<0.04	<0.12	<0.12	<1.0	<0.025	NL	<1.0	<1.0	<0.0002	0.003	<0.4
	8/2/2010	6010B	<1.0	<1.0	<0.1	<0.3	<0.3	<2.5	<0.25	NL	**24**	<2.5	<0.0002	NL	<2.5
	4/20/2010 [2]	6010B	**0.17**	0.13	<0.01	<0.03	<0.03	0.62	<0.025	1500	**9.6**	<0.25	<0.0002	0.00227	<0.25
	6/17/2009	6010B	**0.384**	0.2	<0.01	<0.05	0.27	0.3	<0.05	4050	**28**	**0.224**	<0.001	0.004	0.13
	12/2/2008	6010B	**0.13**	0.15	<0.01	<0.05	<0.1	<0.5	<0.025	1400	**5.5**	<0.1	<0.001	0.002	<0.15
	9/9/2008	6010B	<0.1	0.12	<0.01	<0.03	<0.03	NL	<0.025	43	**2.4**	<0.25	<0.001	0.00148	<0.01
EP-9 [2]	11/12/2014	200.7/200.8	**0.2**	0.25	<0.01	<0.03	<0.03	0.19	<0.05	NL	**0.25**	<1	<0.0002	<0.05	<0.1
	3/5/2014	200.7/200.8	**0.12**	0.18	<0.01	<0.03	<0.03	0.26	<0.1	NL	**2.7**	**0.15**	<0.0002	<0.1	<0.05
	10/15/2013	200.7/200.8	<0.1	0.18	<0.01	<0.03	<0.03	0.1	<0.05	1200	**3.3**	**0.11**	<0.0002	<0.05	<0.05
	5/28/2013	200.7/200.8	**0.095**	0.2	<0.01	<0.03	<0.03	<0.1	<0.05	NL	**3.4**	<0.1	<0.0002	<0.01	<0.05
	11/6/2012	200.7/200.8	**0.055**	0.15	<0.01	<0.03	<0.03	0.13	<0.025	NL	**0.94**	<0.25	<0.0002	<0.01	<0.05
	5/29/2012	200.7/200.8	**0.081**	0.17	<0.002	0.0096	<0.006	0.11	<0.005	NL	**4.7**	**0.074**	<0.0002	<0.02	0.014
	11/1/2011	200.7/200.8	**0.087**	0.2	<0.01	<0.03	<0.03	0.037	<0.025	NL	**1.9**	**0.051**	<0.0002	<0.02	<0.05
	5/23/2011	200.7/200.8	0.1	0.2	<0.01	<0.03	<0.03	0.18	<0.025	970	**7.4**	<0.25	<0.0002	<0.01	<0.05
	11/16/2010	6010B	<0.4	<0.4	<0.04	<0.12	<0.12	<1.0	<0.1	NL	**6.7**	<1.0	<0.0002	0.003	<0.4
	4/20/2010 [2]	6010B	<0.1	0.14	<0.01	<0.03	<0.03	0.62	<0.025	790	**29**	<0.25	<0.0002	0.0022	<0.25

8.16.3 EVAPORATION PONDS (EP-1 thru EP-12B)
Total Metals Analytical Result Summary

			Parameters												
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	0.01	**0.05**	**1**	**1**	0.05	NE	**0.2**	**0.05**	**0.002**	**0.03**	**10**
40 CFR 141.62 MCL (June 2015)			**0.01**	2	**0.005**	0.1	1.3	NE	**0.015**	NE	NE	0.05	0.002	0.03	NE
EPA RSL for Tap Water (June 2015)			0.000052	3.8	0.0092	NE	0.8	14	0.015	NE	0.43	0.1	0.00063	0.06	6
SAMPLE ID	**DATE SAMPLED**	**METHOD**													
EP-11 [2]	11/12/2014	200.7/200.8	**0.14**	0.16	<0.01	<0.03	<0.03	0.38	<0.05	NL	**1.2**	<0.5	<0.0002	<0.05	<0.05
	3/5/2014	200.7/200.8	**0.042**	0.081	<0.002	0.013	<0.006	0.79	<0.01	NL	**0.99**	0.041	<0.0002	<0.01	0.019
	10/15/2013	200.7/200.8	<0.05	0.072	<0.002	0.011	<0.006	0.42	<0.05	240	**0.41**	<0.05	<0.0002	<0.05	<0.01
	5/28/2013	200.7/200.8	**0.042**	0.064	<0.002	0.01	<0.006	0.12	<0.01	NL	**0.44**	<0.05	<0.0002	<0.005	<0.01
	11/6/2012	200.7/200.8	**0.017**	0.051	<0.002	0.0065	<0.006	0.99	<0.005	NL	**0.35**	0.014	<0.0002	<0.0025	0.024
	5/29/2012	200.7/200.8	**0.028**	0.086	<0.002	0.0099	<0.006	0.48	<0.005	NL	**0.8**	0.017	<0.0002	<0.0025	0.014
	11/1/2011	200.7/200.8	0.0083	0.071	<0.002	<0.006	<0.006	**1.2**	<0.005	NL	0.19	0.0084	<0.0002	<0.005	0.021
	5/23/2011	200.7/200.8	**0.061**	0.085	<0.01	<0.03	<0.03	0.22	<0.025	340	**0.9**	<0.25	<0.0002	<0.01	<0.05
	11/16/2010	6010B	<0.1	0.14	<0.01	**0.35**	<0.03	**1.3**	<0.025	NL	**0.88**	<0.25	<0.0002	0.002	<0.1
	4/20/2010 [2]	6010B	<0.1	<0.1	<0.01	<0.03	<0.03	0.42	<0.025	420	**1.6**	<0.25	<0.0002	0.00197	<0.25
EP-12A [2]	11/12/2014	200.7/200.8	<0.05	0.14	<0.002	0.018	<0.006	**4.1**	<0.05	NL	**0.44**	<0.05	<0.0002	<0.05	0.019
	3/5/2014	200.7/200.8	**0.019**	0.059	<0.002	0.014	<0.006	**1.9**	<0.01	NL	**0.95**	0.02	<0.0002	<0.01	0.021
	10/15/2013	200.7/200.8	<0.05	0.072	<0.002	0.011	<0.006	0.65	<0.05	45	**0.38**	<0.05	<0.0002	<0.05	0.016
	5/28/2013	200.7/200.8	**0.018**	0.054	<0.002	0.012	<0.006	0.67	<0.01	NL	**0.23**	<0.02	<0.0002	<0.01	0.015
	11/6/2012	200.7/200.8	**0.015**	0.053	<0.002	<0.006	<0.006	0.86	<0.005	NL	**0.32**	0.013	<0.0002	<0.0025	0.02
	5/29/2012	200.7/200.8	**0.025**	0.083	<0.002	0.0097	<0.006	0.52	<0.005	NL	**0.75**	0.017	<0.0002	<0.0025	0.016
	11/1/2011	200.7/200.8	0.0085	0.065	<0.002	0.0067	<0.006	**1.9**	<0.005	NL	0.14	0.0063	0.00035	<0.005	0.04
	5/23/2011	200.7/200.8	**0.024**	0.061	<0.002	0.02	<0.006	0.22	<0.005	120	**0.32**	<0.05	<0.0002	<0.0025	0.016
	11/16/2010	6010B	<0.1	<0.1	<0.01	<0.03	<0.03	**1.1**	<0.025	NL	**0.4**	<0.25	<0.0002	0.002	<0.1
	4/20/2010 [2]	6010B	<0.1	<0.1	<0.01	<0.03	<0.03	0.92	<0.025	110	**0.28**	<0.25	<0.0002	0.00175	<0.25
EP-12B [2]	11/12/2014	200.7/200.8	<0.05	0.087	<0.002	0.011	<0.006	**1.4**	<0.05	NL	**0.27**	<0.05	<0.0002	<0.05	0.019
	3/5/2014	200.7/200.8	**0.014**	0.08	<0.002	0.013	<0.006	**1.2**	<0.01	NL	**0.55**	0.014	<0.0002	<0.01	0.014
	10/15/2013	200.7/200.8	**0.011**	0.08	<0.002	0.0076	<0.006	0.38	<0.01	31	0.2	0.012	<0.0002	<0.01	0.023
	5/28/2013	200.7/200.8	**0.013**	0.049	<0.002	0.013	<0.006	**1.3**	<0.01	NL	**0.25**	<0.02	<0.0002	<0.01	0.025
	11/6/2012	200.7/200.8	0.0092	0.04	<0.002	0.0069	<0.006	**1.6**	<0.005	NL	**0.47**	0.0089	0.00042	<0.0025	0.031
	5/29/2012	200.7/200.8	**0.016**	0.072	<0.002	<0.006	<0.006	0.32	<0.005	NL	0.12	0.017	<0.0002	<0.0025	<0.01
	11/1/2011	200.7/200.8	0.0076	0.063	<0.002	0.0073	<0.006	**2.4**	<0.005	NL	0.13	0.006	0.00055	<0.005	0.059
	5/23/2011	200.7/200.8	**0.016**	0.05	<0.002	0.022	<0.006	0.59	<0.005	110	**0.29**	<0.05	<0.0002	<0.0025	0.02
	11/16/2010	6010B	<0.1	<0.1	<0.01	<0.03	<0.03	0.84	<0.025	NL	0.15	<0.25	<0.0002	<0.001	<0.25
	4/20/2010 [2]	6010B	<0.1	<0.1	<0.01	<0.03	<0.03	**4.2**	<0.025	83	**0.35**	<0.25	<0.0002	0.00291	<0.25

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
1) National Secondary Drinking Water Regulation (May 2009); Action Level
EPA Regional Screening Level (RSL) Summary Table

NOTES
2) Used the unapproved Facility Wide Ground Water Monitoring Plan (FWGWMP) sampling guidelines for the first quarter of 2010 which included the addition of evaporation ponds 9, 11, 12A and 12B.

8.16.4 EVAPORATION PONDS (EP-1 thru EP-12B)
Dissolved Metals Analytical Result Summary

			Parameters											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1.0**	0.01	**0.05**	**1.0**	**1.0**	0.05	**0.2**	**0.05**	**0.05**	**0.03**	**10.0**
SAMPLE ID	**DATE SAMPLED**	**METHOD**												
EP-1	11/12/2014	200.7/200.8	**0.041**	0.12	<0.01	0.036	<0.03	**1.2**	<0.01	**0.66**	0.013	<0.025	<0.01	0.058
	3/5/2014	200.7/200.8	<0.01	0.13	<0.002	0.018	<0.006	0.78	<0.01	**0.53**	<0.01	<0.005	<0.01	0.021
	10/15/2013	200.7/200.8	0.01	0.1	<0.002	0.017	<0.006	0.42	<0.005	**0.45**	<0.01	<0.05	<0.01	0.017
	5/28/2013	200.7/200.8	<0.01	0.061	<0.01	<0.03	<0.03	0.25	<0.01	**0.43**	<0.01	<0.025	<0.01	<0.05
	11/6/2012	200.7/200.8	0.0088	0.034	<0.002	0.0073	<0.006	**2.2**	<0.005	**0.66**	0.0072	<0.005	0.0011	0.099
	5/29/2012	200.7/200.8	0.0084	0.046	<0.002	<0.006	<0.006	0.76	<0.005	0.15	0.011	<0.005	<0.005	0.074
	11/1/2011	200.7/200.8	0.0047	0.012	<0.002	<0.006	<0.006	1	<0.005	0.12	0.015	<0.005	<0.002	0.059
	5/23/2011	200.7/200.8	<0.01	0.014	<0.01	0.047	<0.03	**15**	<0.025	**0.34**	<0.25	<0.025	<0.005	0.13
	11/16/2010	6010B	<0.1	<0.1	<0.1	<0.03	<0.03	**4.3**	<0.025	0.15	<0.25	<0.025	<0.001	<0.25
	8/2/2010	6010B	<0.02	0.072	<0.002	0.013	<0.006	**2.5**	<0.005	**0.36**	<0.05	<0.025	<0.001	0.096
	4/20/2010 [2]	6010B	<0.02	0.085	<0.002	0.019	0.0091	**29**	<0.005	**0.24**	**0.066**	<0.005	0.00442	0.28
EP-2	11/12/2014	200.7/200.8	**0.011**	0.076	<0.002	0.0099	<0.006	**1.4**	<0.01	**0.21**	<0.01	<0.005	<0.01	0.056
	3/5/2014	200.7/200.8	<0.01	0.13	<0.002	0.016	<0.006	0.72	<0.01	**0.38**	0.042	<0.005	<0.01	0.01
	10/15/2013	200.7/200.8	<0.01	0.085	<0.002	0.0071	<0.006	0.27	<0.005	0.19	0.011	<0.005	<0.01	0.017
	5/28/2013	200.7/200.8	**0.012**	0.059	<0.01	<0.03	<0.03	**3.2**	<0.01	**0.48**	0.024	<0.025	<0.01	0.092
	11/6/2012	200.7/200.8	0.01	0.034	<0.002	0.012	<0.006	**1.2**	<0.005	**0.36**	0.0041	<0.005	<0.001	0.045
	5/29/2012	200.7/200.8	**0.011**	0.06	<0.002	<0.006	<0.006	0.46	<0.005	0.15	0.011	<0.005	<0.005	0.024
	11/1/2011	200.7/200.8	0.0058	0.042	<0.002	0.0065	<0.006	**1.1**	<0.005	0.11	0.0057	<0.005	<0.002	0.044
	5/23/2011	200.7/200.8	**0.014**	0.026	<0.01	<0.03	<0.03	**1.7**	<0.025	**0.33**	<0.25	<0.025	<0.005	<0.05
	11/16/2010	6010B	<0.1	<0.1	<0.01	<0.03	<0.03	0.71	<0.025	0.18	<0.25	<0.025	<0.001	<0.25
	8/2/2010	6010B	<0.1	<0.1	<0.01	<0.03	<0.03	**2.2**	<0.025	**0.27**	<0.25	<0.025	<0.001	<0.25
	4/20/2010 [2]	6010B	<0.02	0.057	<0.002	0.013	<0.006	**9.7**	<0.005	**0.34**	<0.25	<0.005	0.0046	0.12
EP-3	11/12/2014	200.7/200.8	**0.012**	0.1	<0.002	0.0091	<0.006	**1.6**	<0.01	**0.23**	<0.01	<0.005	<0.01	0.016
	3/5/2014	200.7/200.8	<0.01	0.13	<0.002	0.013	<0.006	0.65	<0.01	**0.41**	0.021	<0.005	<0.01	<0.01
	10/15/2013	200.7/200.8	0.01	0.085	<0.002	0.0073	<0.006	0.2	<0.005	0.15	0.015	<0.05	<0.01	0.012
	5/28/2013	200.7/200.8	**0.011**	0.088	<0.01	<0.03	<0.03	0.41	<0.01	**0.26**	0.013	<0.025	<0.01	0.072
	11/6/2012	200.7/200.8	0.0081	0.04	<0.002	0.0065	<0.006	1	<0.005	**0.52**	0.0053	<0.005	0.0014	0.076
	5/29/2012	200.7/200.8	**0.014**	0.076	<0.002	<0.006	<0.006	0.22	<0.005	0.1	0.022	<0.005	<0.01	0.033
	11/1/2011	200.7/200.8	0.0066	0.053	<0.002	<0.006	<0.006	**1.3**	<0.005	0.12	0.0056	<0.005	<0.005	0.03
	5/23/2011	200.7/200.8	**0.014**	0.033	<0.002	0.024	<0.006	**1.5**	<0.005	**0.34**	<0.05	<0.005	<0.005	0.033
	11/16/2010	6010B	<0.1	<0.1	<0.01	<0.03	<0.03	0.24	<0.025	0.15	<0.25	<0.025	<0.001	<0.25
	8/2/2010	6010B	<0.1	0.12	<0.002	0.0093	<0.006	**1.8**	<0.005	**0.37**	<0.05	<0.005	<0.001	<0.05
	4/20/2010 [2]	6010B	<0.1	<0.1	<0.01	<0.03	<0.03	0.88	<0.025	**0.42**	<0.25	<0.005	0.00258	<0.25
EP-4	11/12/2014	200.7/200.8	**0.012**	0.11	<0.002	0.01	<0.006	**1.3**	0.0013	**0.27**	0.011	<0.005	0.0039	0.017
	3/5/2014	200.7/200.8	<0.01	0.13	<0.002	0.012	<0.006	0.58	<0.01	**0.43**	0.021	<0.005	<0.01	<0.01
	10/15/2013	200.7/200.8	**0.012**	0.084	<0.002	<0.006	<0.006	0.26	<0.005	0.15	0.017	<0.05	<0.01	0.013
	5/28/2013	200.7/200.8	**0.013**	0.085	<0.01	<0.03	<0.03	0.31	<0.01	0.19	0.019	<0.025	<0.01	<0.05
	11/6/2012	200.7/200.8	0.0076	0.068	<0.002	<0.006	<0.006	0.29	<0.005	**0.59**	<0.01	<0.005	<0.001	0.13
	5/29/2012	200.7/200.8	**0.017**	0.06	<0.002	0.0067	<0.006	0.2	<0.005	0.061	0.024	<0.005	<0.005	0.036
	11/1/2011	200.7/200.8	0.0086	0.073	<0.002	<0.006	<0.006	0.78	<0.005	0.2	0.0084	<0.005	<0.005	0.022
	5/23/2011	200.7/200.8	**0.017**	0.067	<0.002	0.024	<0.006	0.19	<0.005	**0.33**	<0.05	<0.005	<0.005	0.019
	11/16/2010	6010B	<0.1	<0.1	<0.01	<0.03	<0.03	0.22	<0.025	0.14	<0.25	<0.025	<0.001	<0.25
	8/2/2010	6010B	<0.1	<0.1	<0.01	<0.03	<0.03	1	<0.025	**0.33**	<0.25	<0.025	0.002	<0.25
	4/20/2010 [2]	6010B	<0.1	<0.1	<0.01	<0.03	<0.03	0.95	<0.025	**0.41**	<0.25	<0.005	0.00292	<0.25

8.16.4 EVAPORATION PONDS (EP-1 thru EP-12B)
Dissolved Metals Analytical Result Summary

			Parameters											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1.0**	0.01	**0.05**	**1.0**	**1.0**	0.05	**0.2**	**0.05**	**0.05**	**0.03**	**10.0**
SAMPLE ID	**DATE SAMPLED**	**METHOD**												
EP-5	11/12/2014	200.7/200.8	**0.025**	0.13	<0.002	0.0089	<0.006	0.24	<0.02	**0.48**	<0.02	<0.005	<0.02	<0.01
	3/5/2014	200.7/200.8	**0.012**	0.1	<0.01	<0.03	<0.03	0.46	<0.01	**0.55**	0.021	<0.025	<0.01	<0.05
	10/15/2013	200.7/200.8	**0.013**	0.089	<0.002	0.0079	<0.006	0.27	<0.005	0.18	0.018	<0.05	<0.01	0.012
	5/28/2013	200.7/200.8	**0.013**	0.085	<0.01	<0.03	<0.03	0.28	<0.01	0.16	0.019	<0.025	<0.1	<0.05
	11/6/2012	200.7/200.8	0.0075	0.07	<0.002	<0.006	<0.006	0.25	<0.005	**0.45**	<0.05	<0.005	<0.001	0.034
	5/29/2012	200.7/200.8	**0.017**	0.059	<0.002	0.0069	<0.006	0.19	<0.005	0.065	0.023	<0.005	<0.01	0.023
	11/1/2011	200.7/200.8	0.0098	0.085	<0.002	0.007	<0.006	0.3	<0.005	**0.24**	0.0075	<0.005	<0.005	<0.1
	5/23/2011	200.7/200.8	**0.018**	0.086	<0.002	0.023	<0.006	0.049	<0.005	**0.21**	<0.05	<0.005	<0.005	0.015
	11/16/2010	6010B	<0.1	<0.1	<0.01	0.031	<0.03	0.37	<0.025	0.19	<0.25	<0.025	<0.001	<0.25
	8/2/2010	6010B	<0.1	<0.1	<0.01	<0.03	<0.03	0.42	<0.025	**0.3**	<0.25	<0.025	0.003	<0.25
	4/20/2010 [2]	6010B	<0.1	0.12	<0.01	<0.03	<0.03	0.71	<0.025	**0.49**	<0.25	<0.005	0.00271	<0.25
EP-6	11/12/2014	200.7/200.8	**0.027**	0.14	<0.01	<0.03	<0.03	0.2	<0.02	**0.53**	0.025	<0.025	<0.02	<0.05
	3/5/2014	200.7/200.8	**0.015**	0.11	<0.002	0.0091	<0.006	0.45	<0.01	**0.6**	0.024	<0.005	<0.01	0.011
	10/15/2013	200.7/200.8	<0.05	0.098	<0.002	0.0086	<0.006	0.077	<0.005	**0.22**	<0.05	<0.05	<0.05	<0.01
	5/28/2013	200.7/200.8	**0.021**	0.096	<0.01	<0.03	<0.03	<0.1	<0.01	0.15	0.02	<0.025	<0.01	0.069
	11/6/2012	200.7/200.8	**0.022**	0.11	<0.02	<0.06	<0.06	0.053	<0.05	0.1	0.014	<0.05	<0.005	<0.1
	5/29/2012	200.7/200.8	**0.02**	0.094	<0.002	0.011	<0.006	0.11	<0.005	**0.41**	0.017	<0.005	<0.01	0.019
	11/1/2011	200.7/200.8	**0.02**	0.11	<0.002	0.014	<0.006	0.076	<0.005	0.19	0.011	<0.005	<0.01	0.011
	5/23/2011	200.7/200.8	**0.016**	0.11	<0.01	<0.03	<0.03	0.13	<0.025	0.13	<0.25	<0.025	<0.005	<0.05
	11/16/2010	6010B	<0.1	0.12	<0.01	<0.03	<0.03	0.18	<0.025	**0.3**	<0.25	<0.025	0.001	<0.25
	8/2/2010	6010B	<0.1	<0.1	<0.01	<0.03	<0.03	0.033	<0.025	0.045	<0.25	<0.025	0.002	<0.25
	4/20/2010 [2]	6010B	<0.02	0.068	<0.002	<0.006	<0.006	0.38	<0.005	**0.43**	<0.05	<0.005	0.00169	0.5
EP-7	11/12/2014	200.7/200.8	**0.11**	0.19	<0.01	<0.03	<0.03	0.35	<0.02	**0.8**	<0.2	<0.025	<0.02	<0.05
	3/5/2014	200.7/200.8	**0.11**	0.11	<0.01	<0.03	<0.03	0.15	<0.1	**2.1**	**0.13**	<0.025	<0.1	<0.05
	10/15/2013	200.7/200.8	**0.13**	0.096	<0.01	<0.03	<0.03	<0.1	<0.025	**0.38**	**0.19**	<0.025	<0.05	<0.05
	5/28/2013	200.7/200.8	**0.11**	0.11	<0.01	<0.03	<0.03	<0.1	<0.02	**2.9**	**0.11**	<0.025	<0.02	<0.05
	11/6/2012	200.7/200.8	**0.12**	0.14	<0.02	<0.06	<0.06	<0.2	<0.05	**0.72**	<0.5	<0.05	<0.02	<0.1
	5/29/2012	200.7/200.8	**0.081**	0.14	<0.02	<0.06	<0.06	<0.2	<0.05	**0.74**	**0.086**	<0.05	<0.02	<0.1
	11/1/2011	200.7/200.8	<0.05	0.09	<0.01	<0.03	<0.03	<0.1	<0.025	**0.6**	<0.05	<0.025	<0.05	<0.05
	5/23/2011	200.7/200.8	**0.068**	0.13	<0.01	<0.03	<0.03	<0.1	<0.025	**1.9**	<0.25	<0.025	<0.01	<0.05
	11/16/2010	6010B	<0.2	<0.2	<0.02	<0.06	<0.06	0.19	<0.05	**2.3**	<0.5	<0.05	0.003	<0 .5
	8/2/2010	6010B	<0.4	<0.4	<0.04	<0.12	<0.12	<0.2	<0.1	**3.4**	<1.0	<0.1	0.003	<1.0
	4/20/2010 [2]	6010B	<0.1	<0.1	<0.01	<0.03	<0.03	<0.1	<0.025	**2.5**	<0.25	<0.025	0.00228	<0.25
EP-8	11/12/2014	200.7/200.8	**0.11**	0.17	<0.01	<0.03	<0.03	0.23	<0.02	**0.77**	<0.2	<0.025	<0.02	<0.05
	3/5/2014	200.7/200.8	**0.11**	0.11	<0.01	<0.03	<0.03	0.14	<0.1	**2.1**	**0.12**	<0.025	<0.1	<0.05
	10/15/2013	200.7/200.8	**0.37**	0.22	<0.01	0.039	<0.03	<0.1	**0.064**	**18**	**0.47**	<0.1	<0.05	<0.05
	5/28/2013	200.7/200.8	**0.11**	0.12	<0.01	<0.03	<0.03	<0.1	<0.02	**3**	**0.088**	<0.025	<0.02	<0.05
	11/6/2012	200.7/200.8	**0.47**	0.26	<0.04	<0.12	<0.12	<0.4	<0.1	**36**	<1.0	<0.1	0.0011	<0.2
	5/29/2012	200.7/200.8	**0.16**	0.18	<0.02	<0.06	<0.06	<0.2	<0.05	**7.3**	**0.13**	<0.05	<0.02	<0.1
	11/1/2011	200.7/200.8	**0.05**	0.13	<0.01	<0.03	<0.03	<0.1	<0.025	**1.1**	0.03	<0.025	<0.02	<0.05
	5/23/2011	200.7/200.8	**0.38**	0.25	<0.02	<0.06	<0.06	<0.1	<0.05	**20**	<0.5	<0.05	<0.05	<0.1
	11/16/2010	6010B	<0.4	<0.4	<0.04	<0.12	<0.12	0.11	<0.1	**9.1**	<1.0	<0.1	0.003	1
	8/2/2010	6010B	**0.77**	<0.4	<0.04	<0.12	<0.12	<0.2	<0.1	**22**	<1.0	<0.1	0.001	1
	4/20/2010 [2]	6010B	<0.2	<0.2	<0.02	<0.06	<0.06	0.26	<0.05	**10**	<0.05	<0.05	0.00166	<0.5

8.16.4 EVAPORATION PONDS (EP-1 thru EP-12B)
Dissolved Metals Analytical Result Summary

			Parameters											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1.0**	0.01	**0.05**	**1.0**	**1.0**	0.05	**0.2**	**0.05**	**0.05**	**0.03**	**10.0**
SAMPLE ID	**DATE SAMPLED**	**METHOD**												
EP-9 [2]	11/12/2014	200.7/200.8	**0.16**	0.25	<0.01	<0.03	<0.03	<0.1	<0.05	0.18	<0.5	<0.025	<0.05	0.051
	3/5/2014	200.7/200.8	0.1	0.19	<0.01	<0.03	<0.03	0.14	<0.1	**2.8**	**0.13**	<0.025	<0.1	<0.05
	10/15/2013	200.7/200.8	0.1	0.19	<0.01	<0.03	<0.03	<0.1	<0.025	**3.3**	**0.15**	<0.025	<0.05	<0.05
	5/28/2013	200.7/200.8	**0.07**	0.19	<0.01	<0.03	<0.03	<0.01	<0.02	**3**	**0.091**	<0.05	<0.02	<0.05
	11/6/2012	200.7/200.8	**0.048**	0.17	<0.02	<0.06	<0.06	<0.2	<0.05	**0.92**	<0.5	<0.05	<0.01	<0.1
	5/29/2011	200.7/200.8	**0.086**	0.18	<0.02	<0.06	<0.06	<0.2	<0.05	**4.8**	**0.084**	<0.05	<0.02	<0.1
	11/1/2011	200.7/200.8	**0.089**	0.2	<0.01	<0.03	<0.03	<0.1	<0.025	**1.3**	**0.057**	<0.025	<0.05	<0.05
	5/23/2011	200.7/200.8	**0.083**	0.21	<0.01	<0.03	<0.03	<0.1	<0.025	**6.8**	<0.25	<0.025	<0.02	<0.05
	11/16/2010	6010B	<0.4	<0.4	<0.04	<0.12	<0.12	<0.4	<0.1	**5.3**	<1.0	<0.1	0.003	<1.0
	4/20/2010 [2]	6010B	<0.2	0.14	<0.01	<0.03	<0.03	0.17	<0.025	**2.6**	<0.25	<0.025	0.00221	<0.25
EP-11 [2]	11/12/2014	200.7/200.8	**0.1**	0.16	<0.01	<0.03	<0.03	0.31	<0.02	**1**	<0.5	<0.025	<0.05	0.061
	3/5/2014	200.7/200.8	**0.04**	0.074	<0.002	0.011	<0.006	0.48	<0.01	**0.99**	0.039	<0.025	<0.01	0.013
	10/15/2013	200.7/200.8	<0.05	0.067	<0.002	0.0096	<0.006	0.21	<0.005	**0.41**	<0.05	<0.05	<0.05	<0.01
	5/28/2013	200.7/200.8	**0.04**	0.068	<0.01	<0.03	<0.03	<0.1	<0.01	**0.48**	0.022	<0.025	<0.01	<0.05
	11/6/2012	200.7/200.8	**0.013**	0.056	<0.002	<0.006	<0.006	0.79	<0.005	**0.4**	0.011	<0.005	0.0012	0.043
	5/29/2011	200.7/200.8	**0.03**	0.081	<0.002	0.011	<0.006	0.16	<0.005	**0.78**	0.019	<0.005	<0.01	0.023
	11/1/2011	200.7/200.8	0.008	0.068	<0.002	<0.006	<0.006	0.89	<0.005	0.19	0.0079	<0.005	<0.005	0.015
	5/23/2011	200.7/200.8	**0.055**	0.087	<0.01	<0.03	<0.03	0.066	<0.025	**0.89**	<0.25	<0.025	<0.01	<0.05
	11/16/2010	6010B	<0.1	0.12	<0.01	<0.03	<0.03	0.48	<0.025	**0.64**	<0.25	<0.025	0.002	<0.25
	4/20/2010 [2]	6010B	<0.1	<0.1	<0.01	<0.03	<0.03	0.15	<0.025	**1.6**	<0.25	<0.025	0.00211	<0.25
EP-12A [2]	11/12/2014	200.7/200.8	**0.021**	0.11	<0.02	<0.06	<0.06	**2.2**	<0.02	**0.43**	<0.02	<0.05	<0.02	<0.1
	3/5/2014	200.7/200.8	**0.016**	0.055	<0.002	0.011	<0.006	**1.4**	<0.01	**1**	0.017	<0.005	<0.01	0.015
	10/15/2013	200.7/200.8	<0.05	0.066	<0.002	0.0098	<0.006	0.53	<0.005	**0.37**	<0.05	<0.025	<0.05	0.013
	5/28/2013	200.7/200.8	**0.015**	0.057	<0.01	<0.03	<0.03	0.49	<0.01	**0.25**	0.018	<0.025	<0.01	0.069
	11/6/2012	200.7/200.8	**0.012**	0.057	<0.002	<0.006	<0.006	0.7	<0.005	**0.38**	0.01	<0.005	0.0012	0.05
	5/29/2012	200.7/200.8	**0.026**	0.075	<0.002	0.011	<0.006	0.16	<0.005	**0.73**	0.018	<0.005	<0.01	0.08
	11/1/2011	200.7/200.8	0.0072	0.058	<0.002	<0.006	<0.006	1	<0.005	0.13	0.0059	<0.005	<0.005	0.022
	5/23/2011	200.7/200.8	**0.025**	0.063	<0.002	0.021	<0.006	0.098	<0.005	**0.31**	<0.05	<0.005	<0.005	0.017
	11/16/2010	6010B	<0.1	<0.1	<0.01	<0.03	<0.03	0.4	<0.025	**0.27**	<0.25	<0.025	0.002	<0.25
	4/20/2010 [2]	6010B	<0.2	0.074	<0.002	<0.006	<0.006	0.55	<0.005	**0.28**	<0.05	<0.005	0.00166	<0.05
EP-12B [2]	11/12/2014	200.7/200.8	<0.02	0.076	<0.002	0.01	<0.006	**1.3**	<0.02	**0.24**	<0.02	<0.005	<0.02	0.023
	3/5/2014	200.7/200.8	**0.012**	0.073	<0.002	0.013	<0.006	0.61	<0.01	**0.57**	0.017	<0.005	<0.01	<0.01
	10/15/2013	200.7/200.8	<0.05	0.074	<0.002	0.0083	<0.006	0.26	<0.005	0.2	<0.05	<0.005	<0.05	0.016
	5/28/2013	200.7/200.8	<0.01	0.052	<0.01	<0.03	<0.03	0.78	<0.01	**0.27**	0.014	<0.025	<0.01	<0.05
	11/6/2012	200.7/200.8	**0.013**	0.042	<0.002	0.0068	<0.006	**1.1**	<0.005	**0.52**	0.012	<0.005	0.0082	0.072
	5/29/2012	200.7/200.8	**0.019**	0.067	<0.002	0.0071	<0.006	0.18	<0.005	0.11	0.024	<0.005	<0.01	0.015
	11/1/2011	200.7/200.8	0.0065	0.055	<0.002	<0.006	<0.006	0.98	<0.005	0.12	0.0058	<0.005	<0.005	0.024
	5/23/2011	200.7/200.8	**0.015**	0.05	<0.002	0.022	<0.006	0.27	<0.005	**0.27**	<0.05	<0.005	<0.005	0.019
	11/16/2010	6010B	<0.1	<0.1	<0.01	<0.03	<0.03	0.84	<0.025	0.15	<0.25	<0.025	<0.001	<0.25
	4/20/2010 [2]	6010B	<0.2	0.064	<0.002	<0.006	<0.006	**1.8**	<0.005	**0.35**	<0.05	<0.005	0.00297	<0.05

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
1) National Secondary Drinking Water Regulation (May 2009); Action Level
EPA Regional Screening Level (RSL) Summary Table

NOTES:
2) Used the unapproved Facility Wide Ground Water Monitoring Plan (FWGWMP) sampling guidelines for the first quarter of 2010 which included the addition of evaporation ponds 9, 11, 12A and 12B.

8.16.5 EVAPORATION PONDS (EP-1 thru EP-12B)

Volatile Organic Compound Analytical Result Summary

			Parameters										
			1,2,4-Trimethyl benzene (mg/L)	1,3,5-Trimethyl benzene (mg/L)	Naphthalene (mg/L)	Acetone (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	2-Butanone (mg/L)	Carbon disulfide (mg/L)	Chloroform (mg/L)	Chloromethane (mg/L)	n-Butyl benzene (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	0.01	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	NE	NE	NE	NE	NE	**0.08**	NE	NE
EPA RSL for Tap Water (June 2015)			**0.015**	**0.12**	**0.00165** [1]	**14.1** [1]	**0.0011**	**0.036**	**5.56** [1]	**0.81** [1]	0.00022	**0.0203** [1]	**1**
SAMPLE ID	**DATE SAMPLED**	**METHOD**											
EP-1	11/12/2014	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	3/5/2014	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	10/15/2013	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	5/28/2013	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	11/6/2012	8260B	<0.01	<0.01	<0.02	0.41	<0.04	<0.04	<0.1	0.32	<0.01	<0.03	<0.03
	5/29/2012	8260B	<0.01	<0.01	<0.02	0.61	<0.04	<0.04	0.11	<0.1	<0.01	<0.03	<0.01
	11/1/2011	8260B	<0.01	<0.01	<0.02	1.4	<0.04	<0.04	0.18	<0.1	<0.01	<0.03	<0.01
	5/23/2011	8260B	<0.01	<0.01	<0.02	1.8	<0.04	<0.04	0.2	<0.1	<0.01	<0.03	<0.01
	8/2/2010	8260B	**0.016**	<0.005	**0.016**	0.73	**0.044**	**0.07**	0.086	<0.05	<0.005	<0.005	<0.005
	4/20/2010	8260B	0.0055	0.0018	**0.011**	1.7	**0.027**	**0.045**	0.1	<0.01	<0.01	<0.01	<0.01
	6/17/2009	8260B	**0.023**	0.0074	**0.012**	0.46	**0.054**	**0.054**	<0.05	<0.05	<0.005	<0.005	<0.005
	12/2/2008	8260B	**0.13**	0.046	**0.074**	1	**0.14**	**0.22**	0.094	<0.05	<0.005	<0.005	0.021
	9/9/2008	8260B	**0.027**	0.0095	**0.033**	1.6	**0.062**	**0.088**	0.15	0.039	<0.001	<0.001	0.0087
	6/17/2008	8260B	**0.017**	0.0044	**0.031**	1.6	**0.072**	**0.3**	0.19	0.011	<0.005	<0.005	0.0055
	3/11/2008	8260B	**0.038**	0.11	**0.2**	1.4	**0.28**	**0.39**	0.16	<0.05	<0.005	<0.005	0.046
EP-2	11/12/2014	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	3/5/2014	8260B	<0.01	<0.01	<0.02	0.67	<0.04	<0.04	<0.1	0.11	<0.01	<0.03	<0.03
	10/15/2013	8260B	<0.01	<0.01	<0.02	0.6	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	5/28/2013	8260B	<0.01	<0.01	<0.02	4.6	<0.04	<0.04	0.47	<0.1	<0.01	<0.03	<0.03
	11/6/2012	8260B	<0.01	<0.01	<0.02	2.4	<0.04	<0.04	0.38	<0.1	<0.01	<0.03	<0.03
	5/29/2012	8260B	<0.01	<0.01	<0.02	0.43	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.01
	11/1/2011	8260B	<0.01	<0.01	<0.02	0.51	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.01
	5/23/2011	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	0.12	<0.01	<0.03	<0.01
	8/2/2010	8260B	<0.005	<0.0058	<0.01	0.27	<0.02	<0.02	<0.05	<0.05	<0.005	<0.005	<0.005
	4/20/2010	8260B	4.6E-03	0.0014	**0.01**	0.15	**0.032**	**0.052**	<0.01	0.021	<0.01	<0.01	<0.01
	6/17/2009	8260B	**0.026**	0.0085	**0.012**	0.56	**0.078**	**0.078**	0.05	0.057	<0.005	<0.005	0.0054
	12/2/2008	8260B	**0.028**	0.0097	**0.016**	0.65	**0.037**	**0.053**	0.072	0.026	<0.005	<0.005	0.0041
	9/9/2008	8260B	6.4E-03	0.0021	**0.0064**	0.36	**0.016**	0.023	0.035	0.025	<0.001	<0.001	0.0025
	6/17/2008	8260B	0.015	<0.01	**0.014**	0.64	**0.033**	**0.05**	0.08	<0.001	<0.001	<0.001	0.009
	3/11/2008	8260B	0.012	0.0032	**0.02**	1.7	**0.034**	**0.049**	0.12	0.018	<0.001	<0.001	0.0014
EP-3	11/12/2014	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	3/5/2014	8260B	<0.01	<0.01	<0.02	0.3	<0.04	<0.04	<0.1	0.14	<0.01	<0.03	<0.03
	10/15/2013	8260B	<0.01	<0.01	<0.02	0.16	<0.04	<0.04	<0.1	<0.01	<0.01	<0.03	<0.03
	5/28/2013	8260B	<0.01	<0.01	<0.02	0.2	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	11/6/2012	8260B	<0.01	<0.01	<0.02	0.24	<0.04	<0.04	<0.1	0.38	<0.01	<0.03	<0.03
	5/29/2012	8260B	<0.01	<0.01	<0.02	0.21	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.01
	11/1/2011	8260B	<0.01	<0.01	<0.02	0.11	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.01
	5/23/2011	8206B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	0.13	<0.01	<0.03	<0.01
	8/2/2010	8260B	<0.005	<0.005	<0.1	0.22	<0.02	<0.02	<0.05	<0.05	<0.005	<0.005	<0.005
	4/20/2010	8260B	<0.001	<0.001	**0.0023**	0.21	0.0076	0.012	0.014	0.043	<0.001	<0.001	<0.001
	6/17/2009	8260B	1.8E-03	<0.01	<0.01	0.047	0.0063	0.0061	<0.01	<0.01	<0.001	<0.001	<0.001
	12/2/2008	8260B	**0.018**	0.0065	**0.011**	0.67	**0.024**	0.035	0.064	0.028	<0.001	<0.001	0.0024
	9/9/2008	8260B	<0.01	<0.01	<0.02	0.11	<0.04	<0.04	<1.0	<1.0	<0.1	<0.1	<0.1
	6/17/2008	8260B	0.002	<0.01	**0.003**	0.16	**0.015**	0.023	0.018	0.01	<0.1	<0.1	<0.1
	3/11/2008	8260B	4.3E-03	0.001	**0.0087**	0.92	**0.02**	0.028	0.064	0.045	<0.001	<0.001	<0.001

8.16.5 EVAPORATION PONDS (EP-1 thru EP-12B)

Volatile Organic Compound Analytical Result Summary

			Parameters										
			1,2,4-Trimethyl benzene (mg/L)	1,3,5-Trimethyl benzene (mg/L)	Naphthalene (mg/L)	Acetone (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	2-Butanone (mg/L)	Carbon disulfide (mg/L)	Chloroform (mg/L)	Chloromethane (mg/L)	n-Butyl benzene (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	0.01	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	NE	NE	NE	NE	NE	**0.08**	NE	NE
EPA RSL for Tap Water (June 2015)			**0.015**	**0.12**	**0.00165** [1]	**14.1** [1]	**0.0011**	**0.036**	**5.56** [1]	**0.81** [1]	0.00022	**0.0203** [1]	**1**
SAMPLE ID	**DATE SAMPLED**	**METHOD**											
EP-4	11/12/2014	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	3/5/2014	8260B	<0.01	<0.01	<0.02	0.31	<0.04	<0.04	<0.1	0.15	<0.01	<0.03	<0.03
	10/15/2013	8260B	<0.01	<0.01	<0.02	0.12	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	5/28/2013	8260B	<0.01	<0.01	<0.02	0.12	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	11/6/2012	8260B	<0.01	<0.01	<0.02	0.13	<0.04	<0.04	<0.1	0.78	<0.01	<0.03	<0.03
	5/29/2012	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.01
	11/1/2011	8260B	<0.01	<0.01	<0.02	0.11	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.01
	5/23/2011	8260B	<0.01	<0.01	<0.02	0.12	<0.04	<0.04	<0.1	0.14	<0.01	<0.03	<0.01
	8/2/2010	8260B	<0.001	<0.001	<0.002	0.1	<0.004	<0.004	0.011	<0.01	<0.001	<0.001	<0.001
	4/20/2010	8260B	<0.001	<0.001	<0.002	0.19	0.005	0.0073	0.014	0.041	<0.001	<0.001	<0.001
	6/17/2009	8260B	<0.001	<0.001	<0.02	0.04	<0.04	<0.04	<0.01	<0.01	<0.001	<0.001	<0.001
	12/2/2008	8260B	0.013	0.0048	**0.0075**	0.6	**0.014**	0.021	0.043	0.034	<0.001	<0.001	0.0023
	9/9/2008	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.01	<0.01
	6/17/2008	8260B	<0.01	<0.01	<0.02	0.059	<0.04	<0.04	<0.1	0.05	<0.01	<0.01	<0.01
	3/11/2008	8260B	2.8E-03	<0.01	**0.0066**	0.8	**0.015**	0.022	0.042	0.063	<0.001	<0.001	<0.001
EP-5	11/12/2014	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	3/5/2014	8260B	<0.01	<0.01	<0.02	0.28	<0.04	<0.04	<0.1	0.12	<0.01	<0.03	<0.03
	10/15/2013	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	5/28/2013	8260B	<0.01	<0.01	<0.02	0.11	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	11/6/2012	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	**1.3**	<0.01	<0.03	<0.03
	5/29/2012	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.01
	11/1/2011	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.01
	5/23/2011	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	0.15	<0.01	<0.03	<0.01
	8/2/2010	8260B	<0.001	<0.001	<0.002	0.045	<0.004	<0.004	<0.1	<0.1	<0.01	<0.01	<0.01
	4/20/2010	8260B	<0.001	<0.001	<0.002	0.13	<0.004	0.0046	0.011	0.047	<0.001	<0.001	<0.001
	6/17/2009	8260B	<0.001	<0.001	<0.02	0.031	<0.004	<0.004	<0.01	<0.01	<0.001	<0.001	<0.001
	12/2/2008	8260B	**0.048**	0.019	**0.0025**	0.2	0.0061	0.0089	0.016	0.015	<0.01	<0.01	0.0011
	9/9/2008	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.01	<0.01
	6/17/2008	8260B	<0.01	<0.01	<0.02	0.046	<0.04	<0.04	<0.1	0.033	<0.01	<0.01	<0.01
	3/11/2008	8260B	1.5E-03	<0.001	**0.0037**	0.19	**0.011**	0.017	0.023	0.097	<0.01	<0.01	<0.01
EP-6	11/12/2014	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	3/5/2014	8260B	<0.01	<0.01	<0.02	0.14	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	10/15/2013	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	5/28/2013	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	0.11	<0.01	<0.03	<0.03
	11/6/2012	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	5/29/2012	8260B	<0.001	<0.001	<0.002	<0.01	<0.004	<0.004	<0.01	<0.01	<0.001	<0.003	<0.001
	11/1/2011	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.01
	5/23/2011	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.01
	8/2/2010	8260B	<0.001	<0.001	<0.002	0.02	<0.004	<0.004	<0.1	<0.1	<0.01	<0.01	<0.01
	4/20/2010	8260B	<0.001	<0.001	<0.002	0.044	<0.004	<0.004	<0.1	<0.1	<0.001	<0.001	<0.001
	6/17/2009	8260B	<0.001	<0.001	<0.002	<0.01	<0.004	<0.004	<0.1	<0.1	<0.001	<0.001	<0.001
	12/2/2008	8260B	0.001	<0.001	<0.002	<0.01	<0.04	<0.04	<0.1	<0.1	<0.01	<0.01	<0.01
	9/9/2008	8260B	<0.001	<0.001	<0.002	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.01	<0.01
	6/17/2008	8260B	<0.001	<0.001	<0.002	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.01	<0.01
	3/11/2008	8260B	0.002	<0.001	**0.004**	0.64	**0.015**	0.02	0.032	0.04	<0.01	<0.01	<0.01

8.16.5 EVAPORATION PONDS (EP-1 thru EP-12B)

Volatile Organic Compound Analytical Result Summary

			Parameters										
			1,2,4-Trimethyl benzene (mg/L)	1,3,5-Trimethyl benzene (mg/L)	Naphthalene (mg/L)	Acetone (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	2-Butanone (mg/L)	Carbon disulfide (mg/L)	Chloroform (mg/L)	Chloromethane (mg/L)	n-Butyl benzene (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	0.01	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	NE	NE	NE	NE	NE	**0.08**	NE	NE
EPA RSL for Tap Water (June 2015)			**0.015**	**0.12**	**0.00165 [1]**	**14.1 [1]**	**0.0011**	**0.036**	**5.56 [1]**	**0.81 [1]**	0.00022	**0.0203 [1]**	**1**
SAMPLE ID	**DATE SAMPLED**	**METHOD**											
EP-7	11/12/2014	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	3/5/2014	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	10/15/2013	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	5/28/2013	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	11/6/2012	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	5/29/2012	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.01
	11/1/2011	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.01
	5/23/2011	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.01
	8/2/2010	8260B	<0.001	<0.001	<0.002	0.061	<0.004	<0.004	<0.01	<0.01	<0.001	<0.001	<0.001
	4/20/2010	8260B	<0.001	<0.001	<0.002	0.023	<0.004	<0.004	<0.01	<0.01	<0.001	<0.001	<0.001
	6/17/2009	8260B	1.1E-03	<0.001	<0.02	0.034	<0.04	<0.04	<0.01	<0.01	<0.001	<0.001	<0.001
	12/2/2008	8260B	1.3E-03	<0.001	<0.02	0.017	<0.04	<0.04	<0.01	<0.01	<0.01	<0.01	<0.01
	9/9/2008	8260B	<0.01	<0.01	<0.02	<0.02	<0.04	<0.04	<0.01	<0.01	<0.01	<0.01	<0.01
	6/17/2008	8260B	1.2E-03	<0.001	<0.02	0.049	<0.04	<0.04	<0.01	<0.01	<0.01	<0.01	<0.01
	3/11/2008	8260B	<0.001	<0.001	<0.02	0.034	<0.04	<0.04	<0.01	<0.01	<0.01	<0.01	<0.01
EP-8	11/12/2014	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	3/5/2014	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	10/15/2013	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	5/28/2013	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	11/6/2012	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.1	<0.03	<0.03
	5/29/2012	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.1	<0.03	<0.01
	11/1/2011	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.1	<0.03	<0.01
	5/23/2011	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.01
	8/2/2010	8260B	<0.001	<0.001	<0.002	0.066	<0.004	<0.004	<0.01	<0.01	<0.001	<0.001	<0.001
	4/20/2010	8260B	<0.001	<0.001	<0.002	0.038	<0.004	<0.004	<0.01	<0.01	<0.001	<0.001	<0.001
	6/17/2009	8260B	<0.001	<0.001	<0.002	0.099	<0.004	<0.004	<0.01	<0.01	<0.001	0.0014	<0.001
	12/2/2008	8260B	<0.001	<0.001	<0.002	<0.1	<0.004	<0.004	<0.01	<0.01	<0.001	<0.001	<0.001
	9/9/2008	8260B	<0.001	<0.001	<0.002	<0.1	<0.004	<0.004	<0.01	<0.01	<0.001	<0.001	<0.001
	6/17/2008	8260B	1.1E-03	<0.001	<0.002	0.12	<0.004	<0.004	0.014	<0.01	0.0014	<0.001	<0.001
	3/11/2008	8260B	<0.001	<0.001	<0.002	0.024	<0.001	<0.001	<0.01	<0.01	<0.001	<0.001	<0.001
EP-9 [2]	11/12/2014	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	3/5/2014	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	10/15/2013	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	5/28/2013	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	11/6/2012	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	5/29/2012	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.01
	11/1/2011	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.01
	5/23/2011	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.01
	4/20/2010	8260B	<0.001	<0.001	<0.002	0.015	<0.004	<0.004	<0.01	<0.01	<0.001	<0.001	<0.001
EP-11 [2]	11/12/2014	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	3/5/2014	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	10/15/2013	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	5/28/2013	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	11/6/2012	8260B	<0.01	<0.01	<0.02	0.12	<0.04	<0.04	<0.1	0.59	<0.01	<0.03	<0.03
	5/29/2012	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.01
	11/1/2011	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.03	<0.1	<0.01	<0.03	<0.01
	5/23/2011	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.01
	4/20/2010	8260B	<0.001	<0.001	<0.002	0.039	<0.004	<0.004	<0.01	<0.01	<0.001	<0.001	<0.001

8.16.5 EVAPORATION PONDS (EP-1 thru EP-12B)

Volatile Organic Compound Analytical Result Summary

			Parameters										
			1,2,4-Trimethyl benzene (mg/L)	1,3,5-Trimethyl benzene (mg/L)	Naphthalene (mg/L)	Acetone (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	2-Butanone (mg/L)	Carbon disulfide (mg/L)	Chloroform (mg/L)	Chloromethane (mg/L)	n-Butyl benzene (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	0.01	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	NE	NE	NE	NE	NE	**0.08**	NE	NE
EPA RSL for Tap Water (June 2015)			**0.015**	**0.12**	**0.00165 [1]**	**14.1 [1]**	**0.0011**	**0.036**	**5.56 [1]**	**0.81 [1]**	0.00022	**0.0203 [1]**	**1**
SAMPLE ID	**DATE SAMPLED**	**METHOD**											
EP-12A [2]	11/12/2014	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	3/5/2014	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	10/15/2013	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	5/28/2013	8260B	<0.01	<0.01	<0.02	0.17	<0.04	<0.04	<0.1	0.14	<0.01	<0.03	<0.03
	11/6/2012	8260B	<0.01	<0.01	<0.02	0.15	<0.04	<0.04	<0.1	0.61	<0.01	<0.03	<0.03
	5/29/2012	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.01
	11/1/2011	8260B	<0.01	<0.01	<0.02	0.16	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.01
	5/23/2011	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	0.1	<0.01	<0.03	<0.01
	4/20/2011	8260B	<0.001	<0.001	<0.002	0.13	<0.004	<0.004	0.011	0.034	<0.001	<0.001	<0.001
EP-12B [2]	11/12/2014	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	3/5/2014	8260B	<0.01	<0.01	<0.02	<0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	10/15/2013	8260B	<0.01	<0.01	<0.02	0.28	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	5/28/2013	8260B	<0.01	<0.01	<0.02	0.53	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.03
	11/6/2012	8260B	<0.01	<0.01	<0.02	0.24	<0.04	<0.04	<0.1	0.47	<0.01	<0.03	<0.03
	5/29/2012	8260B	<0.01	<0.01	<0.02	0.1	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.01
	11/1/2011	8260B	<0.01	<0.01	<0.02	0.16	<0.04	<0.04	<0.1	<0.1	<0.01	<0.03	<0.01
	5/23/2011	8260B	<0.01	<0.01	<0.02	0.18	<0.04	<0.04	<0.1	0.17	<0.01	<0.03	<0.01
	4/20/2011	8260B	1.6E-03	<0.001	**0.0034**	0.3	**0.012**	0.019	0.025	0.035	<0.001	<0.001	<0.001

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or less.
a) Human Health Standards; b) Other Standards for Domestic Water
40 CFR 141.62 Detection limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table (Nov 2011)
1) NMED Tap Water (Dec 2014)

NOTES:
2) Unapproved monitoring schedule was used at the beginning of 2010 which included the addition of evaporation ponds 9, 11, 12A and 12B.

8.16.6 EVAPORATION PONDS (EP-1 thru EP-12B)

Semi Volatile Organic Compound Analytical Result Summary

			Parameters															
			Aniline (mg/L)	Benzoic acid (mg/L)	Benzyl alcohol (mg/L)	Bis(2-ethyl hexyl)phthalate (mg/L)	Carbazole (mg/L)	2,4-Dimethyl phenol (mg/L)	Fluorene (mg/L)	2-Methyl naphthalene (mg/L)	2-Methyl phenol (mg/L)	3+4-Methyl phenol (mg/L)	Naphthalene (mg/L)	2-Nitrophenol (mg/L)	Phenanthrene (mg/L)	Phenol (mg/L)	Pyrene (mg/L)	Pyridine (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	**0.005**	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	**0.006**	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			**0.013**	**75**	**2**	0.0056	NE	**0.354** [1]	**0.288** [1]	**0.036**	**0.93**	**0.0015**	**0.00165** [1]	NE	NE	5.8	**0.12**	**0.02**
SAMPLE ID	**SAMPLE DATE**	**METHOD**																
EP-1	11/12/2014	8270C	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.04	0.062	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05
	3/5/2014	8270C	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.04	<0.05	**0.14**	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05
	10/15/2013	8270C	<0.01	<0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.013**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	5/28/2013	8270C	<0.03	<0.06	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
	11/6/2012	8270C	**0.072**	<0.1	<0.05	<0.05	<0.05	0.09	<0.05	<0.05	0.41	**0.7**	<0.05	<0.05	<0.05	**1.4**	<0.05	<0.05
	5/29/2012	8270C	**0.07**	<0.1	<0.05	<0.05	<0.05	0.07	<0.05	<0.05	0.31	**0.7**	<0.05	<0.05	0.051	**1.1**	<0.05	<0.05
	11/1/2011	8270C	**0.82**	<0.1	<0.05	<0.05	<0.05	**0.43**	<0.05	<0.05	**2.5**	**5.0**	<0.05	<0.05	<0.05	**9.7**	<0.5	<0.05
	5/23/2011	8270C	**0.42**	<0.1	<0.05	<0.05	<0.05	0.26	<0.05	<0.05	**2.0**	**3.6**	<0.05	<0.05	<0.05	**6.4**	<0.5	<0.05
	11/16/2010	8270C	**0.6**	<0.02	<0.01	<0.01	0.017	0.36	0.017	**0.18**	**2.1**	**4.2**	**0.025**	<0.1	0.11	**8.5**	0.012	<0.01
	4/20/2010 [2]	8270C	<0.05	<0.1	<0.05	<0.05	<0.05	0.063	<0.05	**0.075**	<0.05	<0.05	<0.05	<0.05	0.11	**0.091**	<0.05	<0.05
EP-2	11/12/2014	8270C	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.04	<0.05	<0.05	<0.02	<0.05	<0.05	**0.058**	<0.05	<0.05
	3/5/2014	8270C	**0.044**	0.097	<0.01	<0.01	<0.01	0.029	<0.01	<0.04	0.14	**0.35**	<0.02	<0.01	<0.01	**0.87**	<0.01	<0.01
	10/15/2013	8270C	<0.01	0.057	<0.01	<0.01	<0.01	0.015	<0.01	<0.01	0.082	**0.2**	<0.01	<0.01	<0.01	**0.42**	<0.01	<0.01
	5/28/2013	8270C	**0.16**	<0.04	<0.02	<0.02	<0.02	**0.38**	<0.02	<0.02	**2.2**	**4.3**	<0.02	<0.02	<0.02	**7.4**	<0.02	<0.02
	11/6/2012	8270C	**0.11**	<0.1	<0.05	<0.05	<0.05	0.16	<0.05	<0.05	**0.92**	**1.3**	<0.05	<0.05	<0.05	**2.3**	<0.05	<0.05
	5/29/2012	8270C	**0.11**	<0.1	<0.05	<0.05	<0.05	0.11	<0.05	<0.05	0.58	**0.81**	<0.05	<0.05	<0.05	**1.7**	<0.05	<0.05
	11/1/2011	8270C	**0.25**	<0.1	<0.05	<0.05	<0.05	0.16	<0.05	<0.05	**1.1**	**2.0**	<0.05	<0.05	<0.05	**3.6**	<0.05	<0.05
	5/23/2011	8270C	**0.27**	<0.02	0.02	**0.013**	<0.01	0.18	<0.01	<0.01	**1.2**	**2.5**	<0.01	<0.01	<0.01	**2.7**	<0.01	<0.01
	11/16/2010	8270C	**0.48**	<0.02	0.011	<0.05	0.01	0.24	<0.05	**0.089**	**1.5**	**2.1**	**0.027**	<0.01	0.014	**3.3**	<0.01	0.011
	4/20/2010 [2]	8270C	<0.05	0.16	<0.05	<0.05	<0.05	0.06	<0.05	**0.075**	0.88	**1.4**	<0.05	0.073	0.1	**2.8**	<0.05	<0.05
EP-3	11/12/2014	8270C	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.04	<0.05	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05
	3/5/2014	8270C	**0.045**	<0.02	<0.01		<0.01	0.026	<0.01	<0.04	0.11	**0.29**	<0.02	<0.01	<0.01	**0.79**	<0.01	<0.01
	10/15/2013	8270C	<0.05	<0.2	<0.05	<0.05	<0.05	0.059	<0.05	<0.05	0.25	**0.45**	<0.05	<0.05	<0.05	**1.0**		
	5/28/2013	8270C	<0.05	<0.1	<0.05	<0.05	<0.05	0.11	<0.05	<0.05	**0.96**	**1.9**	<0.05	<0.05	<0.05	**3.7**		
	11/6/2012	8270C	**0.12**	<0.04	0.026	<0.02	<0.02	0.1	<0.02	<0.02	0.52	**0.96**	<0.02	<0.02	<0.02	**2.0**		
	5/29/2012	8270C	<0.1	<0.02	<0.1	<0.1	<0.1	0.13	<0.1	<0.1	**0.87**	**1.6**	<0.1	<0.1	<0.1	**3.3**		
	11/1/2011	8270C	**0.21**	<0.1	<0.05	<0.05	<0.05	0.16	<0.05	<0.05	**1.1**	**1.5**	<0.05	.<0.05	<0.5	**2.9**		
	5/23/2011	8270C	**0.083**	<0.02	<0.01	<0.01	<0.01	0.092	<0.01	<0.01	0.63	**1.6**	<0.01	<0.01	<0.01	**1.6**		
	11/16/2010	8270C	**0.26**	<0.02	<0.01	<0.01	<0.01	0.14	<0.05	0.026	0.91	**1.9**	<0.01	<0.01	<0.01	**2.4**		
	4/20/2010 [2]	8270C	**0.22**	<0.1	<0.05	<0.05	<0.05	0.094	<0.05	<0.05	0.77	**1.2**	<0.05	<0.05	<0.05	**2.8**		
EP-4	11/12/2014	8270C	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.04	<0.05	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05
	3/5/2014	8270C	**0.04**	<0.02	<0.01		<0.01	0.022	<0.01	<0.04	0.08	**0.21**	<0.02	<0.01	<0.01	**0.42**	<0.01	<0.01
	10/15/2013	8270C	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.18	**0.34**	<0.05	<0.05	<0.05	**0.67**		
	5/28/2013	8270C	**0.029**	<0.04	<0.02	<0.02	<0.02	0.071	<0.02	<0.02	0.48	**1.0**	<0.02	<0.02	<0.02	**1.4**		
	11/6/2012	8270C	**0.06**	<0.1	<0.05	<0.05	<0.05	0.072	<0.05	<0.05	0.29	**0.53**	<0.05	<0.05	<0.05	**1.1**		
	5/29/2012	8270C	<0.05	<0.1	<0.05	<0.05	<0.05	0.11	<0.05	<0.05	0.78	**1.2**	<0.05	<0.05	<0.05	**2.9**		
	11/1/2011	8270C	**0.067**	<0.1	<0.05	<0.05	<0.05	0.11	<0.05	<0.05	0.64	**0.84**	<0.05	<0.05	<0.05	**1.1**		
	5/23/2011	8270C	**0.22**	<0.02	<0.01	<0.01	<0.01	0.28	<0.01	<0.01	**1.2**	**2.8**	<0.01	<0.01	<0.01	**2.3**		
	11/16/2010	8270C	**0.21**	<0.02	<0.01	**0.015**	<0.01	0.11	<0.05	<0.01	0.55	**1.3**	<0.01	<0.01	<0.01	**1.6**		
	4/20/2010 [2]	8270C	**0.18**	<0.1	<0.05	<0.05	<0.05	0.073	<0.05	<0.05	0.62	**0.96**	<0.05	<0.05	<0.05	**2.1**		

8.16.6 EVAPORATION PONDS (EP-1 thru EP-12B)

Semi Volatile Organic Compound Analytical Result Summary

			Parameters															
			Aniline (mg/L)	Benzoic acid (mg/L)	Benzyl alcohol (mg/L)	Bis(2-ethyl hexyl)phthalate (mg/L)	Carbazole (mg/L)	2,4-Dimethyl phenol (mg/L)	Fluorene (mg/L)	2-Methyl naphthalene (mg/L)	2-Methyl phenol (mg/L)	3+4-Methyl phenol (mg/L)	Naphthalene (mg/L)	2-Nitrophenol (mg/L)	Phenanthrene (mg/L)	Phenol (mg/L)	Pyrene (mg/L)	Pyridine (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	**0.005**	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	**0.006**	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			**0.013**	**75**	**2**	0.0056	NE	**0.354** [1]	**0.288** [1]	**0.036**	**0.93**	**0.0015**	**0.00165** [1]	NE	NE	5.8	**0.12**	**0.02**
SAMPLE ID	**SAMPLE DATE**	**METHOD**																
EP-5	11/12/2014	8270C	<0.01	<0.02	<0.01	**0.013**	<0.01	<0.01	<0.01	<0.04	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01
	3/5/2014	8270C	**0.023**	<0.02	<0.01		<0.01	0.018	<0.01	<0.04	0.082	**0.2**	<0.02	<0.01	<0.01	**0.26**	<0.01	<0.01
	10/15/2013	8270C	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.16	**0.26**	<0.05	<0.05	<0.05	**0.54**		
	5/28/2013	8270C	**0.032**	<0.04	<0.02	<0.02	<0.02	0.084	<0.02	<0.02	0.46	**0.93**	<0.02	<0.02	<0.02	**1.2**		
	11/6/2012	8270C	<0.05	<0.1	<0.05	<0.05	<0.05	0.074	<0.05	<0.05	0.27	**0.4**	<0.05	<0.05	<0.05	**0.9**		
	5/29/2012	8270C	**0.057**	<0.1	<0.05	<005	<0.05	<0.05	<0.05	<0.05	0.82	**1.1**	<0.05	<0.05	<0.05	**2.7**		
	11/1/2011	8270C	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.1	**0.089**	<0.05	<0.05	<0.05	**0.052**		
	5/23/2011	8270C	**0.11**	<0.02	<0.01	<0.01	<0.01	0.22	<0.01	<0.01	**1.1**	**2.6**	<0.01	<0.01	<0.01	**1.8**		
	11/16/2010	8270C	**0.12**	<0.1	<0.05	<005	<0.05	0.09	<0.05	<0.05	0.6	**1.1**	<0.05	<0.05	<0.05	**1.2**		
	4/20/2010 [2]	8270C	**0.17**	<0.1	<0.05	<0.05	<0.05	0.074	<0.05	<0.05	0.64	**1.0**	<0.05	<0.05	<0.05	**2.2**		
EP-6	11/12/2014	8270C	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.04	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01
	3/5/2014	8270C	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.04	<0.05	**0.088**	<0.02	<0.05	<0.05	**0.28**	<0.05	<0.05
	10/15/2013	8270C	<0.01	<0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	5/28/2013	8270C	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	0.26	**0.23**	<0.1	<0.1	<0.1	**0.14**		
	11/6/2012	8270C	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
	5/29/2012	8270C	**0.036**	<0.02	<0.01	<0.01	<0.01	0.034	<0.01	<0.01	0.43	**0.41**	<0.01	<0.01	<0.01	**0.72**		
	11/1/2011	8270C	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	5/23/2011	8270C	**0.069**	<0.02	<0.01	**0.019**	<0.01	0.11	<0.01	<0.01	0.56	**1.1**	<0.01	<0.01	<0.01	**1.3**		
	11/16/2010	8270C	<0.01	<0.02	<0.01	**0.011**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.032**		
	4/20/2010 [2]	8270C	**0.081**	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.3	**0.44**	<0.05	<0.05	<0.05	**0.38**		
EP-7	11/12/2014	8270C	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.04	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01
	3/5/2014	8270C	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.04	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01
	10/15/2013	8270C	<0.01	<0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	5/28/2013	8270C	<0.03	<0.06	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03		
	11/6/2012	8270C	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
	5/29/2012	8270C	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	11/1/2011	8270C	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.018**	<0.01	<0.01	<0.01	**0.04**		
	5/23/2011	8270C	<0.01	<0.02	<0.01	**0.019**	<0.01	<0.01	<0.01	<0.01	<0.01	**0.045**	<0.01	<0.01	<0.01	**0.17**		
	11/16/2010	8270C	<0.01	<0.02	<0.01	**0.011**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	4/20/2010 [2]	8270C	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		

8.16.6 EVAPORATION PONDS (EP-1 thru EP-12B)

Semi Volatile Organic Compound Analytical Result Summary

			Parameters															
			Aniline (mg/L)	Benzoic acid (mg/L)	Benzyl alcohol (mg/L)	Bis(2-ethyl hexyl)phthalate (mg/L)	Carbazole (mg/L)	2,4-Dimethyl phenol (mg/L)	Fluorene (mg/L)	2-Methyl naphthalene (mg/L)	2-Methyl phenol (mg/L)	3+4-Methyl phenol (mg/L)	Naphthalene (mg/L)	2-Nitrophenol (mg/L)	Phenanthrene (mg/L)	Phenol (mg/L)	Pyrene (mg/L)	Pyridine (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	**0.005**	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	**0.006**	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			**0.013**	**75**	**2**	0.0056	NE	**0.354** [1]	**0.288** [1]	**0.036**	**0.93**	**0.0015**	**0.00165** [1]	NE	NE	5.8	**0.12**	**0.02**
SAMPLE ID	**SAMPLE DATE**	**METHOD**																
EP-8	11/12/2014	8270C	<0.011	<0.022	<0.011	**0.018**	<0.011	<0.011	<0.011	<0.04	<0.011	<0.011	<0.02	<0.011	<0.011	<0.011	<0.011	<0.011
	3/5/2014	8270C	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.04	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01
	10/15/2013	8270C	<0.01	<0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	5/28/2013	8270C	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	11/6/2012	8270C	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
	5/29/2012	8270C	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	11/1/2011	8270C	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	5/23/2011	8270C	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	11/16/2010	8270C	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	4/20/2010 [2]	8270C	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
EP-9 [2]	11/12/2014	8270C	<0.01	<0.02	<0.01	**0.018**	<0.01	<0.01	<0.01	<0.04	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01
	3/5/2014	8270C	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.04	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01
	10/15/2013	8270C	<0.01	<0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	5/28/2013	8270C	<0.03	<0.06	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03		
	11/6/2012	8270C	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
	5/29/2012	8270C	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.07	**0.12**	<0.01	<0.01	<0.01	**0.23**		
	11/1/2011	8270C	<0.02	<0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		
	5/23/2011	8270C	<0.02	<0.04	<0.02	**0.022**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		
	11/16/2010	8270C	<0.01	<0.02	<0.01	**0.013**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	4/20/2010	8270C	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
EP-11 [2]	11/12/2014	8270C	<0.01	<0.02	<0.01	**0.013**	<0.01	<0.01	<0.01	<0.04	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01
	3/5/2014	8270C	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.04	<0.05	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05
	10/15/2013	8270C	<0.01	<0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	5/28/2013	8270C	<0.02	<0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		
	11/6/2012	8270C	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.2	**0.33**	<0.05	<0.05	<0.05	**0.68**		
	5/29/2012	8270C	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
	11/1/2011	8270C	**0.067**	<0.1	<0.05	<0.05	<0.05	0.055	<0.05	<0.05	0.46	**0.75**	<0.05	<0.05	<0.05	**1.3**		
	5/23/2011	8270C	<0.01	<0.02	<0.01	**0.017**	<0.01	0.065	<0.01	<0.01	0.42	**1.1**	<0.01	<0.01	<0.01	**2.1**		
	11/16/2010	8270C	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	4/20/2010	8270C	<0.01	<0.02	<0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
EP-12A [2]	11/12/2014	8270C	<0.01	<0.02	<0.01	**0.012**	<0.01	<0.01	<0.01	<0.04	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01
	3/5/2014	8270C	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.04	<0.05	<0.05	<0.02	<0.05	<0.05	**0.2**	<0.05	<0.05
	10/15/2013	8270C	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.1	**0.16**	<0.05	<0.05	<0.05	**0.35**		
	5/28/2013	8270C	**0.031**	<0.01	<0.01	<0.01	<0.01	0.11	<0.01	<0.01	0.56	**1.3**	<0.01	<0.01	<0.01	**2.0**		
	11/6/2012	8270C	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.15	**0.21**	<0.05	<0.05	<0.05	**0.46**		
	5/29/2012	8270C	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
	11/1/2011	8270C	**0.16**	<0.1	<0.05	<0.05	<0.05	0.15	<0.05	<0.05	**0.94**	**1.3**	<0.05	<0.05	<0.05	**2.7**		
	5/23/2011	8270C	**0.14**	<0.02	<0.01	<0.01	<0.01	0.19	<0.01	<0.01	**1.2**	**2.7**	<0.01	<0.01	<0.01	**3.6**		
	11/16/2010	8270C	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
	4/20/2010	8270C	**0.067**	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.12	**0.17**	<0.05	<0.05	<0.05	**0.016**		

8.16.6 EVAPORATION PONDS (EP-1 thru EP-12B)

Semi Volatile Organic Compound Analytical Result Summary

			Parameters															
			Aniline (mg/L)	Benzoic acid (mg/L)	Benzyl alcohol (mg/L)	Bis(2-ethyl hexyl)phthalate (mg/L)	Carbazole (mg/L)	2,4-Dimethyl phenol (mg/L)	Fluorene (mg/L)	2-Methyl naphthalene (mg/L)	2-Methyl phenol (mg/L)	3+4-Methyl phenol (mg/L)	Naphthalene (mg/L)	2-Nitrophenol (mg/L)	Phenanthrene (mg/L)	Phenol (mg/L)	Pyrene (mg/L)	Pyridine (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	**0.005**	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	**0.006**	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			**0.013**	**75**	**2**	0.0056	NE	**0.354** [1]	**0.288** [1]	**0.036**	**0.93**	**0.0015**	**0.00165** [1]	NE	NE	5.8	**0.12**	**0.02**
SAMPLE ID	**SAMPLE DATE**	**METHOD**																
EP-12B [2]	11/12/2014	8270C	<0.01	<0.02	<0.01	**0.012**	<0.01	<0.01	<0.01	<0.04	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01
	3/5/2014	8270C	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.04	<0.05	**0.079**	<0.02	<0.05	<0.05	**0.6**	<0.05	<0.05
	10/15/2013	8270C	<0.05	<0.2	<0.05	<0.05	<0.05	0.068	<0.05	<0.05	0.34	**0.73**	<0.05	<0.05	<0.05	**1.5**		
	5/28/2013	8270C	**0.11**	<0.04	<0.02	<0.02	<0.02	0.2	<0.02	<0.02	**1.4**	**3.5**	<0.02	<0.02	<0.02	**5.5**		
	11/6/2012	8270C	**0.093**	<0.1	<0.05	<0.05	<0.05	0.089	<0.05	<0.05	0.46	**0.96**	<0.05	<0.05	<0.05	**1.8**		
	5/29/2012	8270C	<0.1	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.33	**0.56**	<0.1	<0.1	<0.1	**1.1**		
	11/1/2011	8270C	**0.023**	<0.02	<0.01	<0.01	<0.01	0.021	<0.01	<0.01	0.13	**0.19**	<0.01	<0.01	<0.01	**0.34**		
	5/23/2011	8270C	**0.15**	<0.02	<0.01	<0.01	<0.01	0.19	<0.01	<0.01	**1.1**	**2.1**	<0.01	<0.01	<0.01	**2.1**		
	11/16/2010	8270C	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.066	**0.078**	<0.01	<0.01	<0.01	**0.2**		
	4/20/2010	8270C	<0.05	<0.1	<0.05	<0.05	<0.05	0.11	<0.05	<0.05	0.92	**1.2**	<0.05	<0.05	<0.05	**2.7**		

DEFINITIONS

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less

a) Human Health Standards; b) Other Standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

1) NMED Tap Water (Dec 2014)

NOTES

2) Used the unapproved Facility Wide Ground Water Monitoring Plan (FWGWMP) sampling guidelines for the first quarter of 2010 which included the addition of evaporation ponds 9, 11, 12A and 12B.

8.17 BOILER WATER TO EP-2 (BW to EP-2)

General Chemistry and Total Recoverable Metals Analytical Result Summary

			Parameters												
			Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Phosphorus (mg/L)	Sulfate (mg/L)	pH	Specific Conductance (µS/cm)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)
WQCC 20NMAC 6.2.3103			**1.6**	**250**	NE	NE	**10**	NE	**600**	**6 - 9**	NE	NE	NE	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	**1**	10	NE	NE	NE	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			0.8	NE	NE	1.6	32	**0.0004**	NE	NE	NE	NE	NE	NE	NE
SAMPLE ID	**DATE SAMPLED**	**METHOD**													
BW to EP-2	11/12/2014	300.0/200.7	<0.1	**4100**	0.15	<2	0.78	<0.5	990	NA	NA	19	5.1	7.5	680
	3/5/2014	300.0/200.7	NL	**2800**	0.13	<0.1	<2	<0.5	**870**	NA	NA	NL	NL	NL	NL
	10/15/2013	300.0/200.7	0.55	64	0.24	<1.0	<1.0	<10	**1900**	NA	NA	4.3	2	11	1300
	5/28/2013	300.0/200.7	<1.0	60	<1.0	<1.0	<1.0	<5.0	**1700**	NA	NA	2.3	<1.0	13	1400
	11/6/2012	300.0/200.8	1.4	49	<0.5	<0.5	<0.5	<2.5	**1900**	NA	NA	1.4	<1.0	7.1	1200
	5/29/2012	300.0/200.9	0.82	60	<0.5	<1.0	<1.0	<2.5	**1700**	NA	NA	4.5	<1.0	2.8	1300
	11/1/2011	300.0/200.10	0.9	56	<0.5	<1.0	<1.0	<2.5	**1800**	NA	NA	3.9	1.9	380	1100
	5/23/2011	300.0/200.11	0.75	69	0.2	<0.01	0.32	<0.5	**1600**	NA	NA	3.7	<1.0	2.8	1000
	11/16/2010	300.0/6010B	<0.2	**53000**	<5.0	<200	<200	<25	**1200**	NA	NA	1600	250	130	26000
	6/28/2010	300.0/6010B	0.27	71	<0.1	<0.1	<0.1	<0.5	500	7.89	1600	1.7	<1.0	2.1	380
	4/20/2010	300.0/6010B	0.64	68	0.24	<0.1	0.31	<0.5	**1400**	NA	NA	2.5	<1.0	15	970
	10/27/2009	300.0/6010B	0.39	37	1.3	0.12	0.12	<0.5	**630**	8.35	1900	0.8	<0.5	4.6	480
	5/6/2009	300.0/6010B	0.9	45	0.24	<1.0	0.65	<0.5	**1500**	8.01	4200	1.1	<0.5	4.9	1200
	6/17/2008	300.0/6010B	1.3	6.7	NL	<0.1	<1.0	<0.5	**2600**	7.9	6500	1.9	<0.5	15	1900

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STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

NOTES

8.17.1 BOILER WATER TO EP-2 (BW to EP-2)

Total Recoverable Metals Analytical Result Summary

			PARAMETERS			
			Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			NE	NE	NE	NE
SAMPLE ID	DATE SAMPLED	METHOD				
BW to EP-2	11/12/2014	200.7	19	5.1	7.5	680
	3/5/2014	200.7	110	18	22	2300
	10/15/2013	200.7	4.3	2.0	11	1300
	5/28/2013	200.7	2.3	<1.0	13	1400
	11/6/2012	200.7	1.4	<1.0	7.1	1200
	5/29/2012	200.7	4.5	<1.0	2.8	1300
	11/1/2011	200.7	3.9	1.9	380	1100
	5/23/2011	200.7	3.7	<1.0	2.8	1000
	11/16/2010	6010B	1600	250	130	26000
	6/28/2010	6010B	1.7	<1.0	2.1	380
	4/20/2010	6010B	2.5	<1.0	15	970
	10/27/2009	6010B	0.8	<0.5	4.6	480
	5/6/2009	6010B	1.1	<0.5	4.9	1200
	6/17/2008	6010B	1.9	<0.5	15	1900

DEFINITIONS

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NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other standards for Domestic Water
1) 20 NMAC 6.2.2101 General Requirements
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table

NOTES

8.18 STP-1 to EP-2 (formerly EP-2 INLET)
BTEX, DRO/GRO, TDS Analytical Result Summary

			Parameters								
			Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	DRO (mg/L)	GRO (mg/L)	MRO (mg/L)	TDS (mg/L)
WQCC 20NMAC 6.2.3103			0.01	**0.75**	0.75	**0.62**	NE	**0.2**[1]	NE	NE	**1000**
40 CFR 141.62 MCL (June 2015)			**0.005**	1	**0.7**	10	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			0.00045	1.1	0.0015	0.19	**0.143** [2]	NE	NE	NE	NE
SAMPLE ID	**DATE SAMPLED**	**METHOD**									
EP-2 Inlet	9/10/2014	8260B/8015B	**0.018**	<0.002	<0.002	<0.003	<0.002	**2.4**	<0.5	<5	**2780**
	9/5/2013	8260B/8015B	**0.033**	0.013	<0.01	<0.015	<0.01	**3.3**	<0.5	<5.0	**2340**
	8/21/2012 [4]	8260B/8015B	<0.001	<0.001	<0.001	<0.0015	<0.001	<1.0	<0.05	<5.0	**3720**
	10/31/2011	8260B/8015B	<0.005	0.0063	<0.005	<0.0075	<0.005	**39**	1.7	6.9	**6730**
	7/21/2010	8260B/8015B	<0.005	<0.005	<0.005	<0.0075	<0.005	**21**	0.83		**4120**
	6/17/2009	8260B/8015B	0.0039	0.02	0.0042	0.037	<0.001	**23**	2		**2600**
	8/21/2008	8260B/8015B	<0.01	0.026	0.014	0.1	<0.01	**290**	10		**2000**
	1/1/2008 [3]	8260B/8015B	**0.13**	0.26	0.044	0.26	0.0052	**150**	2.6		**2200**

DEFINITIONS
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NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other standards for Domestic Water
1) NMED Table 6-2 (Unknown oil), TPH Screening Guidelines for Potable Ground Water (GW-1) (JUN 2012).
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table
2) NMED Tap Water (Dec 2014)

NOTES
3) Due to inclement weather in December 2007, samples were collected in January 2008.
4) Sample taken from inlet from STP-1. No flow to aeration lagoons - diverted to Waste Water Treatment Plant.

8.18.1 STP-1 to EP-2 (formerly EP-2 Inlet)
General Chemistry Analytical Results Summary

			Parameters						
			Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	Phosphorus (mg/L)	Sulfate (mg/L)
WQCC 20NMAC 6.2.3103			**1.6**	**250**	NE	NE	**10**	NE	**600**
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	**1**	10	NE	NE
EPA RSL for Tap Water (June 2015)			0.8	NE	NE	1.6	32	**0.0004**	NE
WELL ID	**DATE SAMPLED**	**METHOD**							
STP-1 to EP-2	11/12/2014	300.0/8015D	<0.1	**4100**	0.15	<2	0.78	<0.5	**990**
	9/10/2014	300.0/8015B	**54**	**310**	2.2	<0.5	<0.5	<2.5	**1200**

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.
a) Human Health Standards; b) Other standards for Domestic Water
1) NMED Table 6-2 (Unknown Oil). TPH Screening Guidelines for Potable Ground Water (GW-1). (JUN 2012)
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table

NOTES:

8.18.2 STP-1 to EP-2 (formerly EP-2 INLET)
BOD/COD Analytical Result Summary

			Parameters	
			BOD (mg/L)	COD (mg/L)
20NMAC 6.2.2101			<30	<125
SAMPLE ID	DATE SAMPLED	METHOD		
STP-1 to EP-2	11/12/2014	SM5210B/5220C	**630**	**1300**
	9/10/2014	SM5210B/5220C	**270**	**1500**
	3/5/2014	SM5210B/5220C	**560**	**1500**
EP-2 Inlet	9/5/2013	SM5210B/5220C	**670**	**1200**
	8/21/2012 [1]	SM5210B/5220C	<2.0	<10.0
	10/31/2011	SM5210B/5220C	**410**	**1520**
	7/21/2010	SM5210B/5220C	**1400**	**3200**
	6/18/2009	SM5210B/5220C	**191**	**1149**
	8/22/2008	SM5210B/5220C	**348**	**1540**
	3/26/2008	SM5210B/5220C	**649**	**1430**
	3/20/2008	SM5210B/5220C	**344**	**829**
	3/11/2008	SM5210B/5220C	**651**	**1150**
	3/6/2008	SM5210B/5220C	**947**	**1520**
	2/28/2008	SM5210B/5220C	**46.1**	**2440**
	2/21/2008	SM5210B/5220C	**>394**	**1950**
	2/14/2008	SM5210B/5220C	**570**	**2290**
	2/7/2008	SM5210B/5220C	**671**	**2570**
	1/31/2008	SM5210B/5220C	**414**	**1290**
	1/25/2008	SM5210B/5220C	**520**	**1200**
	1/18/2008	SM5210B/5220C	**462**	**1460**
	1/11/2008	SM5210B/5220C	**449**	**1350**

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS
20 NMAC 6.2.2101 - General Requirements

NOTES:
1) Sample taken from inlet from STP-1. No flow to aeration lagoons - diverted to Waste Water Treatment Plant.

8.18.3 STP-1 to EP-2 (formerly EP-2 Inlet)
Total Metals Analytical Results Summary

			Parameters														
			Arsenic (mg/L)	Barium (mg/L)	Calcium (mg/L)	Chromium (mg/L)	Sodium (mg/L)	Iron (mg/L)	Lead (mg/L)	Magnesium (mg/L)	Manganese (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Silver (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1**	NE	**0.05**	NE	**1**	0.05		**0.2**		**0.05**	0.05	**0.002**	**0.03**	**10**
40 CFR 141.62 MCL (June 2015)			**0.01**	2	NE	0.1	NE	NE	**0.015**		NE		0.05	0.1[2]	0.002	0.03	NE
EPA RSL for Tap Water (June 2015)			0.000052	3.8	NE	NE	0.8	14	0.015	NE	0.43	NE	0.1	0.094	0.00063	0.06	6
WELL ID	**DATE SAMPLED**	**METHOD**															
STP-1 to EP-2	11/12/2014	200.7/200.8	**0.011**	0.071	NL	0.013	NL	**1.6**	<0.001	NL	0.18	NL	0.025	<0.005	<0.0002	0.0022	0.044
	9/10/2014	200.7/200.8	**0.014**	0.098	NL	0.017	NL	**3.7**	<0.001	NL	0.18	NL	0.021	<0.005	<0.0002	0.0045	0.12
	3/5/2014	200.7/200.8	**0.011**	0.18	NL	0.014	NL	0.94	<0.001	NL	**0.36**	NL	0.027	<0.005	<0.0002	0.004	0.044

DEFINITIONS	STANDARDS
NE = Not established	WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS
NA = Not analyzed	Concentration or Less. a) Human Health Standards; b) Other standards for Domestic Water
NL = Not listed on laboratory analysis	40 CFR 141.62 Detection Limits for Inorganic Contaminants
Bold and highlighted values represent values above the applicable standards	EPA Regional Screening Level (RSL) Summary Table

NOTES

8.18.4 STP-1 to EP-2 (formerly EP-2 Inlet)
Dissolved Metals Analytical Results Summary

			Parameters												
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Potassium (mg/L)	Selenium (mg/L)	Sodium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20NMAC 6.2.3103			0.1	**1.0**	0.01	**0.05**	**1.0**	**1.0**	0.05	**0.2**	NE	**0.05**	NE	**0.03**	**10.0**
WELL ID	**DATE SAMPLED**	**METHOD**													
STP-1 to EP-2	11/12/2014	200.7/200.8	0.01	0.068	<0.002	0.014	<0.006	**1.4**	<0.01	0.17	7.5	<0.025	680	0.0013	0.072
	9/10/2014	200.7/200.8	**0.011**	0.087	<0.002	0.018	<0.006	**3.5**	<0.01	**0.38**	53	0.022	600	0.0028	0.087
	3/5/2014	200.7/200.8	<0.01	0.2	<0.002	0.014	<0.006	0.63	<0.01	**0.38**	NL	0.06	NL	<0.01	0.019

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis
Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS
Concentration or Less. a) Human Health Standards; b) Other standards for Domestic Water
40 CFR 141.62 Detection Limits for Inorganic Contaminants
EPA Regional Screening Level (RSL) Summary Table

NOTES

8.18.5 STP-1 to EP-2 (formerly EP-2 INLET)

Volatile Organic Compound Analytical Result Summary

			Parameters												
			1,2,4- Trimethyl benzene (mg/L)	1,3,5-Trimethyl benzene (mg/L)	Naphthalene (mg/L)	1-Methyl naphthalene (mg/L)	2-Methyl naphthalene (mg/L)	Acetone (mg/L)	2-Butanone (mg/L)	Carbon Disulfide (mg/L)	Isopropyl benzene (mg/L)	4-Isopropyl toluene (mg/L)	n-Butyl benzene (mg/L)	n-Propyl benzene (mg/L)	sec-Butyl benzene (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			**0.015**	**0.12**	**0.00165 [1]**	**0.0011**	**0.036**	**14.1 [1]**	**5.56 [1]**	**0.81 [1]**	**0.447 [1]**	NE	**1**	**0.66**	**2**
SAMPLE ID	**DATE SAMPLED**	**METHOD**													
STP-1 to EP-2	9/10/2014	8260B	<0.002	<0.002	<0.004	<0.008	<0.008	1.3	0.16	0.058	<0.002	<0.002	<0.006	<0.002	<0.002
EP-2 Inlet	9/5/2013	8260B	<0.01	<0.01	<0.02	<0.04	<0.04	2.2	0.26	<0.1	<0.01	<0.01	<0.03	<0.01	<0.01
	8/21/2012 [3]	8260B	<0.001	<0.001	<0.002	<0.004	<0.004	<0.01	<0.01	<0.01	<0.001	<0.001	<0.003	<0.001	<0.001
	10/31/2011	8260B	<0.005	<0.005	<0.01	<0.02	<0.02	0.86	0.14	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
	7/21/2010	8260B	<0.005	<0.005	<0.01	<0.02	<0.02	0.49	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
	6/17/2009	8260B	**0.025**	0.0082	**0.011**	**0.057**	**0.061**	0.5	0.046	0.011	<0.001	<0.001	0.0044	0.0018	<0.001
	8/21/2008	8260B	**0.11**	0.035	**0.02**	**0.3**	0.34	1.2	0.14	<.1	<0.01	<0.01	0.029	0.013	<0.001
	1/1/2008 [2]	8260B	**0.17**	0.047	**0.25**	**0.46**	**0.75**	<0.05	<0.05	0.14	0.0063	0.007	0.044	0.019	0.0071

DEFINITIONS

NE = Not established

NA = Not analyzed

NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS concentration or less.

a) Human Health Standards; b) Other Standards for Domestic Water

40 CFR 141.62 Detection Limits for Inorganic Contaminants

EPA Regional Screening Level (RSL) Summary Table

1) NMED Tap Water (Dec 2014)

NOTES

2) Due to inclement weather in December 2007, samples were taken in January 2008.

3) Sample taken from inlet from STP-1. No flow to aeration lagoons - diverted to Waste Water Treatment Plant.

8.18.6 STP-1 to EP-2 (formerly EP-2 Inlet)
Semi Volatile Organic Compounds Analytical Results Summary

			PARAMETERS																					
			Acenaphthene (mg/L)	Aniline (mg/L)	Benz(a)anthracene (mg/L)	Benzoic Acid (mg/L)	Benzyl Alcohol (mg/L)	Bis(2-ethylhexyl)phthalate (mg/L)	Carbazole (mg/L)	Chrysene (mg/L)	Dibenzofuran (mg/L)	Diethyl phthalate (mg/L)	2,4-Dimethyl phenol (mg/L)	Fluorene (mg/L)	1-Methylnaphthalene (mg/L)	2-Methylnaphthalene (mg/L)	2-Methylphenol (mg/L)	3+4-Methylphenol (mg/L)	Naphthalene (mg/L)	2-Nitrophenol (mg/L)	Phenanthrene (mg/L)	Phenol (mg/L)	Pyrene (mg/L)	Pyridine (mg/L)
WQCC 20NMAC 6.2.3103			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
40 CFR 141.62 MCL (June 2015)			NE	NE	NE	NE	NE	**0.006**	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
EPA RSL for Tap Water (June 2015)			**0.535 [1]**	**0.013**	**0.000343 [1]**	**75**	**2**	0.0056	NE	**0.00343 [1]**	**0.0079**	**14.8 [1]**	**0.354 [1]**	**0.288 [1]**	**0.0011**	**0.93**	**0.93**	**0.0015**	**0.00165 [1]**	NE	NE	**5.8**	**0.117 [1]**	**0.02**
Well ID	**Date Sampled**	**Method**																						
STP-1 to EP-2	9/10/2014	8270C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**22**	<0.01	<0.01	<0.01	<0.01	**140**	<0.01	<0.01

DEFINITIONS
NE = Not established
NA = Not analyzed
NL = Not listed on laboratory analysis

Bold and highlighted values represent values above the applicable standards

STANDARDS
WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or less.
a) Human Health Standards; b) Other Standards for Domestic Water

EPA Regional Screening Level (RSL) Summary Table (June 2011)
1) NMED Tap Water (Dec 2014)

NOTES

FIGURES

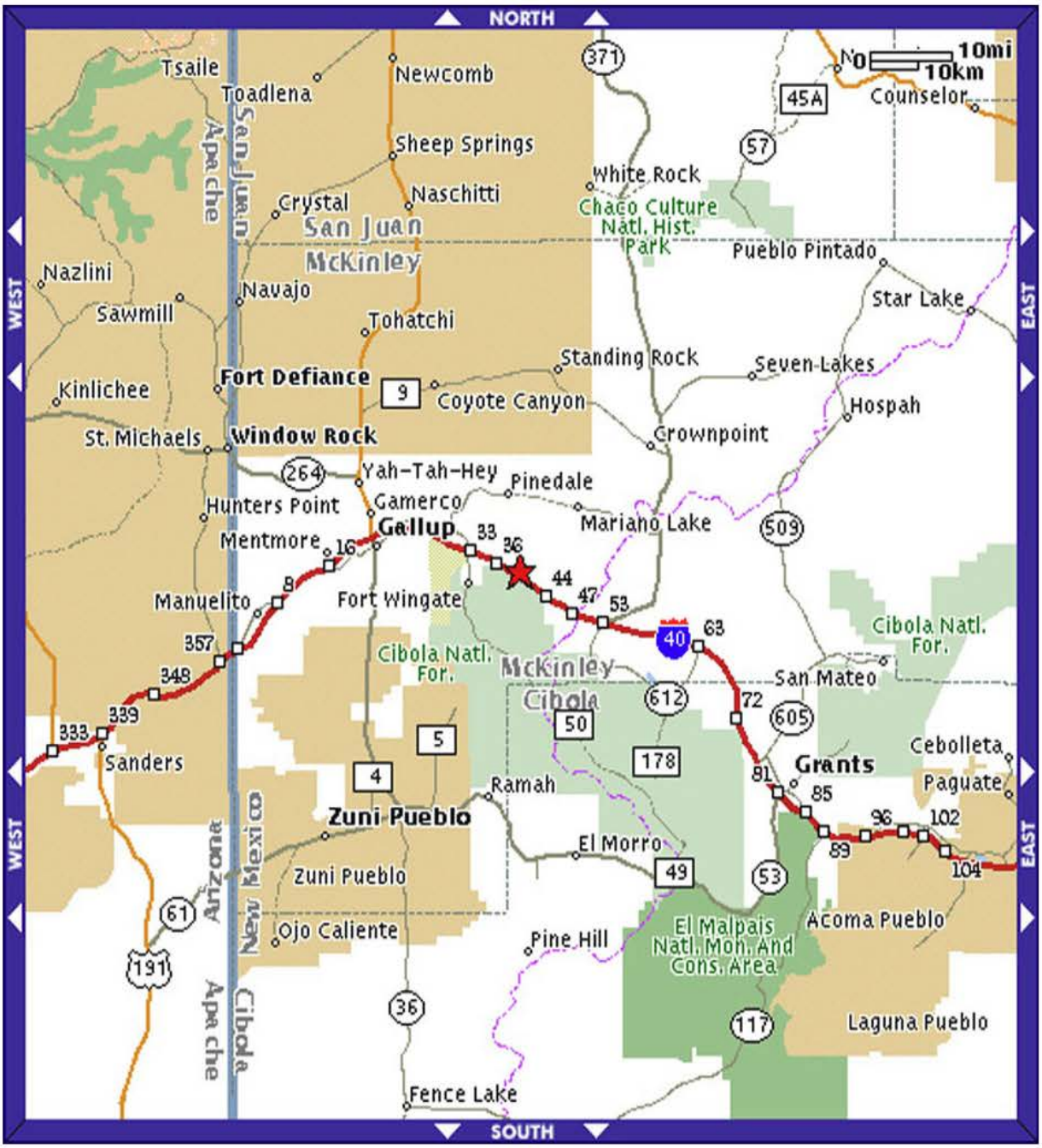


Figure 1: Regional map showing the location of the Gallup Refinery (red star along Interstate-40, 20 miles east of the City of Gallup).

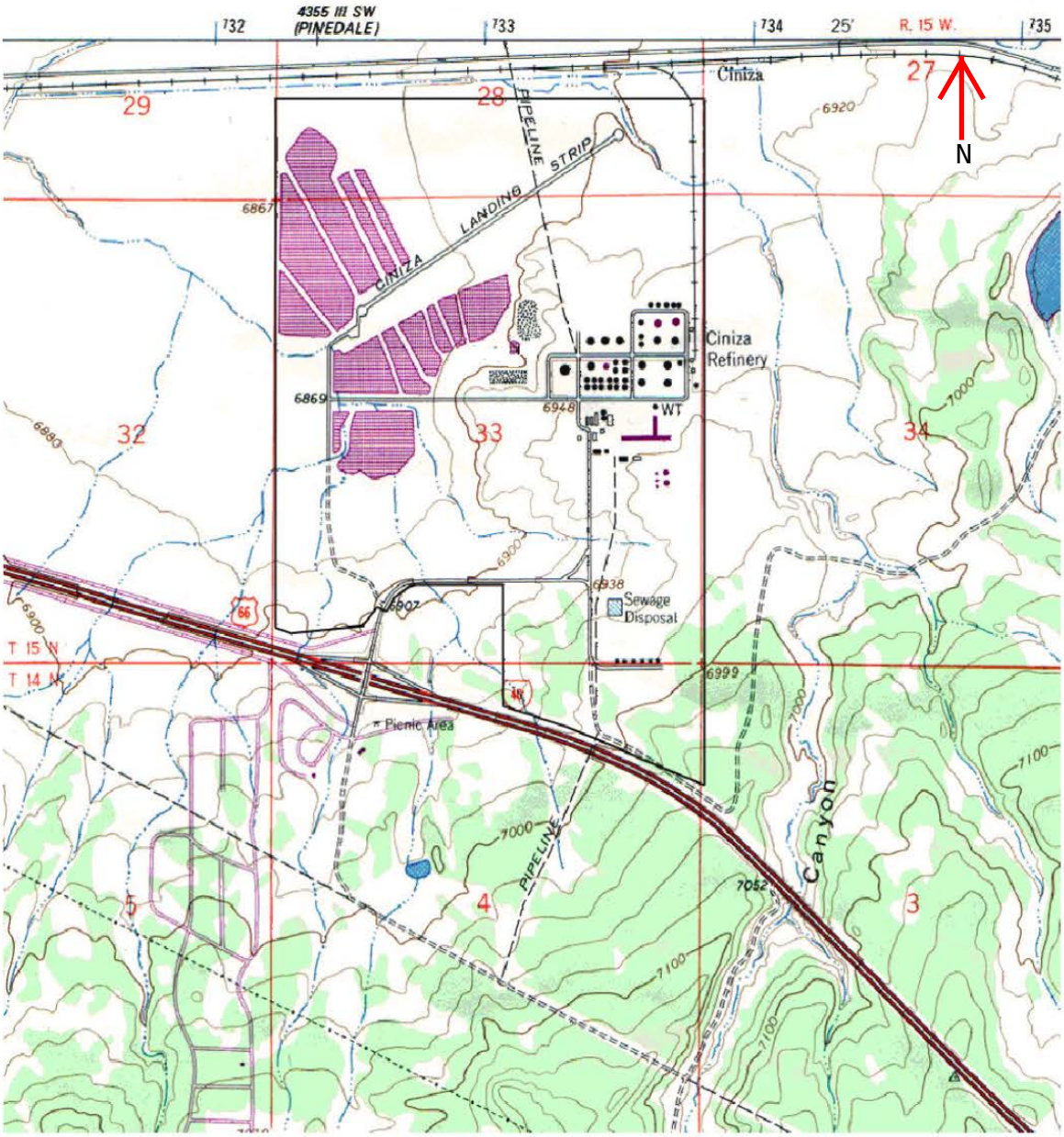
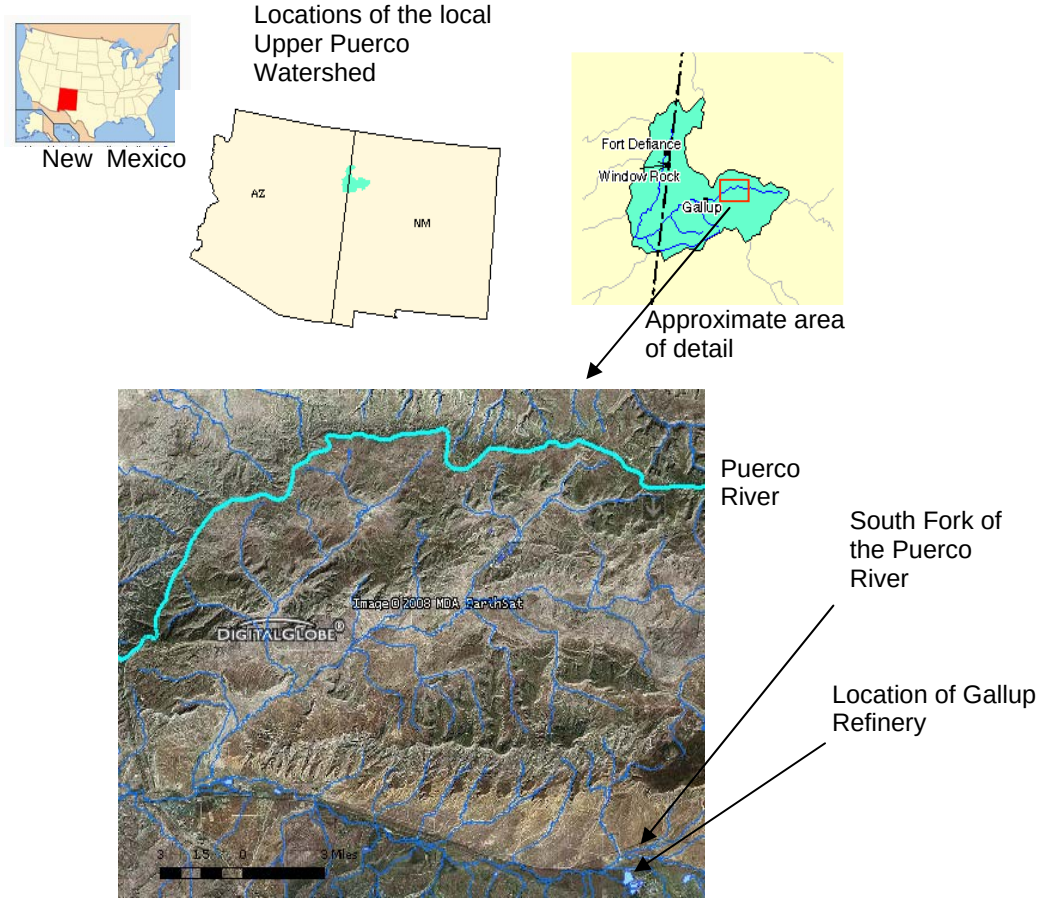


Figure 2: Topographic Map of the Gallup Refinery Site - USGS Topographical Map - Gallup Quadrangle (Revised 1980)

Figure 3: Aerial photograph of the Gallup Refinery

Figure 4: **Regional scale**: Flow lines and major surface water bodies (from: EPA Enviromapper - http://map24.epa.gov/EMR/?ZoomToWatershed=15020006) North is towards the top of the page.



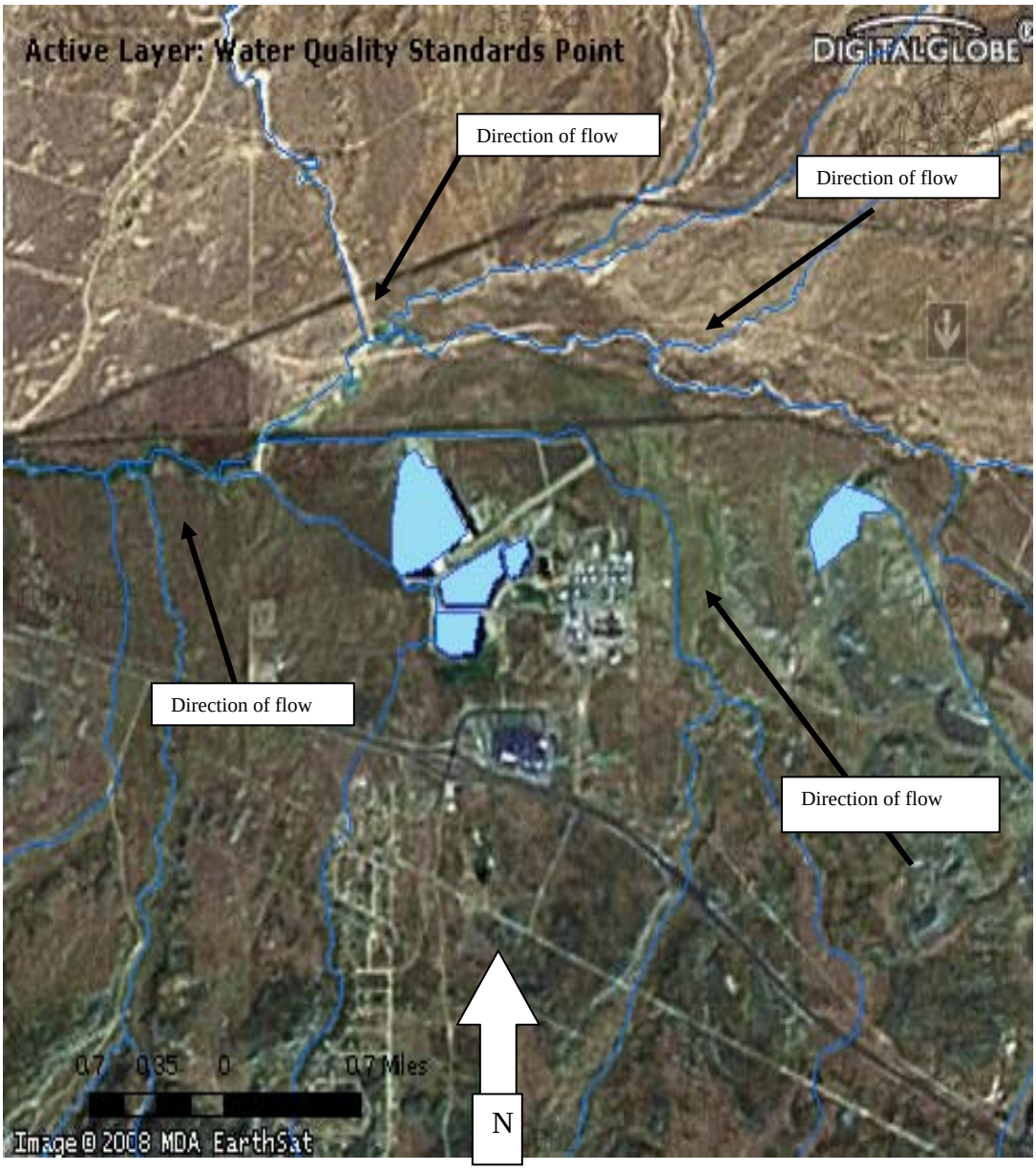
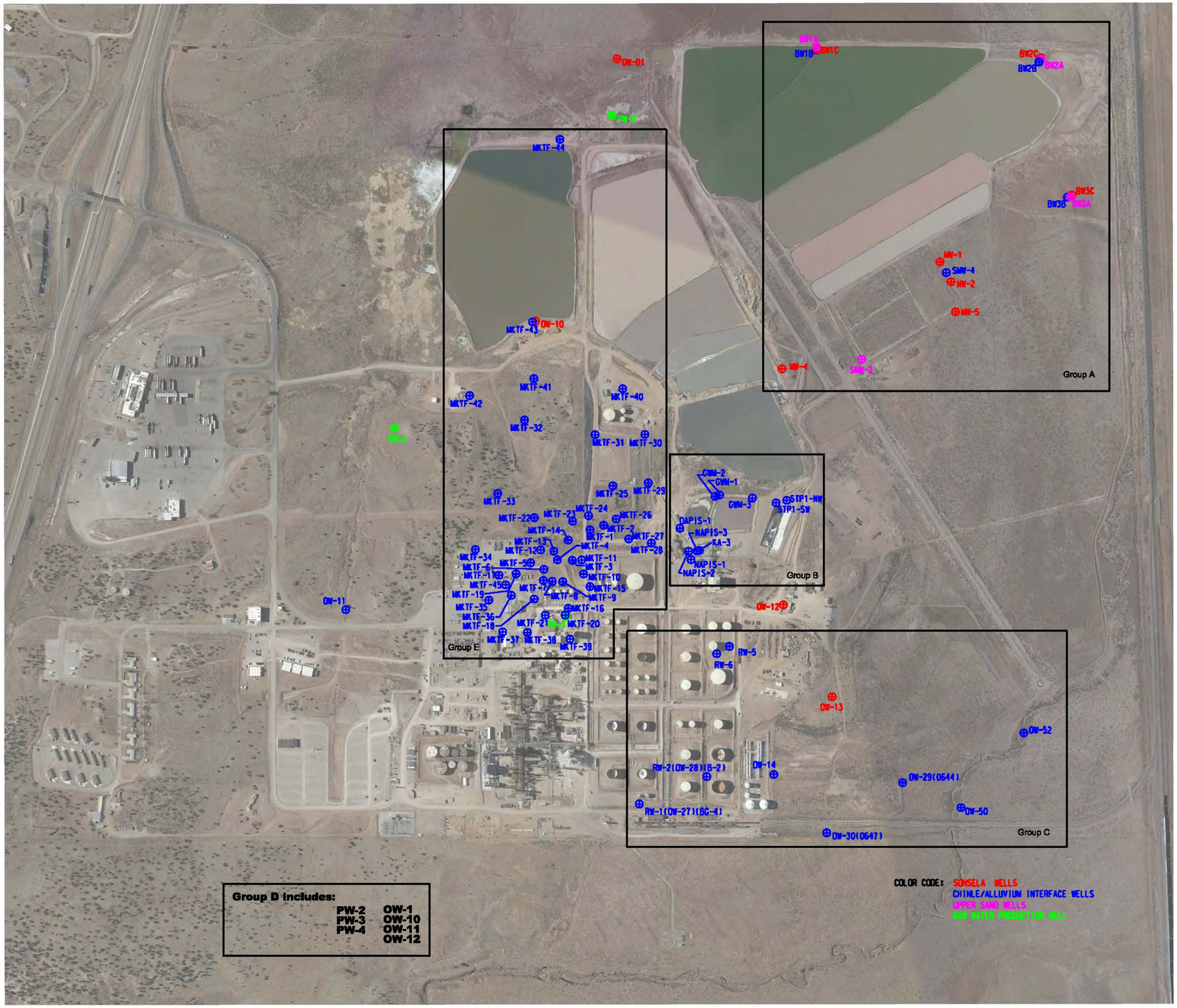


Figure 5: Localized scale: Flow lines and major surface water bodies (from: EPA Enviromapper - http://map24.epa.gov/EMR/?ZoomToWatershed=15020006) North is towards the top of the page. The pond to the east is Jon Myers' Livestock Pond.



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1"=500'

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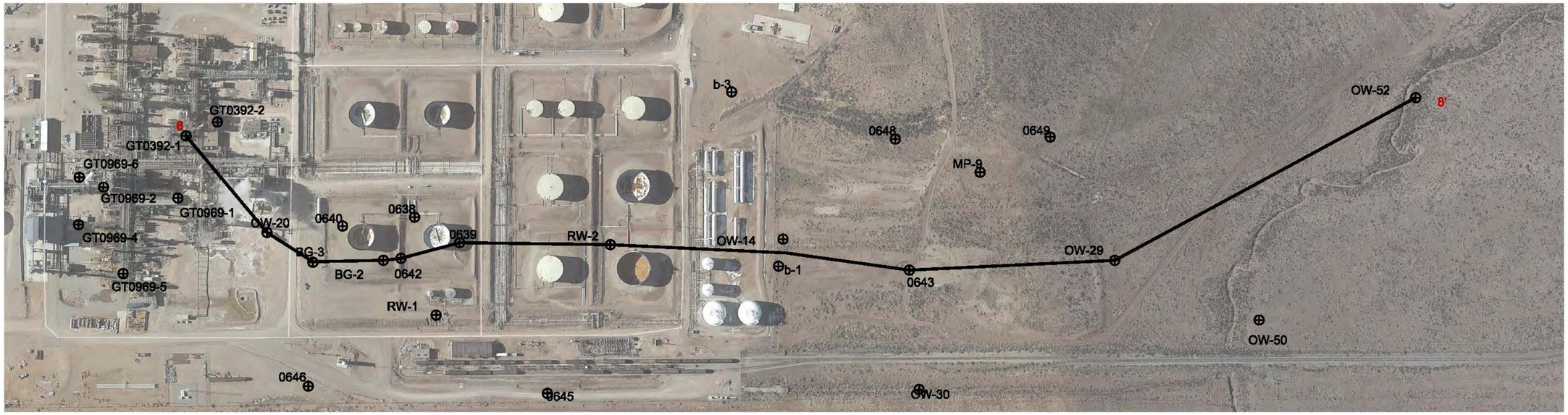
Figure 6

FACILITIES AND WELL GROUPS

WESTERN REFINING - GALLUP REFINERY

Western Refining - Gallup Refinery
92 Giant Crossing Road
Gallup, New Mexico 87301

Date: February 26, 2015



Profile East 8-8'

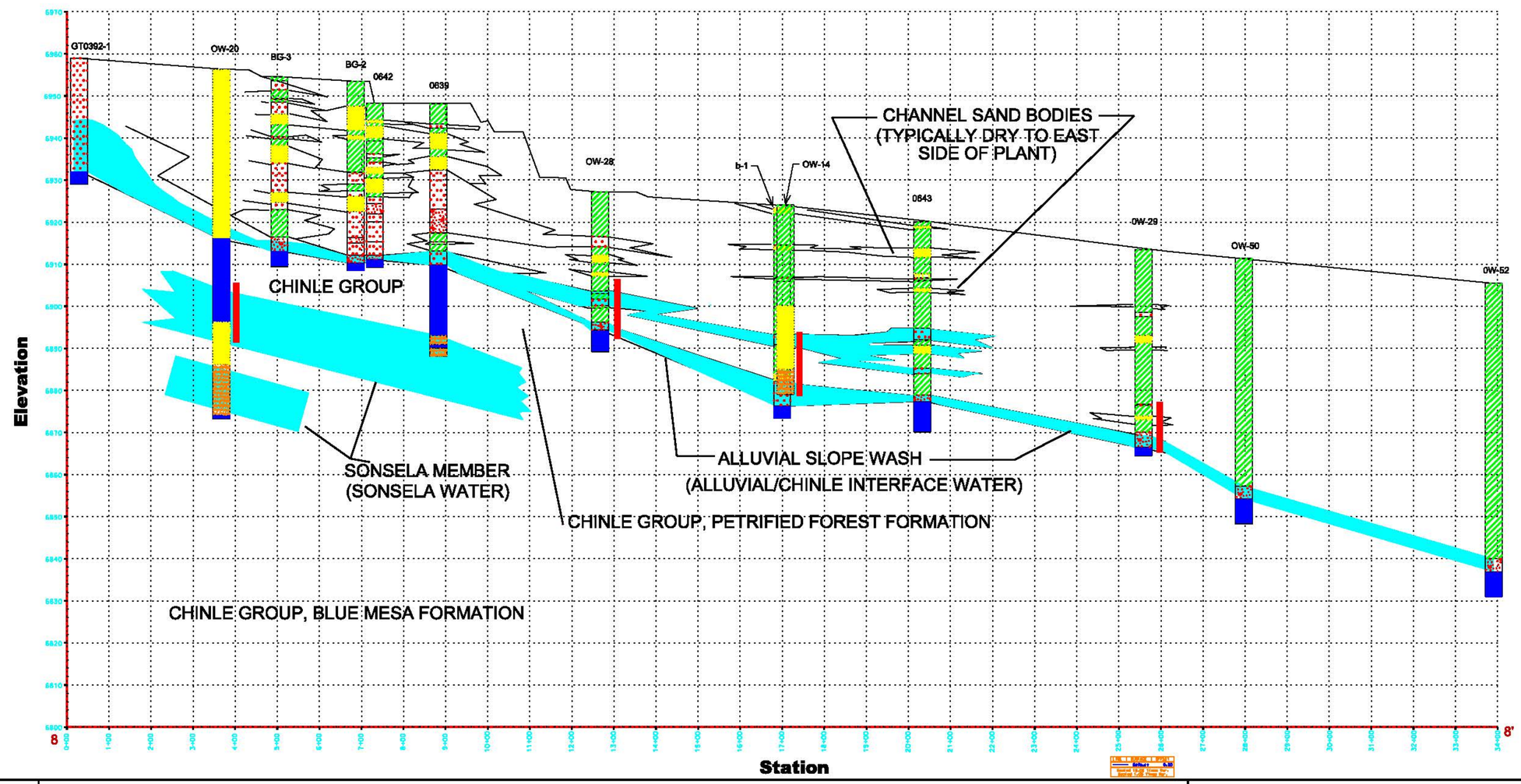


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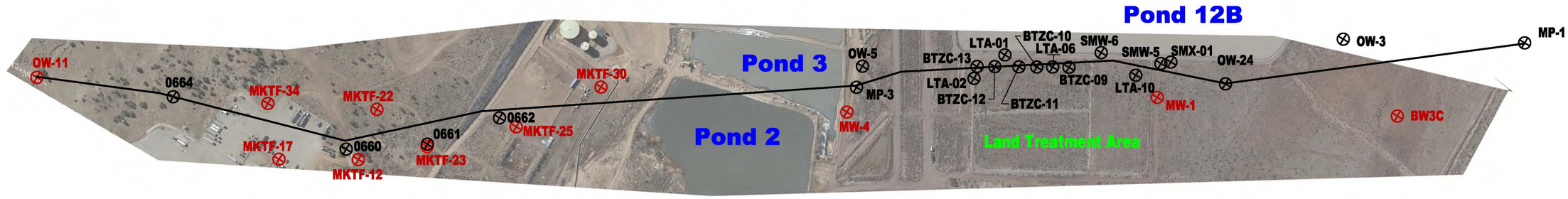
Figure 7

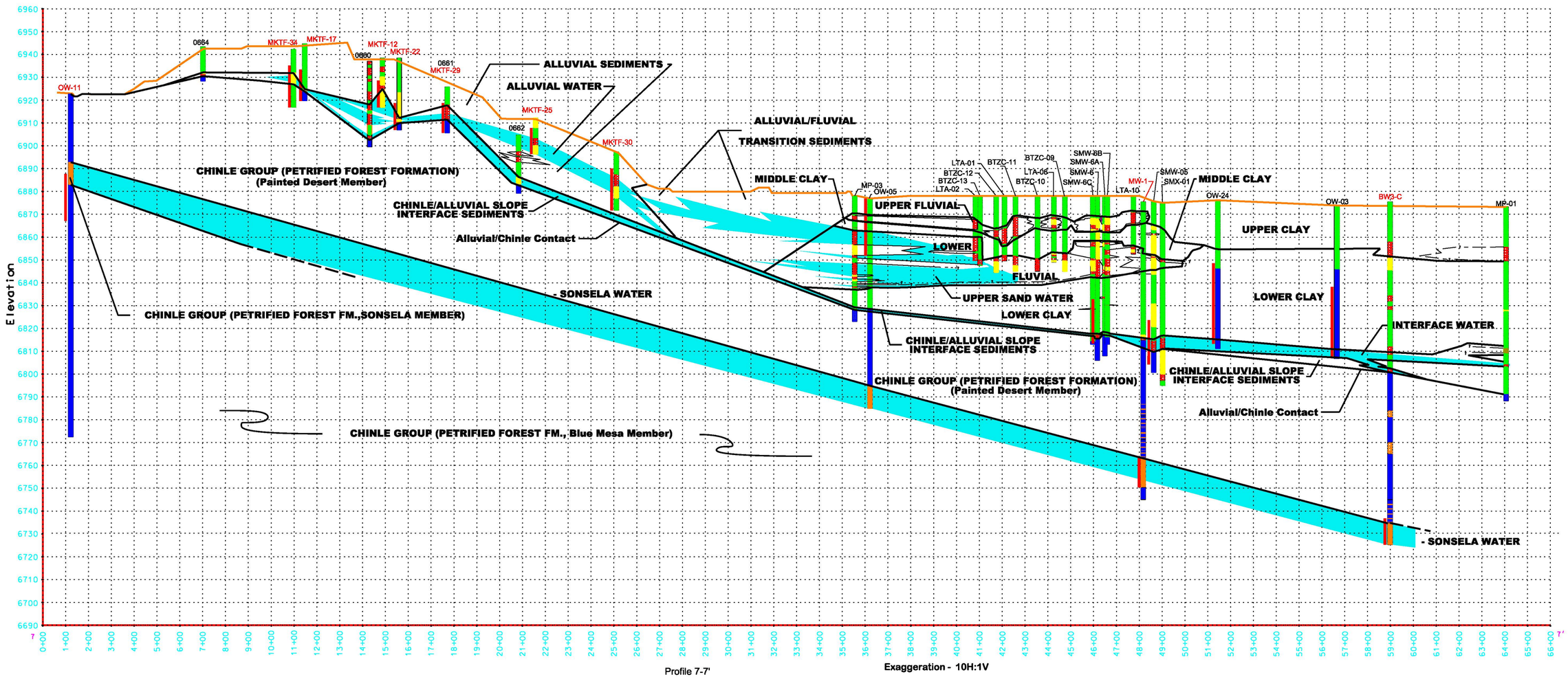
TYPICAL SOUTH-NORTH GEOLOGIC PROFILE (E. PLANT)

WESTERN REFINING - GALLUP REFINERY

Western Refining - Gallup Refinery
92 Giant Crossing Road
Gallup, New Mexico 87301

Date: March 4, 2015





LEGEND

- CLAY
- SANDY CLAY OR CLAYEY SAND
- SAND
- SILT
- SHALE (CHINLE GROUP)
- SANDSTONE (NOT PART OF THE SONSELA)
- SONSELA SANDSTONE MEMBER (CHINLE GROUP)
- PROFILE LINE
- WATER BEARING ZONE
- SCREENED INTERVAL
- OW-XX, MW-XX, MKTF-XX, BW3-C — ACTIVE MONITORING WELL
- LTA-10 — BORING OR CLOSED WELL

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Project #: 0625859

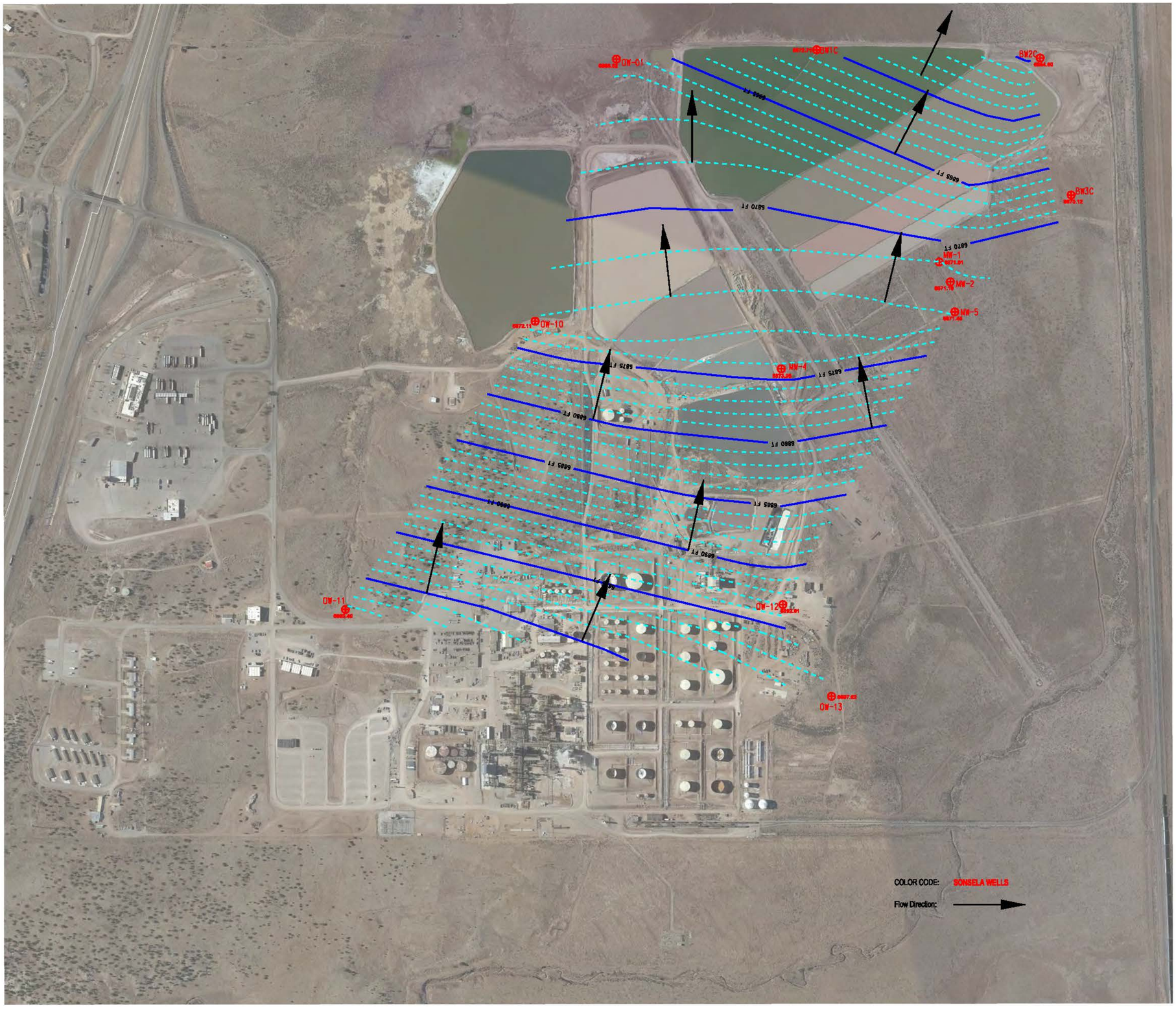
Figure 8

S - N Section - Westerly Plant Area

WESTERN REFINING - GALLUP REFINERY

Western Refining - Gallup Refinery
92 Giant Crossing Road
Gallup, New Mexico 87301

Date: March 24, 2015



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1"=500'

Project #: 0625859

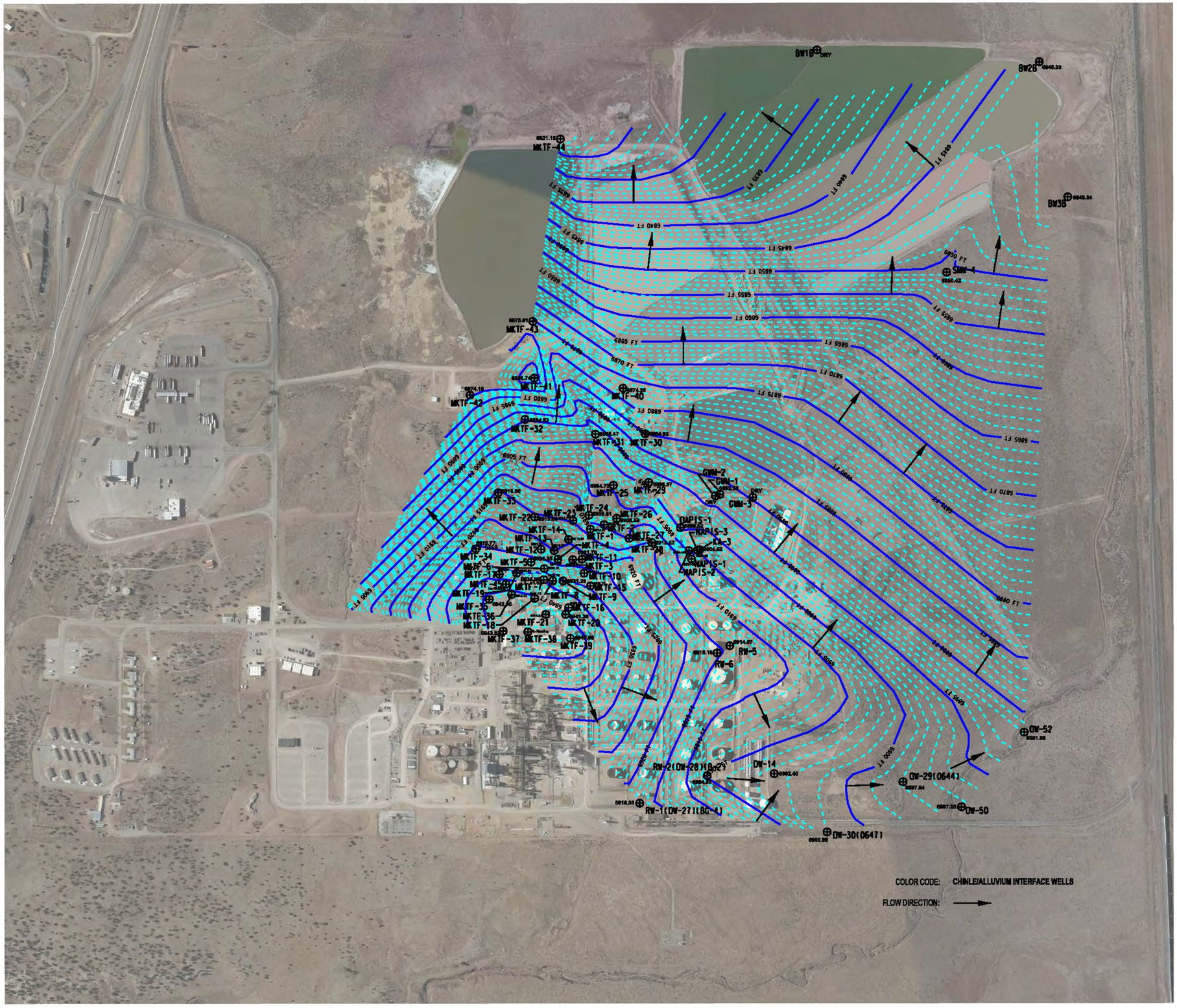
Figure 9

Sonsela Water Elevation Map 2014

WESTERN REFINING - GALLUP REFINERY

Western Refining - Gallup Refinery
92 Giant Crossing Road
Gallup, New Mexico 87301

Date: February 26, 2015



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1"=500'

Project #: 0625859

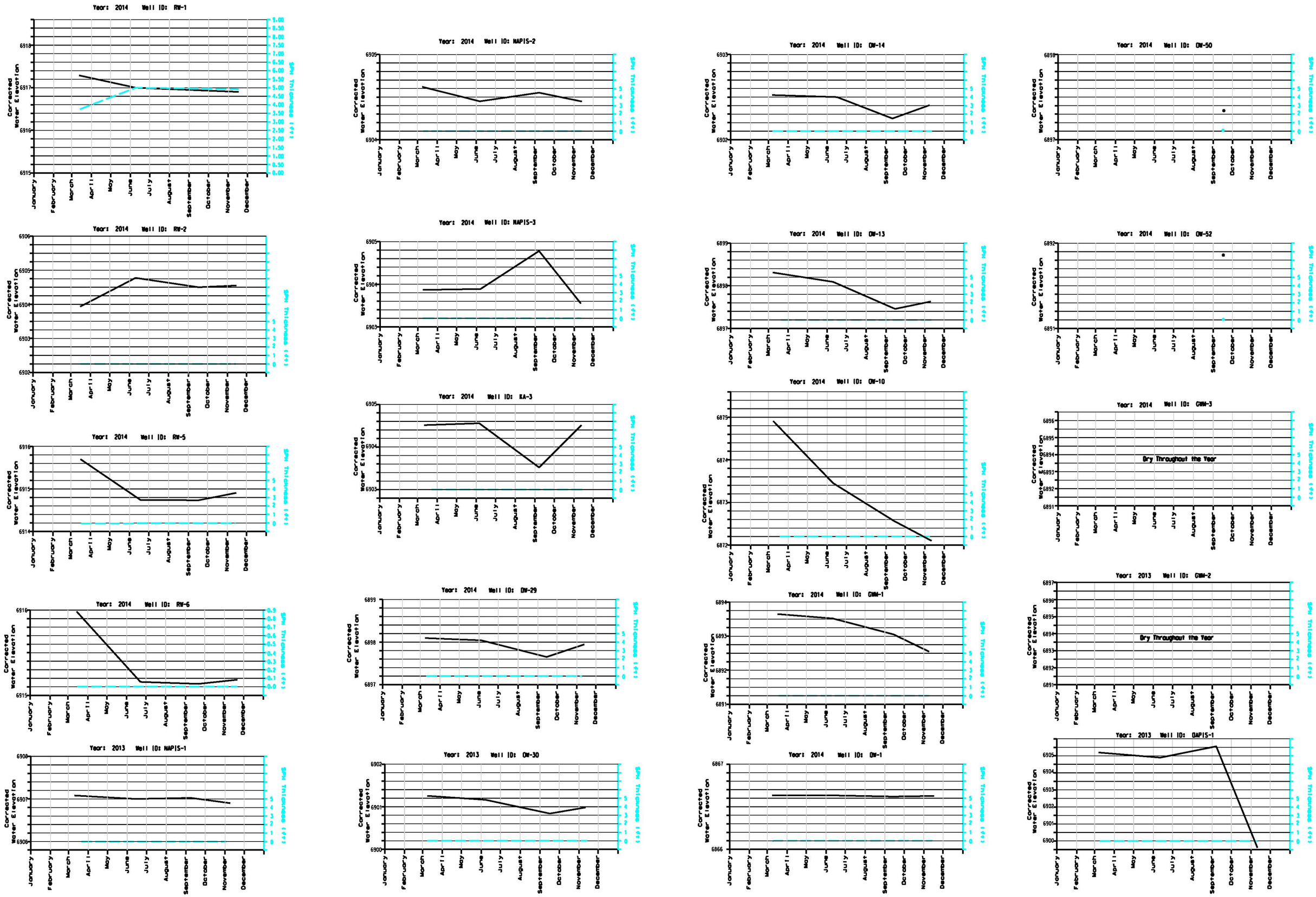
Figure 10

Alluvium/Chinle Gp Interface Water Elevation Map

WESTERN REFINING - GALLUP REFINERY

Western Refining - Gallup Refinery
92 Giant Crossing Road
Gallup, New Mexico 87301

Date: February 26, 2015



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Project #: 0625859

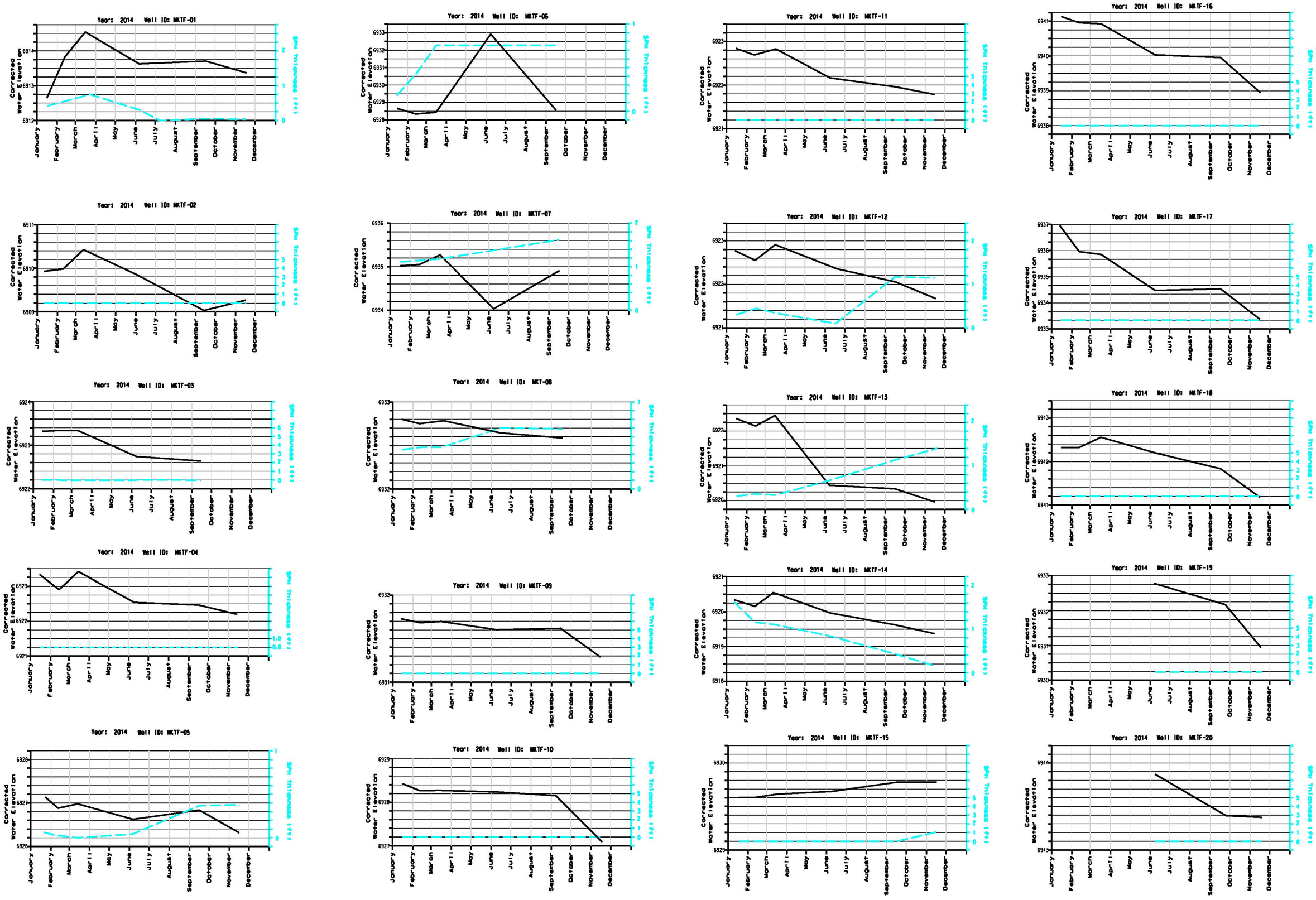
Figure 11

GROUNDWATER ELEVATION VS TIME

WESTERN REFINING - GALLUP REFINERY

Western Refining - Gallup Refinery
92 Giant Crossing Road
Gallup, New Mexico 87301

Date: February 27, 2015



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915-584-1317

NTS

Project #: 0625859

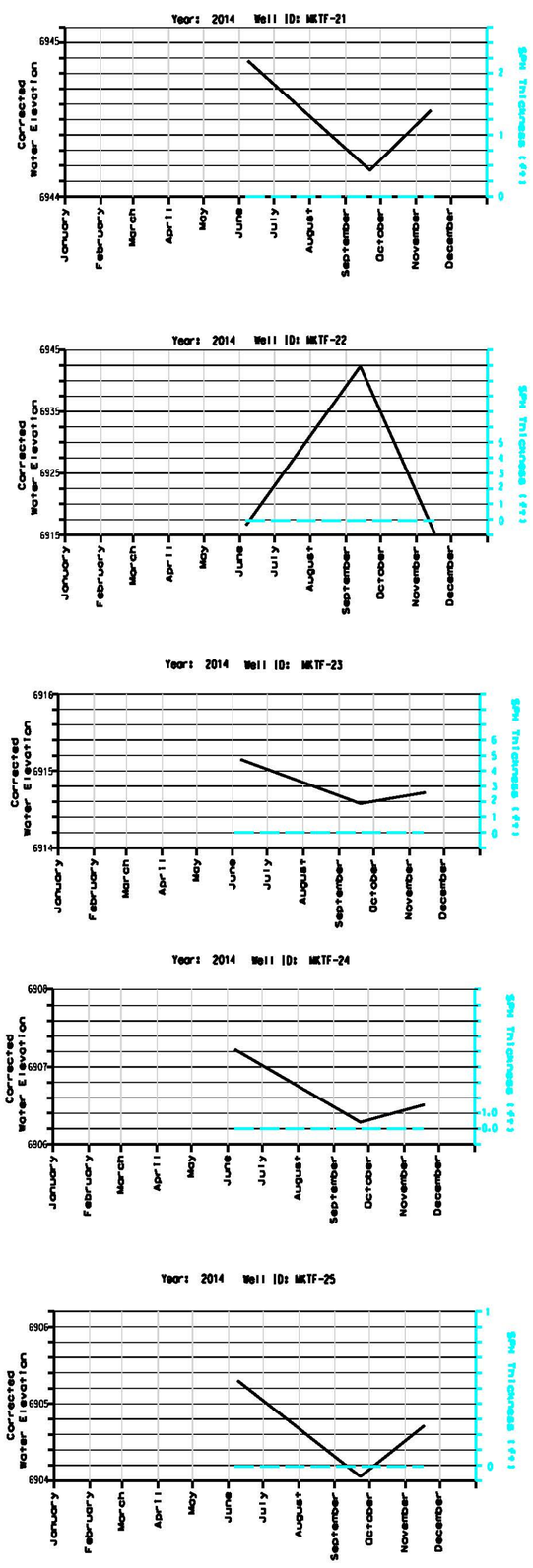
Figure 11A

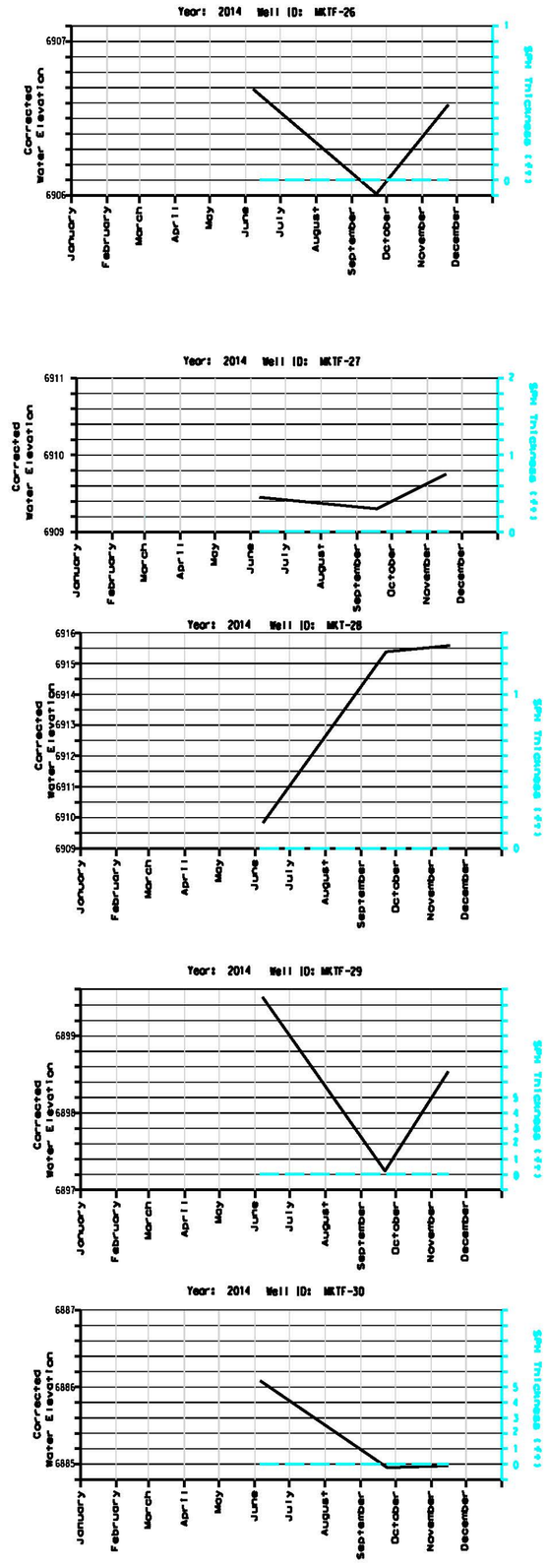
GROUNDWATER ELEVATION VS TIME

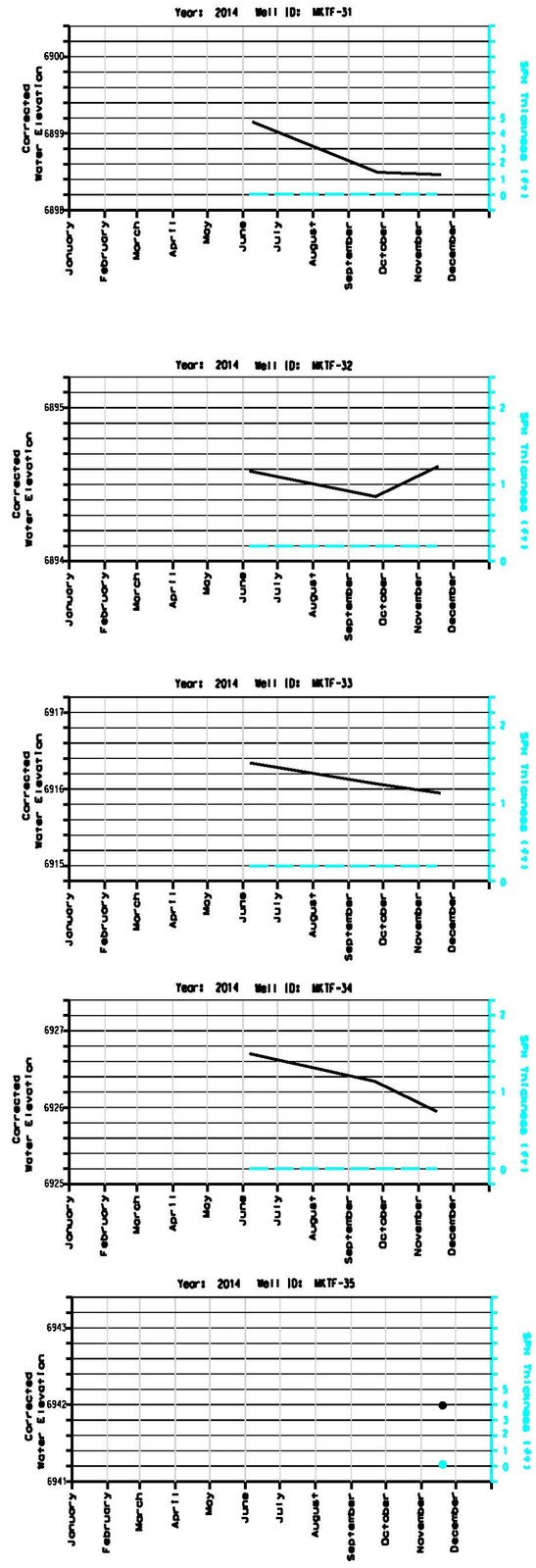
WESTERN REFINING - GALLUP REFINERY

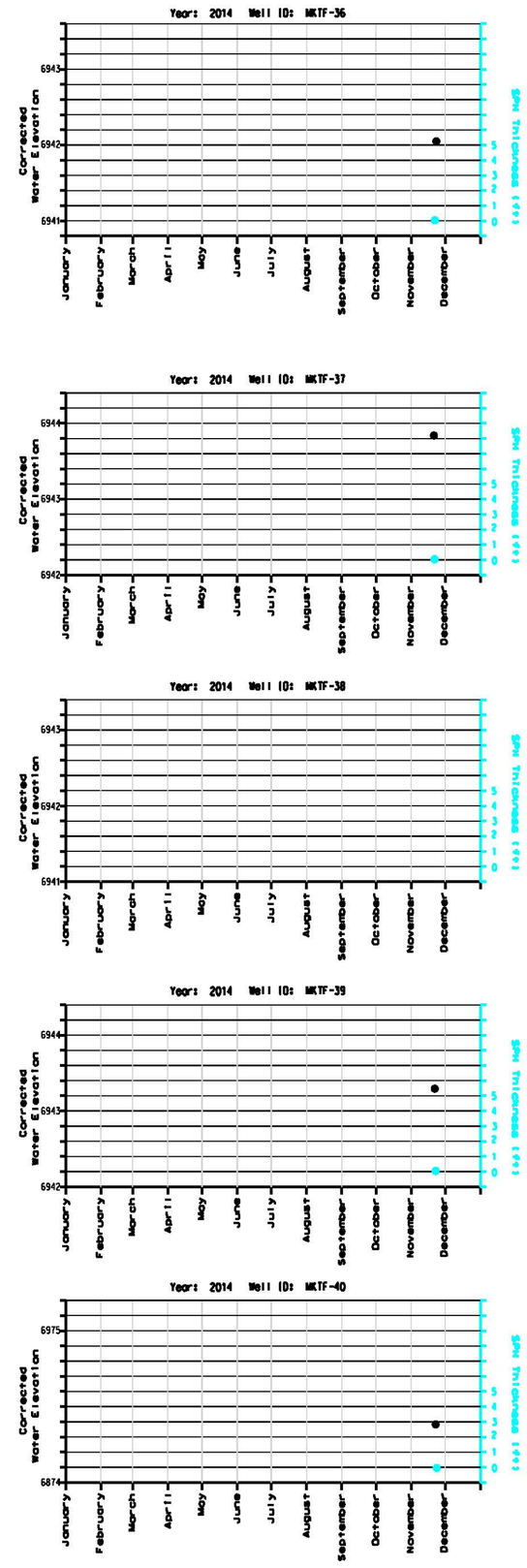
Western Refining - Gallup Refinery
92 Giant Crossing Road
Gallup, New Mexico 87301

Date: February 27, 2015









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Project #: 0625859

Figure 11B

GROUNDWATER ELEVATION VS TIME

WESTERN REFINING - GALLUP REFINERY

Western Refining - Gallup Refinery
92 Giant Crossing Road
Gallup, New Mexico 87301

Date: March 3, 2015

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1"=500'

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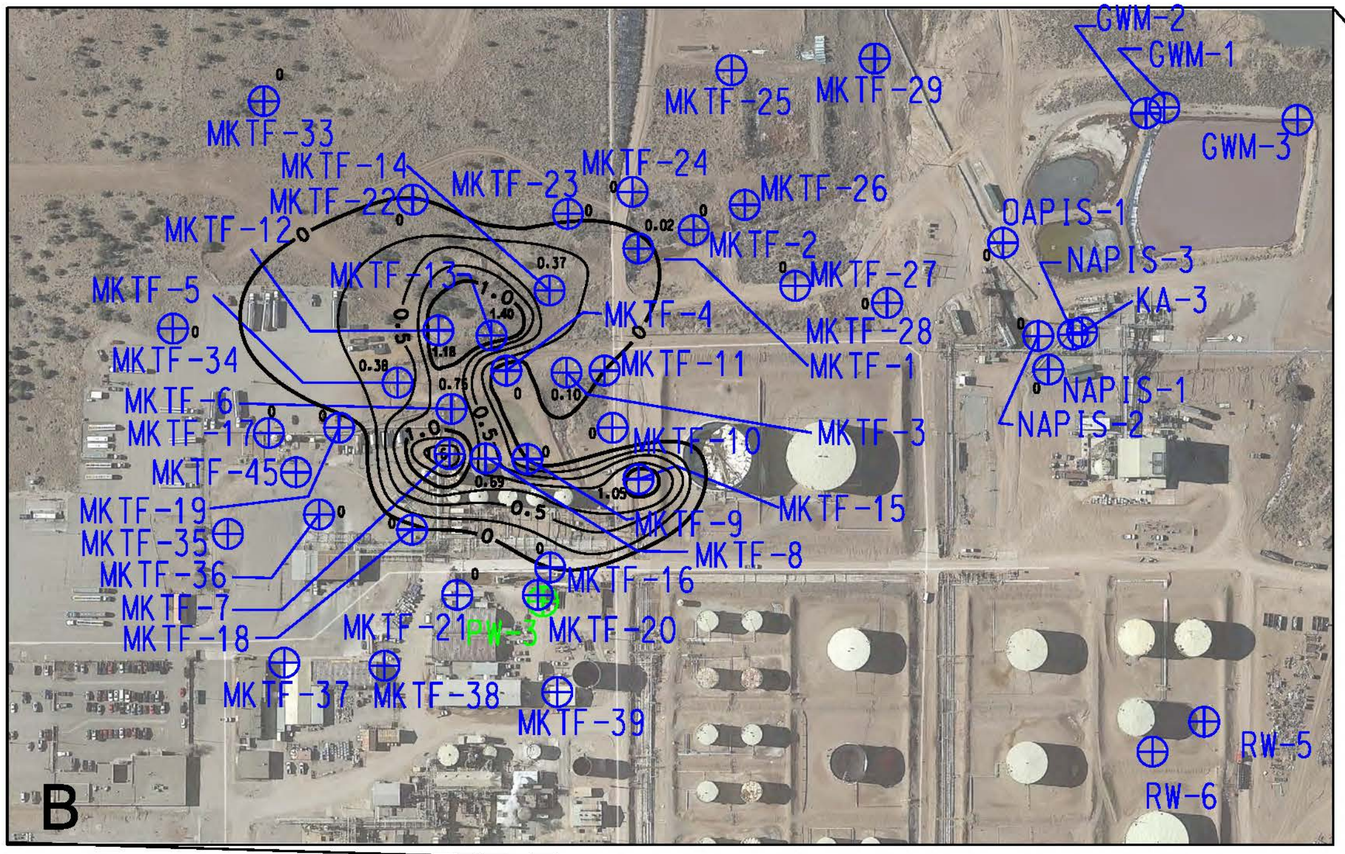
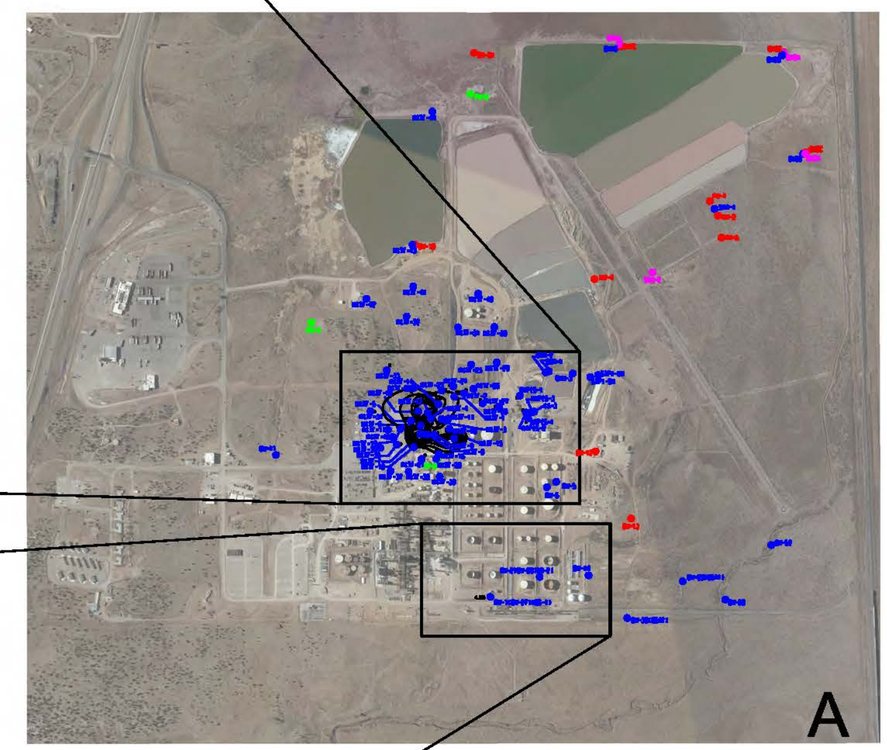
Figure 12

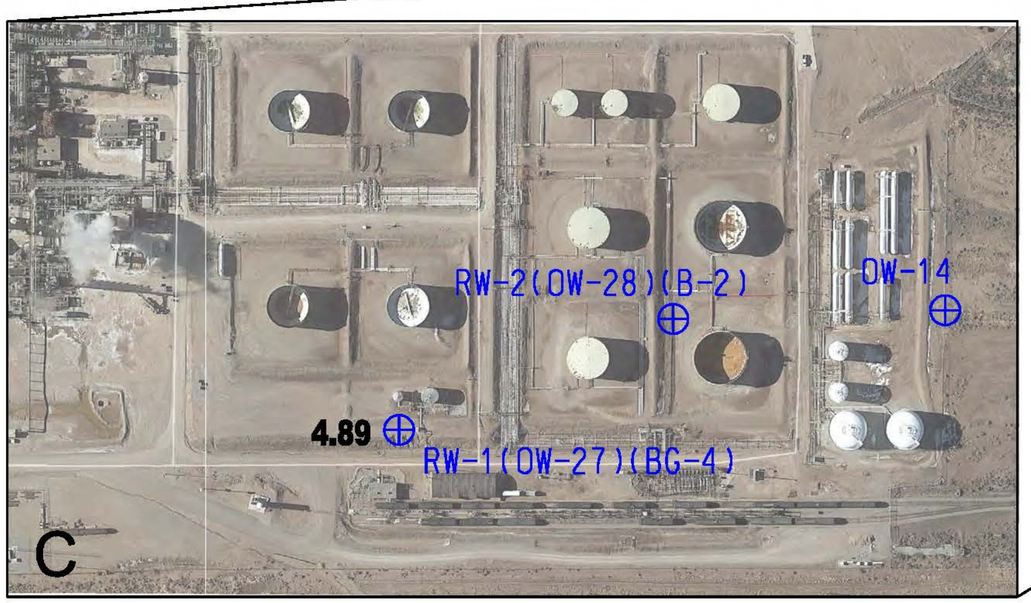
Alluvial/Fluvial Upper Sand Water 2014

WESTERN REFINING - GALLUP REFINERY

Western Refining - Gallup Refinery
92 Giant Crossing Road
Gallup, New Mexico 87301
Date: February 26, 2015







SPH Contour Thickness (in feet)

Contour Interval: 0.25'

Scale: Image A - Not to scale
Image B - 1" = 200'
Image C - 1" = 200'

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Line is 1 inch long on original

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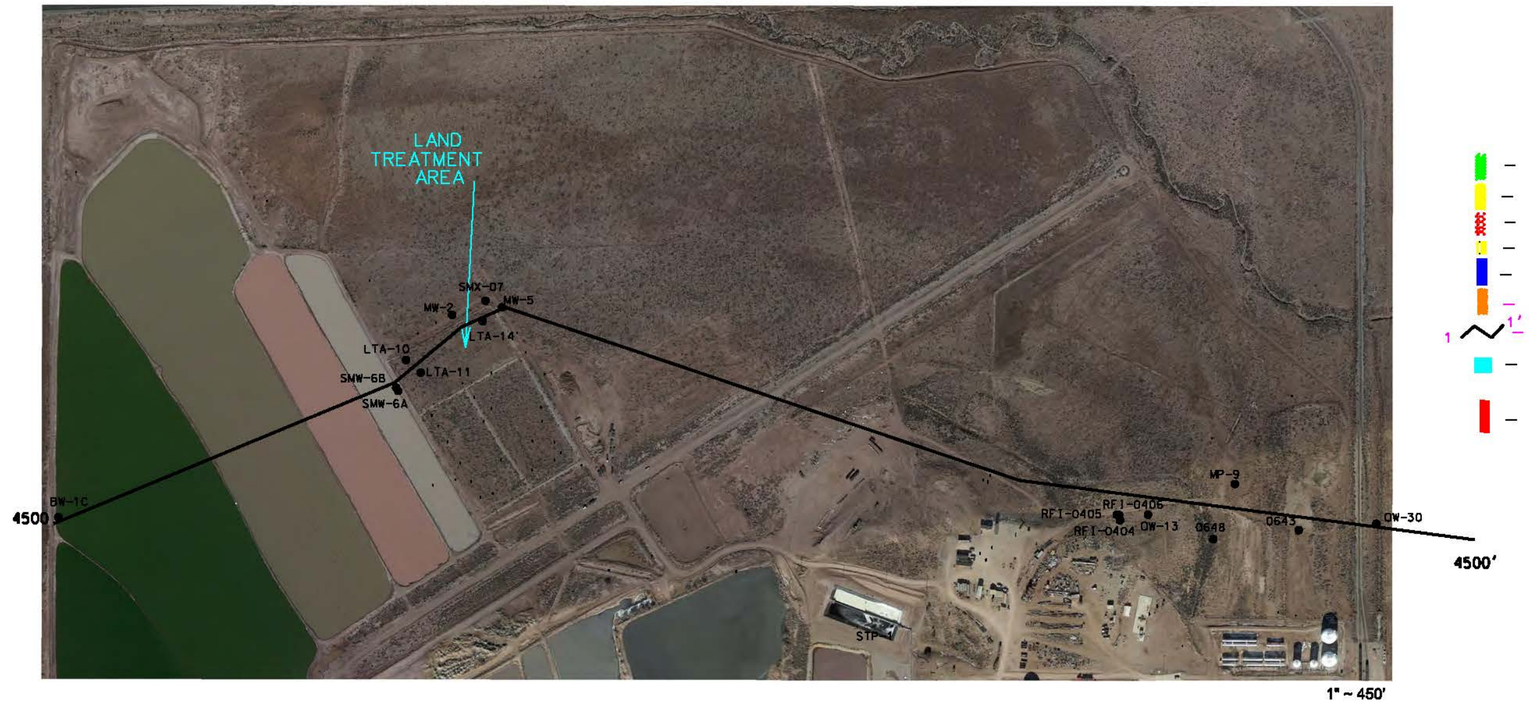
Figure 13

Product Thickness Map (SPH for 11/14)

WESTERN REFINING - GALLUP REFINERY

Western Refining - Gallup Refinery
92 Giant Crossing Road
Gallup, New Mexico 87301

Date: March 12, 2015



LEGEND

- CLAY
- SANDY CLAY OR CLAYEY SAND
- SAND
- SILT
- SHALE (CHINLE FORMATION)
- SANDSTONE (CHINLE FORMATION)
- PROFILE LINE
- WATER BEARING ZONE
- SCREENED INTERVAL

PROFILE 4500 - 4500'

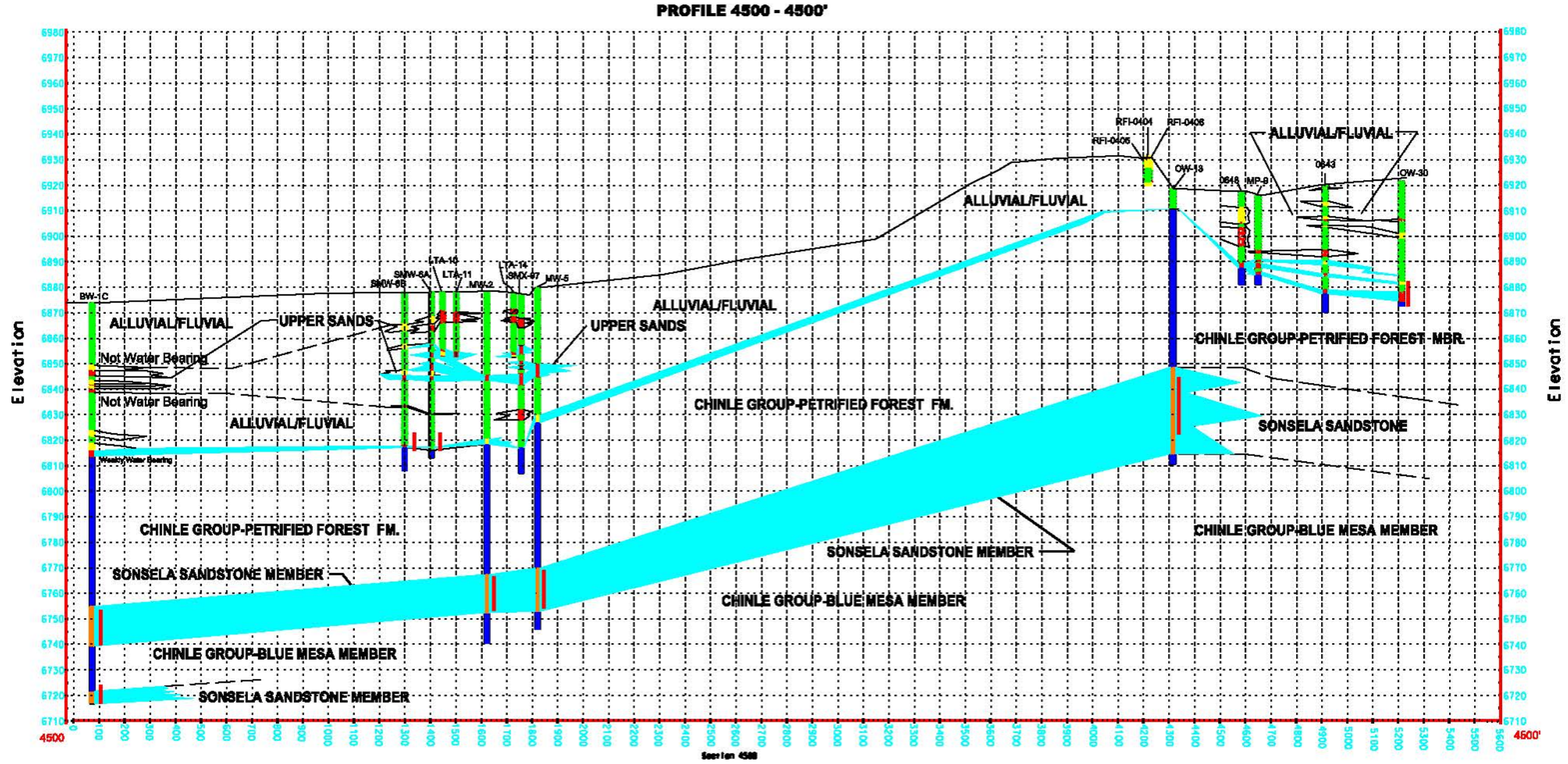


Figure 14

TYPICAL WEST - EAST GEOLOGIC PROFILE

WESTERN REFINING - GALLUP REFINERY

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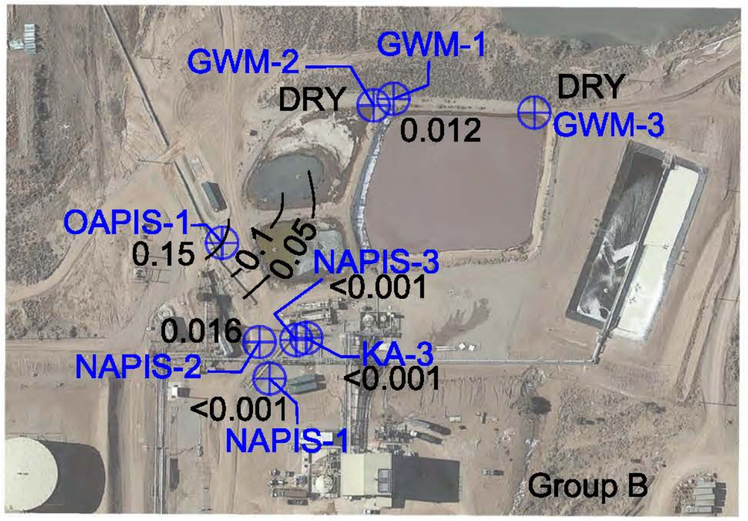
Western Refining - Gallup Refinery
92 Giant Crossing Road
Gallup, New Mexico 87301

Date: March 31, 2015

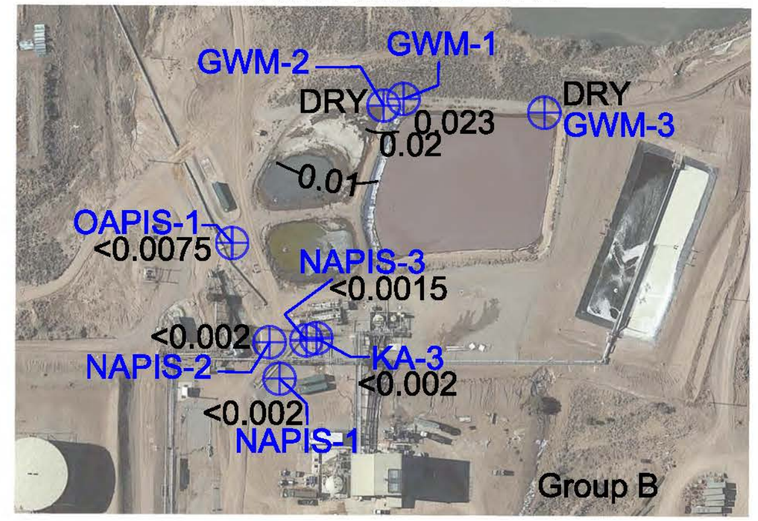
Benzene (November 2014)

Contour Interval = 0.05



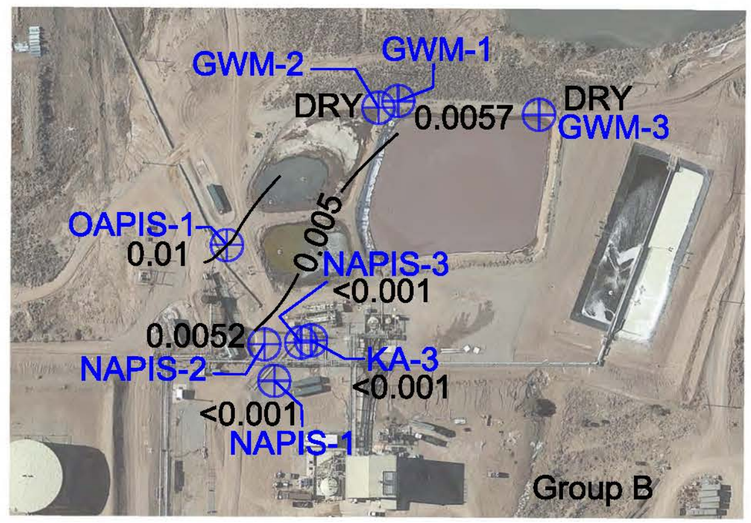
Total Xylenes (November 2014)

Contour Interval = 0.01

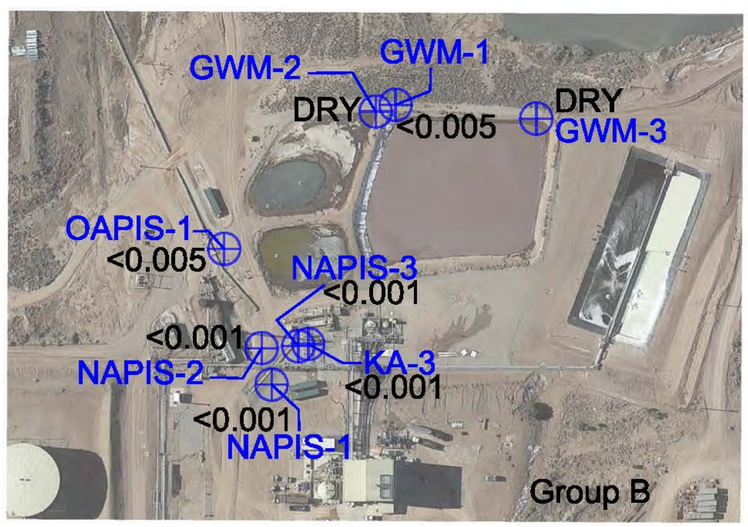


Ethyl Benzene (November 2014)

Contour Interval = 0.005



Toluene (November 2014)



MTBE (November 2014)

Contour Interval = 0.10

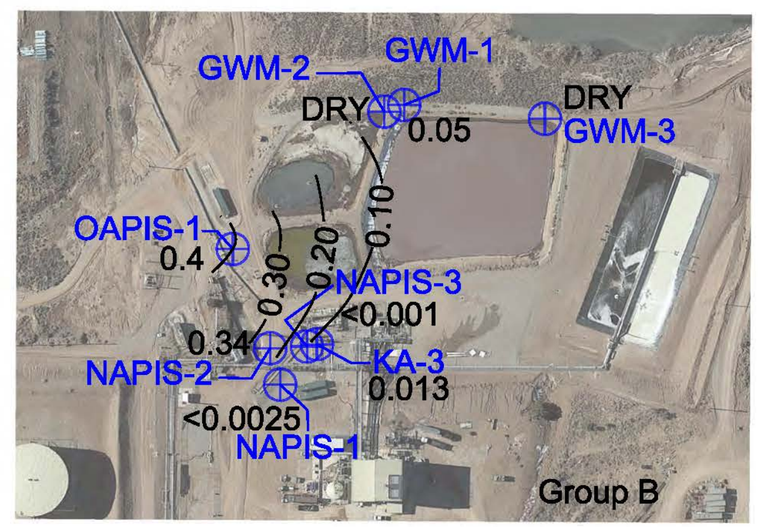


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Figure 15

WELL GROUP B CONSTITUENTS

WESTERN REFINING - GALLUP REFINERY

Western Refining - Gallup Refinery
92 Giant Crossing Road
Gallup, New Mexico 87301

Date: March 24, 2015

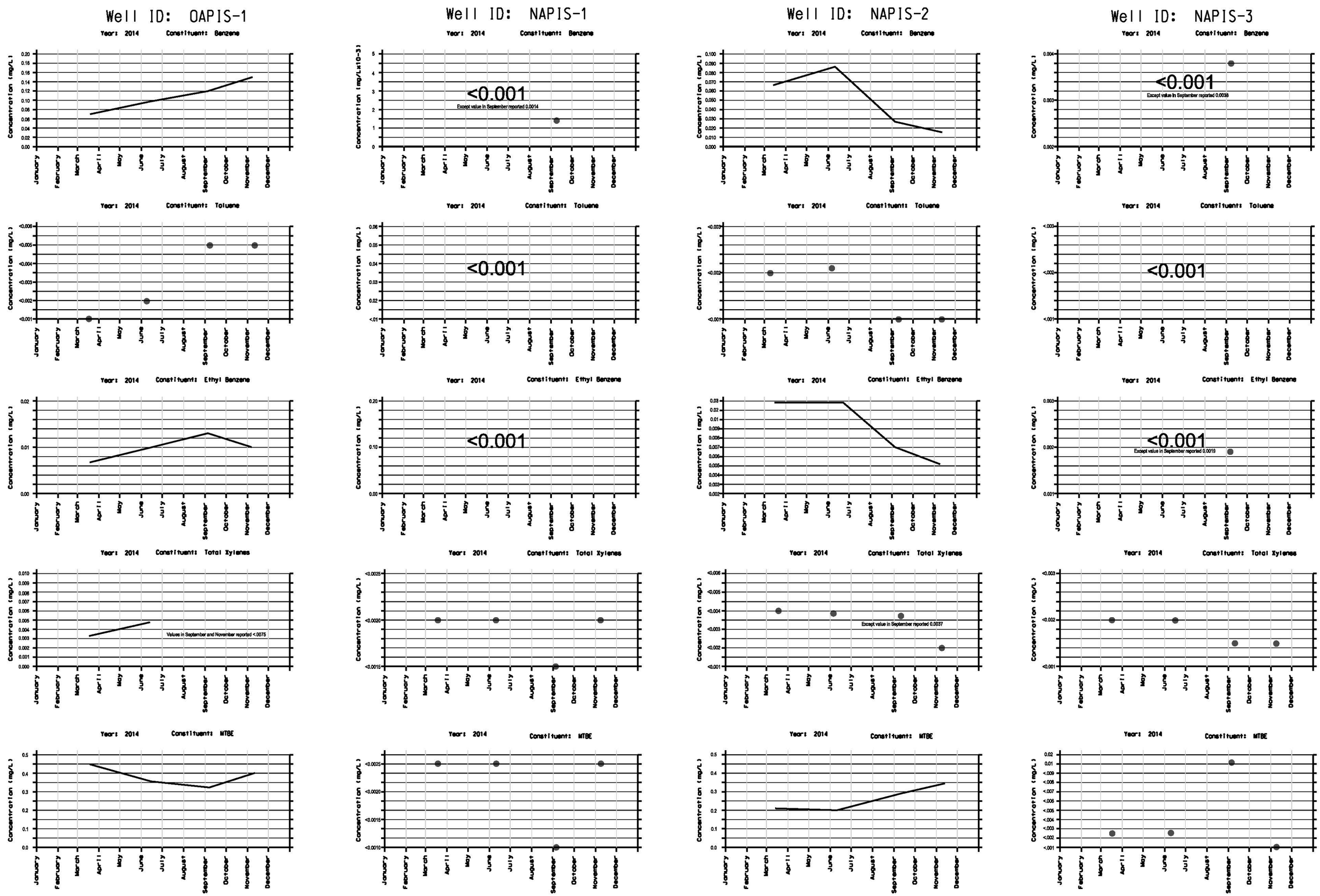

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Figure 15.1

WELL GROUP B CONSTITUENTS

WESTERN REFINING - GALLUP REFINERY

Western Refining - Gallup Refinery
92 Giant Crossing Road
Gallup, New Mexico 87301

Date: March 6, 2015

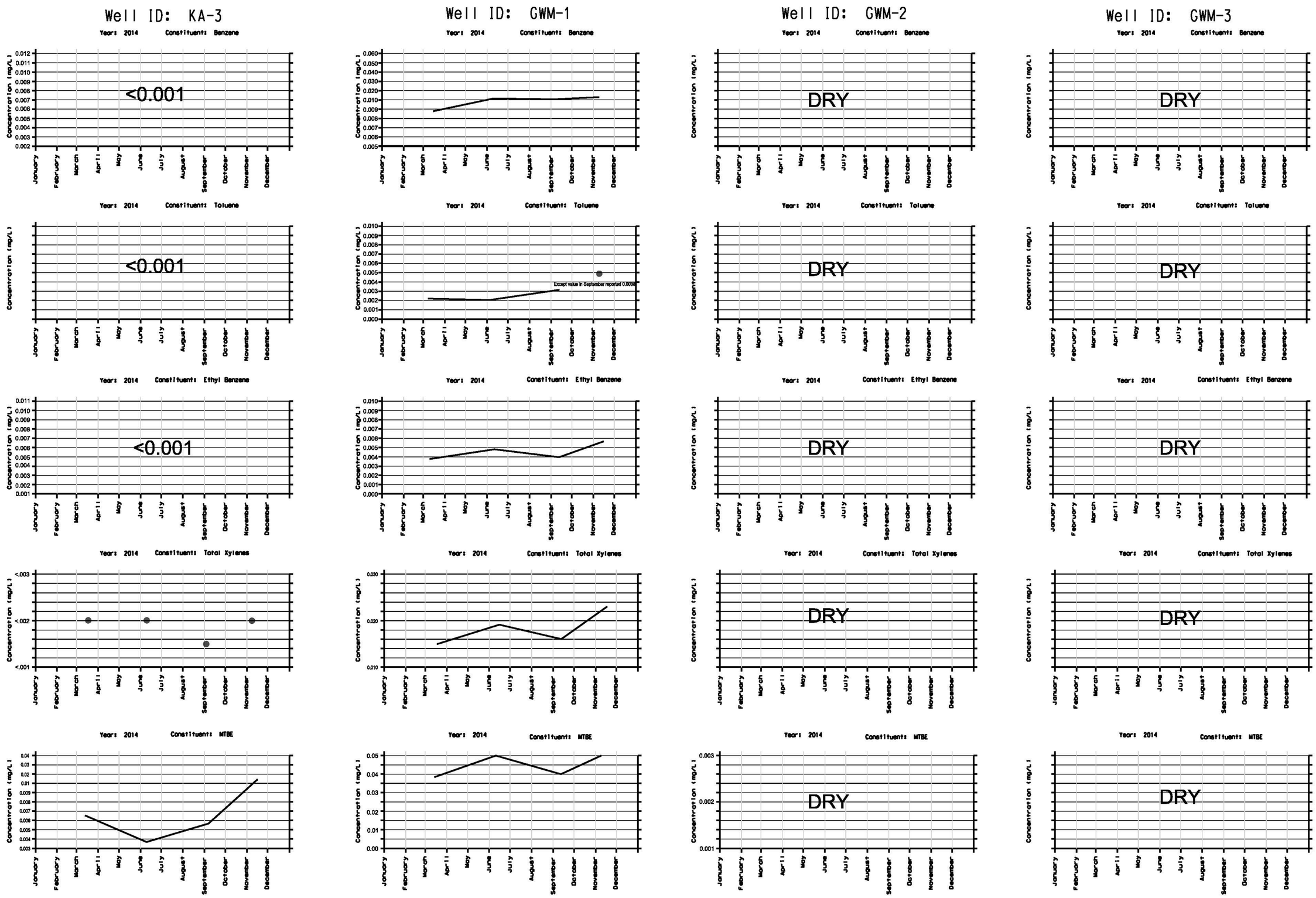

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Figure 15.1A

WELL GROUP B CONSTITUENTS

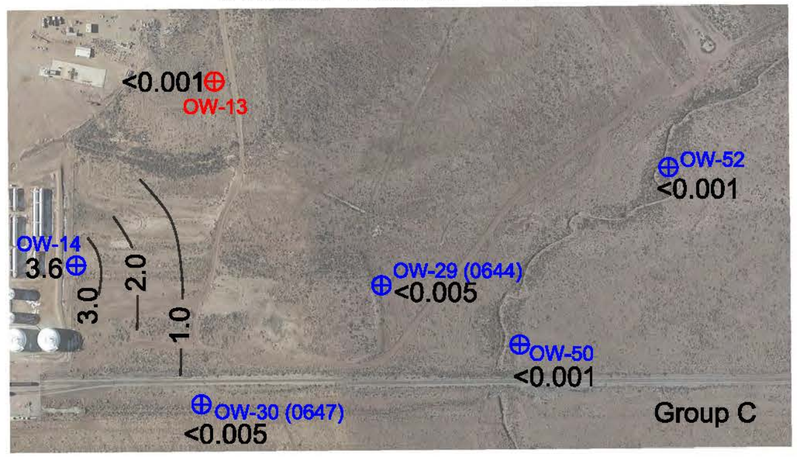
WESTERN REFINING - GALLUP REFINERY

Western Refining - Gallup Refinery
92 Giant Crossing Road
Gallup, New Mexico 87301

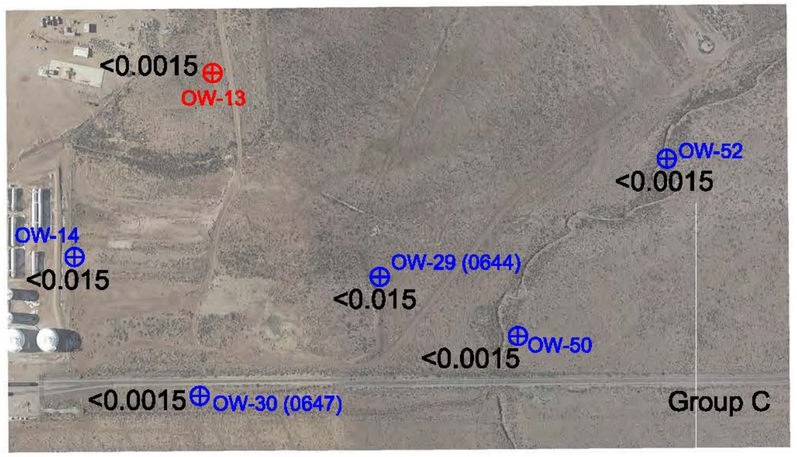
Date: March 6, 2015

Benzene (November 2014)

Contour Interval = 1.0

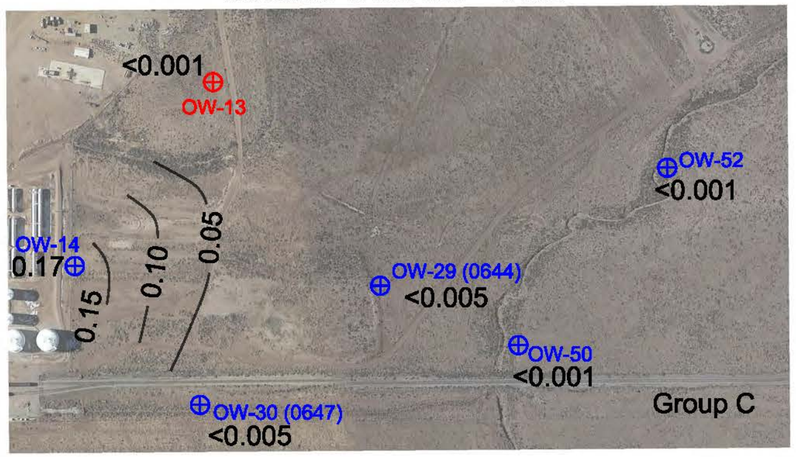


Total Xylenes (November 2014)



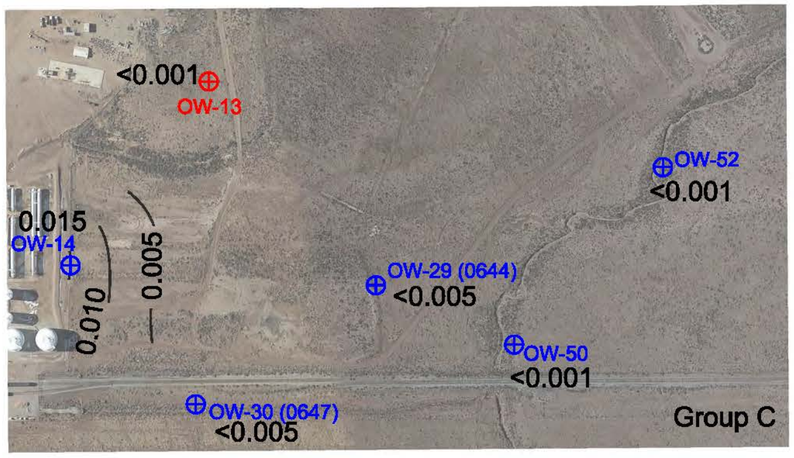
Ethyl Benzene (November 2014)

Contour Interval = 0.05



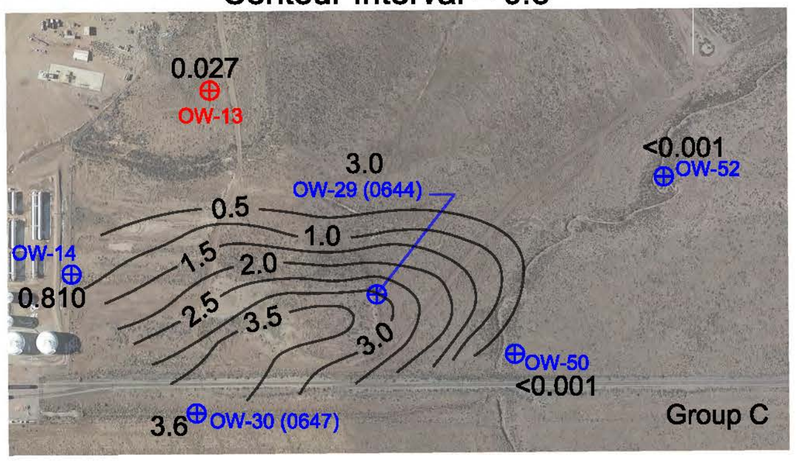
Toluene (November 2014)

Contour Interval = 0.005



MTBE (November 2014)

Contour Interval = 0.5



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Project #: 0625859

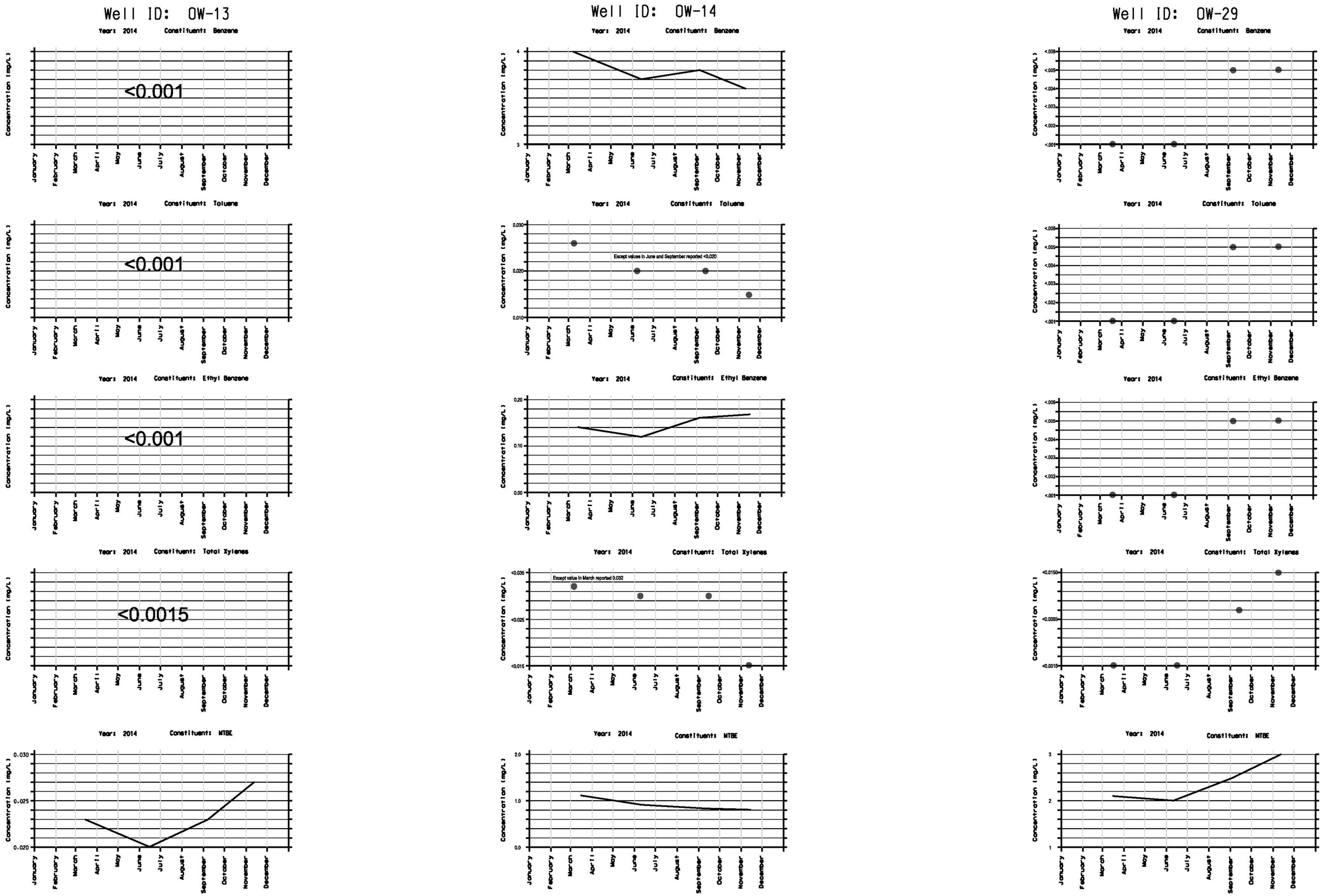
Figure 16

WELL GROUP C CONSTITUENTS

WESTERN REFINING - GALLUP REFINERY

Western Refining - Gallup Refinery
92 Giant Crossing Road
Gallup, New Mexico 87301

Date: March 24, 2015



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Project #: 0625859

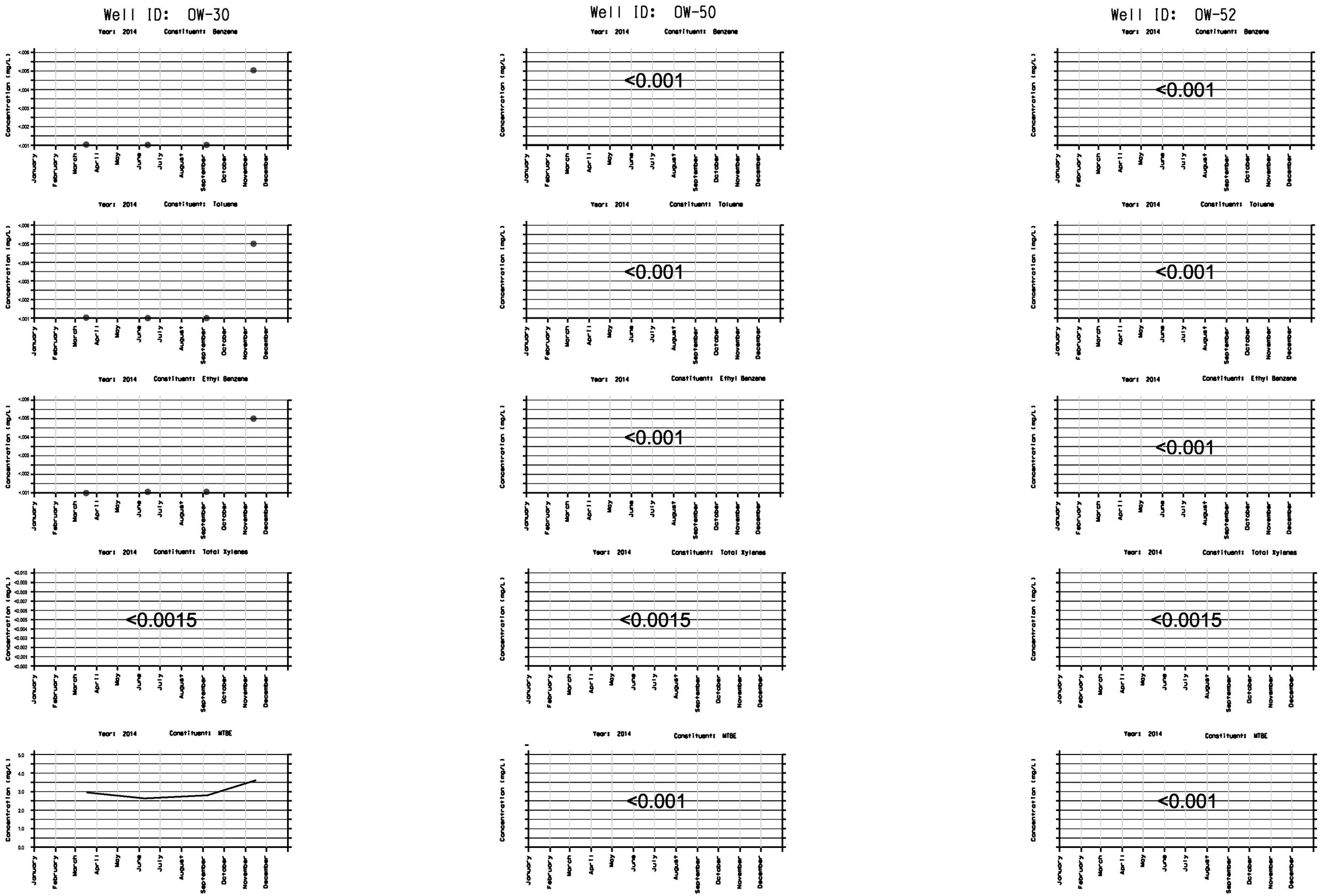
Figure 16.1

WELL GROUP C CONSTITUENTS

WESTERN REFINING - GALLUP REFINERY

Western Refining - Gallup Refinery
92 Giant Crossing Road
Gallup, New Mexico 87301

Date: March 6, 2015



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Project #: 0625859

Figure 16.1A

WELL GROUP C CONSTITUENTS

WESTERN REFINING - GALLUP REFINERY

Western Refining - Gallup Refinery
92 Giant Crossing Road
Gallup, New Mexico 87301

Date: March 6, 2015

APPENDIX A

SEPARATE PHASE HYDROCARBON RECOVERY LOGS

APPENDIX A - RW-1 HYDROCARBON RECOVERY LOG
2/22/05 thru 12/2014

Measurement Date	Time	Quarter	Method	Status	Depth to Product (ft)	Depth to Water (ft)	Product Thickness Level [2] (ft)	Product Bailed or Purged [2] (gal)	Water Purged [2] (gal)
2/22/2005	8:30	1st	NR	Start	32.46	36.5	4.04	14	NR
3/2/2005	7:45	1st	NR	Start	32.42	36.44	4.02	9	NR
3/8/2005	8:30	1st	NR	Start	31.92	36.35	4.43	15	NR
3/9/2005	830	1st	NR	Start	31.92	37.5	5.58	4	NR
3/11 to 3/18/05	NR	1st	NR	Start	NR	NR	NR	74	NR
3/18 to 3/23/05	NR	1st	Pump	Continue pumping	NR	NR	NR	48	NR
3/23 to 4/1/05	NR	1st	Pump	Continue pumping	NR	NR	NR	62	NR
4/1 To 4/4/05		2nd	Pump	Pump shutdown to measure	NR	NR	NR	27	NR
4/5/2005	11:30	2nd	Pump		34.75	38.92	4.17	NR	NR
4/4 to 4/15/05	11:00	2nd	Pump	Continue pumping	NR	NR	NR	50	NR
4-15 to 5-5-05	12:30	2nd	Pump	Continue pumping	NR	NR	NR	45	154
5-5 to 6-17-05	11:30	2nd	Pump	Continue pumping	NR	NR	NR	24	196
6/27/2005	14:30	2nd		Pump shutdown to measure	NR	NR	NR	NR	NR
6/28/2005	11:30	2nd			32.46	33.25	0.79	NR	NR
6/28/2005		2nd	Pump	Continue pumping	NR	NR	NR	NR	NR
6/17 to 7/8/2005	10:30	2nd	Pump	Continue pumping	NR	NR	NR	18	146
7/8 to 8/9/2005	13:30	3rd	Pump	Continue pumping	NR	NR	NR	28	350
8/9 to 9/16/2005	11:35	3rd			36.46	36.54	0.08	8	240
12/5/2005	13:15	4th			31.92	34.71	2.79	NR	NR
12/8/2005	14:00	4th	Pump	Start	NR	NR	NR	NR	NR
12/22/2005	15:30	4th		stop	NR	NR	NR	5	120
12/29/2005	14:00	4th	Bailer	Hand bailed	NR	NR	NR	0.5	4.5
3/16/2006	13:00	1st.			NR	NR	NR	NR	NR
3/16/2006	14:30	1st.	Pump	Start	32.23	34.48	2.25	NR	NR
3/23/2006	14:30	1st.		Stop	NR	NR	NR	NR	NR
3/27/2006	15:30	1st.	Pump	Start	NR	NR	NR	NR	NR
3/31/2006	11:30	1st.	Pump	Continue pumping	NR	NR	NR	7	174
4/3/2006	11:30	2nd		Stop	NR	NR	NR	1	38
4/4/2006	11:00	2nd			32.75	33.08	0.33	NR	NR
6/6/2006	13:00	2nd			32.39	34.54	2.15	NR	NR
6/8/2006	15:00	2nd	Pump	Start	NR	NR	NR	NR	NR
6/29/2006	10:00	2nd		Stop	NR	NR	NR	8	365
7/31/2006	11:45	3rd			33.06	33.48	0.42	NR	NR
7/31/2006	11:45	3rd	Pump	Start pump	NR	NR	NR	NR	NR
8/3/2006	14:20	3rd		Stopped pump	NR	NR	NR	2	87
8/8/2006	9:00	3rd	Pump	Start pump	NR	NR	NR	NR	NR
8/10/2006	15:30	3rd	Pump	Start pump	NR	NR	NR	NR	NR
8/22/2006	9:00	3rd		Stopped. Pulled pump	NR	NR	NR	4.9	373
8/22/2006	9:45	3rd	Pump	Start pump	33.1	33.4	0.3	NR	NR
12/21/2006	15:55	4th	Pump	Start pump	35.2	36	0.8	0.62	70
2/21/2007	10:15	1st.	Pump	Start pump	33.42	34.6	1.18	0.63	53.5
6/5/2007	10:00	2nd		Compressor Down	32.42	32.71	0.29	NR	NR

RW-1 HYDROCARBON RECOVERY LOG - Continued

Measurement Date	Time	Quarter	Method	Status	Depth to Product (ft)	Depth to Water (ft)	Product Thickness Level [2] (ft)	Product Bailed or Purged [2] (gal)	Water Purged [2] (gal)
6/5/2007	10:10	2nd		Hand Bailed	NR	NR	NR	0.05	9
6/6/2007	8:40	2nd		Hand bailed	NR	NR	NR	0.1	11
6/13/2007	14:00	2nd		Hand bailed	NR	NR	NR	0.1	12
6/14/2007	10:40	2nd		Hand bailed	NR	NR	NR	0.05	8
7/10/2007	10:08	3rd		Hand bailed	32.42	32.71	0.29	0.3	18
7/11/2007	9:25	3rd		Hand bailed	NR	NR	NR	0.21	NR
7/23/2007	10:00	3rd		Hand bailed	NR	NR	NR	0.1	NR
11/26/2007	10:50	4th		Hand bailed	30.76	36.45	5.69	0.18	37
2/18/2008	15:32	1st.		Hand Bailed - pump frozen	30.18	34.77	4.59	1.66	36
5/21/2008	14:10	2nd	Pump	Used Pump	30.33	34.57	4.24	1.39	51
9/12/2008[1]	14:30	3rd		Bladder pump malfunctioned	30.03	34.59	4.56	Not Bailed	0
11/13/2008	13:00	4th	Pump	Used Pump	30.02	34.63	4.61	0.94	65
2/11/2009	14:05	1st.	Pump	Used Pump	30.21	31.72	1.51	0.29	90
5/5/2009	11:30	2nd	Pump	Used Pump	30.22	30.8	0.58	0.41	76
8/10/2009	9:22	3rd	Pump	Used Pump	30.69	31.02	0.33	0.89	98
10/28/2009	10:55	4th	Pump	Used Pump	30.56	30.75	0.19	0.19	74
3/3/2010	9:00	1st	Pump	Used Pump	30.89	31.05	0.16	0.21	31
6/3/2010	13:10	2nd	Pump	Used Pump	30.99	31.09	0.1	0.1	32
9/20/2010	14:00	3rd	Pump	Used Pump	29.91	30.06	0.15	0.25	34
11/3/2010	9:10	4th	Pump	Used Pump	30.89	31.01	0.12	0.1	31
3/9/2011	10:19	1st	Pump	Used Pump	30.04	30.15	0.11	0.12	40
6/27/2011	8:05	2nd	Pump	Used Pump	30.52	30.63	0.11	0.1	45
10/3/2011	15:07	Annual	Pump	Used Pump	30.81	30.9	0.09	0.11	42
11/8/2011	8:30	4th	Pump	Used Pump	30.77	30.85	0.08	0.09	38
3/15/2012	10:30	1st	Pump	Used Pump	29.31	29.34	0.03	0.02	22
6/4/2012	9:00	2nd	Pump	Used Pump	29.39	29.41	0.02	0.05	40
8/13/2012	10:30	3rd	Pump	Used Pump	29.54	30.13	0.59	0.4	40
10/8/2012	9:40	4th	Pump	Used Pump	29.28	30.18	0.9	0.5	35
3/26/2013	10:25	1st	Pump	Used Pump	29.11	32.6	3.49	0.028	24
6/17/2013	11:50	2nd	Pump	Used Pump	29.37	33.1	3.73	0.75	18
9/16/2013	11:05	3rd	Pump	Used Pump	28.75	33.09	4.34	0.8	19
11/12/2013	9:25	4th	Pump	Used Pump	28.73	33.11	4.38	0.75	25
3/7/2014	NR	1st	Pump	Used Pump	28.15	31.65	3.5	0.75	28
6/9/2014	NR	2nd	Pump	Used Pump	28.31	33.06	4.75	0.75	25
9/18/2014 [3]	NR	3rd		Annual Sampling Only	28.05	Unknown			
11/13/2014	NR	4th	Pump	Used Pump	28.11	33.04	4.93	0.87	30
					YTD TOTALS		**91.79**	**469.258**	**3555**

NOTES:
FT - Feet
Gal - Gallon
NR - Not recorded
YTD -Year to date
1)Bladder pump has torn diaphragm. Pump non-repairable. Ordered new pump
2) Measurements given are estimated values based on the technicians interpretation and should not be viewed as accurate.
3) Annual Samples collected - no purging done at this time. Technician did not record DTW measurement.

APPENDIX B

APPLICABLE STANDARDS

Table A-1: NMED Soil Screening Levels

Chemical	Residential Soil (mg/kg)	End-point	Industrial/ Occupational Soil (mg/kg)	End-point	Construction Worker Soil (mg/kg)	End-point	Tap Water (ug/L)	End-point	Risk-based SSL for a DAF of 1 (mg/kg)	Risk-based SSL for a DAF of 20 (mg/kg)
Acenaphthene	3.48E+03	n	5.05E+04	n	1.51E+04	n	5.35E+02	n	4.12E+00	8.25E+01
Acetaldehyde	2.49E+02	n	1.17E+03	n	2.17E+02	n	1.88E+01	n	3.29E-03	6.58E-02
Acetone	6.63E+04	n	9.60E+05	nls	2.42E+05	nls	1.41E+04	n	2.49E+00	4.98E+01
Acrylonitrile	4.93E+00	c	2.46E+01	c	3.52E+01	n	5.23E-01	c	9.77E-05	1.95E-03
Acetophenone	7.82E+03	ns	1.30E+05	nls	3.54E+04	ns	1.92E+03	n	4.82E-01	9.64E+00
Acrolein	4.54E-01	n	2.16E+00	n	4.01E-01	n	4.15E-02	n	7.29E-06	1.46E-04
Aldrin	3.11E-01	c	1.50E+00	c	8.07E+00	n	4.54E-02	c	5.60E-03	1.12E-01
Aluminum	7.80E+04	n	1.29E+06	nl	4.14E+04	n	1.99E+04	n	2.99E+04	5.97E+05
Anthracene	1.74E+04	n	2.53E+05	nl	7.53E+04	n	1.72E+03	n	4.25E+01	8.51E+02
Antimony	3.13E+01	n	5.19E+02	n	1.42E+02	n	7.26E+00	n	3.28E-01	6.56E+00
Arsenic	4.25E+00	c	2.15E+01	c	5.74E+01	n	5.13E-01	c	1.50E-02	2.99E-01
Barium	1.56E+04	n	2.55E+05	nl	4.39E+03	n	3.28E+03	n	1.35E+02	2.70E+03
Benzene	1.78E+01	c	8.72E+01	c	1.42E+02	n	4.54E+00	c	1.90E-03	3.80E-02
Benzidine	5.18E-03	c	1.12E-01	c	8.12E-01	c	1.07E-03	c	2.09E-06	4.17E-05
Benzo(a)anthracene	1.53E+00	c	3.23E+01	c	2.40E+02	c	3.43E-01	c	9.11E-02	1.82E+00
Benzo(a)pyrene	1.53E-01	c	3.23E+00	c	2.40E+01	c	3.43E-02	c	3.02E-02	6.05E-01
Benzo(b)fluoranthene	1.53E+00	c	3.23E+01	c	2.40E+02	c	3.43E-01	c	3.09E-01	6.17E+00
Benzo(k)fluoranthene	1.53E+01	c	3.23E+02	c	2.31E+03	c	3.43E+00	c	3.02E+00	6.05E+01
Beryllium	1.56E+02	n	2.58E+03	n	1.48E+02	n	1.24E+01	n	9.79E+00	1.96E+02
a-BHC (a-Hexachlorocyclohexane, a-HCH)	8.45E-01	c	4.07E+00	c	2.97E+01	c	6.80E-02	c	2.98E-04	5.96E-03
b-BHC (b-Hexachlorocyclohexane, b-HCH)	2.96E+00	c	1.43E+01	c	1.04E+02	c	2.38E-01	c	1.04E-03	2.09E-02
g-BHC (Lindane)	5.63E+00	c	2.83E+01	c	9.43E+01	n	4.08E-01	c	1.79E-03	3.58E-02
1,1-Biphenyl	6.32E+01	n	2.98E+02	n	5.46E+01	n	8.34E-01	n	6.56E-03	1.31E-01
Bis(2-chloroethyl) ether	3.11E+00	c	1.57E+01	c	1.95E+00	c	1.36E-01	c	3.03E-05	6.05E-04
Bis(2-chloroisopropyl) ether	9.93E+01	c	5.19E+02	cs	3.54E+03	cs	9.76E+00	c	2.37E-03	4.73E-02
Bis(2-ethylhexyl) phthalate	3.80E+02	c	1.83E+03	c	5.38E+03	n	5.56E+01	c	9.99E+00	2.00E+02
Bis(chloromethyl) ether	2.08E-03	c	1.02E-02	c	4.81E-02	c	7.20E-04	c	1.50E-07	3.00E-06
Boron	1.56E+04	n	2.59E+05	nl	5.14E+04	n	3.95E+03	n	1.25E+01	2.51E+02
Bromodichloromethane	6.19E+00	c	3.02E+01	c	1.43E+02	c	1.34E+00	c	3.10E-04	6.21E-03
Bromomethane	1.77E+01	n	9.45E+01	n	1.79E+01	n	7.54E+00	n	1.71E-03	3.43E-02
1,3-Butadiene	6.86E-01	c	3.41E+00	c	2.02E+00	n	1.80E-01	c	1.04E-04	2.07E-03

Chemical	Residential Soil (mg/kg)	End-point	Industrial/ Occupational Soil (mg/kg)	End-point	Construction Worker Soil (mg/kg)	End-point	Tap Water (ug/L)	End-point	Risk-based SSL for a DAF of 1 (mg/kg)	Risk-based SSL for a DAF of 20 (mg/kg)
2-Butanone (Methyl ethyl ketone, MEK)	3.74E+04	n	4.11E+05	nls	9.17E+04	ns	5.56E+03	n	1.00E+00	2.01E+01
tert-Butyl methyl ether (MTBE)	9.75E+02	c	4.82E+03	c	2.42E+04	cs	1.43E+02	c	2.77E-02	5.53E-01
Cadmium	7.05E+01	n	1.11E+03	n	7.21E+01	n	6.24E+00	n	4.69E-01	9.39E+00
Carbon disulfide	1.55E+03	ns	8.54E+03	ns	1.62E+03	ns	8.10E+02	n	2.21E-01	4.42E+00
Carbon tetrachloride	1.07E+01	c	5.25E+01	c	2.02E+02	n	4.53E+00	c	1.66E-03	3.33E-02
Chlordane	1.77E+01	c	8.90E+01	c	1.53E+02	n	2.23E+00	c	1.13E-01	2.26E+00
2-Chloroacetophenone	1.72E+05	nl	8.12E+05	nl	2.81E+02	n				
2-Chloro-1,3-butadiene	1.75E-01	c	8.48E-01	c	3.95E+00	c	1.87E-01	c	9.83E-05	1.97E-03
1-Chloro-1,1-difluoroethane	1.09E+05	nls	5.15E+05	nls	9.58E+04	ns	1.04E+05	n	5.34E+01	1.07E+03
Chlorobenzene	3.78E+02	ns	2.16E+03	ns	4.12E+02	ns	7.76E+01	n	4.18E-02	8.36E-01
1-Chlorobutane	3.13E+03	ns	5.19E+04	ns	1.42E+04	ns	6.31E+02	n	2.27E-01	4.53E+00
Chlorodifluoromethane	1.02E+05	nls	4.83E+05	nls	8.98E+04	ns	1.04E+05	n	4.27E+01	8.55E+02
Chloroform	5.90E+00	c	2.87E+01	c	1.34E+02	c	2.29E+00	c	5.46E-04	1.09E-02
Chloromethane	4.11E+01	c	2.01E+02	c	2.35E+02	n	2.03E+01	c	4.76E-03	9.51E-02
b-Chloronaphthalene	6.26E+03	n	1.04E+05	nl	2.83E+04	ns	7.33E+02	n	2.85E+00	5.70E+01
o-Chloronitrobenzene	1.78E+01	c	8.55E+01	c	8.39E+01	n	2.35E+00	c	1.71E-03	3.42E-02
p-Chloronitrobenzene	6.16E+01	n	9.16E+02	n	2.57E+02	n	1.79E+01	n	1.28E-02	2.57E-01
2-Chlorophenol	3.91E+02	n	6.49E+03	n	1.77E+03	n	9.10E+01	n	5.76E-02	1.15E+00
2-Chloropropane	2.86E+02	n	1.35E+03	ns	2.51E+02	ns	2.09E+02	n	6.31E-02	1.26E+00
o-Chlorotoluene	1.56E+03	ns	2.60E+04	ns	7.08E+03	ns	2.33E+02	n	1.78E-01	3.56E+00
Chromium III	1.17E+05	nl	1.95E+06	nl	5.31E+05	nl	1.36E+04	n	2.46E+07	4.91E+08
Chromium VI	3.05E+00	c	7.21E+01	c	6.69E+01	c	2.52E-01	c	4.84E-03	9.68E-02
Chromium (Total)	9.66E+01	c	5.05E+02	c	1.34E+02	n	5.59E+00	c	1.01E+04	2.01E+05
Chrysene	1.53E+02	c	3.23E+03	c	2.31E+04	c	3.43E+01	c	9.30E+00	1.86E+02
Copper	3.13E+03	n	5.19E+04	n	1.42E+04	n	7.90E+02	n	2.78E+01	5.56E+02
Crotonaldehyde	3.66E+00	c	1.91E+01	c	1.30E+02	c	4.04E-01	c	7.11E-05	1.42E-03
Cumene (isopropylbenzene)	2.36E+03	ns	1.42E+04	ns	2.74E+03	ns	4.47E+02	n	5.69E-01	1.14E+01
Cyanide	1.12E+01	n	6.33E+01	n	1.21E+01	n	1.46E+00	n	2.61E-04	5.22E-03
Cyanogen	7.82E+01	n	1.30E+03	n	3.54E+02	n	1.99E+01	n	4.01E-03	8.01E-02
Cyanogen bromide	7.04E+03	n	1.17E+05	nl	3.19E+04	n	1.80E+03	n	5.29E-01	1.06E+01
Cyanogen chloride	3.91E+03	n	6.49E+04	n	1.77E+04	n	9.99E+02	n	2.94E-01	5.88E+00
DDD	2.22E+01	c	1.07E+02	c	7.78E+02	c	3.06E-01	c	5.39E-02	1.08E+00
DDE	1.57E+01	c	7.55E+01	c	5.49E+02	c	2.29E+00	c	4.04E-01	8.08E+00

Chemical	Residential Soil (mg/kg)	End-point	Industrial/ Occupational Soil (mg/kg)	End-point	Construction Worker Soil (mg/kg)	End-point	Tap Water (ug/L)	End-point	Risk-based SSL for a DAF of 1 (mg/kg)	Risk-based SSL for a DAF of 20 (mg/kg)
DDT	1.87E+01	c	9.50E+01	c	1.62E+02	n	2.29E+00	c	5.80E-01	1.16E+01
Dibenz(a,h)anthracene	1.53E-01	c	3.23E+00	c	2.40E+01	c	1.06E-01	c	3.05E-01	6.11E+00
1,2-Dibromo-3-chloropropane	8.58E-02	c	1.18E+00	c	5.53E+00	c	3.36E-03	c	1.17E-06	2.34E-05
Dibromochloromethane	1.39E+01	c	6.74E+01	c	3.40E+02	c	1.68E+00	c	3.77E-04	7.54E-03
1,2-Dibromoethane	6.72E-01	c	3.31E+00	c	1.63E+01	c	7.46E-02	c	1.76E-05	3.52E-04
1,4-Dichloro-2-butene	1.15E-01	c	5.58E-01	c	2.59E+00	c	1.34E-02	c	5.00E-06	9.99E-05
1,2-Dichlorobenzene	2.15E+03	ns	1.30E+04	ns	2.50E+03	ns	3.02E+02	n	2.29E-01	4.58E+00
1,4-Dichlorobenzene	3.28E+01	c	1.59E+02	c	7.46E+02	c	4.81E+00	c	3.60E-03	7.20E-02
3,3-Dichlorobenzidine	1.18E+01	c	5.70E+01	c	4.10E+02	c	1.24E+00	c	6.14E-03	1.23E-01
Dichlorodifluoromethane	1.82E+02	n	8.65E+02	ns	1.61E+02	n	1.97E+02	n	3.61E-01	7.23E+00
1,1-Dichloroethane	7.86E+01	c	3.83E+02	c	1.82E+03	cs	2.75E+01	c	6.79E-03	1.36E-01
1,2-Dichloroethane	8.32E+00	c	4.07E+01	c	5.38E+01	n	1.71E+00	c	4.07E-04	8.14E-03
cis-1,2-Dichloroethene	1.56E+02	n	2.60E+03	ns	7.08E+02	n	3.65E+01	n	9.18E-03	1.84E-01
trans-1,2-Dichloroethene	2.95E+02	n	1.61E+03	ns	3.05E+02	n	9.32E+01	n	2.35E-02	4.69E-01
1,1-Dichloroethene	4.40E+02	n	2.26E+03	ns	4.24E+02	n	2.84E+02	n	9.74E-02	1.95E+00
2,4-Dichlorophenol	1.85E+02	n	2.75E+03	n	8.07E+02	n	4.53E+01	n	4.13E-02	8.25E-01
1,2-Dichloropropane	1.78E+01	c	8.68E+01	c	2.54E+01	n	4.37E+00	c	1.21E-03	2.43E-02
1,3-Dichloropropene	2.93E+01	c	1.46E+02	c	1.30E+02	n	4.70E+00	c	1.40E-03	2.80E-02
Dicyclopentadiene	1.73E+00	n	8.14E+00	n	1.51E+00	n	6.25E-01	n	1.71E-03	3.42E-02
Dieldrin	3.33E-01	c	1.60E+00	c	1.17E+01	c	1.71E-02	c	5.18E-04	1.04E-02
Diethyl phthalate	4.93E+04	n	7.33E+05	nl	2.15E+05	nl	1.48E+04	n	4.89E+00	9.79E+01
Di-n-butyl phthalate (Dibutyl phthalate)	6.16E+03	n	9.16E+04	n	2.69E+04	n	8.85E+02	n	1.69E+00	3.38E+01
2,4-Dimethylphenol	1.23E+03	n	1.83E+04	n	5.38E+03	n	3.54E+02	n	3.22E-01	6.45E+00
4,6-Dinitro-o-cresol	4.93E+00	n	7.33E+01	n	2.15E+01	n	1.51E+00	n	1.97E-03	3.94E-02
2,4-Dinitrophenol	1.23E+02	n	1.83E+03	n	5.38E+02	n	3.88E+01	n	3.35E-02	6.71E-01
2,4-Dinitrotoluene	1.71E+01	c	8.23E+01	c	5.36E+02	n	2.37E+00	c	2.46E-03	4.91E-02
2,6-Dintitrotoluene	3.56E+00	c	1.72E+01	c	8.09E+01	n	4.84E-01	c	5.10E-04	1.02E-02
2,4/2,6-Dintrotoluene Mixture	7.83E+00	c	3.77E+01	c	2.77E+02	c	1.06E+00	c	1.12E-03	2.23E-02
1,4-Dioxane	5.33E+01	c	2.57E+02	c	1.88E+03	c	7.76E+00	c	1.38E-03	2.75E-02
1,2-Diphenylhydrazine	6.66E+00	c	3.21E+01	c	2.34E+02	c	7.73E-01	c	1.88E-03	3.76E-02
Endosulfan	3.70E+02	n	5.50E+03	n	1.61E+03	n	9.87E+01	n	1.02E+00	2.04E+01
Endrin	1.85E+01	n	2.75E+02	n	8.07E+01	n	2.23E+00	n	6.77E-02	1.35E+00
Epichlorohydrin	4.27E+01	n	2.15E+02	n	4.02E+01	n	2.05E+00	n	3.86E-04	7.72E-03

Chemical	Residential Soil (mg/kg)	End-point	Industrial/ Occupational Soil (mg/kg)	End-point	Construction Worker Soil (mg/kg)	End-point	Tap Water (ug/L)	End-point	Risk-based SSL for a DAF of 1 (mg/kg)	Risk-based SSL for a DAF of 20 (mg/kg)
Ethyl acetate	1.82E+03	n	8.75E+03	n	1.63E+03	n	1.45E+02	n	2.64E-02	5.28E-01
Ethyl acrylate	1.45E+02	c	7.57E+02	c	5.16E+03	cs	1.56E+01	c	2.99E-03	5.97E-02
Ethyl chloride	1.90E+04	ns	8.95E+04	ns	1.66E+04	ns	2.09E+04	n	5.37E+00	1.07E+02
Ethyl ether	1.56E+04	ns	2.60E+05	nls	7.08E+04	ns	3.93E+03	n	7.60E-01	1.52E+01
Ethyl methacrylate	2.73E+03	ns	1.78E+04	ns	3.48E+03	ns	4.55E+02	n	9.15E-02	1.83E+00
Ethylbenzene	7.51E+01	c	3.68E+02	cs	1.77E+03	cs	1.49E+01	c	1.31E-02	2.62E-01
Ethylene oxide	5.02E+00	c	2.48E+01	c	1.23E+02	c	5.08E-01	c	9.09E-05	1.82E-03
Fluoranthene	2.32E+03	n	3.37E+04	n	1.00E+04	n	8.02E+02	n	6.69E+01	1.34E+03
Fluorene	2.32E+03	n	3.37E+04	n	1.00E+04	n	2.88E+02	n	4.00E+00	8.00E+01
Fluoride	4.69E+03	n	7.78E+04	n	1.81E+04	n	1.18E+03	n	1.78E+02	3.56E+03
Furan	7.24E+01	n	1.15E+03	n	3.54E+02	n	1.92E+01	n	6.12E-03	1.22E-01
Heptachlor	1.18E+00	c	5.70E+00	c	4.15E+01	c	4.39E-02	c	2.73E-03	5.45E-02
Hexachlorobenzene	3.33E+00	c	1.60E+01	c	1.17E+02	c	4.87E-01	c	4.61E-03	9.22E-02
Hexachloro-1,3-butadiene	6.16E+01	n	3.29E+02	c	2.69E+02	n	2.95E+00	c	4.39E-03	8.79E-02
Hexachlorocyclopentadiene	3.70E+02	n	5.49E+03	n	8.67E+02	n	2.78E+01	n	6.68E-02	1.34E+00
Hexachloroethane	4.31E+01	n	6.41E+02	c	1.88E+02	n	6.80E+00	n	3.31E-03	6.62E-02
n-Hexane	6.15E+02	ns	3.20E+03	ns	6.03E+02	ns	3.19E+02	n	2.78E+00	5.57E+01
HMX	3.85E+03	n	6.33E+04	n	1.74E+04	n	1.00E+03	n	9.72E-01	1.94E+01
Hydrazine anhydride	1.78E+00	c	8.55E+00	c	5.99E+01	c	2.60E-01	c	4.50E-05	9.00E-04
Hydrogen cyanide	1.02E+01	n	5.72E+01	n	1.09E+01	n	1.46E+00	n	2.61E-04	5.22E-03
Indeno(1,2,3-c,d)pyrene	1.53E+00	c	3.23E+01	c	2.40E+02	c	3.43E-01	c	1.00E+00	2.01E+01
Iron	5.48E+04	n	9.08E+05	nl	2.48E+05	nl	1.38E+04	n	3.48E+02	6.96E+03
Isobutanol (Isobutyl alcohol)	1.85E+04	n	2.75E+05	nl	8.07E+04	n	5.91E+03	n	1.05E+00	2.10E+01
Isophorone	5.61E+03	c	2.70E+04	c	5.37E+04	n	7.79E+02	c	2.11E-01	4.22E+00
Lead	4.00E+02	IEUBK	8.00E+02	IEUBK	8.00E+02	IEUBK				
Lead (tetraethyl-)	6.16E-03	n	9.16E-02	n	3.54E-02	n	1.24E-03	n	4.70E-06	9.41E-05
Maleic hydrazide	3.08E+04	n	4.58E+05	nl	1.35E+05	nl	1.00E+04	n	1.79E+00	3.57E+01
Manganese	1.05E+04	n	1.60E+05	nl	4.64E+02	n	2.02E+03	n	1.31E+02	2.63E+03
Mercury (elemental)	2.38E+01	ns	1.12E+02	ns	2.07E+01	ns	6.26E-01	n	3.27E-02	6.54E-01
Mercury (methyl)	7.82E+00	n	1.30E+02	n	3.54E+01	n	1.96E+00	n	4.45E-04	8.89E-03
Mercury (salts)	2.35E+01	n	3.89E+02	ns	7.71E+01	n	4.92E+00	n	2.56E-01	5.13E+00
Methacrylonitrile	7.70E+00	n	1.23E+02	n	3.28E+01	n	1.91E+00	n	3.71E-04	7.43E-03
Methomyl	1.54E+03	n	2.29E+04	n	6.73E+03	n	4.98E+02	n	9.37E-02	1.87E+00

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Methyl acetate	7.82E+04	ns	1.30E+06	nls	3.54E+05	nls	1.99E+04	n	3.55E+00	7.11E+01
Methyl acrylate	3.50E+02	n	1.85E+03	n	3.48E+02	n	3.90E+01	n	7.13E-03	1.43E-01
Methyl isobutyl ketone	5.81E+03	ns	8.16E+04	ns	2.02E+04	ns	1.24E+03	n	2.40E-01	4.80E+00
Methyl methacrylate	1.11E+04	ns	5.65E+04	ns	1.06E+04	ns	1.39E+03	n	2.61E-01	5.22E+00
Methyl styrene (alpha)	5.48E+03	ns	9.08E+04	ns	2.48E+04	ns	7.65E+02	n	9.43E-01	1.89E+01
Methyl styrene (mixture)	2.73E+02	ns	2.20E+03	ns	4.49E+02	ns	3.73E+01	n	4.70E-02	9.40E-01
Methylcyclohexane	5.50E+03	ns	2.59E+04	ns	4.82E+03	ns	6.26E+03	n	1.58E+01	3.16E+02
Methylene bromide (Dibromomethane)	5.79E+01	n	2.88E+02	n	5.39E+01	n	8.00E+00	n	1.68E-03	3.35E-02
Methylene chloride	4.09E+02	n	5.13E+03	ns	1.21E+03	n	1.06E+02	n	2.35E-02	4.71E-01
Molybdenum	3.91E+02	n	6.49E+03	n	1.77E+03	n	9.87E+01	n	1.99E+00	3.98E+01
Naphthalene	4.97E+01	c	2.41E+02	c	1.59E+02	n	1.65E+00	c	4.11E-03	8.23E-02
Nickel	1.56E+03	n	2.57E+04	n	7.53E+02	n	3.72E+02	n	2.42E+01	4.85E+02
Nitrate	1.25E+05	nl	2.08E+06	nl	5.66E+05	nl	3.16E+04	n	2.13E+01	4.25E+02
Nitrite	7.82E+03	n	1.30E+05	nl	3.54E+04	n	1.97E+03	n	1.33E+00	2.66E+01
Nitrobenzene	6.04E+01	c	2.93E+02	c	3.53E+02	n	1.40E+00	c	7.20E-04	1.44E-02
Nitroglycerin	6.16E+00	n	9.16E+01	n	2.69E+01	n	1.96E+00	n	6.80E-04	1.36E-02
N-Nitrosodiethylamine	7.94E-03	c	1.71E-01	c	1.25E+00	c	1.65E-03	c	4.92E-07	9.84E-06
N-Nitrosodimethylamine	2.34E-02	c	5.03E-01	c	2.14E+00	n	4.90E-03	c	1.02E-06	2.03E-05
N-Nitrosodi-n-butylamine	7.81E-01	c	3.77E+00	c	2.46E+01	c	2.72E-02	c	4.21E-05	8.41E-04
N-Nitrosodiphenylamine	1.09E+03	c	5.24E+03	c	3.79E+04	c	1.21E+02	c	4.98E-01	9.95E+00
N-Nitrosopyrrolidine	2.54E+00	c	1.22E+01	c	8.89E+01	c	3.70E-01	c	1.15E-04	2.30E-03
m-Nitrotoluene	6.16E+00	n	9.16E+01	n	2.69E+01	n	1.74E+00	n	1.25E-03	2.50E-02
o-Nitrotoluene	3.16E+01	c	1.65E+02	c	3.19E+02	n	3.13E+00	c	2.28E-03	4.56E-02
p-Nitrotoluene	2.47E+02	n	1.60E+03	c	1.08E+03	n	4.24E+01	c	3.05E-02	6.09E-01
Pentachlorobenzene	4.93E+01	n	7.33E+02	n	2.15E+02	n	3.07E+00	n	1.76E-02	3.52E-01
Pentachlorophenol	9.85E+00	c	4.45E+01	c	3.46E+02	c	4.00E-01	c	3.04E-03	6.08E-02
Perchlorate	5.48E+01	n	9.08E+02	ns	2.48E+02	n	1.38E+01	n	5.85E-03	1.17E-01
Phenanthrene	1.74E+03	n	2.53E+04	n	7.53E+03	n	1.70E+02	n	4.30E+00	8.59E+01
Phenol	1.85E+04	n	2.75E+05	nl	7.74E+04	n	5.76E+03	n	2.62E+00	5.23E+01
Polychlorinatedbiphenyls (PCBs)										
Aroclor 1016	3.98E+00	n	5.74E+01	n	1.72E+01	n	1.40E+00	n	1.01E-01	2.01E+00
Aroclor 1221	1.81E+00	c	8.57E+00	c	5.53E+01	cs	5.54E-02	c	7.08E-04	1.42E-02
Aroclor 1232	1.86E+00	c	8.82E+00	c	5.76E+01	cs	5.54E-02	c	7.08E-04	1.42E-02

Chemical	Residential Soil (mg/kg)	End-point	Industrial/ Occupational Soil (mg/kg)	End-point	Construction Worker Soil (mg/kg)	End-point	Tap Water (ug/L)	End-point	Risk-based SSL for a DAF of 1 (mg/kg)	Risk-based SSL for a DAF of 20 (mg/kg)
Aroclor 1242	2.43E+00	c	1.15E+01	c	8.53E+01	c	3.89E-01	c	4.57E-02	9.14E-01
Aroclor 1248	2.43E+00	c	1.15E+01	c	8.53E+01	c	3.89E-01	c	4.48E-02	8.96E-01
Aroclor 1254	1.14E+00	n	1.15E+01	c	4.91E+00	n	3.89E-01	c	7.63E-02	1.53E+00
Aroclor 1260	2.43E+00	c	1.15E+01	c	8.53E+01	c	3.89E-01	c	2.04E-01	4.09E+00
2,2',3,3',4,4',5-Heptachlorobiphenyl (PCB 170)	3.75E-01	c	1.77E+00	c	1.72E+00	n	5.99E-02	c	3.21E-02	6.42E-01
2,2',3,4,4',5,5'-Heptachlorobiphenyl (PCB 180)	3.75E+00	c	1.77E+01	c	1.72E+01	n	5.99E-01	c	3.14E-01	6.29E+00
2,3,3',4,4',5,5'-Heptachlorobiphenyl (PCB 189)	1.25E+00	c	5.89E+00	c	5.73E+00	n	2.00E-01	c	1.05E-01	2.10E+00
2,3',4,4',5,5'-Hexachlorobiphenyl (PCB 167)	1.25E+00	c	5.89E+00	c	5.73E+00	n	2.00E-01	c	6.27E-02	1.25E+00
2,3,3',4,4',5'-Hexachlorobiphenyl (PCB 157)	1.25E+00	c	5.89E+00	c	5.73E+00	n	2.00E-01	c	6.40E-02	1.28E+00
2,3,3',4,4',5-Hexachlorobiphenyl (PCB 156)	1.25E+00	c	5.89E+00	c	5.73E+00	n	2.00E-01	c	6.40E-02	1.28E+00
3,3',4,4',5,5'-Hexachlorobiphenyl (PCB 169)	1.25E-03	c	5.89E-03	c	5.73E-03	n	2.00E-04	c	6.27E-05	1.25E-03
2',3,4,4',5-Pentachlorobiphenyl (PCB 123)	1.25E+00	c	5.89E+00	c	5.73E+00	n	2.00E-01	c	3.91E-02	7.83E-01
2',3',4,4',5-Pentachlorobiphenyl (PCB 118)	1.25E+00	c	5.89E+00	c	5.73E+00	n	2.00E-01	c	3.84E-02	7.67E-01
2',3,3',4,4'-Pentachlorobiphenyl (PCB 105)	1.25E+00	c	5.89E+00	c	5.73E+00	n	2.00E-01	c	3.91E-02	7.83E-01
2,3,4,4',5-Pentachlorobiphenyl (PCB 114)	1.25E+00	c	5.89E+00	c	5.73E+00	n	2.00E-01	c	3.91E-02	7.83E-01
3,3',4,4',5-Pentachlorobiphenyl (PCB 126)	3.75E-04	c	1.77E-03	c	1.72E-03	n	5.99E-05	c	1.15E-05	2.30E-04
3,3',4,4'-Tetrachlorobiphenyl (PCB 77)	3.75E-01	c	1.77E+00	c	1.72E+00	n	5.99E-02	c	7.03E-03	1.41E-01
3,4,4',5-Tetrachlorobiphenyl (PCB 81)	1.25E-01	c	5.89E-01	c	5.73E-01	n	2.00E-02	c	2.34E-03	4.69E-02
Propylene oxide	2.56E+01	c	1.33E+02	c	7.99E+02	n	2.66E+00	c	4.82E-04	9.65E-03
Pyrene	1.74E+03	n	2.53E+04	n	7.53E+03	n	1.17E+02	n	9.59E+00	1.92E+02
RDX (Hexahydro-1,3,5-trinitro-1,3,5-triazine	6.04E+01	c	3.11E+02	c	1.01E+03	n	7.02E+00	c	2.16E-03	4.31E-02
Selenium	3.91E+02	n	6.49E+03	n	1.75E+03	n	9.87E+01	n	5.11E-01	1.02E+01
Silver	3.91E+02	n	6.49E+03	n	1.77E+03	n	8.12E+01	n	6.88E-01	1.38E+01
Strontium	4.69E+04	n	7.79E+05	nl	2.12E+05	nl	1.18E+04	n	4.17E+02	8.33E+03
Styrene	7.26E+03	ns	5.13E+04	ns	1.02E+04	ns	1.21E+03	n	1.03E+00	2.06E+01
Sulfolane	6.16E+01	n	9.16E+02	n	2.65E+02	n	2.00E+01	n	3.75E-03	7.49E-02
2,3,7,8-TCDD	4.90E-05	c	2.48E-04	c	2.26E-04	n	5.99E-06	c	2.24E-06	4.48E-05
2,3,7,8-TCDF	4.90E-04	c	2.48E-03	c	1.72E-02	c	2.01E-06	c	4.22E-07	8.44E-06
1,2,4,5-Tetrachlorobenzene	1.85E+01	n	2.75E+02	n	8.07E+01	n	1.66E+00	n	5.83E-03	1.17E-01
1,1,1,2-Tetrachloroethane	2.81E+01	c	1.37E+02	c	6.59E+02	cs	5.72E+00	c	1.80E-03	3.59E-02
1,1,2,2-Tetrachloroethane	7.98E+00	c	3.94E+01	c	1.97E+02	c	7.57E-01	c	2.40E-04	4.80E-03
Tetrachloroethene	1.11E+02	ns	6.29E+02	ns	1.20E+02	ns	4.03E+01	n	1.60E-02	3.21E-01
Tetryl (Trinitrophenylmethylnitramine)	1.56E+02	n	2.59E+03	n	7.06E+02	n	3.94E+01	n	2.79E-01	5.59E+00

Chemical	Residential Soil (mg/kg)	End-point	Industrial/ Occupational Soil (mg/kg)	End-point	Construction Worker Soil (mg/kg)	End-point	Tap Water (ug/L)	End-point	Risk-based SSL for a DAF of 1 (mg/kg)	Risk-based SSL for a DAF of 20 (mg/kg)
Thallium	7.82E-01	n	1.30E+01	n	3.54E+00	n	1.97E-01	n	1.41E-02	2.81E-01
Toluene	5.23E+03	ns	6.13E+04	ns	1.40E+04	ns	1.09E+03	n	6.07E-01	1.21E+01
Toxaphene	4.84E+00	c	2.33E+01	c	1.70E+02	c	1.53E-01	c	1.77E-02	3.54E-01
Tribromomethane (Bromoform)	6.74E+02	c	3.25E+03	c	5.38E+03	n	9.19E+01	c	2.05E-02	4.11E-01
1,1,2-Trichloro-1,2,2-trifluoroethane	5.08E+04	ns	2.43E+05	nls	4.53E+04	ns	5.50E+04	n	1.60E+02	3.20E+03
1,2,4-Trichlorobenzene	8.29E+01	n	4.23E+02	ns	7.91E+01	n	3.98E+00	n	8.82E-03	1.76E-01
1,1,1-Trichloroethane	1.44E+04	ns	7.25E+04	ns	1.36E+04	ns	8.00E+03	n	2.55E+00	5.11E+01
1,1,2-Trichloroethane	2.61E+00	n	1.24E+01	n	2.30E+00	n	4.15E-01	n	1.11E-04	2.23E-03
Trichloroethylene	6.77E+00	n	3.65E+01	n	6.90E+00	n	2.82E+00	n	8.75E-04	1.75E-02
Trichlorofluoromethane	1.23E+03	ns	6.03E+03	ns	1.13E+03	ns	1.14E+03	n	7.84E-01	1.57E+01
2,4,5-Trichlorophenol	6.16E+03	n	9.16E+04	n	2.69E+04	n	1.17E+03	n	3.31E+00	6.62E+01
2,4,6-Trichlorophenol	6.16E+01	n	9.16E+02	n	2.69E+02	n	1.19E+01	n	3.37E-02	6.74E-01
1,1,2-Trichloropropane	3.91E+02	n	6.49E+03	ns	1.77E+03	ns	8.81E+01	n	2.79E-02	5.59E-01
1,2,3-Trichloropropane	5.10E-02	c	1.21E+00	c	6.31E+00	n	7.47E-03	c	2.60E-06	5.21E-05
Triethylamine	1.93E+02	n	9.09E+02	n	1.69E+02	n	1.46E+01	n	3.65E-03	7.31E-02
2,4,6-Trinitrotoluene	3.60E+01	n	5.73E+02	n	1.61E+02	n	9.80E+00	n	4.30E-02	8.61E-01
Uranium (soluable salts)	2.34E+02	n	3.88E+03	ns	2.77E+02	ns	5.92E+01	n	2.67E+01	5.33E+02
Vanadium	3.94E+02	n	6.53E+03	n	6.14E+02	n	6.31E+01	n	6.31E+01	1.26E+03
Vinyl acetate	2.56E+03	n	1.24E+04	ns	2.30E+03	ns	4.09E+02	n	7.52E-02	1.50E+00
Vinyl bromide	2.71E+00	c	1.31E+01	c	8.46E+00	n	1.75E+00	c	4.62E-04	9.23E-03
Vinyl chloride	7.42E-01	c	2.84E+01	c	1.61E+02	c	2.01E-01	c	6.75E-05	1.35E-03
m-Xylene	7.64E+02	ns	3.73E+03	ns	6.96E+02	ns	1.93E+02	n	1.48E-01	2.97E+00
o-Xylene	8.05E+02	ns	3.94E+03	ns	7.36E+02	ns	1.93E+02	n	1.49E-01	2.98E+00
Xylenes	8.71E+02	ns	4.28E+03	ns	7.98E+02	ns	1.93E+02	n	1.49E-01	2.98E+00
Zinc	2.35E+04	n	3.89E+05	nl	1.06E+05	nl	5.96E+03	n	3.71E+02	7.41E+03

c – carcinogen
cs - carcinogenic, SSL may exceed saturation
DAF – Dilution Attenuation Factor
mg/kg – milligrams per kilogram
n – noncarcinogenic
nl - noncarcinogen, SSL may exceed ceiling limit
ns - noncarcinogen, SSL may exceed saturation
nls - noncarcinogen, SSL may exceed both saturation and ceiling limit
SSL – Soil Screening Level
µg/L – micrograms per liter

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; J = New Jersey; O = EPA Office of Water; F = See FAQ; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1				
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD$_o$ (mg/kg-day)	key	RfC$_i$ (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Inhalation SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL Child HQ=1 (µg/L)	Dermal SL Child HQ=1 (µg/L)	Inhalation SL Child HQ=1 (µg/L)	Noncarcinogenic SL Child HI=1 (µg/L)	MCL (ug/L)
1.8E-02	C	5.1E-06	C	1.5E-01	I					-1.5	1	1	Yes	ALAR	1596-84-5	4.3E+00	1.3E+04		4.3E+00	3.0E+03	1.0E+07		3.0E+03	
8.7E-03	I			4.0E-03	I					-0.85	1	1	Yes	Acephate	30560-19-1	9.0E+00	1.1E+04		8.9E+00	8.0E+01	1.1E+05		8.0E+01	
		2.2E-06	I			9.0E-03	I	V		-0.34	1	1	Yes	Acetaldehyde	75-07-0			2.6E+00	2.6E+00			1.9E+01	1.9E+01	
				2.0E-02	I					3.03	1	0.9	Yes	Acetochlor	34256-82-1					4.0E+02	2.9E+03		3.5E+02	
				9.0E-01	I	3.1E+01	A	V		-0.24	1	1	Yes	Acetone	67-64-1					1.8E+04	4.4E+06	6.4E+04	1.4E+04	
						2.0E-03	X	V		-0.03	1	1	Yes	Acetone Cyanohydrin	75-86-5							4.2E+00	4.2E+00	
						6.0E-02	I	V		-0.34	1	1	Yes	Acetonitrile	75-05-8							1.3E+02	1.3E+02	
				1.0E-01	I			V		1.58	1	1	Yes	Acetophenone	98-86-2					2.0E+03	4.6E+04		1.9E+03	
3.8E+00	C	1.3E-03	C							3.12	1	1	Yes	Acetylaminofluorene, 2-	53-96-3	2.1E-02	6.4E-02		1.6E-02					
				5.0E-04	I	2.0E-05	I	V		-0.01	1	1	Yes	Acrolein	107-02-8					1.0E+01	1.7E+03	4.2E-02	4.2E-02	
5.0E-01	I	1.0E-04	I	2.0E-03	I	6.0E-03	I		M	-0.67	1	1	Yes	Acrylamide	79-06-1	5.0E-02	2.3E+01		5.0E-02	4.0E+01	2.1E+04		4.0E+01	
				5.0E-01	I	1.0E-03	I	V		0.35	1	1	Yes	Acrylic Acid	79-10-7					1.0E+04	1.1E+06	2.1E+00	2.1E+00	
5.4E-01	I	6.8E-05	I	4.0E-02	A	2.0E-03	I	V		0.25	1	1	Yes	Acrylonitrile	107-13-1	1.4E-01	1.4E+01	8.3E-02	5.2E-02	8.0E+02	8.8E+04	4.2E+00	4.1E+00	
						6.0E-03	P			-0.32	1	1	Yes	Adiponitrile	111-69-3									
5.6E-02	C			1.0E-02	I					3.52	1	0.9	Yes	Alachlor	15972-60-8	1.4E+00	4.2E+00		1.0E+00	2.0E+02	6.9E+02		1.6E+02	2.0E+00
				1.0E-03	I					1.13	1	1	Yes	Aldicarb	116-06-3					2.0E+01	1.4E+03		2.0E+01	3.0E+00
				1.0E-03	I					-0.57	1	1	Yes	Aldicarb Sulfone	1646-88-4					2.0E+01	2.4E+04		2.0E+01	2.0E+00
										-0.78	1	1	Yes	Aldicarb sulfoxide	1646-87-3									4.0E+00
1.7E+01	I	4.9E-03	I	3.0E-05	I			V		6.5	1	1	No	Aldrin	309-00-2	4.6E-03		1.1E-03	9.2E-04	6.0E-01			6.0E-01	
				2.5E-01	I					2.2	1	1	Yes	Ally	74223-64-6					5.0E+03	2.4E+05		4.9E+03	
				5.0E-03	I	1.0E-04	X	V		0.17	1	1	Yes	Allyl Alcohol	107-18-6					1.0E+02	1.3E+04	2.1E-01	2.1E-01	
2.1E-02	C	6.0E-06	C			1.0E-03	I	V		1.93	1	1	Yes	Allyl Chloride	107-05-1	3.7E+00	3.3E+01	9.4E-01	7.3E-01			2.1E+00	2.1E+00	
				1.0E+00	P	5.0E-03	P				1	1	Yes	Aluminum	7429-90-5					2.0E+04	4.5E+06		2.0E+04	
				4.0E-04	I						1	1	Yes	Aluminum Phosphide	20859-73-8					8.0E+00	1.8E+03		8.0E+00	
				3.0E-04	I					2.31	1	1	Yes	Amdro	67485-29-4					6.0E+00	5.1E+02		5.9E+00	
				9.0E-03	I					2.98	1	1	Yes	Ametryn	834-12-8					1.8E+02	9.7E+02		1.5E+02	
2.1E+01	C	6.0E-03	C							2.86	1	1	Yes	Aminobiphenyl, 4-	92-67-1	3.7E-03	1.5E-02		3.0E-03					
				8.0E-02	P					0.21	1	1	Yes	Aminophenol, m-	591-27-5					1.6E+03	2.8E+05		1.6E+03	
				2.0E-02	P					0.04	1	1	Yes	Aminophenol, p-	123-30-8					4.0E+02	9.1E+04		4.0E+02	
				2.5E-03	I					5.5	1	0.9	Yes	Amitraz	33089-61-1					5.0E+01	9.7E+00		8.2E+00	
						1.0E-01	I	V		0.23	1	1		Ammonia	7664-41-7									
				2.0E-01	I						1	1	Yes	Ammonium Sulfamate	7773-06-0					4.0E+03	9.1E+05		4.0E+03	
						3.0E-03	X	V		0.89	1	1	Yes	Amyl Alcohol, tert-	75-85-4							6.3E+00	6.3E+00	
5.7E-03	I	1.6E-06	C	7.0E-03	P	1.0E-03	I			0.9	1	1	Yes	Aniline	62-53-3	1.4E+01	6.6E+02		1.3E+01	1.4E+02	7.7E+03		1.4E+02	
4.0E-02	P			2.0E-03	X					3.39	1	0.9	Yes	Anthraquinone, 9,10-	84-65-1	1.9E+00	4.9E+00		1.4E+00	4.0E+01	1.1E+02		3.0E+01	
				4.0E-04	I						0.15	1	Yes	Antimony (metallic)	7440-36-0					8.0E+00	2.7E+02		7.8E+00	6.0E+00
				5.0E-04	H						0.15	1	Yes	Antimony Pentoxide	1314-60-9					1.0E+01	3.4E+02		9.7E+00	
				9.0E-04	H					-7.28	0.15	1	No	Antimony Potassium Tartrate	11071-15-1					1.8E+01			1.8E+01	
				4.0E-04	H						0.15	1	Yes	Antimony Tetroxide	1332-81-6					8.0E+00	2.7E+02		7.8E+00	
						2.0E-04	I				0.15	1	Yes	Antimony Trioxide	1309-64-4									
				1.3E-02	I					3.1	1	0.9	Yes	Apollo	74115-24-5					2.6E+02	2.1E+03		2.3E+02	
2.5E-02	I	7.1E-06	I	5.0E-02	H					4.82	1	0.8	Yes	Aramite	140-57-8	3.1E+00	2.3E+00		1.3E+00	1.0E+03	8.2E+02		4.5E+02	
1.5E+00	I	4.3E-03	I	3.0E-04	I	1.5E-05	C				1	1	Yes	Arsenic, Inorganic	7440-38-2	5.2E-02	9.3E+00		5.2E-02	6.0E+00	1.4E+03		6.0E+00	1.0E+01
				3.5E-06	C	5.0E-05	I				1	1	Yes	Arsine	7784-42-1					7.0E-02	1.6E+01		7.0E-02	
				9.0E-03	I					4.28	1	0.9	Yes	Assure	76578-14-8					1.8E+02	3.8E+02		1.2E+02	
				5.0E-02	I					-0.27	1	1	Yes	Asulam	3337-71-1					1.0E+03	8.0E+05		1.0E+03	
2.3E-01	C			3.5E-02	I					2.61	1	1	Yes	Atrazine	1912-24-9	3.4E-01	2.6E+00		3.0E-01	7.0E+02	6.2E+03		6.3E+02	3.0E+00
8.8E-01	C	2.5E-04	C							2.98	1	0.9	Yes	Auramine	492-80-8	8.9E-02	2.6E-01		6.6E-02					
				4.0E-04	I					4.48	1	1	No	Avermectin B1	65195-55-3					8.0E+00			8.0E+00	
1.1E-01	I	3.1E-05	I					V		3.82	1	1	Yes	Azobenzene	103-33-3	7.1E-01	7.0E-01	1.8E-01	1.2E-01					
				1.0E+00	P	7.0E-06	P			-1.7	1	1	Yes	Azodicarbonamide	123-77-3					2.0E+04	6.8E+07		2.0E+04	
				2.0E-01	I	5.0E-04	H				0.07	1	Yes	Barium	7440-39-3					4.0E+03	6.4E+04		3.8E+03	2.0E+03
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		0.025	1	Yes	Barium Chromate	10294-40-3	5.0E-02	2.3E-01		4.1E-02	4.0E+02	2.3E+03		3.4E+02	
				4.0E-03	I					1.52	1	1	Yes	Baygon	114-26-1					8.0E+01	3.6E+03		7.8E+01	
				3.0E-02	I					2.77	1	1	Yes	Bayleton	43121-43-3					6.0E+02	6.9E+03		5.5E+02	
				2.5E-02	I					5.95	1	0.7	Yes	Baythroid	68359-37-5					5.0E+02	1.6E+02		1.2E+02	
				3.0E-01	I			V		5.29	1	0.8	Yes	Benefin	1861-40-1					6.0E+03	2.4E+03		1.7E+03	
				5.0E-02	I					2.12	1	1	Yes	Benomyl	17804-35-2					1.0E+03	3.0E+04		9.7E+02	
				3.0E-02	I					2.34	1	1	Yes	Bentazon	25057-89-0					6.0E+02	9.4E+03		5.7E+02	
				1.0E-01	I			V		1.48	1	1	Yes	Benzaldehyde	100-52-7					2.0E+03	4.9E+04		1.9E+03	
5.5E-02	I	7.8E-06	I	4.0E-03	I	3.0E-02	I	V		2.13	1	1	Yes	Benzene	71-43-2	1.4E+00	9.4E+00	7.2E-01	4.5E-01	8.0E+01	6.0E+02	6.3E+01	3.3E+01	5.0E+00
1.0E-01	X			3.0E-04	X					-3.727	1	1	No	Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1	7.8E-01			7.8E-01	6.0E+00			6.0E+00	
				1.0E-03	P			V		2.52	1	1	Yes	Benzenethiol	108-98-5					2.0E+01	1.0E+02		1.7E+01	
2.3E+02	I	6.7E-02	I	3.0E-03	I				M	1.34	1	1	Yes	Benzidine	92-87-5	1.1E-04	4.8E-03		1.1E-04	6.0E+01	3.0E+03		5.9E+01	

TR=1E-6
HQ=1.0

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; J = New Jersey; O = EPA Office of Water; F = See FAQ; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1				
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	voc	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Inhalation SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL Child HQ=1 (µg/L)	Dermal SL Child HQ=1 (µg/L)	Inhalation SL Child HQ=1 (µg/L)	Noncarcinogenic SL Child HI=1 (µg/L)	MCL (ug/L)
				4.0E+00	I					1.87	1	1	Yes	Benzoic Acid	65-85-0					8.0E+04	1.2E+06		7.5E+04	
1.3E+01	I							V		3.9	1	1	Yes	Benzotrichloride	98-07-7	6.0E-03	5.7E-03		2.9E-03					
				1.0E-01	P					1.1	1	1	Yes	Benzyl Alcohol	100-51-6					2.0E+03	8.9E+04		2.0E+03	
1.7E-01	I	4.9E-05	C	2.0E-03	P	1.0E-03	P	V		2.3	1	1	Yes	Benzyl Chloride	100-44-7	4.6E-01	3.2E+00	1.1E-01	8.9E-02	4.0E+01	3.2E+02	2.1E+00	2.0E+00	
		2.4E-03	I	2.0E-03	I	2.0E-05	I				0.007	1	Yes	Beryllium and compounds	7440-41-7					4.0E+01	6.4E+01		2.5E+01	4.0E+00
				1.0E-04	I					0	1	1	Yes	Bidrin	141-66-2					2.0E+00	1.1E+03		2.0E+00	
				9.0E-03	P					4.48	1	0.9	Yes	Bifenox	42576-02-3					1.8E+02	2.3E+02		1.0E+02	
				1.5E-02	I					8.15	1	0	No	Biphenthrin	82657-04-3					3.0E+02			3.0E+02	
8.0E-03	I			5.0E-01	I	4.0E-04	X	V		4.01	1	1	Yes	Biphenyl, 1,1'-	92-52-4	9.7E+00	6.3E+00		3.8E+00	1.0E+04	7.3E+03	8.3E-01	8.3E-01	
7.0E-02	H	1.0E-05	H	4.0E-02	I			V		2.48	1	1	Yes	Bis(2-chloro-1-methylethyl) ether	108-60-1	1.1E+00	7.9E+00	5.6E-01	3.6E-01	8.0E+02	6.5E+03		7.1E+02	
				3.0E-03	P					1.3	1	1	Yes	Bis(2-chloroethoxy)methane	111-91-1					6.0E+01	3.0E+03		5.9E+01	
1.1E+00	I	3.3E-04	I					V		1.29	1	1	Yes	Bis(2-chloroethyl)ether	111-44-4	7.1E-02	2.6E+00	1.7E-02	1.4E-02					
2.2E+02	I	6.2E-02	I					V		0.57	1	1	Yes	Bis(chloromethyl)ether	542-88-1	3.5E-04	3.2E-02	9.1E-05	7.2E-05					
				5.0E-02	I					3.32	1	1	Yes	Bisphenol A	80-05-7					1.0E+03	3.2E+03		7.7E+02	
				2.0E-01	I	2.0E-02	H				1	1	Yes	Boron And Borates Only	7440-42-8					4.0E+03	9.1E+05		4.0E+03	
				2.0E+00	P	2.0E-02	P	V		1.16	1	1	Yes	Boron Trichloride	10294-34-5					4.0E+04	9.1E+06	4.2E+01	4.2E+01	
				4.0E-02	C	1.3E-02	C	V		0.22	1	1	Yes	Boron Trifluoride	7637-07-2					8.0E+02	1.8E+05	2.7E+01	2.6E+01	
7.0E-01	I			4.0E-03	I						1	1	Yes	Bromate	15541-45-4	1.1E-01	2.0E+01		1.1E-01	8.0E+01	1.8E+04		8.0E+01	1.0E+01
2.0E+00	X	6.0E-04	X					V		1.92	1	1	Yes	Bromo-2-chloroethane, 1-	107-04-0	3.9E-02	5.5E-01	9.4E-03	7.4E-03					
				8.0E-03	I	6.0E-02	I	V		2.99	1	1	Yes	Bromobenzene	108-86-1					1.6E+02	5.4E+02	1.3E+02	6.2E+01	
						4.0E-02	X	V		1.41	1	1	Yes	Bromochloromethane	74-97-5							8.3E+01	8.3E+01	
6.2E-02	I	3.7E-05	C	2.0E-02	I			V		2	1	1	Yes	Bromodichloromethane	75-27-4	1.3E+00	1.8E+01	1.5E-01	1.3E-01	4.0E+02	6.4E+03		3.8E+02	8.0E+01(F)
7.9E-03	I	1.1E-06	I	2.0E-02	I			V		2.4	1	1	Yes	Bromoform	75-25-2	9.9E+00	1.4E+02	5.1E+00	3.3E+00	4.0E+02	6.2E+03		3.8E+02	8.0E+01(F)
				1.4E-03	I	5.0E-03	I	V		1.19	1	1	Yes	Bromomethane	74-83-9					2.8E+01	1.0E+03	1.0E+01	7.5E+00	
				5.0E-03	H			V		5.21	1	0.8	Yes	Bromophos	2104-96-3					1.0E+02	5.5E+01		3.5E+01	
				2.0E-02	I					3.39	1	0.9	Yes	Bromoxynil	1689-84-5					4.0E+02	1.8E+03		3.3E+02	
				2.0E-02	I			V		5.4	1	0.8	Yes	Bromoxynil Octanoate	1689-99-2					4.0E+02	2.1E+02		1.4E+02	
3.4E+00	C	3.0E-05	I			2.0E-03	I	V		1.99	1	1	Yes	Butadiene, 1,3-	106-99-0	2.3E-02	1.6E-01	1.9E-01	1.8E-02			4.2E+00	4.2E+00	
				1.0E-01	I			V		0.88	1	1	Yes	Butanol, N-	71-36-3					2.0E+03	1.0E+05		2.0E+03	
1.9E-03	P			2.0E-01	I					4.73	1	0.9	Yes	Butyl Benzyl Phthlate	85-68-7	4.1E+01	2.6E+01		1.6E+01	4.0E+03	2.9E+03		1.7E+03	
				2.0E+00	P	3.0E+01	P	V		0.61	1	1	Yes	Butyl alcohol, sec-	78-92-2					4.0E+04	3.0E+06	6.3E+04	2.4E+04	
				5.0E-02	I			V		4.15	1	1	Yes	Butylate	2008-41-5					1.0E+03	8.5E+02		4.6E+02	
2.0E-04	C	5.7E-08	C							3.5	1	1	Yes	Butylated hydroxyanisole	25013-16-5	3.9E+02	6.2E+02		2.4E+02					
3.6E-03	P			3.0E-01	P					5.1	1	1	Yes	Butylated hydroxytoluene	128-37-0	2.2E+01	3.8E+00		3.3E+00	6.0E+03	1.2E+03		1.0E+03	
				5.0E-02	P			V		4.38	1	1	No	Butylbenzene, n-	104-51-8					1.0E+03			1.0E+03	
				1.0E-01	X			V		4.57	1	1	No	Butylbenzene, sec-	135-98-8					2.0E+03			2.0E+03	
				1.0E-01	X			V		4.11	1	1	Yes	Butylbenzene, tert-	98-06-6					2.0E+03	1.1E+03		6.9E+02	
				2.0E-02	A					0.36	1	1	Yes	Cacodylic Acid	75-60-5					4.0E+02	6.7E+04		4.0E+02	
		1.8E-03	I	1.0E-03	I	1.0E-05	A				0.025	1		Cadmium (Diet)	7440-43-9									
		1.8E-03	I	5.0E-04	I	1.0E-05	A				0.05	1	Yes	Cadmium (Water)	7440-43-9					1.0E+01	1.1E+02		9.2E+00	5.0E+00
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		0.025	1	Yes	Calcium Chromate	13765-19-0	5.0E-02	2.3E-01		4.1E-02	4.0E+02	2.3E+03		3.4E+02	
				5.0E-01	I	2.2E-03	C			-0.19	1	1	Yes	Caprolactam	105-60-2					1.0E+04	9.0E+05		9.9E+03	
1.5E-01	C	4.3E-05	C	2.0E-03	I					3.8	1	0.9	Yes	Captafol	2425-06-1	5.2E-01	1.7E+00		4.0E-01	4.0E+01	1.5E+02		3.2E+01	
2.3E-03	C	6.6E-07	C	1.3E-01	I					2.8	1	1	Yes	Captan	133-06-2	3.4E+01	3.4E+02		3.1E+01	2.6E+03	3.0E+04		2.4E+03	
				1.0E-01	I					2.36	1	1	Yes	Carbaryl	63-25-2					2.0E+03	2.4E+04		1.8E+03	
				5.0E-03	I					2.32	1	1	Yes	Carbofuran	1563-66-2					1.0E+02	1.4E+03		9.4E+01	4.0E+01
				1.0E-01	I	7.0E-01	I	V		1.94	1	1	Yes	Carbon Disulfide	75-15-0					2.0E+03	2.0E+04	1.5E+03	8.1E+02	
7.0E-02	I	6.0E-06	I	4.0E-03	I	1.0E-01	I	V		2.83	1	1	Yes	Carbon Tetrachloride	56-23-5	1.1E+00	4.2E+00	9.4E-01	4.5E-01	8.0E+01	3.4E+02	2.1E+02	4.9E+01	5.0E+00
				1.0E-02	I					3.81	1	0.8	Yes	Carbosulfan	55285-14-8					2.0E+02	6.9E+01		5.1E+01	
				1.0E-01	I					2.14	1	1	Yes	Carboxin	5234-68-4					2.0E+03	4.1E+04		1.9E+03	
						9.0E-04	I				1	1	Yes	Ceric oxide	1306-38-3									
				1.0E-01	I			V		0.99	1	1	Yes	Chloral Hydrate	302-17-0					2.0E+03	1.5E+05		2.0E+03	
				1.5E-02	I					1.9	1	1	Yes	Chloramben	133-90-4					3.0E+02	7.4E+03		2.9E+02	
4.0E-01	H									2.22	1	1	Yes	Chloranil	118-75-2	1.9E-01	3.4E+00		1.8E-01					
3.5E-01	I	1.0E-04	I	5.0E-04	I	7.0E-04	I	V		6.26	1	0.7	No	Chlordane	12789-03-6	2.2E-01		5.6E-02	4.5E-02	1.0E+01		1.5E+00	1.3E+00	2.0E+00
1.0E+01	I	4.6E-03	C	3.0E-04	I					5.41	1	0.8	Yes	Chlordecone (Kepone)	143-50-0	7.8E-03	6.2E-03		3.5E-03	6.0E+00	5.4E+00		2.9E+00	
				7.0E-04	A					3.81	1	0.9	Yes	Chlorfenvinphos	470-90-6					1.4E+01	5.6E+01		1.1E+01	
				2.0E-02	I					2.5	1	1	Yes	Chlorimuron, Ethyl-	90982-32-4					4.0E+02	1.5E+04		3.9E+02	
				1.0E-01	I	1.5E-04	A	V		0.85	1	1	Yes	Chlorine	7782-50-5					2.0E+03	4.5E+05	3.0E-01	3.0E-01	
				3.0E-02	I	2.0E-04	I	V			1	1	Yes	Chlorine Dioxide	10049-04-4					6.0E+02	1.4E+05	4.2E-01	4.2E-01	
				3.0E-02	I						1	1	Yes	Chlorite (Sodium Salt)	7758-19-2					6.0E+02	1.4E+05		6.0E+02	1.0E+03
						5.0E+01	I	V		2.05	1	1	Yes	Chloro-1,1-difluoroethane, 1-	75-68-3							1.0E+05	1.0E+05	
		3.0E-04	I	2.0E-02	H	2.0E-02	I	V		2.53	1	1	Yes	Chloro-1,3-butadiene, 2-	126-99-8			1.9E-02	1.9E-02	4.0E+02	1.8E+03	4.2E+01	3.7E+01	
4.6E-01	H									-1.42	1	1	Yes	Chloro-2-methylaniline HCl, 4-	3165-93-3	1.7E-01	4.9E+02		1.7E-01					

TR=1E-06 HQ=1.0

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Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1				
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	voc	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Inhalation SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL Child HQ=1 (µg/L)	Dermal SL Child HQ=1 (µg/L)	Inhalation SL Child HQ=1 (µg/L)	Noncarcinogenic SL Child HI=1 (µg/L)	MCL (ug/L)
1.0E-01	P	7.7E-05	C	3.0E-03	X					2.27	1	1	Yes	Chloro-2-methylaniline, 4-	95-69-2	7.8E-01	6.4E+00		6.9E-01	6.0E+01	5.5E+02		5.4E+01	
2.7E-01	X							V		0.09	1	1	Yes	Chloroacetaldehyde, 2-	107-20-0	2.9E-01	4.4E+01		2.9E-01					
				2.0E-03	H					0.22	1	1	Yes	Chloroacetic Acid	79-11-8					4.0E+01	6.3E+03		4.0E+01	6.0E+01
						3.0E-05	I			1.93	1	1	Yes	Chloroacetophenone, 2-	532-27-4									
2.0E-01	P			4.0E-03	I					1.83	1	1	Yes	Chloroaniline, p-	106-47-8	3.9E-01	5.7E+00		3.6E-01	8.0E+01	1.3E+03		7.6E+01	
				2.0E-02	I	5.0E-02	P	V		2.84	1	1	Yes	Chlorobenzene	108-90-7					4.0E+02	1.3E+03	1.0E+02	7.8E+01	1.0E+02
1.1E-01	C	3.1E-05	C	2.0E-02	I					4.74	1	0.8	Yes	Chlorobenzilate	510-15-6	7.1E-01	5.4E-01		3.1E-01	4.0E+02	3.5E+02		1.9E+02	
				3.0E-02	X					2.65	1	1	Yes	Chlorobenzoic Acid, p-	74-11-3					6.0E+02	3.4E+03		5.1E+02	
				3.0E-03	P	3.0E-01	P	V		3.6	1	1	Yes	Chlorobenzotrifluoride, 4-	98-56-6					6.0E+01	9.3E+01	6.3E+02	3.5E+01	
				4.0E-02	P			V		2.64	1	1	Yes	Chlorobutane, 1-	109-69-3					8.0E+02	3.0E+03		6.4E+02	
						5.0E+01	I	V		1.08	1	1	Yes	Chlorodifluoromethane	75-45-6							1.0E+05	1.0E+05	
				2.0E-02	P			V		0.03	1	1	Yes	Chloroethanol, 2-	107-07-3					4.0E+02	7.7E+04		4.0E+02	
3.1E-02	C	2.3E-05	I	1.0E-02	I	9.8E-02	A	V		1.97	1	1	Yes	Chloroform	67-66-3	2.5E+00	2.8E+01	2.4E-01	2.2E-01	2.0E+02	2.5E+03	2.0E+02	9.7E+01	8.0E+01(F)
						9.0E-02	I	V		0.91	1	1	Yes	Chloromethane	74-87-3							1.9E+02	1.9E+02	
2.4E+00	C	6.9E-04	C					V		0.32	1	1	Yes	Chloromethyl Methyl Ether	107-30-2	3.2E-02	3.5E+00	8.1E-03	6.5E-03					
3.0E-01	P			3.0E-03	P	1.0E-05	X			2.24	1	1	Yes	Chloronitrobenzene, o-	88-73-3	2.6E-01	2.5E+00		2.3E-01	6.0E+01	6.4E+02		5.5E+01	
6.3E-03	P			1.0E-03	P	6.0E-04	P			2.39	1	1	Yes	Chloronitrobenzene, p-	100-00-5	1.2E+01	9.3E+01		1.1E+01	2.0E+01	1.7E+02		1.8E+01	
				5.0E-03	I			V		2.15	1	1	Yes	Chlorophenol, 2-	95-57-8					1.0E+02	1.0E+03		9.1E+01	
						4.0E-04	C	V		2.09	1	1	Yes	Chloropicrin	76-06-2							8.3E-01	8.3E-01	
3.1E-03	C	8.9E-07	C	1.5E-02	I					3.05	1	0.9	Yes	Chlorothalonil	1897-45-6	2.5E+01	1.5E+02		2.2E+01	3.0E+02	2.1E+03		2.6E+02	
				2.0E-02	I			V		3.42	1	1	Yes	Chlorotoluene, o-	95-49-8					4.0E+02	5.8E+02		2.4E+02	
				2.0E-02	X			V		3.33	1	1	Yes	Chlorotoluene, p-	106-43-4					4.0E+02	6.6E+02		2.5E+02	
2.4E+02	C	6.9E-02	C							-1.02	1	1	Yes	Chlorozotocin	54749-90-5	3.2E-04	7.1E-01		3.2E-04					
				2.0E-01	I					3.51	1	0.9	Yes	Chlorpropham	101-21-3					4.0E+03	9.8E+03		2.8E+03	
				1.0E-03	A					4.96	1	0.8	Yes	Chlorpyrifos	2921-88-2					2.0E+01	1.5E+01		8.4E+00	
				1.0E-02	H					4.31	1	0.9	Yes	Chlorpyrifos Methyl	5598-13-0					2.0E+02	2.9E+02		1.2E+02	
				5.0E-02	I					2	1	1	Yes	Chlorsulfuron	64902-72-3					1.0E+03	5.7E+04		9.9E+02	
				8.0E-04	H					5.8	1	0.8	Yes	Chlorthiophos	60238-56-4					1.6E+01	3.4E+00		2.8E+00	
				1.5E+00	I						0.013	1	Yes	Chromium(III), Insoluble Salts	16065-83-1					3.0E+04	8.9E+04		2.2E+04	
5.0E-01	J	8.4E-02	S	3.0E-03	I	1.0E-04	I		M		0.025	1	Yes	Chromium(VI)	18540-29-9	5.0E-02	1.1E-01		3.5E-02	6.0E+01	1.7E+02		4.4E+01	
											0.013	1	Yes	Chromium, Total	7440-47-3									1.0E+02
		9.0E-03	P	3.0E-04	P	6.0E-06	P				1	1	Yes	Cobalt	7440-48-4					6.0E+00	3.4E+03		6.0E+00	
		6.2E-04	I					V	M		1	0		Coke Oven Emissions	8007-45-2									
				4.0E-02	H						1	1	Yes	Copper	7440-50-8					8.0E+02	1.8E+05		8.0E+02	1.3E+03
				5.0E-02	I	6.0E-01	C			1.96	1	1	Yes	Cresol, m-	108-39-4					1.0E+03	1.2E+04		9.3E+02	
				5.0E-02	I	6.0E-01	C			1.95	1	1	Yes	Cresol, o-	95-48-7					1.0E+03	1.2E+04		9.3E+02	
				1.0E-01	A	6.0E-01	C			1.94	1	1	Yes	Cresol, p-	106-44-5					2.0E+03	2.5E+04		1.9E+03	
				1.0E-01	A					3.1	1	1	Yes	Cresol, p-chloro-m-	59-50-7					2.0E+03	5.2E+03		1.4E+03	
				1.0E-01	A	6.0E-01	C			1.95	1	1	Yes	Cresols	1319-77-3					2.0E+03	2.4E+04		1.9E+03	
1.9E+00	H			1.0E-03	P			V		0.6	1	1	Yes	Crotonaldehyde, trans-	123-73-9	4.1E-02	2.6E+00		4.0E-02	2.0E+01	1.5E+03		2.0E+01	
				1.0E-01	I	4.0E-01	I	V		3.66	1	1	Yes	Cumene	98-82-8					2.0E+03	1.9E+03	8.3E+02	4.5E+02	
2.2E-01	C	6.3E-05	C							-3.16	1	1	No	Cupferron	135-20-6	3.5E-01			3.5E-01					
8.4E-01	H			2.0E-03	H					2.22	1	1	Yes	Cyanazine	21725-46-2	9.3E-02	1.5E+00		8.7E-02	4.0E+01	7.5E+02		3.8E+01	
														Cyanides										
				1.0E-03	I						1	1	Yes	~Calcium Cyanide	592-01-8					2.0E+01	4.5E+03		2.0E+01	
				5.0E-03	I						1	1	Yes	~Copper Cyanide	544-92-3					1.0E+02	2.3E+04		1.0E+02	
				6.0E-04	I	8.0E-04	S	V			1	1	Yes	~Cyanide (CN-)	57-12-5					1.2E+01	2.7E+03	1.7E+00	1.5E+00	2.0E+02
				1.0E-03	I			V		0.07	1	1	Yes	~Cyanogen	460-19-5					2.0E+01	5.1E+03		2.0E+01	
				9.0E-02	I			V			1	1	Yes	~Cyanogen Bromide	506-68-3					1.8E+03	1.6E+06		1.8E+03	
				5.0E-02	I			V			1	1	Yes	~Cyanogen Chloride	506-77-4					1.0E+03	5.8E+05		1.0E+03	
				6.0E-04	I	8.0E-04	I	V		-0.25	1	1	Yes	~Hydrogen Cyanide	74-90-8					1.2E+01	2.7E+03	1.7E+00	1.5E+00	
				2.0E-03	I						1	1	Yes	~Potassium Cyanide	151-50-8					4.0E+01	4.5E+03		4.0E+01	
				5.0E-03	I						0.04	1	Yes	~Potassium Silver Cyanide	506-61-6					1.0E+02	4.5E+02		8.2E+01	
				1.0E-01	I						0.04	1	Yes	~Silver Cyanide	506-64-9					2.0E+03	1.8E+04		1.8E+03	
				1.0E-03	I						1	1	Yes	~Sodium Cyanide	143-33-9					2.0E+01	4.5E+03		2.0E+01	2.0E+02
				2.0E-04	P						1	0	Yes	~Thiocyanates	NA					4.0E+00	9.1E+02		4.0E+00	
				2.0E-04	X			V		0.58	1	1	Yes	~Thiocyanic Acid	463-56-9					4.0E+00	9.1E+02		4.0E+00	
				5.0E-02	I						1	1	Yes	~Zinc Cyanide	557-21-1					1.0E+03	3.8E+05		1.0E+03	
						6.0E+00	I	V		3.44	1	1	Yes	Cyclohexane	110-82-7							1.3E+04	1.3E+04	
2.3E-02	H									4.72	1	0.9	Yes	Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3	3.4E+00	8.0E+00		2.4E+00					
				5.0E+00	I	7.0E-01	P	V		0.81	1	1	Yes	Cyclohexanone	108-94-1					1.0E+05	6.5E+06	1.5E+03	1.4E+03	
				5.0E-03	P	1.0E+00	X	V		2.86	1	1	Yes	Cyclohexene	110-83-8					1.0E+02	2.5E+02	2.1E+03	7.0E+01	
				2.0E-01	I			V		1.49	1	1	Yes	Cyclohexylamine	108-91-8					4.0E+03	9.2E+04		3.8E+03	
				5.0E-03	I					6.9	1	0.5	No	Cyhalothrin/karate	68085-85-8					1.0E+02			1.0E+02	

TR=1E-06
HQ=1.0

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; J = New Jersey; O = EPA Office of Water; F = See FAQ; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

Toxicity and Chemical-specific Information																Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1				
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Inhalation SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL Child HQ=1 (µg/L)	Dermal SL Child HQ=1 (µg/L)	Inhalation SL Child HQ=1 (µg/L)	Noncarcinogenic SL Child HI=1 (µg/L)	MCL (ug/L)
				1.0E-02	I					6.6	1	0.7	No	Cypermethrin	52315-07-8					2.0E+02			2.0E+02	
				7.5E-03	I					0.96	1	1	Yes	Cyromazine	66215-27-8					1.5E+02	1.2E+04		1.5E+02	
2.4E-01	I	6.9E-05	C							6.02	1	0.8	Yes	DDD	72-54-8	3.2E-01	3.4E-02		3.1E-02					
3.4E-01	I	9.7E-05	C					V		6.51	1	0.8	No	DDE, p,p'-	72-55-9	2.3E-01		5.8E-02	4.6E-02					
3.4E-01	I	9.7E-05	I	5.0E-04	I					6.91	1	0.7	No	DDT	50-29-3	2.3E-01			2.3E-01	1.0E+01			1.0E+01	
				1.0E-02	I					4.28	1	0.9	Yes	Dacthal	1861-32-1					2.0E+02	3.2E+02		1.2E+02	
				3.0E-02	I					0.78	1	1	Yes	Dalapon	75-99-0					6.0E+02	5.5E+04		6.0E+02	2.0E+02
7.0E-04	I			7.0E-03	I					12.11	1	0	No	Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209)	1163-19-5	1.1E+02			1.1E+02	1.4E+02			1.4E+02	
				4.0E-05	I					3.21	1	0.9	Yes	Demeton	8065-48-3					8.0E-01	4.1E+00		6.7E-01	
1.2E-03	I			6.0E-01	I					8.12	1	0	No	Di(2-ethylhexyl)adipate	103-23-1	6.5E+01			6.5E+01	1.2E+04			1.2E+04	4.0E+02
6.1E-02	H									4.49	1	0.9	Yes	Diallate	2303-16-4	1.3E+00	8.9E-01		5.2E-01					
				7.0E-04	A					3.81	1	0.9	Yes	Diazinon	333-41-5					1.4E+01	3.9E+01		1.0E+01	
				1.0E-02	X			V		4.38	1	1	Yes	Dibenzothiophene	132-65-0					2.0E+02	9.6E+01		6.5E+01	
8.0E-01	P	6.0E-03	P	2.0E-04	P	2.0E-04	I	V	M	2.96	1	1	Yes	Dibromo-3-chloropropane, 1,2-	96-12-8	3.1E-02	1.6E-01	3.4E-04	3.3E-04	4.0E+00	2.4E+01	4.2E-01	3.7E-01	2.0E-01
				4.0E-04	X			V		3.75	1	0.9	Yes	Dibromobenzene, 1,3-	108-36-1					8.0E+00	1.6E+01		5.3E+00	
				1.0E-02	I			V		3.79	1	0.9	Yes	Dibromobenzene, 1,4-	106-37-6					2.0E+02	3.7E+02		1.3E+02	
8.4E-02	I	2.7E-05	C	2.0E-02	I			V		2.16	1	1	Yes	Dibromochloromethane	124-48-1	9.3E-01	1.4E+01	2.1E-01	1.7E-01	4.0E+02	6.7E+03		3.8E+02	8.0E+01(F)
2.0E+00	I	6.0E-04	I	9.0E-03	I	9.0E-03	I	V		1.96	1	1	Yes	Dibromoethane, 1,2-	106-93-4	3.9E-02	6.9E-01	9.4E-03	7.5E-03	1.8E+02	3.6E+03	1.9E+01	1.7E+01	5.0E-02
				1.0E-02	H	4.0E-03	X	V		1.7	1	1	Yes	Dibromomethane (Methylene Bromide)	74-95-3					2.0E+02	5.4E+03	8.3E+00	8.0E+00	
				3.0E-04	P						1	0	No	Dibutyltin Compounds	NA					6.0E+00			6.0E+00	
				3.0E-02	I					2.21	1	1	Yes	Dicamba	1918-00-9					6.0E+02	1.0E+04		5.7E+02	
		4.2E-03	P					V		2.6	1	1	Yes	Dichloro-2-butene, 1,4-	764-41-0			1.3E-03	1.3E-03					
		4.2E-03	P					V		2.6	1	1	Yes	Dichloro-2-butene, cis-1,4-	1476-11-5			1.3E-03	1.3E-03					
		4.2E-03	P					V		2.6	1	1	Yes	Dichloro-2-butene, trans-1,4-	110-57-6			1.3E-03	1.3E-03					
5.0E-02	I			4.0E-03	I					0.92	1	1	Yes	Dichloroacetic Acid	79-43-6	1.6E+00	9.2E+01		1.5E+00	8.0E+01	5.4E+03		7.9E+01	6.0E+01
				9.0E-02	I	2.0E-01	H	V		3.43	1	1	Yes	Dichlorobenzene, 1,2-	95-50-1					1.8E+03	2.9E+03	4.2E+02	3.0E+02	6.0E+02
5.4E-03	C	1.1E-05	C	7.0E-02	A	8.0E-01	I	V		3.44	1	1	Yes	Dichlorobenzene, 1,4-	106-46-7	1.4E+01	2.0E+01	5.1E-01	4.8E-01	1.4E+03	2.2E+03	1.7E+03	5.7E+02	7.5E+01
4.5E-01	I	3.4E-04	C							3.51	1	1	Yes	Dichlorobenzidine, 3,3'-	91-94-1	1.7E-01	4.3E-01		1.2E-01					
				9.0E-03	X					4.44	1	0.9	Yes	Dichlorobenzophenone, 4,4'-	90-98-2					1.8E+02	1.4E+02		7.8E+01	
				2.0E-01	I	1.0E-01	X	V		2.16	1	1	Yes	Dichlorodifluoromethane	75-71-8					4.0E+03	3.8E+04	2.1E+02	2.0E+02	
5.7E-03	C	1.6E-06	C	2.0E-01	P			V		1.79	1	1	Yes	Dichloroethane, 1,1-	75-34-3	1.4E+01	1.8E+02	3.5E+00	2.7E+00	4.0E+03	5.8E+04		3.8E+03	
9.1E-02	I	2.6E-05	I	6.0E-03	X	7.0E-03	P	V		1.48	1	1	Yes	Dichloroethane, 1,2-	107-06-2	8.6E-01	1.8E+01	2.2E-01	1.7E-01	1.2E+02	2.8E+03	1.5E+01	1.3E+01	5.0E+00
				5.0E-02	I	2.0E-01	I	V		2.13	1	1	Yes	Dichloroethylene, 1,1-	75-35-4					1.0E+03	8.5E+03	4.2E+02	2.8E+02	7.0E+00
				2.0E-03	I			V		1.86	1	1	Yes	Dichloroethylene, 1,2-cis-	156-59-2					4.0E+01	3.6E+02		3.6E+01	7.0E+01
				2.0E-02	I			V		2.09	1	1	Yes	Dichloroethylene, 1,2-trans-	156-60-5					4.0E+02	3.6E+03		3.6E+02	1.0E+02
				3.0E-03	I					3.06	1	1	Yes	Dichlorophenol, 2,4-	120-83-2					6.0E+01	1.9E+02		4.6E+01	
				1.0E-02	I					2.81	1	1	Yes	Dichlorophenoxy Acetic Acid, 2,4-	94-75-7					2.0E+02	1.3E+03		1.7E+02	7.0E+01
				8.0E-03	I					3.53	1	0.9	Yes	Dichlorophenoxy)butyric Acid, 4-(2,4-	94-82-6					1.6E+02	4.8E+02		1.2E+02	
3.6E-02	C	1.0E-05	C	9.0E-02	A	4.0E-03	I	V		1.98	1	1	Yes	Dichloropropane, 1,2-	78-87-5	2.2E+00	2.3E+01	5.6E-01	4.4E-01	1.8E+03	2.1E+04	8.3E+00	8.3E+00	5.0E+00
				2.0E-02	P			V		2	1	1	Yes	Dichloropropane, 1,3-	142-28-9					4.0E+02	4.6E+03		3.7E+02	
				3.0E-03	I					0.78	1	1	Yes	Dichloropropanol, 2,3-	616-23-9					6.0E+01	4.9E+03		5.9E+01	
1.0E-01	I	4.0E-06	I	3.0E-02	I	2.0E-02	I	V		2.04	1	1	Yes	Dichloropropene, 1,3-	542-75-6	7.8E-01	7.5E+00	1.4E+00	4.7E-01	6.0E+02	6.5E+03	4.2E+01	3.9E+01	
2.9E-01	I	8.3E-05	C	5.0E-04	I	5.0E-04	I			1.43	1	1	Yes	Dichlorvos	62-73-7	2.7E-01	1.3E+01		2.6E-01	1.0E+01	5.6E+02		9.9E+00	
				8.0E-02	P	3.0E-04	X	V		3.51	1	1	Yes	Dicyclopentadiene	77-73-6					1.6E+03	3.5E+03	6.3E-01	6.3E-01	
1.6E+01	I	4.6E-03	I	5.0E-05	I					5.4	1	0.8	Yes	Dieldrin	60-57-1	4.9E-03	2.6E-03		1.7E-03	1.0E+00	6.1E-01		3.8E-01	
		3.0E-04	C			5.0E-03	I				1	0		Diesel Engine Exhaust	NA									
				2.0E-03	P	2.0E-04	P			-1.43	1	1	Yes	Diethanolamine	111-42-2					4.0E+01	8.4E+04		4.0E+01	
				3.0E-02	P	1.0E-04	P			0.56	1	1	Yes	Diethylene Glycol Monobutyl Ether	112-34-5					6.0E+02	8.6E+04		6.0E+02	
				6.0E-02	P	3.0E-04	P			-0.54	1	1	Yes	Diethylene Glycol Monoethyl Ether	111-90-0					1.2E+03	7.8E+05		1.2E+03	
				1.0E-03	P			V		0.05	1	1	Yes	Diethylformamide	617-84-5					2.0E+01	4.2E+03		2.0E+01	
3.5E+02	C	1.0E-01	C							5.07	1	0.9	Yes	Diethylstilbestrol	56-53-1	2.2E-04	6.3E-05		4.9E-05					
				8.0E-02	I					0.65	1	1	Yes	Difenzoquat	43222-48-6					1.6E+03	7.3E+05		1.6E+03	
				2.0E-02	I					3.88	1	0.9	Yes	Diflubenzuron	35367-38-5					4.0E+02	1.0E+03		2.9E+02	
						4.0E+01	I	V		0.75	1	1	Yes	Difluoroethane, 1,1-	75-37-6							8.3E+04	8.3E+04	
4.4E-02	C	1.3E-05	C					V		3.38	1	1	Yes	Dihydrosafrole	94-58-6	1.8E+00	2.2E+00	4.3E-01	3.0E-01					
						7.0E-01	P	V		1.52	1	1	Yes	Diisopropyl Ether	108-20-3							1.5E+03	1.5E+03	
				8.0E-02	I			V		1.03	1	1	Yes	Diisopropyl Methylphosphonate	1445-75-6					1.6E+03	1.3E+05		1.6E+03	
				2.0E-02	I					-0.17	1	1	Yes	Dimethipin	55290-64-7					4.0E+02	2.4E+05		4.0E+02	
				2.0E-04	I					0.78	1	1	Yes	Dimethoate	60-51-5					4.0E+00	6.4E+02		4.0E+00	
1.6E+00	P									1.81	1	1	Yes	Dimethoxybenzidine, 3,3'-	119-90-4	4.9E-02	1.6E+00		4.7E-02					
1.7E-03	P			6.0E-02	P					-0.61	1	1	Yes	Dimethyl methylphosphonate	756-79-6	4.6E+01	2.7E+04		4.6E+01	1.2E+03	8.1E+05		1.2E+03	
4.6E+00	C	1.3E-03	C							4.58	1	1	Yes	Dimethylamino azobenzene [p-]	60-11-7	1.7E-02	6.9E-03		4.9E-03					
5.8E-01	H									-1.51	1	1	Yes	Dimethylaniline HCl, 2,4-	21436-96-4	1.3E-01	4.0E+02		1.3E-01					
2.0E-01	P			2.0E-03	X					1.68	1	1	Yes	Dimethylaniline, 2,4-	95-68-1	3.9E-01	6.8E+00		3.7E-01	4.0E+01	8.0E+02		3.8E+01	

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Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; J = New Jersey; O = EPA Office of Water; F = See FAQ; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1				
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	voc	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Inhalation SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL Child HQ=1 (µg/L)	Dermal SL Child HQ=1 (µg/L)	Inhalation SL Child HQ=1 (µg/L)	Noncarcinogenic SL Child HI=1 (µg/L)	MCL (ug/L)
				2.0E-03	I			V		2.31	1	1	Yes	Dimethylaniline, N,N-	121-69-7					4.0E+01	3.0E+02		3.5E+01	
1.1E+01	P									2.34	1	1	Yes	Dimethylbenzidine, 3,3'-	119-93-7	7.1E-03	8.2E-02		6.5E-03					
				1.0E-01	P	3.0E-02	I	V		-1.01	1	1	Yes	Dimethylformamide	68-12-2					2.0E+03	1.8E+06	6.3E+01	6.1E+01	
				1.0E-04	X	2.0E-06	X	V		-1.19	1	1	Yes	Dimethylhydrazine, 1,1-	57-14-7					2.0E+00	3.5E+03	4.2E-03	4.2E-03	
5.5E+02	C	1.6E-01	C					V		-0.54	1	1	Yes	Dimethylhydrazine, 1,2-	540-73-8	1.4E-04	4.8E-02	3.5E-05	2.8E-05					
				2.0E-02	I					2.3	1	1	Yes	Dimethylphenol, 2,4-	105-67-9					4.0E+02	3.1E+03		3.6E+02	
				6.0E-04	I					2.36	1	1	Yes	Dimethylphenol, 2,6-	576-26-1					1.2E+01	8.5E+01		1.1E+01	
				1.0E-03	I					2.23	1	1	Yes	Dimethylphenol, 3,4-	95-65-8					2.0E+01	1.7E+02		1.8E+01	
4.5E-02	C	1.3E-05	C					V		2.58	1	1	Yes	Dimethylvinylchloride	513-37-1	1.7E+00	6.3E+00	4.3E-01	3.3E-01					
				8.0E-05	X					2.13	1	1	Yes	Dinitro-o-cresol, 4,6-	534-52-1					1.6E+00	2.6E+01		1.5E+00	
				2.0E-03	I					4.12	1	0.9	Yes	Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5					4.0E+01	5.4E+01		2.3E+01	
				1.0E-04	P					1.69	1	1	Yes	Dinitrobenzene, 1,2-	528-29-0					2.0E+00	5.3E+01		1.9E+00	
				1.0E-04	I					1.49	1	1	Yes	Dinitrobenzene, 1,3-	99-65-0					2.0E+00	7.2E+01		2.0E+00	
				1.0E-04	P					1.46	1	1	Yes	Dinitrobenzene, 1,4-	100-25-4					2.0E+00	7.5E+01		2.0E+00	
				2.0E-03	I					1.67	1	1	Yes	Dinitrophenol, 2,4-	51-28-5					4.0E+01	1.2E+03		3.9E+01	
6.8E-01	I									2.18	1	1	Yes	Dinitrotoluene Mixture, 2,4/2,6-	NA	1.1E-01	1.4E+00		1.1E-01					
3.1E-01	C	8.9E-05	C	2.0E-03	I					1.98	1	1	Yes	Dinitrotoluene, 2,4-	121-14-2	2.5E-01	4.1E+00		2.4E-01	4.0E+01	7.5E+02		3.8E+01	
1.5E+00	P			3.0E-04	X					2.1	1	1	Yes	Dinitrotoluene, 2,6-	606-20-2	5.2E-02	7.1E-01		4.8E-02	6.0E+00	9.3E+01		5.7E+00	
				2.0E-03	S					1.84	1	1	Yes	Dinitrotoluene, 2-Amino-4,6-	35572-78-2					4.0E+01	1.0E+03		3.9E+01	
				2.0E-03	S					1.84	1	1	Yes	Dinitrotoluene, 4-Amino-2,6-	19406-51-0					4.0E+01	1.0E+03		3.9E+01	
4.5E-01	X			9.0E-04	X					2.18	1	1	Yes	Dinitrotoluene, Technical grade	25321-14-6	1.7E-01	2.1E+00		1.6E-01	1.8E+01	2.5E+02		1.7E+01	
				1.0E-03	I					3.56	1	0.9	Yes	Dinoseb	88-85-7					2.0E+01	5.4E+01		1.5E+01	7.0E+00
1.0E-01	I	5.0E-06	I	3.0E-02	I	3.0E-02	I	V		-0.27	1	1	Yes	Dioxane, 1,4-	123-91-1	7.8E-01	2.2E+02	1.1E+00	4.6E-01	6.0E+02	1.9E+05	6.3E+01	5.7E+01	
														Dioxins										
6.2E+03	I	1.3E+00	I							8.21	1	0	No	~Hexachlorodibenzo-p-dioxin, Mixture	NA	1.3E-05			1.3E-05					
1.3E+05	C	3.8E+01	C	7.0E-10	I	4.0E-08	C	V		6.8	1	0.5	No	~TCDD, 2,3,7,8-	1746-01-6	6.0E-07		1.5E-07	1.2E-07	1.4E-05		8.3E-05	1.2E-05	3.0E-05
				3.0E-02	I					2.86	1	1	Yes	Diphenamid	957-51-7					6.0E+02	4.2E+03		5.3E+02	
				8.0E-04	X					2.4	1	1	Yes	Diphenyl Sulfone	127-63-9					1.6E+01	2.0E+02		1.5E+01	
				2.5E-02	I					3.5	1	1	Yes	Diphenylamine	122-39-4					5.0E+02	8.4E+02		3.1E+02	
8.0E-01	I	2.2E-04	I							2.94	1	1	Yes	Diphenylhydrazine, 1,2-	122-66-7	9.7E-02	3.7E-01		7.7E-02					
				2.2E-03	I					-2.82	1	1	No	Diquat	85-00-7					4.4E+01			4.4E+01	2.0E+01
7.1E+00	C	1.4E-01	C							4.9	1	1	No	Direct Black 38	1937-37-7	1.1E-02			1.1E-02					
7.4E+00	C	1.4E-01	C							-2.03	1	1	No	Direct Blue 6	2602-46-2	1.1E-02			1.1E-02					
6.7E+00	C	1.4E-01	C							-6.53	1	1	No	Direct Brown 95	16071-86-6	1.2E-02			1.2E-02					
				4.0E-05	I					4.02	1	0.9	Yes	Disulfoton	298-04-4					8.0E-01	1.3E+00		5.0E-01	
				1.0E-02	I			V		0.77	1	1	Yes	Dithiane, 1,4-	505-29-3					2.0E+02	1.6E+04		2.0E+02	
				2.0E-03	I					2.68	1	1	Yes	Diuron	330-54-1					4.0E+01	3.6E+02		3.6E+01	
				4.0E-03	I					1.15	1	1	Yes	Dodine	2439-10-3					8.0E+01	1.1E+04		8.0E+01	
				2.5E-02	I			V		3.21	1	1	Yes	EPTC	759-94-4					5.0E+02	1.5E+03		3.8E+02	
				6.0E-03	I			V		3.83	1	0.9	Yes	Endosulfan	115-29-7					1.2E+02	6.3E+02		1.0E+02	
				2.0E-02	I					1.91	1	1	Yes	Endothall	145-73-3					4.0E+02	8.5E+03		3.8E+02	1.0E+02
				3.0E-04	I					5.2	1	0.8	Yes	Endrin	72-20-8					6.0E+00	3.7E+00		2.3E+00	2.0E+00
9.9E-03	I	1.2E-06	I	6.0E-03	P	1.0E-03	I	V		0.45	1	1	Yes	Epichlorohydrin	106-89-8	7.9E+00	7.5E+02	4.7E+00	2.9E+00	1.2E+02	1.3E+04	2.1E+00	2.0E+00	
						2.0E-02	I	V		0.86	1	1	Yes	Epoxybutane, 1,2-	106-88-7							4.2E+01	4.2E+01	
				5.0E-03	I					-0.22	1	1	Yes	Ethephon	16672-87-0					1.0E+02	4.2E+04		1.0E+02	
				5.0E-04	I					5.07	1	0.8	Yes	Ethion	563-12-2					1.0E+01	7.7E+00		4.3E+00	
				1.0E-01	P	6.0E-02	P	V		0.59	1	1	Yes	Ethoxyethanol Acetate, 2-	111-15-9					2.0E+03	2.3E+05	1.3E+02	1.2E+02	
				9.0E-02	P	2.0E-01	I	V		-0.32	1	1	Yes	Ethoxyethanol, 2-	110-80-5					1.8E+03	6.2E+05	4.2E+02	3.4E+02	
				9.0E-01	I	7.0E-02	P	V		0.73	1	1	Yes	Ethyl Acetate	141-78-6					1.8E+04	1.2E+06	1.5E+02	1.4E+02	
4.8E-02	H			5.0E-03	P	8.0E-03	P	V		1.32	1	1	Yes	Ethyl Acrylate	140-88-5	1.6E+00	4.3E+01		1.6E+00	1.0E+02	3.0E+03	1.7E+01	1.4E+01	
						1.0E+01	I	V		1.43	1	1	Yes	Ethyl Chloride (Chloroethane)	75-00-3							2.1E+04	2.1E+04	
				2.0E-01	I			V		0.89	1	1	Yes	Ethyl Ether	60-29-7					4.0E+03	2.0E+05		3.9E+03	
				9.0E-02	H	3.0E-01	P	V		1.94	1	1	Yes	Ethyl Methacrylate	97-63-2					1.8E+03	2.3E+04	6.3E+02	4.6E+02	
				1.0E-05	I					4.78	1	0.8	Yes	Ethyl-p-nitrophenyl Phosphonate	2104-64-5					2.0E-01	1.6E-01		8.9E-02	
1.1E-02	C	2.5E-06	C	1.0E-01	I	1.0E+00	I	V		3.15	1	1	Yes	Ethylbenzene	100-41-4	7.1E+00	1.2E+01	2.2E+00	1.5E+00	2.0E+03	3.8E+03	2.1E+03	8.1E+02	7.0E+02
				7.0E-02	P					-0.94	1	1	Yes	Ethylene Cyanohydrin	109-78-4					1.4E+03	1.1E+06		1.4E+03	
				9.0E-02	P			V		-2.04	1	1	No	Ethylene Diamine	107-15-3					1.8E+03			1.8E+03	
				2.0E+00	I	4.0E-01	C			-1.36	1	1	Yes	Ethylene Glycol	107-21-1					4.0E+04	5.7E+07		4.0E+04	
				1.0E-01	I	1.6E+00	I			0.83	1	1	Yes	Ethylene Glycol Monobutyl Ether	111-76-2					2.0E+03	1.4E+05		2.0E+03	
3.1E-01	C	8.8E-05	C			3.0E-02	C	V		-0.3	1	1	Yes	Ethylene Oxide	75-21-8	2.5E-01	5.2E+01	6.4E-02	5.1E-02			6.3E+01	6.3E+01	
4.5E-02	C	1.3E-05	C	8.0E-05	I					-0.66	1	1	Yes	Ethylene Thiourea	96-45-7	1.7E+00	9.7E+02		1.7E+00	1.6E+00	1.0E+03		1.6E+00	
6.5E+01	C	1.9E-02	C					V		-0.28	1	1	Yes	Ethyleneimine	151-56-4	1.2E-03	2.4E-01	3.0E-04	2.4E-04					
				3.0E+00	I					2.19	1	1	Yes	Ethylphthalyl Ethyl Glycolate	84-72-0					6.0E+04	1.5E+06		5.8E+04	
				8.0E-03	I					2.55	1	1	Yes	Express	101200-48-0					1.6E+02	5.0E+03		1.6E+02	

TR=1E-06
HQ=1.0

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Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1				
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	voc	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Inhalation SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL Child HQ=1 (µg/L)	Dermal SL Child HQ=1 (µg/L)	Inhalation SL Child HQ=1 (µg/L)	Noncarcinogenic SL Child HI=1 (µg/L)	MCL (ug/L)
				2.5E-04	I					3.23	1	0.9	Yes	Fenamiphos	22224-92-6					5.0E+00	3.4E+01		4.4E+00	
				2.5E-02	I					5.7	1	0.8	Yes	Fenpropathrin	39515-41-8					5.0E+02	7.3E+01		6.4E+01	
				1.3E-02	I					2.42	1	1	Yes	Fluometuron	2164-17-2					2.6E+02	3.4E+03		2.4E+02	
				4.0E-02	C	1.3E-02	C				1	1	Yes	Fluoride	16984-48-8					8.0E+02	1.8E+05		8.0E+02	
				6.0E-02	I	1.3E-02	C				1	1	Yes	Fluorine (Soluble Fluoride)	7782-41-4					1.2E+03	2.7E+05		1.2E+03	4.0E+03
				8.0E-02	I					3.16	1	0.9	Yes	Fluridone	59756-60-4					1.6E+03	1.4E+04		1.4E+03	
				2.0E-02	I					3.34	1	0.9	Yes	Flurprimidol	56425-91-3					4.0E+02	2.4E+03		3.4E+02	
				6.0E-02	I					3.7	1	0.9	Yes	Flutolanil	66332-96-5					1.2E+03	4.5E+03		9.5E+02	
				1.0E-02	I					6.81	1	0.6	No	Fluvalinate	69409-94-5					2.0E+02			2.0E+02	
3.5E-03	I			1.0E-01	I					2.85	1	1	Yes	Folpet	133-07-3	2.2E+01	2.0E+02		2.0E+01	2.0E+03	2.1E+04		1.8E+03	
1.9E-01	I									2.9	1	1	Yes	Fomesafen	72178-02-0	4.1E-01	8.7E+00		3.9E-01					
				2.0E-03	I					3.94	1	0.9	Yes	Fonofos	944-22-9					4.0E+01	6.3E+01		2.4E+01	
		1.3E-05	I	2.0E-01	I	9.8E-03	A	V		0.35	1	1	Yes	Formaldehyde	50-00-0			4.3E-01	4.3E-01	4.0E+03	3.2E+05	2.0E+01	2.0E+01	
				9.0E-01	P	3.0E-04	X	V		-0.54	1	1	Yes	Formic Acid	64-18-6					1.8E+04	6.3E+06	6.3E-01	6.3E-01	
				3.0E+00	I					-2.4	1	1	No	Fosetyl-AL	39148-24-8					6.0E+04			6.0E+04	
														Furans										
				1.0E-03	X			V		4.12	1	1	Yes	~Dibenzofuran	132-64-9					2.0E+01	1.3E+01		7.9E+00	
				1.0E-03	I			V		1.34	1	1	Yes	~Furan	110-00-9					2.0E+01	4.8E+02		1.9E+01	
				9.0E-01	I	2.0E+00	I	V		0.46	1	1	Yes	~Tetrahydrofuran	109-99-9					1.8E+04	1.7E+06	4.2E+03	3.4E+03	
3.8E+00	H									-0.04	1	1	Yes	Furazolidone	67-45-8	2.1E-02	9.8E+00		2.0E-02					
				3.0E-03	I	5.0E-02	H	V		0.41	1	1	Yes	Furfural	98-01-1					6.0E+01	7.1E+03	1.0E+02	3.8E+01	
1.5E+00	C	4.3E-04	C							1.8	1	1	Yes	Furium	531-82-8	5.2E-02	1.8E+00		5.0E-02					
3.0E-02	I	8.6E-06	C							4.38	1	0.9	Yes	Furmecyclox	60568-05-0	2.6E+00	1.9E+00		1.1E+00					
				4.0E-04	I					-5.34	1	1	No	Glufosinate, Ammonium	77182-82-2					8.0E+00			8.0E+00	
						8.0E-05	C			-0.18	1	1	Yes	Glutaraldehyde	111-30-8									
				4.0E-04	I	1.0E-03	H	V		-0.12	1	1	Yes	Glycidyl	765-34-4					8.0E+00	1.8E+03	2.1E+00	1.7E+00	
				1.0E-01	I					-3.4	1	1	No	Glyphosate	1071-83-6					2.0E+03			2.0E+03	7.0E+02
				3.0E-03	I					4.73	1	0.8	Yes	Goal	42874-03-3					6.0E+01	6.6E+01		3.2E+01	
				1.0E-02	X			V		-1.63	1	1	Yes	Guanidine	113-00-8					2.0E+02	4.2E+05		2.0E+02	
				2.0E-02	P					-1.7	1	1	Yes	Guanidine Chloride	50-01-1					4.0E+02	1.0E+09		4.0E+02	
				3.0E-03	A	1.0E-02	A			2.75	1	1	Yes	Guthion	86-50-0					6.0E+01	8.3E+02		5.6E+01	
				5.0E-05	I					4.07	1	0.9	Yes	Haloxyfop, Methyl	69806-40-2					1.0E+00	3.1E+00		7.6E-01	
				1.3E-02	I					1.56	1	1	Yes	Harmony	79277-27-3					2.6E+02	3.5E+04		2.6E+02	
4.5E+00	I	1.3E-03	I	5.0E-04	I			V		6.1	1	0.8	Yes	Heptachlor	76-44-8	1.7E-02	2.2E-03	4.3E-03	1.4E-03	1.0E+01	1.5E+00		1.3E+00	4.0E-01
9.1E+00	I	2.6E-03	I	1.3E-05	I			V		4.98	1	0.8	Yes	Heptachlor Epoxide	1024-57-3	8.6E-03	6.8E-03	2.2E-03	1.4E-03	2.6E-01	2.4E-01		1.2E-01	2.0E-01
				2.0E-03	I			V		6.07	1	0.7	No	Hexabromobenzene	87-82-1					4.0E+01			4.0E+01	
				2.0E-04	I						1	0	No	Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2					4.0E+00			4.0E+00	
1.6E+00	I	4.6E-04	I	8.0E-04	I			V		5.73	1	0.9	No	Hexachlorobenzene	118-74-1	4.9E-02		1.2E-02	9.8E-03	1.6E+01			1.6E+01	1.0E+00
7.8E-02	I	2.2E-05	I	1.0E-03	P			V		4.78	1	0.9	Yes	Hexachlorobutadiene	87-68-3	1.0E+00	4.2E-01	2.6E-01	1.4E-01	2.0E+01	9.5E+00		6.5E+00	
6.3E+00	I	1.8E-03	I	8.0E-03	A					3.8	1	0.9	Yes	Hexachlorocyclohexane, Alpha-	319-84-6	1.2E-02	1.7E-02		7.1E-03	1.6E+02	2.5E+02		9.7E+01	
1.8E+00	I	5.3E-04	I							3.78	1	0.9	Yes	Hexachlorocyclohexane, Beta-	319-85-7	4.3E-02	5.9E-02		2.5E-02					
1.1E+00	C	3.1E-04	C	3.0E-04	I					3.72	1	0.9	Yes	Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	7.1E-02	9.6E-02		4.1E-02	6.0E+00	9.2E+00		3.6E+00	2.0E-01
1.8E+00	I	5.1E-04	I							4.14	1	0.9	Yes	Hexachlorocyclohexane, Technical	608-73-1	4.3E-02	5.9E-02		2.5E-02					
				6.0E-03	I	2.0E-04	I	V		5.04	1	0.9	Yes	Hexachlorocyclopentadiene	77-47-4					1.2E+02	4.2E+01	4.2E-01	4.1E-01	5.0E+01
4.0E-02	I	1.1E-05	C	7.0E-04	I	3.0E-02	I	V		4.14	1	1	Yes	Hexachloroethane	67-72-1	1.9E+00	1.7E+00	5.1E-01	3.3E-01	1.4E+01	1.4E+01	6.3E+01	6.2E+00	
				3.0E-04	I					7.54	1	0	No	Hexachlorophene	70-30-4					6.0E+00			6.0E+00	
1.1E-01	I			3.0E-03	I					0.87	1	1	Yes	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	7.1E-01	8.3E+01		7.0E-01	6.0E+01	7.9E+03		6.0E+01	
						1.0E-05	I	V		3.2	1	1	Yes	Hexamethylene Diisocyanate, 1,6-	822-06-0							2.1E-02	2.1E-02	
				4.0E-04	P					0.28	1	1	Yes	Hexamethylphosphoramide	680-31-9					8.0E+00	2.0E+03		8.0E+00	
				6.0E-02	H	7.0E-01	I	V		3.9	1	1	Yes	Hexane, N-	110-54-3					1.2E+03	6.4E+02	1.5E+03	3.2E+02	
				2.0E+00	P					0.08	1	1	Yes	Hexanedioic Acid	124-04-9					4.0E+04	1.1E+07		4.0E+04	
				5.0E-03	I	3.0E-02	I	V		1.38	1	1	Yes	Hexanone, 2-	591-78-6					1.0E+02	2.7E+03	6.3E+01	3.8E+01	
				3.3E-02	I					1.85	1	1	Yes	Hexazinone	51235-04-2					6.6E+02	2.4E+04		6.4E+02	
3.0E+00	I	4.9E-03	I			3.0E-05	P	V		-2.07	1	1	Yes	Hydrazine	302-01-2	2.6E-02	1.1E+02	1.1E-03	1.1E-03			6.3E-02	6.3E-02	
3.0E+00	I	4.9E-03	I								1	1	Yes	Hydrazine Sulfate	10034-93-2	2.6E-02	4.7E+00		2.6E-02					
						2.0E-02	I	V			1	1	Yes	Hydrogen Chloride	7647-01-0							4.2E+01	4.2E+01	
				4.0E-02	C	1.4E-02	C	V		0.23	1	1	Yes	Hydrogen Fluoride	7664-39-3					8.0E+02	1.8E+05	2.9E+01	2.8E+01	
						2.0E-03	I	V		0.23	1	1	Yes	Hydrogen Sulfide	7783-06-4							4.2E+00	4.2E+00	
6.0E-02	P			4.0E-02	P					0.59	1	1	Yes	Hydroquinone	123-31-9	1.3E+00	1.1E+02		1.3E+00	8.0E+02	7.9E+04		7.9E+02	
				1.3E-02	I					3.82	1	0.9	Yes	Imazalil	35554-44-0					2.6E+02	6.8E+02		1.9E+02	
				2.5E-01	I					1.86	1	1	Yes	Imazaquin	81335-37-7					5.0E+03	2.6E+05		4.9E+03	
				1.0E-02	A						1	1	Yes	Iodine	7553-56-2					2.0E+02	4.5E+04		2.0E+02	
				4.0E-02	I					3	1	0.9	Yes	Iprodione	36734-19-7					8.0E+02	9.1E+03		7.4E+02	
				7.0E-01	P						1	1	Yes	Iron	7439-89-6					1.4E+04	3.2E+06		1.4E+04	

TR=1E-06
HQ=1.0

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; J = New Jersey; O = EPA Office of Water; F = See FAQ; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1				
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	voc	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Inhalation SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL Child HQ=1 (µg/L)	Dermal SL Child HQ=1 (µg/L)	Inhalation SL Child HQ=1 (µg/L)	Noncarcinogenic SL Child HI=1 (µg/L)	MCL (ug/L)
				3.0E-01	I			V		0.76	1	1	Yes	Isobutyl Alcohol	78-83-1					6.0E+03	3.6E+05		5.9E+03	
9.5E-04	I			2.0E-01	I	2.0E+00	C			1.7	1	1	Yes	Isophorone	78-59-1	8.2E+01	1.6E+03		7.8E+01	4.0E+03	8.6E+04		3.8E+03	
				1.5E-02	I			V		5.8	1	0.8	Yes	Isopropalin	33820-53-0					3.0E+02	4.6E+01		4.0E+01	
				2.0E+00	P	2.0E-01	P	V		0.05	1	1	Yes	Isopropanol	67-63-0					4.0E+04	6.5E+06	4.2E+02	4.1E+02	
				1.0E-01	I					0.27	1	1	Yes	Isopropyl Methyl Phosphonic Acid	1832-54-8					2.0E+03	3.9E+05		2.0E+03	
				5.0E-02	I					3.94	1	0.9	Yes	Isoxaben	82558-50-7					1.0E+03	2.7E+03		7.3E+02	
						3.0E-01	A	V		8	1	0	No	JP-7	NA							6.3E+02	6.3E+02	
				7.5E-02	I					3.43	1	0.9	Yes	Kerb	23950-58-5					1.5E+03	5.5E+03		1.2E+03	
				2.0E-03	I					4.81	1	0.9	Yes	Lactofen	77501-63-4					4.0E+01	6.7E+01		2.5E+01	
														Lead Compounds										
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		0.025	1	Yes	~Lead Chromate	7758-97-6	5.0E-02	2.3E-01		4.1E-02	4.0E+02	2.3E+03		3.4E+02	
8.5E-03	C	1.2E-05	C								1	0.8	Yes	~Lead Phosphate	7446-27-7	9.2E+00	1.6E+03		9.1E+00					
2.8E-01	C	8.0E-05	C							-0.08	1	1	Yes	~Lead acetate	301-04-2	2.8E-01	2.7E+02		2.8E-01					
											1	1	Yes	~Lead and Compounds	7439-92-1								1.5E+01	1.5E+01
8.5E-03	C	1.2E-05	C							-4	1	1	No	~Lead subacetate	1335-32-6	9.2E+00			9.2E+00					
				1.0E-07	I			V		4.15	1	0.9	Yes	~Tetraethyl Lead	78-00-2					2.0E-03	3.8E-03		1.3E-03	
				2.0E-03	I					3.2	1	0.9	Yes	Linuron	330-55-2					4.0E+01	2.0E+02		3.3E+01	
				2.0E-03	P						1	1	Yes	Lithium	7439-93-2					4.0E+01	9.1E+03		4.0E+01	
				2.0E-01	I					2.18	1	1	Yes	Londax	83055-99-6					4.0E+03	2.4E+05		3.9E+03	
				5.0E-04	I					3.25	1	1	Yes	MCPA	94-74-6					1.0E+01	3.0E+01		7.5E+00	
				1.0E-02	I					3.5	1	0.9	Yes	MCPB	94-81-5					2.0E+02	5.5E+02		1.5E+02	
				1.0E-03	I					3.13	1	1	Yes	MCPP	93-65-2					2.0E+01	7.1E+01		1.6E+01	
				2.0E-02	I					2.36	1	1	Yes	Malathion	121-75-5					4.0E+02	1.1E+04		3.9E+02	
				1.0E-01	I	7.0E-04	C			1.62	1	1	Yes	Maleic Anhydride	108-31-6					2.0E+03	3.8E+04		1.9E+03	
				5.0E-01	I					-0.84	1	1	Yes	Maleic Hydrazide	123-33-1					1.0E+04	8.9E+06		1.0E+04	
				1.0E-04	P					-0.6	1	1	Yes	Malononitrile	109-77-3					2.0E+00	9.1E+02		2.0E+00	
				3.0E-02	H					1.33	1	0.9	Yes	Mancozeb	8018-01-7					6.0E+02	4.9E+03		5.4E+02	
				5.0E-03	I					0.62	1	1	Yes	Maneb	12427-38-2					1.0E+02	4.4E+03		9.8E+01	
				1.4E-01	I	5.0E-05	I				1	1		Manganese (Diet)	7439-96-5									
				2.4E-02	S	5.0E-05	I				0.04	1	Yes	Manganese (Non-diet)	7439-96-5					4.8E+02	4.4E+03		4.3E+02	
				9.0E-05	H					1.04	1	1	Yes	Mephosfolan	950-10-7					1.8E+00	2.5E+02		1.8E+00	
				3.0E-02	I					-2.82	1	1	No	Mepiquat Chloride	24307-26-4					6.0E+02			6.0E+02	
														Mercury Compounds										
				3.0E-04	I	3.0E-04	S			-0.22	0.07	1	Yes	~Mercuric Chloride (and other Mercury salts)	7487-94-7					6.0E+00	9.5E+01		5.7E+00	2.0E+00
						3.0E-04	I	V		0.62	1	1	Yes	~Mercury (elemental)	7439-97-6							6.3E-01	6.3E-01	2.0E+00
				1.0E-04	I						1	1	Yes	~Methyl Mercury	22967-92-6					2.0E+00	4.5E+02		2.0E+00	
				8.0E-05	I					0.71	1	1	Yes	~Phenylmercuric Acetate	62-38-4					1.6E+00	5.7E+02		1.6E+00	
				3.0E-05	I			V		7.67	1	0.3	No	Merphos	150-50-5					6.0E-01			6.0E-01	
				3.0E-05	I					5.7	1	0.9	Yes	Merphos Oxide	78-48-8					6.0E-01	9.9E-02		8.5E-02	
				6.0E-02	I					1.65	1	1	Yes	Metalaxyl	57837-19-1					1.2E+03	6.4E+04		1.2E+03	
				1.0E-04	I	3.0E-02	P	V		0.68	1	1	Yes	Methacrylonitrile	126-98-7					2.0E+00	1.3E+02	6.3E+01	1.9E+00	
				5.0E-05	I					-0.8	1	1	Yes	Methamidophos	10265-92-6					1.0E+00	1.0E+03		1.0E+00	
				2.0E+00	I	2.0E+01	I	V		-0.77	1	1	Yes	Methanol	67-56-1					4.0E+04	1.8E+07	4.2E+04	2.0E+04	
				1.0E-03	I					2.2	1	1	Yes	Methidathion	950-37-8					2.0E+01	5.8E+02		1.9E+01	
				2.5E-02	I					0.6	1	1	Yes	Methomyl	16752-77-5					5.0E+02	6.8E+04		5.0E+02	
4.9E-02	C	1.4E-05	C							1.47	1	1	Yes	Methoxy-5-nitroaniline, 2-	99-59-2	1.6E+00	5.2E+01		1.5E+00					
				5.0E-03	I					5.08	1	0.8	Yes	Methoxychlor	72-43-5					1.0E+02	5.9E+01		3.7E+01	4.0E+01
				8.0E-03	P	1.0E-03	P	V		0.1	1	1	Yes	Methoxyethanol Acetate, 2-	110-49-6					1.6E+02	3.5E+04	2.1E+00	2.1E+00	
				5.0E-03	P	2.0E-02	I	V		-0.77	1	1	Yes	Methoxyethanol, 2-	109-86-4					1.0E+02	6.3E+04	4.2E+01	2.9E+01	
				1.0E+00	X			V		0.18	1	1	Yes	Methyl Acetate	79-20-9					2.0E+04	2.9E+06		2.0E+04	
				3.0E-02	H	2.0E-02	P	V		0.8	1	1	Yes	Methyl Acrylate	96-33-3					6.0E+02	3.7E+04	4.2E+01	3.9E+01	
				6.0E-01	I	5.0E+00	I	V		0.29	1	1	Yes	Methyl Ethyl Ketone (2-Butanone)	78-93-3					1.2E+04	1.5E+06	1.0E+04	5.6E+03	
		1.0E-03	X	1.0E-03	P	2.0E-05	X	V		-1.05	1	1	Yes	Methyl Hydrazine	60-34-4			5.6E-03	5.6E-03	2.0E+01	1.5E+04	4.2E-02	4.2E-02	
				8.0E-02	H	3.0E+00	I	V		1.31	1	1	Yes	Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1					1.6E+03	4.9E+04	6.3E+03	1.2E+03	
						1.0E-03	C	V		0.79	1	1	Yes	Methyl Isocyanate	624-83-9							2.1E+00	2.1E+00	
				1.4E+00	I	7.0E-01	I	V		1.38	1	1	Yes	Methyl Methacrylate	80-62-6					2.8E+04	7.7E+05	1.5E+03	1.4E+03	
				2.5E-04	I					2.86	1	1	Yes	Methyl Parathion	298-00-0					5.0E+00	4.1E+01		4.5E+00	
				6.0E-02	X					-1	1	1	Yes	Methyl Phosphonic Acid	993-13-5					1.2E+03	1.2E+06		1.2E+03	
				6.0E-03	H	4.0E-02	H	V		3.44	1	1	Yes	Methyl Styrene (Mixed Isomers)	25013-15-4					1.2E+02	1.6E+02	8.3E+01	3.8E+01	
9.9E-02	C	2.8E-05	C							-0.66	1	1	Yes	Methyl methanesulfonate	66-27-3	7.9E-01	4.6E+02		7.9E-01					
1.8E-03	C	2.6E-07	C			3.0E+00	I	V		0.94	1	1	Yes	Methyl tert-Butyl Ether (MTBE)	1634-04-4	4.3E+01	1.9E+03	2.2E+01	1.4E+01			6.3E+03	6.3E+03	
				3.0E-04	X					-2.06	1	1	Yes	Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2					6.0E+00	5.9E+04		6.0E+00	
9.0E-03	P			2.0E-02	X					1.87	1	1	Yes	Methyl-5-Nitroaniline, 2-	99-55-8	8.7E+00	1.4E+02		8.1E+00	4.0E+02	7.3E+03		3.8E+02	
8.3E+00	C	2.4E-03	C							-0.92	1	1	Yes	Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	9.4E-03	1.0E+01		9.4E-03					

TR=1E-06
HQ=1.0

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; J = New Jersey; O = EPA Office of Water; F = See FAQ; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1				
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	voc	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Inhalation SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL Child HQ=1 (µg/L)	Dermal SL Child HQ=1 (µg/L)	Inhalation SL Child HQ=1 (µg/L)	Noncarcinogenic SL Child HI=1 (µg/L)	MCL (ug/L)
1.3E-01	C	3.7E-05	C							-2.06	1	1	Yes	Methylaniline Hydrochloride, 2-	636-21-5	6.0E-01	3.7E+03		6.0E-01					
				1.0E-02	A					-1.18	1	1	Yes	Methylarsonic acid	124-58-3					2.0E+02	3.6E+05		2.0E+02	
				2.0E-04	X						1	0	No	Methylbenzene,1-4-diamine monohydrochloride, 2-	74612-12-7					4.0E+00			4.0E+00	
1.0E-01	X			3.0E-04	X						1	0	No	Methylbenzene-1,4-diamine sulfate, 2-	615-50-9	7.8E-01			7.8E-01	6.0E+00			6.0E+00	
2.2E+01	C	6.3E-03	C						M	6.42	1	0.8	No	Methylcholanthrene, 3-	56-49-5	1.1E-03			1.1E-03					
2.0E-03	I	1.0E-08	I	6.0E-03	I	6.0E-01	I	V	M	1.25	1	1	Yes	Methylene Chloride	75-09-2	1.3E+01	3.4E+02	2.0E+02	1.1E+01	1.2E+02	3.7E+03	1.3E+03	1.1E+02	5.0E+00
1.0E-01	P	4.3E-04	C	2.0E-03	P				M	3.91	1	0.9	Yes	Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	2.5E-01	4.2E-01		1.6E-01	4.0E+01	7.5E+01		2.6E+01	
4.6E-02	I	1.3E-05	C							4.37	1	1	Yes	Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	101-61-1	1.7E+00	6.4E-01		4.6E-01					
1.6E+00	C	4.6E-04	C			2.0E-02	C			1.59	1	1	Yes	Methylenebisbenzenamine, 4,4'-	101-77-9	4.9E-02	1.6E+00		4.7E-02					
						6.0E-04	I			5.22	1	0.9	Yes	Methylenediphenyl Diisocyanate	101-68-8									
				7.0E-02	H			V		3.48	1	1	Yes	Methylstyrene, Alpha-	98-83-9					1.4E+03	1.7E+03		7.8E+02	
				1.5E-01	I					3.13	1	1	Yes	Metolachlor	51218-45-2					3.0E+03	2.6E+04		2.7E+03	
				2.5E-02	I					1.7	1	1	Yes	Metribuzin	21087-64-9					5.0E+02	1.8E+04		4.9E+02	
				3.0E+00	P			V		6.1	1	1	No	Mineral oils	8012-95-1					6.0E+04			6.0E+04	
1.8E+01	C	5.1E-03	C	2.0E-04	I			V		6.89	1	0.5	No	Mirex	2385-85-5	4.3E-03		1.1E-03	8.8E-04	4.0E+00			4.0E+00	
				2.0E-03	I					3.21	1	1	Yes	Molinate	2212-67-1					4.0E+01	1.2E+02		3.0E+01	
				5.0E-03	I						1	1	Yes	Molybdenum	7439-98-7					1.0E+02	2.3E+04		1.0E+02	
				1.0E-01	I						1	1	Yes	Monochloramine	10599-90-3					2.0E+03	4.5E+05		2.0E+03	4.0E+03
				2.0E-03	P					1.66	1	1	Yes	Monomethylaniline	100-61-8					4.0E+01	7.5E+02		3.8E+01	
				3.0E-04	X					4.04	1	0.9	Yes	N,N'-Diphenyl-1,4-benzenediamine	74-31-7					6.0E+00	8.8E+00		3.6E+00	
				2.0E-03	I			V		1.38	1	1	Yes	Naled	300-76-5					4.0E+01	6.8E+03		4.0E+01	
				3.0E-02	X	1.0E-01	P	V			1	0	No	Naphtha, High Flash Aromatic (HFAN)	64742-95-6					6.0E+02		2.1E+02	1.5E+02	
1.8E+00	C	0.0E+00	C							2.28	1	1	Yes	Naphthylamine, 2-	91-59-8	4.3E-02	3.5E-01		3.9E-02					
				1.0E-01	I					3.36	1	0.9	Yes	Napropamide	15299-99-7					2.0E+03	8.9E+03		1.6E+03	
		2.6E-04	C	1.1E-02	C	1.4E-05	C				1	1	Yes	Nickel Acetate	373-02-4					2.2E+02	6.8E+05		2.2E+02	
		2.6E-04	C	1.1E-02	C	1.4E-05	C				1	1	Yes	Nickel Carbonate	3333-67-3					2.2E+02	1.4E+06		2.2E+02	
		2.6E-04	C	1.1E-02	C	1.4E-05	C	V			1	0	Yes	Nickel Carbonyl	13463-39-3			2.2E-02	2.2E-02	2.2E+02		2.9E-02	2.9E-02	
		2.6E-04	C	1.1E-02	C	1.4E-05	C				0.04	1	Yes	Nickel Hydroxide	12054-48-7					2.2E+02	2.0E+03		2.0E+02	
		2.6E-04	C	1.1E-02	C	2.0E-05	C				0.04	1	Yes	Nickel Oxide	1313-99-1					2.2E+02	2.0E+03		2.0E+02	
		2.4E-04	I	1.1E-02	C	1.4E-05	C				0.04	0	Yes	Nickel Refinery Dust	NA					2.2E+02	1.0E+04		2.2E+02	
		2.6E-04	C	2.0E-02	I	9.0E-05	A				0.04	1	Yes	Nickel Soluble Salts	7440-02-0					4.0E+02	1.8E+04		3.9E+02	
1.7E+00	C	4.8E-04	I	1.1E-02	C	1.4E-05	C				0.04	1	Yes	Nickel Subsulfide	12035-72-2	4.6E-02	1.6E+00		4.5E-02	2.2E+02	1.0E+04		2.2E+02	
		2.6E-04	C	1.1E-02	C	1.4E-05	C				1	0	Yes	Nickelocene	1271-28-9					2.2E+02			2.2E+02	
				1.6E+00	I						1	1	Yes	Nitrate	14797-55-8					3.2E+04	7.3E+06		3.2E+04	1.0E+04
											1	0	Yes	Nitrate + Nitrite (as N)	NA									1.0E+04
				1.0E-01	I						1	1	Yes	Nitrite	14797-65-0					2.0E+03	4.5E+05		2.0E+03	1.0E+03
				1.0E-02	X	5.0E-05	X			1.85	1	1	Yes	Nitroaniline, 2-	88-74-4					2.0E+02	3.4E+03		1.9E+02	
2.0E-02	P			4.0E-03	P	6.0E-03	P			1.39	1	1	Yes	Nitroaniline, 4-	100-01-6	3.9E+00	1.2E+02		3.8E+00	8.0E+01	2.8E+03		7.8E+01	
		4.0E-05	I	2.0E-03	I	9.0E-03	I	V		1.85	1	1	Yes	Nitrobenzene	98-95-3			1.4E-01	1.4E-01	4.0E+01	6.2E+02	1.9E+01	1.3E+01	
				3.0E+03	P					-4.56	1	1	No	Nitrocellulose	9004-70-0					6.0E+07			6.0E+07	
				7.0E-02	H					-0.47	1	1	Yes	Nitrofurantoin	67-20-9					1.4E+03	1.6E+06		1.4E+03	
1.3E+00	C	3.7E-04	C							0.23	1	1	Yes	Nitrofurazone	59-87-0	6.0E-02	1.6E+01		6.0E-02					
1.7E-02	P			1.0E-04	P					1.62	1	1	Yes	Nitroglycerin	55-63-0	4.6E+00	1.8E+02		4.5E+00	2.0E+00	8.7E+01		2.0E+00	
				1.0E-01	I					-0.89	1	1	Yes	Nitroguanidine	556-88-7					2.0E+03	1.8E+06		2.0E+03	
		8.8E-06	P			5.0E-03	P	V		-0.35	1	1	Yes	Nitromethane	75-52-5			6.4E-01	6.4E-01			1.0E+01	1.0E+01	
		2.7E-03	H			2.0E-02	I	V		0.93	1	1	Yes	Nitropropane, 2-	79-46-9			2.1E-03	2.1E-03			4.2E+01	4.2E+01	
2.7E+01	C	7.7E-03	C						M	0.23	1	1	Yes	Nitroso-N-ethylurea, N-	759-73-9	9.3E-04	1.5E-01		9.2E-04					
1.2E+02	C	3.4E-02	C						M	-0.03	1	1	Yes	Nitroso-N-methylurea, N-	684-93-5	2.1E-04	4.5E-02		2.1E-04					
5.4E+00	I	1.6E-03	I					V		2.63	1	1	Yes	Nitroso-di-N-butylamine, N-	924-16-3	1.4E-02	7.6E-02	3.5E-03	2.7E-03					
7.0E+00	I	2.0E-03	C							1.36	1	1	Yes	Nitroso-di-N-propylamine, N-	621-64-7	1.1E-02	3.4E-01		1.1E-02					
2.8E+00	I	8.0E-04	C							-1.28	1	1	Yes	Nitrosodiethanolamine, N-	1116-54-7	2.8E-02	7.8E+01		2.8E-02					
1.5E+02	I	4.3E-02	I						M	0.48	1	1	Yes	Nitrosodiethylamine, N-	55-18-5	1.7E-04	1.6E-02		1.7E-04					
5.1E+01	I	1.4E-02	I	8.0E-06	P	4.0E-05	X	V	M	-0.57	1	1	Yes	Nitrosodimethylamine, N-	62-75-9	4.9E-04	1.9E-01	1.5E-04	1.1E-04	1.6E-01	7.4E+01	8.3E-02	5.5E-02	
4.9E-03	I	2.6E-06	C							3.13	1	1	Yes	Nitrosodiphenylamine, N-	86-30-6	1.6E+01	5.0E+01		1.2E+01					
2.2E+01	I	6.3E-03	C					V		0.04	1	1	Yes	Nitrosomethylethylamine, N-	10595-95-6	3.5E-03	6.2E-01	8.9E-04	7.1E-04					
6.7E+00	C	1.9E-03	C							-0.44	1	1	Yes	Nitrosomorpholine [N-]	59-89-2	1.2E-02	5.1E+00		1.2E-02					
9.4E+00	C	2.7E-03	C							0.36	1	1	Yes	Nitrosopiperidine [N-]	100-75-4	8.3E-03	1.0E+00		8.2E-03					
2.1E+00	I	6.1E-04	I							-0.19	1	1	Yes	Nitrosopyrrolidine, N-	930-55-2	3.7E-02	9.9E+00		3.7E-02					
				1.0E-04	X					2.45	1	1	Yes	Nitrotoluene, m-	99-08-1					2.0E+00	1.4E+01		1.7E+00	
2.2E-01	P			9.0E-04	P			V		2.3	1	1	Yes	Nitrotoluene, o-	88-72-2	3.5E-01	2.7E+00		3.1E-01	1.8E+01	1.5E+02		1.6E+01	
1.6E-02	P			4.0E-03	P					2.37	1	1	Yes	Nitrotoluene, p-	99-99-0	4.9E+00	3.3E+01		4.2E+00	8.0E+01	6.2E+02		7.1E+01	
				3.0E-04	X	2.0E-02	P	V		5.65	1	1	No	Nonane, n-	111-84-2					6.0E+00		4.2E+01	5.3E+00	
				4.0E-02	I					2.3	1	1	Yes	Norflurazon	27314-13-2					8.0E+02	2.0E+04		7.7E+02	
				7.0E-04	I					3.7	1	0.9	Yes	Nustar	85509-19-9					1.4E+01	4.9E+01		1.1E+01	

TR=1E-06
HQ=1.0

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; J = New Jersey; O = EPA Office of Water; F = See FAQ; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1				
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD$_o$ (mg/kg-day)	key	RfC$_i$ (mg/m^3)	key	volc	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Inhalation SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL Child HQ=1 (µg/L)	Dermal SL Child HQ=1 (µg/L)	Inhalation SL Child HQ=1 (µg/L)	Noncarcinogenic SL Child HI=1 (µg/L)	MCL (ug/L)
				3.0E-03	I					8.71	1	0.3	No	Octabromodiphenyl Ether	32536-52-0					6.0E+01			6.0E+01	
				5.0E-02	I					0.16	1	1	Yes	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0					1.0E+03	6.3E+05		1.0E+03	
				2.0E-03	H					-1.01	1	1	Yes	Octamethylpyrophosphoramide	152-16-9					4.0E+01	1.4E+05		4.0E+01	
				5.0E-02	I					3.73	1	0.9	Yes	Oryzalin	19044-88-3					1.0E+03	4.1E+03		8.1E+02	
				5.0E-03	I					4.8	1	0.8	Yes	Oxadiazon	19666-30-9					1.0E+02	9.0E+01		4.7E+01	
				2.5E-02	I					-0.47	1	1	Yes	Oxamyl	23135-22-0					5.0E+02	5.0E+05		5.0E+02	2.0E+02
				1.3E-02	I					3.2	1	0.9	Yes	Paclobutrazol	76738-62-0					2.6E+02	1.7E+03		2.3E+02	
				4.5E-03	I					-4.5	1	1	No	Paraquat Dichloride	1910-42-5					9.0E+01			9.0E+01	
				6.0E-03	H					3.83	1	0.9	Yes	Parathion	56-38-2					1.2E+02	3.0E+02		8.6E+01	
				5.0E-02	H			V		3.83	1	1	Yes	Pebulate	1114-71-2					1.0E+03	1.3E+03		5.6E+02	
				4.0E-02	I					5.18	1	0.9	Yes	Pendimethalin	40487-42-1					8.0E+02	2.3E+02		1.8E+02	
				2.0E-03	I					6.84	1	0.6	No	Pentabromodiphenyl Ether	32534-81-9					4.0E+01			4.0E+01	
				1.0E-04	I					7.66	1	0.6	No	Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	60348-60-9					2.0E+00			2.0E+00	
				8.0E-04	I			V		5.17	1	0.9	Yes	Pentachlorobenzene	608-93-5					1.6E+01	3.9E+00		3.2E+00	
9.0E-02	P							V		3.22	1	1	Yes	Pentachloroethane	76-01-7	8.7E-01	2.4E+00		6.4E-01					
2.6E-01	H			3.0E-03	I			V		4.64	1	0.9	Yes	Pentachloronitrobenzene	82-68-8	3.0E-01	1.9E-01		1.2E-01	6.0E+01	4.4E+01		2.5E+01	
4.0E-01	I	5.1E-06	C	5.0E-03	I					5.12	1	0.9	Yes	Pentachlorophenol	87-86-5	1.9E-01	5.0E-02		4.0E-02	1.0E+02	2.9E+01		2.3E+01	1.0E+00
4.0E-03	X			2.0E-03	P					2.38	1	1	Yes	Pentaerythritol tetranitrate (PETN)	78-11-5	1.9E+01	4.1E+02		1.9E+01	4.0E+01	9.6E+02		3.9E+01	
						1.0E+00	P	V		3.39	1	1	Yes	Pentane, n-	109-66-0							2.1E+03	2.1E+03	
														Perchlorates										
				7.0E-04	I						1	1	Yes	~Ammonium Perchlorate	7790-98-9					1.4E+01	3.2E+03		1.4E+01	
				7.0E-04	I						1	1	Yes	~Lithium Perchlorate	7791-03-9					1.4E+01	3.2E+03		1.4E+01	
				7.0E-04	I						1	1	Yes	~Perchlorate and Perchlorate Salts	14797-73-0					1.4E+01	3.2E+03		1.4E+01	1.5E+01(F)
				7.0E-04	I						1	1	Yes	~Potassium Perchlorate	7778-74-7					1.4E+01	1.6E+03		1.4E+01	
				7.0E-04	I						1	1	Yes	~Sodium Perchlorate	7601-89-0					1.4E+01	3.2E+03		1.4E+01	
				2.0E-02	P			V		1.8173	1	1	Yes	Perfluorobutane Sulfonate	375-73-5					4.0E+02	8.3E+03		3.8E+02	
				5.0E-02	I					6.5	1	0.6	No	Permethrin	52645-53-1					1.0E+03			1.0E+03	
2.2E-03	C	6.3E-07	C							1.58	1	1	Yes	Phenacetin	62-44-2	3.5E+01	1.1E+03		3.4E+01					
				2.5E-01	I					3.59	1	0.9	Yes	Phenmedipham	13684-63-4					5.0E+03	1.9E+04		4.0E+03	
				3.0E-01	I	2.0E-01	C			1.46	1	1	Yes	Phenol	108-95-2					6.0E+03	1.4E+05		5.8E+03	
				5.0E-04	X					4.15	1	1	Yes	Phenothiazine	92-84-2					1.0E+01	7.5E+00		4.3E+00	
				6.0E-03	I					-0.33	1	1	Yes	Phenylenediamine, m-	108-45-2					1.2E+02	4.8E+04		1.2E+02	
4.7E-02	H									0.15	1	1	Yes	Phenylenediamine, o-	95-54-5	1.7E+00	2.8E+02		1.6E+00					
				1.9E-01	H					-0.3	1	1	Yes	Phenylenediamine, p-	106-50-3					3.8E+03	1.4E+06		3.8E+03	
1.9E-03	H									3.09	1	1	Yes	Phenylphenol, 2-	90-43-7	4.0E+01	1.1E+02		3.0E+01					
				2.0E-04	H					3.56	1	0.9	Yes	Phorate	298-02-2					4.0E+00	1.2E+01		3.0E+00	
						3.0E-04	I	V		-0.71	1	1		Phosgene	75-44-5									
				2.0E-02	I					2.78	1	1	Yes	Phosmet	732-11-6					4.0E+02	5.3E+03		3.7E+02	
														Phosphates, inorganic										
				4.9E+01	P						1	1	Yes	~Aluminum metaphosphate	13776-88-0					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	0	Yes	~Ammonium polyphosphate	68333-79-9					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Calcium pyrophosphate	7790-76-3					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Diammonium phosphate	7783-28-0					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Dicalcium phosphate	7757-93-9					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Dimagnesium phosphate	7782-75-4					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Dipotassium phosphate	7758-11-4					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Disodium phosphate	7558-79-4					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Monoaluminum phosphate	13530-50-2					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Monoammonium phosphate	7722-76-1					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Monocalcium phosphate	7758-23-8					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Monomagnesium phosphate	7757-86-0					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Monopotassium phosphate	7778-77-0					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Monosodium phosphate	7558-80-7					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Polyphosphoric acid	8017-16-1					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	0.9	Yes	~Potassium tripolyphosphate	13845-36-8					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Sodium acid pyrophosphate	7758-16-9					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Sodium aluminum phosphate (acidic)	7785-88-8					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	0	Yes	~Sodium aluminum phosphate (anhydrous)	10279-59-1					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	0.8	Yes	~Sodium aluminum phosphate (tetrahydrate)	10305-76-7					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	0.9	Yes	~Sodium hexametaphosphate	10124-56-8					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Sodium polyphosphate	68915-31-1					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Sodium trimetaphosphate	7785-84-4					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Sodium tripolyphosphate	7758-29-4					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Tetrapotassium phosphate	7320-34-5					9.7E+05	2.2E+08		9.7E+05	

R=1E-0
HQ=1.0

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; J = New Jersey; O = EPA Office of Water; F = See FAQ; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1				
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Inhalation SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL Child HQ=1 (µg/L)	Dermal SL Child HQ=1 (µg/L)	Inhalation SL Child HQ=1 (µg/L)	Noncarcinogenic SL Child HI=1 (µg/L)	MCL (ug/L)
				4.9E+01	P						1	1	Yes	~Tetrasodium pyrophosphate	7722-88-5					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	0.8	Yes	~Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Tricalcium phosphate	7758-87-4					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Trimagnesium phosphate	7757-87-1					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Tripotassium phosphate	7778-53-2					9.7E+05	2.2E+08		9.7E+05	
				4.9E+01	P						1	1	Yes	~Trisodium phosphate	7601-54-9					9.7E+05	2.2E+08		9.7E+05	
				3.0E-04	I	3.0E-04	I	V		-0.27	1	1	Yes	Phosphine	7803-51-2					6.0E+00	1.4E+03	6.3E-01	5.7E-01	
				4.9E+01	P	1.0E-02	I				1	1	Yes	Phosphoric Acid	7664-38-2					9.7E+05	2.2E+08		9.7E+05	
				2.0E-05	I			V		3.08	1	1	Yes	Phosphorus, White	7723-14-0					4.0E-01	9.1E+01		4.0E-01	
														Phthalates										
1.4E-02	I	2.4E-06	C	2.0E-02	I					7.6	1	0.8	No	~Bis(2-ethylhexyl)phthalate	117-81-7	5.6E+00			5.6E+00	4.0E+02			4.0E+02	6.0E+00
				1.0E+00	I					4.15	1	0.9	Yes	~Butylphthalyl Butylglycolate	85-70-1					2.0E+04	4.1E+04		1.3E+04	
				1.0E-01	I					4.5	1	0.9	Yes	~Dibutyl Phthalate	84-74-2					2.0E+03	1.6E+03		9.0E+02	
				8.0E-01	I					2.42	1	1	Yes	~Diethyl Phthalate	84-66-2					1.6E+04	2.0E+05		1.5E+04	
				1.0E-01	I			V		2.25	1	1	Yes	~Dimethylterephthalate	120-61-6					2.0E+03	2.7E+04		1.9E+03	
				1.0E-02	P					8.1	1	0	No	~Octyl Phthalate, di-N-	117-84-0					2.0E+02			2.0E+02	
				1.0E+00	H					2	1	1	Yes	~Phthalic Acid, P-	100-21-0					2.0E+04	3.3E+05		1.9E+04	
				2.0E+00	I	2.0E-02	C			1.6	1	1	Yes	~Phthalic Anhydride	85-44-9					4.0E+04	1.1E+06		3.9E+04	
				7.0E-02	I					1.9	1	1	Yes	Picloram	1918-02-1					1.4E+03	4.3E+04		1.4E+03	5.0E+02
				1.0E-04	X					0.93	1	1	Yes	Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3					2.0E+00	2.1E+02		2.0E+00	
				1.0E-02	I					4.2	1	0.9	Yes	Pirimiphos, Methyl	29232-93-7					2.0E+02	3.1E+02		1.2E+02	
3.0E+01	C	8.6E-03	C	7.0E-06	H						1	0	No	Polybrominated Biphenyls	59536-65-1	2.6E-03			2.6E-03	1.4E-01			1.4E-01	
														Polychlorinated Biphenyls (PCBs)										
7.0E-02	S	2.0E-05	S	7.0E-05	I			V		5.69	1	0.9	No	~Aroclor 1016	12674-11-2	1.1E+00		2.8E-01	2.2E-01	1.4E+00			1.4E+00	
2.0E+00	S	5.7E-04	S					V		4.65	1	1	Yes	~Aroclor 1221	11104-28-2	3.9E-02	1.1E-02	9.8E-03	4.6E-03					
2.0E+00	S	5.7E-04	S					V		4.4	1	1	Yes	~Aroclor 1232	11141-16-5	3.9E-02	1.1E-02	9.8E-03	4.6E-03					
2.0E+00	S	5.7E-04	S					V		6.34	1	0.7	No	~Aroclor 1242	53469-21-9	3.9E-02		9.8E-03	7.8E-03					
2.0E+00	S	5.7E-04	S					V		6.2	1	0.7	No	~Aroclor 1248	12672-29-6	3.9E-02		9.8E-03	7.8E-03					
2.0E+00	S	5.7E-04	S	2.0E-05	I			V		6.5	1	0.5	No	~Aroclor 1254	11097-69-1	3.9E-02		9.8E-03	7.8E-03	4.0E-01			4.0E-01	
2.0E+00	S	5.7E-04	S					V		7.55	1	0	No	~Aroclor 1260	11096-82-5	3.9E-02		9.8E-03	7.8E-03					
				6.0E-04	X			V		6.34	1	0.7	No	~Aroclor 5460	11126-42-4					1.2E+01			1.2E+01	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		8.27	1	0	No	~Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		7.5	1	0	No	~Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		7.6	1	0	No	~Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 157)	69782-90-7	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		7.6	1	0	No	~Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	38380-08-4	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01	
3.9E+03	E	1.1E+00	E	2.3E-08	E	1.3E-06	E	V		7.41	1	0.1	No	~Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	2.0E-05		4.9E-06	4.0E-06	4.7E-04		2.8E-03	4.0E-04	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		6.98	1	0.4	No	~Pentachlorobiphenyl, 2,3,4,4',5- (PCB 123)	65510-44-3	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		7.12	1	0.3	No	~Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		6.79	1	0.5	No	~Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01	
3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		6.98	1	0.4	No	~Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01	
1.3E+04	E	3.8E+00	E	7.0E-09	E	4.0E-07	E	V		6.98	1	0.4	No	~Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	6.0E-06		1.5E-06	1.2E-06	1.4E-04		8.3E-04	1.2E-04	
2.0E+00	I	5.7E-04	I					V		7.1	1	0.7		~Polychlorinated Biphenyls (high risk)	1336-36-3									
4.0E-01	I	1.0E-04	I					V		7.1	1	0.7	No	~Polychlorinated Biphenyls (low risk)	1336-36-3	1.9E-01		5.6E-02	4.4E-02					5.0E-01
7.0E-02	I	2.0E-05	I					V		7.1	1	0.7		~Polychlorinated Biphenyls (lowest risk)	1336-36-3									
1.3E+01	E	3.8E-03	E	7.0E-06	E	4.0E-04	E			6.63	1	0.6	No	~Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	6.0E-03			6.0E-03	1.4E-01			1.4E-01	
3.9E+01	E	1.1E-02	E	2.3E-06	E	1.3E-04	E	V		6.34	1	0.7	No	~Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	2.0E-03		4.9E-04	4.0E-04	4.7E-02		2.8E-01	4.0E-02	
						6.0E-04	I			10.46	1	0	No	Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9									
														Polynuclear Aromatic Hydrocarbons (PAHs)										
				6.0E-02	I			V		3.92	1	1	Yes	~Acenaphthene	83-32-9					1.2E+03	9.6E+02		5.3E+02	
				3.0E-01	I			V		4.45	1	1	Yes	~Anthracene	120-12-7					6.0E+03	2.5E+03		1.8E+03	
7.3E-01	E	1.1E-04	C					V	M	5.76	1	1	No	~Benz[a]anthracene	56-55-3	3.4E-02		1.8E-02	1.2E-02					
1.2E+00	C	1.1E-04	C							6.11	1	0.9	No	~Benzo(j)fluoranthene	205-82-3	6.5E-02			6.5E-02					
7.3E+00	I	1.1E-03	C						M	6.13	1	1	No	~Benzo[a]pyrene	50-32-8	3.4E-03			3.4E-03					2.0E-01
7.3E-01	E	1.1E-04	C						M	5.78	1	1	No	~Benzo[b]fluoranthene	205-99-2	3.4E-02			3.4E-02					
7.3E-02	E	1.1E-04	C						M	6.11	1	0.9	No	~Benzo[k]fluoranthene	207-08-9	3.4E-01			3.4E-01					
				8.0E-02	I			V		3.9	1	1	Yes	~Chloronaphthalene, Beta-	91-58-7					1.6E+03	1.4E+03		7.5E+02	
7.3E-03	E	1.1E-05	C						M	5.81	1	1	No	~Chrysene	218-01-9	3.4E+00			3.4E+00					
7.3E+00	E	1.2E-03	C						M	6.75	1	0.6	No	~Dibenz[a,h]anthracene	53-70-3	3.4E-03			3.4E-03					
1.2E+01	C	1.1E-03	C							7.71	1	0.3	No	~Dibenzo(a,e)pyrene	192-65-4	6.5E-03			6.5E-03					
2.5E+02	C	7.1E-02	C						M	5.8	1	0.9	No	~Dimethylbenz(a)anthracene, 7,12-	57-97-6	1.0E-04			1.0E-04					
				4.0E-02	I					5.16	1	1	No	~Fluoranthene	206-44-0					8.0E+02			8.0E+02	
				4.0E-02	I			V		4.18	1	1	Yes	~Fluorene	86-73-7					8.0E+02	4.6E+02		2.9E+02	
7.3E-01	E	1.1E-04	C						M	6.7	1	0.6	No	~Indeno[1,2,3-cd]pyrene	193-39-5	3.4E-02			3.4E-02					
2.9E-02	P			7.0E-02	A			V		3.87	1	1	Yes	~Methylnaphthalene, 1-	90-12-0	2.7E+00	1.9E+00		1.1E+00	1.4E+03	1.1E+03		6.2E+02	

TR=1E-06
HQ=1.0

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Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1				
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	voc	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Inhalation SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL Child HQ=1 (µg/L)	Dermal SL Child HQ=1 (µg/L)	Inhalation SL Child HQ=1 (µg/L)	Noncarcinogenic SL Child HI=1 (µg/L)	MCL (ug/L)
				4.0E-03	I			V		3.86	1	1	Yes	~Methylnaphthalene, 2-	91-57-6					8.0E+01	6.5E+01		3.6E+01	
		3.4E-05	C	2.0E-02	I	3.0E-03	I	V		3.3	1	1	Yes	~Naphthalene	91-20-3			1.7E-01	1.7E-01	4.0E+02	7.0E+02	6.3E+00	6.1E+00	
1.2E+00	C	1.1E-04	C							4.75	1	0.9	Yes	~Nitropyrene, 4-	57835-92-4	6.5E-02	2.6E-02		1.9E-02					
				3.0E-02	I			V		4.88	1	1	Yes	~Pyrene	129-00-0					6.0E+02	1.5E+02		1.2E+02	
				2.0E-02	P					-0.33	1	1	Yes	Potassium Perfluorobutane Sulfonate	29420-49-3					4.0E+02	2.8E+05		4.0E+02	
1.5E-01	I			9.0E-03	I					4.1	1	0.9	Yes	Prochloraz	67747-09-5	5.2E-01	1.3E+00		3.7E-01	1.8E+02	5.1E+02		1.3E+02	
				6.0E-03	H			V		5.58	1	0.8	Yes	Profluralin	26399-36-0					1.2E+02	3.3E+01		2.6E+01	
				1.5E-02	I					2.99	1	1	Yes	Prometon	1610-18-0					3.0E+02	1.6E+03		2.5E+02	
				4.0E-03	I					3.51	1	0.9	Yes	Prometryn	7287-19-6					8.0E+01	2.3E+02		6.0E+01	
				1.3E-02	I					2.18	1	1	Yes	Propachlor	1918-16-7					2.6E+02	4.3E+03		2.5E+02	
				5.0E-03	I					3.07	1	1	Yes	Propanil	709-98-8					1.0E+02	4.4E+02		8.2E+01	
				2.0E-02	I					5	1	0.8	Yes	Propargite	2312-35-8					4.0E+02	2.7E+02		1.6E+02	
				2.0E-03	I			V		-0.38	1	1	Yes	Propargyl Alcohol	107-19-7					4.0E+01	1.2E+04		4.0E+01	
				2.0E-02	I					2.93	1	1	Yes	Propazine	139-40-2					4.0E+02	2.4E+03		3.4E+02	
				2.0E-02	I					2.6	1	1	Yes	Propham	122-42-9					4.0E+02	2.8E+03		3.5E+02	
				1.3E-02	I					3.72	1	0.9	Yes	Propiconazole	60207-90-1					2.6E+02	1.1E+03		2.1E+02	
						8.0E-03	I	V		0.59	1	1	Yes	Propionaldehyde	123-38-6							1.7E+01	1.7E+01	
				1.0E-01	X	1.0E+00	X	V		3.69	1	1	Yes	Propyl benzene	103-65-1					2.0E+03	1.8E+03	2.1E+03	6.6E+02	
						3.0E+00	C	V		1.77	1	1	Yes	Propylene	115-07-1							6.3E+03	6.3E+03	
				2.0E+01	P					-0.92	1	1	Yes	Propylene Glycol	57-55-6					4.0E+05	3.2E+08		4.0E+05	
						2.7E-04	A			1.59	1	1	Yes	Propylene Glycol Dinitrate	6423-43-4									
				7.0E-01	H			V		0.002	1	1	Yes	Propylene Glycol Monoethyl Ether	1569-02-4					1.4E+04	3.3E+06		1.4E+04	
				7.0E-01	H	2.0E+00	I	V		-0.49	1	1	Yes	Propylene Glycol Monomethyl Ether	107-98-2					1.4E+04	3.9E+06	4.2E+03	3.2E+03	
2.4E-01	I	3.7E-06	I			3.0E-02	I	V		0.03	1	1	Yes	Propylene Oxide	75-56-9	3.2E-01	4.5E+01	1.5E+00	2.7E-01			6.3E+01	6.3E+01	
				2.5E-01	I					2.6	1	1	Yes	Pursuit	81335-77-5					5.0E+03	7.2E+04		4.7E+03	
				2.5E-02	I					6.2	1	0.7	No	Pydrin	51630-58-1					5.0E+02			5.0E+02	
				1.0E-03	I			V		0.65	1	1	Yes	Pyridine	110-86-1					2.0E+01	1.5E+03		2.0E+01	
				5.0E-04	I					4.44	1	0.9	Yes	Quinalphos	13593-03-8					1.0E+01	1.0E+01		5.1E+00	
3.0E+00	I									2.03	1	1	Yes	Quinoline	91-22-5	2.6E-02	2.8E-01		2.4E-02					
						3.0E-02	A				1	0	Yes	Refractory Ceramic Fibers	NA									
				3.0E-02	I					6.14	1	0.7	Yes	Resmethrin	10453-86-8					6.0E+02	7.6E+01		6.7E+01	
				5.0E-02	H			V		4.88	1	0.8	Yes	Ronnel	299-84-3					1.0E+03	6.8E+02		4.1E+02	
				4.0E-03	I					4.1	1	0.9	Yes	Rotenone	83-79-4					8.0E+01	2.6E+02		6.1E+01	
2.2E-01	C	6.3E-05	C						M	3.45	1	1	Yes	Safrole	94-59-7	1.1E-01	5.9E-01		9.5E-02					
				2.5E-02	I					5.57	1	0.8	Yes	Savey	78587-05-0					5.0E+02	1.4E+02		1.1E+02	
				5.0E-03	I						1	1	Yes	Selenious Acid	7783-00-8					1.0E+02	2.3E+04		1.0E+02	
				5.0E-03	I	2.0E-02	C				1	1	Yes	Selenium	7782-49-2					1.0E+02	2.3E+04		1.0E+02	5.0E+01
				5.0E-03	C	2.0E-02	C				1	1	Yes	Selenium Sulfide	7446-34-6					1.0E+02	2.3E+04		1.0E+02	
				9.0E-02	I					4.38	1	0.9	Yes	Sethoxydim	74051-80-2					1.8E+03	2.4E+03		1.0E+03	
						3.0E-03	C				1	1	Yes	Silica (crystalline, respirable)	7631-86-9									
				5.0E-03	I						0.04	1	Yes	Silver	7440-22-4					1.0E+02	1.5E+03		9.4E+01	
1.2E-01	H			5.0E-03	I					2.18	1	1	Yes	Simazine	122-34-9	6.5E-01	8.9E+00		6.1E-01	1.0E+02	1.6E+03		9.4E+01	4.0E+00
				1.3E-02	I					0.37	1	1	Yes	Sodium Acifluorfen	62476-59-9					2.6E+02	2.1E+05		2.6E+02	
				4.0E-03	I						1	1	Yes	Sodium Azide	26628-22-8					8.0E+01	1.8E+04		8.0E+01	
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		0.025	1	Yes	Sodium Dichromate	10588-01-9	5.0E-02	2.3E-01		4.1E-02	4.0E+02	2.3E+03		3.4E+02	
2.7E-01	H			3.0E-02	I					-1.431	1	1	Yes	Sodium Diethyldithiocarbamate	148-18-5	2.9E-01	8.2E+02		2.9E-01	6.0E+02	1.9E+06		6.0E+02	
				5.0E-02	A	1.3E-02	C				1	1	Yes	Sodium Fluoride	7681-49-4					1.0E+03	2.3E+05		1.0E+03	
				2.0E-05	I					-3.78	1	1	No	Sodium Fluoroacetate	62-74-8					4.0E-01			4.0E-01	
				1.0E-03	H						1	1	Yes	Sodium Metavanadate	13718-26-8					2.0E+01	4.5E+03		2.0E+01	
2.4E-02	H			3.0E-02	I					3.53	1	0.9	Yes	Stirofos (Tetrachlorovinphos)	961-11-5	3.2E+00	1.8E+01		2.8E+00	6.0E+02	3.8E+03		5.2E+02	
5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		0.025	1	Yes	Strontium Chromate	7789-06-2	5.0E-02	2.3E-01		4.1E-02	4.0E+02	2.3E+03		3.4E+02	
				6.0E-01	I						1	1	Yes	Strontium, Stable	7440-24-6					1.2E+04	2.7E+06		1.2E+04	
				3.0E-04	I					1.93	1	1	Yes	Strychnine	57-24-9					6.0E+00	3.2E+02		5.9E+00	
				2.0E-01	I	1.0E+00	I	V		2.95	1	1	Yes	Styrene	100-42-5					4.0E+03	1.0E+04	2.1E+03	1.2E+03	1.0E+02
				3.0E-03	P					3.1	1	1	Yes	Styrene-Acrylonitrile (SAN) Trimer	NA					6.0E+01	2.4E+02		4.8E+01	
				1.0E-03	P	2.0E-03	X			-0.77	1	1	Yes	Sulfolane	126-33-0					2.0E+01	1.7E+04		2.0E+01	
				8.0E-04	P					3.9	1	0.9	Yes	Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9					1.6E+01	3.5E+01		1.1E+01	
						1.0E-03	C	V			1	1	Yes	Sulfur Trioxide	7446-11-9							2.1E+00	2.1E+00	
						1.0E-03	C				1	1	Yes	Sulfuric Acid	7664-93-9									
				2.5E-02	I					2.94	1	0.9	Yes	Systhane	88671-89-0					5.0E+02	4.8E+03		4.5E+02	
				3.0E-02	H					3.3	1	0.9	Yes	TCMTB	21564-17-0					6.0E+02	2.4E+03		4.8E+02	
				7.0E-02	I					1.79	1	1	Yes	Tebuthiuron	34014-18-1					1.4E+03	4.7E+04		1.4E+03	
				2.0E-02	H					5.96	1	0.7	No	Temephos	3383-96-8					4.0E+02			4.0E+02	
				1.3E-02	I					1.89	1	1	Yes	Terbacil	5902-51-2					2.6E+02	7.0E+03		2.5E+02	

R=1E-06
HQ=1.0

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; J = New Jersey; O = EPA Office of Water; F = See FAQ; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1				
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD$_o$ (mg/kg-day)	key	RfC$_i$ (mg/m^3)	key	volc	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Inhalation SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL Child HQ=1 (µg/L)	Dermal SL Child HQ=1 (µg/L)	Inhalation SL Child HQ=1 (µg/L)	Noncarcinogenic SL Child HI=1 (µg/L)	MCL (ug/L)
				2.5E-05	H			V		4.48	1	0.9	Yes	Terbufos	13071-79-9					5.0E-01	4.5E-01		2.4E-01	
				1.0E-03	I					3.74	1	0.9	Yes	Terbutryn	886-50-0					2.0E+01	4.1E+01		1.3E+01	
				1.0E-04	I					6.77	1	0.6	No	Tetrabromodiphenyl ether, 2,2',4,4'- (BDE-47)	5436-43-1					2.0E+00			2.0E+00	
				3.0E-04	I			V		4.64	1	1	Yes	Tetrachlorobenzene, 1,2,4,5-	95-94-3					6.0E+00	2.4E+00		1.7E+00	
2.6E-02	I	7.4E-06	I	3.0E-02	I			V		2.93	1	1	Yes	Tetrachloroethane, 1,1,1,2-	630-20-6	3.0E+00	1.0E+01	7.6E-01	5.7E-01	6.0E+02	2.4E+03		4.8E+02	
2.0E-01	I	5.8E-05	C	2.0E-02	I			V		2.39	1	1	Yes	Tetrachloroethane, 1,1,2,2-	79-34-5	3.9E-01	3.1E+00	9.7E-02	7.6E-02	4.0E+02	3.6E+03		3.6E+02	
2.1E-03	I	2.6E-07	I	6.0E-03	I	4.0E-02	I	V		3.4	1	1	Yes	Tetrachloroethylene	127-18-4	3.7E+01	6.3E+01	2.2E+01	1.1E+01	1.2E+02	2.3E+02	8.3E+01	4.1E+01	5.0E+00
				3.0E-02	I					4.45	1	0.9	Yes	Tetrachlorophenol, 2,3,4,6-	58-90-2					6.0E+02	3.9E+02		2.4E+02	
2.0E+01	H							V		4.54	1	0.9	Yes	Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1	3.9E-03	1.9E-03		1.3E-03					
				5.0E-04	I					3.99	1	0.9	Yes	Tetraethyl Dithiopyrophosphate	3689-24-5					1.0E+01	2.4E+01		7.1E+00	
						8.0E+01	I	V		1.68	1	1	Yes	Tetrafluoroethane, 1,1,1,2-	811-97-2							1.7E+05	1.7E+05	
				2.0E-03	P					1.64	1	1	Yes	Tetryl (Trinitrophenylmethylnitramine)	479-45-8					4.0E+01	2.5E+03		3.9E+01	
				7.0E-06	X						1	1	Yes	Thallium (I) Nitrate	10102-45-1					1.4E-01	3.2E+01		1.4E-01	
				1.0E-05	X						1	1	Yes	Thallium (Soluble Salts)	7440-28-0					2.0E-01	4.5E+01		2.0E-01	2.0E+00
				6.0E-06	X			V		-0.17	1	1	Yes	Thallium Acetate	563-68-8					1.2E-01	1.0E+02		1.2E-01	
				2.0E-05	X						1	1	Yes	Thallium Carbonate	6533-73-9					4.0E-01	3.7E+03		4.0E-01	
				6.0E-06	X						1	1	Yes	Thallium Chloride	7791-12-0					1.2E-01	2.7E+01		1.2E-01	
				2.0E-05	X						1	0.9	Yes	Thallium Sulfate	7446-18-6					4.0E-01	9.1E+01		4.0E-01	
				1.0E-02	I					3.4	1	0.9	Yes	Thiobencarb	28249-77-6					2.0E+02	7.7E+02		1.6E+02	
				7.0E-02	X					-0.63	1	1	Yes	Thiodiglycol	111-48-8					1.4E+03	9.6E+05		1.4E+03	
				3.0E-04	H					2.16	1	1	Yes	Thiofanox	39196-18-4					6.0E+00	4.4E+01		5.3E+00	
				8.0E-02	I					1.4	1	1	Yes	Thiophanate, Methyl	23564-05-8					1.6E+03	2.0E+05		1.6E+03	
				5.0E-03	I					1.73	1	1	Yes	Thiram	137-26-8					1.0E+02	4.0E+03		9.8E+01	
				6.0E-01	H						1	1	Yes	Tin	7440-31-5					1.2E+04	2.7E+06		1.2E+04	
						1.0E-04	A	V			1	1	Yes	Titanium Tetrachloride	7550-45-0							2.1E-01	2.1E-01	
				8.0E-02	I	5.0E+00	I	V		2.73	1	1	Yes	Toluene	108-88-3					1.6E+03	5.3E+03	1.0E+04	1.1E+03	1.0E+03
1.8E-01	X			2.0E-04	X					0.16	1	1	Yes	Toluene-2,5-diamine	95-70-5	4.3E-01	7.9E+01		4.3E-01	4.0E+00	8.3E+02		4.0E+00	
3.0E-02	P			4.0E-03	X					1.39	1	1	Yes	Toluidine, p-	106-49-0	2.6E+00	6.5E+01		2.5E+00	8.0E+01	2.3E+03		7.7E+01	
				3.0E+00	P			V		6.1	1	1	No	Total Petroleum Hydrocarbons (Aliphatic High)	NA					6.0E+04			6.0E+04	
						6.0E-01	P	V		3.9	1	1	Yes	Total Petroleum Hydrocarbons (Aliphatic Low)	NA							1.3E+03	1.3E+03	
				1.0E-02	X	1.0E-01	P	V		5.65	1	1	No	Total Petroleum Hydrocarbons (Aliphatic Medium)	NA					2.0E+02		2.1E+02	1.0E+02	
				4.0E-02	P					5.16	1	1	No	Total Petroleum Hydrocarbons (Aromatic High)	NA					8.0E+02			8.0E+02	
				4.0E-03	P	3.0E-02	P	V		2.13	1	1	Yes	Total Petroleum Hydrocarbons (Aromatic Low)	NA					8.0E+01	6.0E+02	6.3E+01	3.3E+01	
				4.0E-03	P	3.0E-03	P	V		3.58	1	1	Yes	Total Petroleum Hydrocarbons (Aromatic Medium)	NA					8.0E+01	9.0E+01	6.3E+00	5.5E+00	
1.1E+00	I	3.2E-04	I							5.9	1	0.8	Yes	Toxaphene	8001-35-2	7.1E-02	1.9E-02		1.5E-02					3.0E+00
				7.5E-03	I					7.56	1	0.5	No	Tralomethrin	66841-25-6					1.5E+02			1.5E+02	
				3.0E-04	A			V		4.1	1	0.9	Yes	Tri-n-butyltin	688-73-3					6.0E+00	9.8E+00		3.7E+00	
				8.0E+01	X					0.25	1	1	Yes	Triacetin	102-76-1					1.6E+06	5.3E+08		1.6E+06	
				1.3E-02	I			V		4.6	1	0.9	Yes	Triallate	2303-17-5					2.6E+02	2.2E+02		1.2E+02	
				1.0E-02	I					1.1	1	1	Yes	Triasulfuron	82097-50-5					2.0E+02	6.0E+04		2.0E+02	
				5.0E-03	I			V		4.66	1	0.9	Yes	Tribromobenzene, 1,2,4-	615-54-3					1.0E+02	8.1E+01		4.5E+01	
9.0E-03	P			1.0E-02	P					4	1	0.9	Yes	Tributyl Phosphate	126-73-8	8.7E+00	1.2E+01		5.1E+00	2.0E+02	3.3E+02		1.2E+02	
				3.0E-04	P						1	0	No	Tributyltin Compounds	NA					6.0E+00			6.0E+00	
				3.0E-04	I					4.05	1	1	Yes	Tributyltin Oxide	56-35-9					6.0E+00	9.5E+01		5.7E+00	
				3.0E+01	I	3.0E+01	H	V		3.16	1	1	Yes	Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1					6.0E+05	1.9E+06	6.3E+04	5.5E+04	
7.0E-02	I			2.0E-02	I					1.33	1	1	Yes	Trichloroacetic Acid	76-03-9	1.1E+00	4.4E+01		1.1E+00	4.0E+02	1.8E+04		3.9E+02	6.0E+01
2.9E-02	H									-0.67	1	1	Yes	Trichloroaniline HCl, 2,4,6-	33663-50-2	2.7E+00	3.6E+03		2.7E+00					
7.0E-03	X			3.0E-05	X					3.52	1	1	Yes	Trichloroaniline, 2,4,6-	634-93-5	1.1E+01	1.9E+01		7.0E+00	6.0E-01	1.2E+00		4.0E-01	
				8.0E-04	X			V		4.05	1	1	Yes	Trichlorobenzene, 1,2,3-	87-61-6					1.6E+01	1.3E+01		7.0E+00	
2.9E-02	P			1.0E-02	I	2.0E-03	P	V		4.02	1	1	Yes	Trichlorobenzene, 1,2,4-	120-82-1	2.7E+00	1.9E+00		1.1E+00	2.0E+02	1.6E+02	4.2E+00	4.0E+00	7.0E+01
				2.0E+00	I	5.0E+00	I	V		2.49	1	1	Yes	Trichloroethane, 1,1,1-	71-55-6					4.0E+04	2.5E+05	1.0E+04	8.0E+03	2.0E+02
5.7E-02	I	1.6E-05	I	4.0E-03	I	2.0E-04	X	V		1.89	1	1	Yes	Trichloroethane, 1,1,2-	79-00-5	1.4E+00	1.9E+01	3.5E-01	2.8E-01	8.0E+01	1.3E+03	4.2E-01	4.1E-01	5.0E+00
4.6E-02	I	4.1E-06	I	5.0E-04	I	2.0E-03	I	V	M	2.42	1	1	Yes	Trichloroethylene	79-01-6	1.2E+00	7.2E+00	9.6E-01	4.9E-01	1.0E+01	6.9E+01	4.2E+00	2.8E+00	5.0E+00
				3.0E-01	I	7.0E-01	H	V		2.53	1	1	Yes	Trichlorofluoromethane	75-69-4					6.0E+03	3.6E+04	1.5E+03	1.1E+03	
				1.0E-01	I					3.72	1	1	Yes	Trichlorophenol, 2,4,5-	95-95-4					2.0E+03	2.9E+03		1.2E+03	
1.1E-02	I	3.1E-06	I	1.0E-03	P					3.69	1	1	Yes	Trichlorophenol, 2,4,6-	88-06-2	7.1E+00	9.4E+00		4.0E+00	2.0E+01	3.0E+01		1.2E+01	
				1.0E-02	I					3.31	1	0.9	Yes	Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5					2.0E+02	8.7E+02		1.6E+02	
				8.0E-03	I					3.8	1	0.9	Yes	Trichlorophenoxypropionic acid, -2,4,5	93-72-1					1.6E+02	3.6E+02		1.1E+02	5.0E+01
				5.0E-03	I			V		2.43	1	1	Yes	Trichloropropane, 1,1,2-	598-77-6					1.0E+02	7.5E+02		8.8E+01	
3.0E+01	I			4.0E-03	I	3.0E-04	I	V	M	2.27	1	1	Yes	Trichloropropane, 1,2,3-	96-18-4	8.4E-04	7.1E-03		7.5E-04	8.0E+01	7.7E+02	6.3E-01	6.2E-01	
				3.0E-03	X	3.0E-04	P	V		2.78	1	1	Yes	Trichloropropene, 1,2,3-	96-19-5					6.0E+01	2.6E+02	6.3E-01	6.2E-01	
				2.0E-02	A					5.11	1	0.8	Yes	Tricresyl Phosphate (TCP)	1330-78-5					4.0E+02	2.6E+02		1.6E+02	
				3.0E-03	I					5.18	1	0.8	Yes	Tridiphane	58138-08-2					6.0E+01	2.6E+01		1.8E+01	
						7.0E-03	I	V		1.45	1	1	Yes	Triethylamine	121-44-8							1.5E+01	1.5E+01	

TR=1E-06
HQ=1

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; J = New Jersey; O = EPA Office of Water; F = See FAQ; E = Environmental Criteria and Assessment Office; S = see user guide Section 5; L = see user guide on lead; M = mutagen; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; n = noncancer; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide); SSL values are based on DAF=1

Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1				
SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	voc	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1.0E-6 (µg/L)	Dermal SL TR=1.0E-6 (µg/L)	Inhalation SL TR=1.0E-6 (µg/L)	Carcinogenic SL TR=1.0E-6 (µg/L)	Ingestion SL Child HQ=1 (µg/L)	Dermal SL Child HQ=1 (µg/L)	Inhalation SL Child HQ=1 (µg/L)	Noncarcinogenic SL Child HI=1 (µg/L)	MCL (ug/L)
				2.0E+00	P					-1.75	1	1	Yes	Triethylene Glycol	112-27-6					4.0E+04	1.8E+08		4.0E+04	
7.7E-03	I			7.5E-03	I			V		5.34	1	0.8	Yes	Trifluralin	1582-09-8	1.0E+01	3.3E+00		2.5E+00	1.5E+02	5.5E+01		4.0E+01	
2.0E-02	P			1.0E-02	P					-0.65	1	1	Yes	Trimethyl Phosphate	512-56-1	3.9E+00	2.7E+03		3.9E+00	2.0E+02	1.6E+05		2.0E+02	
						5.0E-03	P	V		3.66	1	1	Yes	Trimethylbenzene, 1,2,3-	526-73-8							1.0E+01	1.0E+01	
						7.0E-03	P	V		3.63	1	1	Yes	Trimethylbenzene, 1,2,4-	95-63-6							1.5E+01	1.5E+01	
				1.0E-02	X			V		3.42	1	1	Yes	Trimethylbenzene, 1,3,5-	108-67-8					2.0E+02	2.8E+02		1.2E+02	
				3.0E-02	I					1.18	1	1	Yes	Trinitrobenzene, 1,3,5-	99-35-4					6.0E+02	4.7E+04		5.9E+02	
3.0E-02	I			5.0E-04	I					1.6	1	1	Yes	Trinitrotoluene, 2,4,6-	118-96-7	2.6E+00	1.0E+02		2.5E+00	1.0E+01	4.5E+02		9.8E+00	
				2.0E-02	P					2.83	1	1	Yes	Triphenylphosphine Oxide	791-28-6					4.0E+02	3.8E+03		3.6E+02	
				2.0E-02	A					3.65	1	0.9	Yes	Tris(1,3-Dichloro-2-propyl) Phosphate	13674-87-8					4.0E+02	3.2E+03		3.6E+02	
				1.0E-02	X					2.59	1	1	Yes	Tris(1-chloro-2-propyl)phosphate	13674-84-5					2.0E+02	3.8E+03		1.9E+02	
2.3E+00	C	6.6E-04	C					V		4.29	1	1	No	Tris(2,3-dibromopropyl)phosphate	126-72-7	3.4E-02		8.5E-03	6.8E-03					
2.0E-02	P			7.0E-03	P					1.44	1	1	Yes	Tris(2-chloroethyl)phosphate	115-96-8	3.9E+00	2.9E+02		3.8E+00	1.4E+02	1.2E+04		1.4E+02	
3.2E-03	P			1.0E-01	P					9.49	1	0	No	Tris(2-ethylhexyl)phosphate	78-42-2	2.4E+01			2.4E+01	2.0E+03			2.0E+03	
				3.0E-03	I	4.0E-05	A				1	1	Yes	Uranium (Soluble Salts)	NA					6.0E+01	1.4E+04		6.0E+01	3.0E+01
1.0E+00	C	2.9E-04	C						M	-0.15	1	1	Yes	Urethane	51-79-6	2.5E-02	5.9E+00		2.5E-02					
		8.3E-03	P	9.0E-03	I	7.0E-06	P				0.026	1	Yes	Vanadium Pentoxide	1314-62-1					1.8E+02	1.1E+03		1.5E+02	
				5.0E-03	S	1.0E-04	A				0.026	1	Yes	Vanadium and Compounds	7440-62-2					1.0E+02	6.0E+02		8.6E+01	
				1.0E-03	I			V		3.84	1	1	Yes	Vernolate	1929-77-7					2.0E+01	2.5E+01		1.1E+01	
				2.5E-02	I					3.1	1	0.9	Yes	Vinclozolin	50471-44-8					5.0E+02	3.7E+03		4.4E+02	
				1.0E+00	H	2.0E-01	I	V		0.73	1	1	Yes	Vinyl Acetate	108-05-4					2.0E+04	1.4E+06	4.2E+02	4.1E+02	
		3.2E-05	H			3.0E-03	I	V		1.57	1	1	Yes	Vinyl Bromide	593-60-2			1.8E-01	1.8E-01			6.3E+00	6.3E+00	
7.2E-01	I	4.4E-06	I	3.0E-03	I	1.0E-01	I	V	M	1.62	1	1	Yes	Vinyl Chloride	75-01-4	2.1E-02	2.7E-01	3.4E-01	1.9E-02	6.0E+01	8.9E+02	2.1E+02	4.4E+01	2.0E+00
				3.0E-04	I					2.7	1	1	Yes	Warfarin	81-81-2					6.0E+00	8.4E+01		5.6E+00	
				2.0E-01	S	1.0E-01	S	V		3.15	1	1	Yes	Xylene, P-	106-42-3					4.0E+03	7.6E+03	2.1E+02	1.9E+02	
				2.0E-01	S	1.0E-01	S	V		3.2	1	1	Yes	Xylene, m-	108-38-3					4.0E+03	7.1E+03	2.1E+02	1.9E+02	
				2.0E-01	S	1.0E-01	S	V		3.12	1	1	Yes	Xylene, o-	95-47-6					4.0E+03	8.0E+03	2.1E+02	1.9E+02	
				2.0E-01	I	1.0E-01	I	V		3.16	1	1	Yes	Xylenes	1330-20-7					4.0E+03	7.5E+03	2.1E+02	1.9E+02	1.0E+04
				3.0E-04	I						1	1	Yes	Zinc Phosphide	1314-84-7					6.0E+00	2.3E+03		6.0E+00	
				3.0E-01	I						1	1	Yes	Zinc and Compounds	7440-66-6					6.0E+03	2.3E+06		6.0E+03	
				5.0E-02	I					1.3	1	1	Yes	Zineb	12122-67-7					1.0E+03	9.7E+04		9.9E+02	
				8.0E-05	X						1	1	Yes	Zirconium	7440-67-7					1.6E+00	3.6E+02		1.6E+00	

TR=1E-6 HQ=1

along the northeast edge of the San Agustin Plains closed basin; thence north along the east side of the north plains closed basin to the Continental Divide; thence northly along the Continental Divide to the community of Regina on State Highway 96; thence southeasterly along the crest of the San Pedro Mountains to Cerro Toledo Peak; thence southwesterly along the Sierra de Los Valles ridge and the Borrego Mesa to Bodega Butte; thence southerly to Angostura Diversion Dam which is the upper reach of the Rio Grande in this basin; thence southeast to the crest and the crest of the Manzano Mountains and the Los Pinos Mountains; thence southerly along the divide that contributes to the Rio Grande to San Marcial gauging station to the point and place of beginning; excluding all waters upstream of Jemez Pueblo which flow into the Jemez River drainage and the Bluewater Lake. Counties included in the basin are:

(1) north portion of Socorro County;
(2) northeast corner of Catron County;
(3) east portion of Valencia County;
(4) west portion of Bernalillo County;
(5) east portion of McKinley County; and
(6) most of Sandoval County.

[3-14-71, 9-3-72, 8-13-76, 2-20-81, 12-1-95; 20.6.2.2102 NMAC - Rn, 20 NMAC 6.2.II.2102, 1-15-01]

20.6.2.2103 - 20.6.2.2199: [RESERVED]
[12-1-95; 20.6.2.2103 - 20.6.2.2199 NMAC - Rn, 20 NMAC 6.2.II.2103-2199, 1-15-01]

20.6.2.2200 WATERCOURSE PROTECTION:
[12-1-95; 20.6.2.2200 NMAC - Rn, 20 NMAC 6.2.II.2200, 1-15-01]

20.6.2.2201 DISPOSAL OF REFUSE: No person shall dispose of any refuse in a natural watercourse or in a location and manner where there is a reasonable probability that the refuse will be moved into a natural watercourse by leaching or otherwise. Solids diverted from the stream and returned thereto are not subject to abatement under this Section.
[4-20-68, 9-3-72; 20.6.2.2201 NMAC - Rn, 20 NMAC 6.2.II.2201, 1-15-01]

20.6.2.2202 - 20.6.2.2999: [RESERVED]
[12-1-95; 20.6.2.2202 - 20.6.2.2999 NMAC - Rn, 20 NMAC 6.2.II.2202-3100, 1-15-01]

20.6.2.3000 PERMITTING AND GROUND WATER STANDARDS:
[12-1-95; 20.6.2.3000 NMAC - Rn, 20 NMAC 6.2.III, 1-15-01]

20.6.2.3001 - 20.6.2.3100: [RESERVED]
[12-1-95; 20.6.2.3001 - 20.6.2.3100 NMAC - Rn, 20 NMAC 6.2.II.2202-3100, 1-15-01]

20.6.2.3101 PURPOSE:

A. The purpose of Sections 20.6.2.3000 through 20.6.2.3114 NMAC controlling discharges onto or below the surface of the ground is to protect all ground water of the state of New Mexico which has an existing concentration of 10,000 mg/l or less TDS, for present and potential future use as domestic and agricultural water supply, and to protect those segments of surface waters which are gaining because of ground water inflow, for uses designated in the New Mexico Water Quality Standards. Sections 20.6.2.3000 through 20.6.2.3114 NMAC are written so that in general:

(1) if the existing concentration of any water contaminant in ground water is in conformance with the standard of 20.6.2.3103 NMAC, degradation of the ground water up to the limit of the standard will be allowed; and

(2) if the existing concentration of any water contaminant in ground water exceeds the standard of Section 20.6.2.3103 NMAC, no degradation of the ground water beyond the existing concentration will be allowed.

B. Ground water standards are numbers that represent the pH range and maximum concentrations of water contaminants in the ground water which still allow for the present and future use of ground water resources.

C. The standards are not intended as maximum ranges and concentrations for use, and nothing herein contained shall be construed as limiting the use of waters containing higher ranges and concentrations.
[2-18-77; 20.6.2.3101 NMAC - Rn, 20 NMAC 6.2.III.3101, 1-15-01]

20.6.2.3102: [RESERVED]
[12-1-95; 20.6.2.3102 NMAC - Rn, 20 NMAC 6.2.III.3102, 1-15-01]

20.6.2.3103 STANDARDS FOR GROUND WATER OF 10,000 mg/l TDS CONCENTRATION OR LESS: The following standards are the allowable pH range and the maximum allowable concentration in ground water for the contaminants specified unless the existing condition exceeds the standard or unless otherwise provided in Subsection D of Section 20.6.2.3109 NMAC. Regardless of whether there is one contaminant or more than one contaminant present in ground water, when an existing pH or concentration of any water contaminant exceeds the standard specified in Subsection A, B, or C of this section, the existing

pH or concentration shall be the allowable limit, provided that the discharge at such concentrations will not result in concentrations at any place of withdrawal for present or reasonably foreseeable future use in excess of the standards of this section. These standards shall apply to the dissolved portion of the contaminants specified with a definition of dissolved being that given in the publication "*methods for chemical analysis of water and waste of the U.S. environmental protection agency*," with the exception that standards for mercury, organic compounds and non-aqueous phase liquids shall apply to the total unfiltered concentrations of the contaminants.

A. Human Health Standards-Ground water shall meet the standards of Subsection A and B of this section unless otherwise provided. If more than one water contaminant affecting human health is present, the toxic pollutant criteria as set forth in the definition of toxic pollutant in Section 20.6.2.1101 NMAC for the combination of contaminants, or the Human Health Standard of Subsection A of Section 20.6.2.3103 NMAC for each contaminant shall apply, whichever is more stringent. Non-aqueous phase liquid shall not be present floating atop of or immersed within ground water, as can be reasonably measured.

(1) Arsenic (As)……0.1 mg/l
(2) Barium (Ba)……1.0 mg/l
(3) Cadmium (Cd)……0.01 mg/l
(4) Chromium (Cr)……0.05 mg/l
(5) Cyanide (CN)……0.2 mg/l
(6) Fluoride (F)……1.6 mg/l
(7) Lead (Pb)……0.05 mg/l
(8) Total Mercury (Hg)……0.002 mg/l
(9) Nitrate (NO_3 as N)……10.0 mg/l
(10) Selenium (Se)……0.05 mg/l
(11) Silver (Ag)……0.05 mg/l
(12) Uranium (U)……0.03 mg/l
(13) Radioactivity: Combined Radium-226 & Radium-228……30 pCi/l
(14) Benzene……0.01 mg/l
(15) Polychlorinated biphenyls (PCB's)……0.001 mg/l
(16) Toluene……0.75 mg/l
(17) Carbon Tetrachloride……0.01 mg/l
(18) 1,2-dichloroethane (EDC) ……0.01 mg/l
(19) 1,1-dichloroethylene (1,1-DCE) ……0.005 mg/l
(20) 1,1,2,2-tetrachloroethylene (PCE) ……0.02 mg/l
(21) 1,1,2-trichloroethylene (TCE) ……0.1 mg/l
(22) ethylbenzene……0.75 mg/l
(23) total xylenes……0.62 mg/l
(24) methylene chloride……0.1 mg/l
(25) chloroform……0.1 mg/l
(26) 1,1-dichloroethane……0.025 mg/l
(27) ethylene dibromide (EDB) ……0.0001 mg/l
(28) 1,1,1-trichloroethane……0.06 mg/l
(29) 1,1,2-trichloroethane……0.01 mg/l
(30) 1,1,2,2-tetrachloroethane……0.01 mg/l
(31) vinyl chloride……0.001 mg/l
(32) PAHs: total naphthalene plus monomethylnaphthalenes……0.03 mg/l
(33) benzo-a-pyrene……0.0007 mg/l

B. Other Standards for Domestic Water Supply

(1) Chloride (Cl) ……250.0 mg/l
(2) Copper (Cu) ……1.0 mg/l
(3) Iron (Fe) ……1.0 mg/l
(4) Manganese (Mn) ……0.2 mg/l
(6) Phenols……0.005 mg/l
(7) Sulfate (SO_4) ……600.0 mg/l
(8) Total Dissolved Solids (TDS) ……1000.0 mg/l
(9) Zinc (Zn) ……10.0 mg/l
(10) pH……between 6 and 9

C. Standards for Irrigation Use - Ground water shall meet the standards of Subsection A, B, and C of this section unless otherwise provided.

(1) Aluminum (Al)……5.0 mg/l
(2) Boron (B) ……0.75 mg/l
(3) Cobalt (Co) ……0.05 mg/l

(4) Molybdenum (Mo) ……...1.0 mg/l
(5) Nickel (Ni) ……....0.2 mg/l
[2-18-77, 1-29-82, 11-17-83, 3-3-86, 12-1-95; 20.6.2.3103 NMAC - Rn, 20 NMAC 6.2.III.3103, 1-15-01; A, 9-26-04]
[Note: For purposes of application of the amended numeric uranium standard to past and current water discharges (as of 9-26-04), the new standard will not become effective until June 1, 2007. For any new water discharges, the uranium standard is effective 9-26-04.]

20.6.2.3104 DISCHARGE PERMIT REQUIRED: Unless otherwise provided by this Part, no person shall cause or allow effluent or leachate to discharge so that it may move directly or indirectly into ground water unless he is discharging pursuant to a discharge permit issued by the secretary. When a permit has been issued, discharges must be consistent with the terms and conditions of the permit. In the event of a transfer of the ownership, control, or possession of a facility for which a discharge permit is in effect, the transferee shall have authority to discharge under such permit, provided that the transferee has complied with Section 20.6.2.3111 NMAC, regarding transfers.
[2-18-77, 12-24-87, 12-1-95; Rn & A, 20.6.2.3104 NMAC - 20 NMAC 6.2.III.3104, 1-15-01; A, 12-1-01]

20.6.2.3105 EXEMPTIONS FROM DISCHARGE PERMIT REQUIREMENT: Sections 20.6.2.3104 and 20.6.2.3106 NMAC do not apply to the following:

A. Effluent or leachate which conforms to all the listed numerical standards of Section 20.6.2.3103 NMAC and has a total nitrogen concentration of 10 mg/l or less, and does not contain any toxic pollutant. To determine conformance, samples may be taken by the agency before the effluent or leachate is discharged so that it may move directly or indirectly into ground water; provided that if the discharge is by seepage through non-natural or altered natural materials, the agency may take samples of the solution before or after seepage. If for any reason the agency does not have access to obtain the appropriate samples, this exemption shall not apply;

B. Effluent which is regulated pursuant to 20.7.3 NMAC, "Liquid Waste Disposal and Treatment" regulations;

C. Water used for irrigated agriculture, for watering of lawns, trees, gardens or shrubs, or for irrigation for a period not to exceed five years for the revegetation of any disturbed land area, unless that water is received directly from any sewerage system;

D. Discharges resulting from the transport or storage of water diverted, provided that the water diverted has not had added to it after the point of diversion any effluent received from a sewerage system, that the source of the water diverted was not mine workings, and that the secretary has not determined that a hazard to public health may result;

E. Effluent which is discharged to a watercourse which is naturally perennial; discharges to dry arroyos and ephemeral streams are not exempt from the discharge permit requirement, except as otherwise provided in this section;

F. Those constituents which are subject to effective and enforceable effluent limitations in a National Pollutant Discharge Elimination System (NPDES) permit, where discharge onto or below the surface of the ground so that water contaminants may move directly or indirectly into ground water occurs downstream from the outfall where NPDES effluent limitations are imposed, unless the secretary determines that a hazard to public health may result. For purposes of this subsection, monitoring requirements alone do not constitute effluent limitations;

G. Discharges resulting from flood control systems;

H. Leachate which results from the direct natural infiltration of precipitation through disturbed materials, unless the secretary determines that a hazard to public health may result;

I. Leachate which results entirely from the direct natural infiltration of precipitation through undisturbed materials;

J. Leachate from materials disposed of in accordance with the Solid Waste Management Regulations (20 NMAC 9.1) adopted by the New Mexico Environmental Improvement Board;

K. Natural ground water seeping or flowing into conventional mine workings which re-enters the ground by natural gravity flow prior to pumping or transporting out of the mine and without being used in any mining process; this exemption does not apply to solution mining;

L. Effluent or leachate discharges resulting from activities regulated by a mining plan approved and permit issued by the New Mexico Coal Surface Mining Commission, provided that this exemption shall not be construed as limiting the application of appropriate ground water protection requirements by the New Mexico Coal Surface Mining Commission;

M. Effluent or leachate discharges which are regulated by the Oil Conservation Commission and the regulation of which by the Water Quality Control Commission would interfere with the exclusive authority granted under Section 70-2-12 NMSA 1978, or under other laws, to the Oil Conservation Commission.
[2-18-77, 6-26-80, 7-2-81, 12-24-87, 12-1-95; 20.6.2.3105 NMAC - Rn, 20 NMAC 6.2.III.3105, 1-15-01; A, 12-1-01; A, 8-1-14]

20.6.2.3106 APPLICATION FOR DISCHARGE PERMITS AND RENEWALS:

A. Any person who, before or on June 18, 1977, is discharging any of the water contaminants listed in 20.6.2.3103 NMAC or any toxic pollutant so that they may move directly or indirectly into ground water shall, within 120 days of receipt of written notice from the secretary that a discharge permit is required, or such longer time as the secretary shall for good cause allow, submit a discharge plan to the secretary for approval; such person may discharge without a discharge permit until 240 days after

APPENDIX C

FIELD INSPECTION LOGS

Chain-of-Custody Record

Client: Western Refining

Mailing Address: Rt 3 Box 7
Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-722-0210

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☐ Rush

Project Name: Q1-2014 Groundwater Sampling

Project #: Quarterly Sampling

Project Manager: Cheryl Johnson

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 4.5

www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8021 + MTBE	8015B (DRO/GRO)	WQCC Metals (Total and Dissolved)	8260 + MTBE	Air Bubbles (Y or N)
3/10/14	0850		East LDU				x	x	x		
3/10/14	0910		West LDU				x	x	x		
~~3/10/14~~			~~Oil Sump LDU~~				~~x~~	~~x~~	~~x~~		
3/10/14	0820	W	FB-Group#1-							x	

Date	Time	Relinquished by:	Received by:	Date	Time
3/10/14	1610	Tom Kearns	[illegible]	03/10/14	1610
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: Western Refining

Mailing Address: Rt 3 Box 7
Gallup, NM 87301

Phone #: 505-722-3833

Email or Fax#: 505-722-0210

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☐ Rush

Project Name: Q1-2014 Groundwater Sampling

Project #: Quarterly Sampling

Project Manager: Cheryl Johnson

Sampler:

On Ice: ☑ Yes ☐ No

Sample Temperature: 2.0

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8260B + MTBE	8015 (GRO/DRO)	WQCC Metals (Total and Dissolved)	major cations and anions	Air Bubbles (Y or N)
3/11/14	0910		GWM-1				x	x	x	x	
			~~GWM-2~~				~~x~~	~~x~~		~~x~~	
			~~GWM-3~~				~~x~~	~~x~~		~~x~~	
3/11/14	0850	W	FB-Group#2-				x				

Date:	Time:	Relinquished by:	Received by:	Date	Time
3/12/14	1110	Pete Sandoval	[illegible]	3/12/14	11:10
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: Western Refining

Mailing Address: Rt 3 Box 7
Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-722-0210

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other_____
☐ EDD (Type) _____

Turn-Around Time:
☐ Standard ☐ Rush_____

Project Name: Q1-2014 Groundwater Sampling

Project #: Quarterly Sampling

Project Manager: Cheryl Johnson

Sampler:
On Ice: ☒ Yes ☐ No
Sample Temperature: 4.6

www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8260 + MTBE	8021 + MTBE	8015B (DRO/GRO)	WQCC Metals (Total and Dissolved)	8270 + Phenols	major cations and anions	Total Cyanide									Air Bubbles (Y or N)
3/10/14	1225		NAPIS-1					x	x	x	x	x										
3/10/14	1020		NAPIS-2					x	x	x	x	x										
3/10/14	1145		NAPIS-3					x	x	x	x	x										
3/10/14	1110		KA-3					x	x	x	x	x										
3/10/14	1315		OAPIS-1				x		x	x	x	x	x									
3/10/14	0925	W	FB-Group#3-				x															
3/10/14	1020		QC								X											

Date:	Time:	Relinquished by:	Received by:	Date	Time
3/10/14	1610	Tom Ramos	[signature]	03/10/14	1610
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: Western Refining

Mailing Address: Rt 3 Box 7
Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-722-0210

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other_____
☐ EDD (Type) _____

Turn-Around Time:
☐ Standard ☐ Rush_____

Project Name: Q1-2014 Groundwater Sampling

Project #: Quarterly Sampling

Project Manager: Cheryl Johnson

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.8

www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8260B + MTBE	8015B (DRO/GRO)	WQCC Metals (Total and Dissolved)	major cations and anions	Air Bubbles (Y or N)
3/7/14	1238	GW	OW-1				x	x	x	x	
3/7/14	1325	GW	OW-10				x	x	x	x	
3/7/14	1152	W	FB-Group#4-				x				

Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
3/7/14	1700	Tom Gleason	Kathleen Gallegos	03/07/14	1700	
Date:	Time:	Relinquished by:	Received by:	Date	Time	

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: Western Refining

Mailing Address: Rt 3 Box 7
Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-722-0210

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other _____
☐ EDD (Type) _____

Turn-Around Time:
☐ Standard ☐ Rush _____

Project Name: Q1-2014 Groundwater Sampling

Project #: Quarterly Sampling

Project Manager: Cheryl Johnson

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.8

www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8260B + MTBE	WQCC Metals (Total and Dissolved)													Air Bubbles (Y or N)
3/7/14	1129	GW	OW-13				x	x													
3/7/14	1032	GW	OW-14				x	x													
3/7/14	951	GW	OW-29				x	x													
3/7/14	1405	GW	OW-30				x	x													
3/7/14	0905		FB-Group#5-				x														
3/7/14	0910		EQ BLANK				x														

Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
3/7/14	1700	Tom Flanes	[signature]	03/07/14	1700	
Date:	Time:	Relinquished by:	Received by:	Date	Time	

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: We[illegible] Refining

Mailing Address: Route 3 Box 7

Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-722-0210

QA/QC Package:
☐ **Standard** ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other_____

☐ EDD (Type) _Please provide EDD_____

☐ **Standard** ☐ Rus[illegible]

Project Name:
OCD Central Landfarm Semiannual Sampling

Project #:
697-039-004

Project Manager:
Ed Riege

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.8

HALL ENVIRONMENTAL ANALYSIS LABO[illegible]ATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	Vadose Zone List (see attached)	NMAC List (see attached)	BTEX (8260)	Air Bubbles (Y or N)
3/6/14	100	soil	CentralOCD-01-3-6	4oz - 2	none		X			
3/6/14	0925	soil	CentralOCD-02-3-6	4oz - 2	none		X			
3/6/14	1050	soil	CentralOCD-03-3-6	4oz - 2	none		X			
3/6/14	0850	soil	CentralOCD-04-3-6	4oz - 2	none		X			
3/6/14		soil	BD-3-6	4oz - 2	none		X			
3/6/14	1000	soil	CentralOCD-01-3-6-MS	4oz - 2	none		X			
3/6/14	1000	soil	CentralOCD-01-3-6-MSD	4oz - 2	none		X			
3/6/14	1035	soil	CentralOCD-TZ-3-6	4oz - 3	none		X	X		
3/6/14	0830	water	EB-3-6	VOA - 3	HCL				X	
3/6/14	0820	water	FB-3-6	VOA - 3	HCL				X	
		water	Trip Blank	VOA - 3	HCL				X	

Date:	Time:	Relinquished by:	Received by:	Date	Time
3/7/14	1700	Tom Flamer	Ashley Gallegos	03/07/14	1700
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Please cc Grant Price (gprice@trihydro.com) with results. Call Grant @ 307-745-7474 w/ questions. Verify that Reporting limits comply with those shown on the attached.

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: Western Refining

Mailing Address: Rt3 Box 7
Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-722-0210

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other

☒ EDD (Type) Trihydro format

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: Q1-2014 Groundwater Sampling

Project #: Qtrly Sampling

Project Manager: Cheryl Johnson

Sampler: Tom Fleener | Pat Landers

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8260B + MTBE	8021 + MTBE	8015B (DRO/GRO)	WQCC Metals (Total and Dissolved)	8270 + Phenols	major cations and anions	BOD and COD	General chemistry (pH, cations, anions, spec. cond.)	chlorides	pH	Nitrates	Cyanide	e-coli			Air Bubbles (Y or N)
3/5/14	1425	H_2O	EP-5	11	All		X			X	X	X	X	X					X			
	1450	H_2O	EP-4	11	All		X			X	X	X	X	X					X			
	1530	H_2O	EP-3	11	All		X			X	X	X	X	X					X			
	1545	H_2O	BW to EP-2	2								X										
	600	H_2O	TB	2	HCl		X															

Date:	Time:	Relinquished by:	Received by:	Date Time
3/6/14	9:12	Joey Walker		03/06/14 0912
Date:	Time:	Relinquished by:	Received by:	Date Time

Remarks:

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Chain-of-Custody Record

Client: Western Refining

Mailing Address: Rt 3 Box 7
Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-722-0210

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other

☒ EDD (Type) Trilyte format

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: Q1-2014 Groundwater Sampling

Project #: Qtrly Sampling

Project Manager: Cheryl Johnson

Sampler: Tom Fleener

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8260B + MTBE	8021 + MTBE	8015B (DRO/GRO)	WQCC Metals (Total and Dissolved)	8270 + Phenols	major cations and anions	BOD and COD	General chemistry (pH, cations, anions, spec. cond.)	chlorides	pH	Nitrates	Cyanide	TDS			Air Bubbles (Y or N)
3/5/14	1425	H_2O	EP-5	1	—														X			
	1450	H_2O	EP-4	1	—														X			
	1530	H_2O	EP-3	1	—														X			
↓	1545	H_2O	BW to EP-2	1	—														X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
3/6/2	0912	Henry Walk	[signature]	03/06/14	0912
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: Western Refining

Mailing Address: Rt 3 Box 7
Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-722-0210

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other
☐ EDD (Type) Trilyndo format

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: Q1-2014 Groundwater Sampling

Project #: Quarterly Sampling

Project Manager: Cheryl Johnson

Sampler: Tom Heenes | Pak Sandys

On Ice: ☒ Yes ☐ No

Sample Temperature:

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4901 Hawkins NE - Albuquerque, NM 87109
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Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8260B + MTBE	8270 + Phenols	WQCC Metals (Total and Dissolved)	BOD/COD	General chemistry (pH, cations, anions, spec. cond.)	E. Coli	major cations and anions	TDS								Air Bubbles (Y or N)
3/5/14			~~BW to EP-2~~ HW									~~x~~	~~x~~	~~x~~	HW							
3/5/14	0910	H_2O	EP-1	12	HCl, H_2SO_4, HNO_3, +un		x	x	x	x	x	x	x	x								
3/5/14	10:20	H_2O	EP-2	11	" "		x	x	x	x	x	x	x	x								
			HW ~~EP-3~~				~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	HW							
			HW ~~EP-4~~				~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	HW							
			HW ~~EP-5~~				~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	HW							
3/5/14	13:25	H_2O	EP-6	11	" "		x	x	x	x	x	x	x	x								
3/5/14	12:35	H_2O	EP-7	11	" "		x	x	x	x	x	x	x	x								
3/5/14	12:15	H_2O	EP-8	11	" "		x	x	x	x	x	x	x	x								
3/5/14	12:55	H_2O	EP-9	11	" "		x	x	x	x	x	x	x	x								
3/5/14	11:50	H_2O	EP-11	11	" "		x	x	x	x	x	x	x	x								
3/5/14	11:25	H_2O	EP-12A	11	" "		x	x	x	x	x	x	x	x								
3/5/14	1100	H_2O	EP-12B	11	" "		x	x	x	x	x	x	x	x								
3/5/14	0940	H_2O	STP-1 to EP-2	11	HCl, H_2SO_4, HNO_3, +un				x	x				x								
3/5/14	0855	H_2O	FB-Group#7-20140305	3	HCl		x															

Date:	Time:	Relinquished by:	Received by:	Date	Time
3/5/14	1346	[signature]	[signature]	3-5-14	1346
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:
Page 1 of 2
- TDS on separate COC
- 1 extra bottle for 8270 + Phenols for internal QC

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: Western Refining

Mailing Address: Rt 3 Box 7
Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-722-0210

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other
☐ EDD (Type) Trihydro format

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: Q1-2014 Groundwater Sampling

Project #: Quarterly Sampling

Project Manager: Cheryl Johnson

Sampler:

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8260B + MTBE	8021 + MTBE	8015B (DRO/GRO)	WQCC Metals (Total and Dissolved)	8270 + Phenols	major cations and anions	BOD and COD	General chemistry (pH, cations, anions, spec. cond.)	chlorides	pH	Nitrates	Cyanide				Air Bubbles (Y or N)
3/5/14	0850	H_2O	EB-#1-20140305	3	HCl		X															
Lab		H_2O	TB	12	HCl		X															

Date:	Time:	Relinquished by:	Received by:	Date	Time
3/5/14	1326	Hoy Walt	[signature]	3-5-14	1326
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:
Page 2 of 2
*1 TB per cooler

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: Western Refining

Mailing Address: Rt 3 Box 7
Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-722-0210

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other

☒ EDD (Type) Trihydro Format

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: Q1-2014 Groundwater Sampling

Project #: Quarterly Sampling

Project Manager: Cheryl Johnson

Sampler:

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8260B + MTBE	8021 + MTBE	8015B (DRO/GRO)	WQCC Metals (Total and Dissolved)	8270 + Phenols	major cations and anions	BOD and COD	General chemistry (pH, cations, anions, spec. cond.)	chlorides	pH	Nitrates	Cyanide	TDS			Air Bubbles (Y or N)
3/5/14	0910	H_2O	EP-1	1															X			
	0940	H_2O	STP-1 to EP-2	1															X			
	10:20	H_2O	EP-2	1															X			
	1100	H_2O	EP-12B	1															X			
	11:25	H_2O	EP-12A	1															X			
	11:50	H_2O	EP-11	1															X			
	12:15	H_2O	EP-8	1															X			
	12:35	H_2O	EP-7	1															X			
	12:55	H_2O	EP-9	1															X			
	1:35	H_2O	EP-6	1															X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
3/5/14	1346	Abby Wa		3/5/14	1326
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

EP-1

WESTERN REFINING - GALLUP REFINERY
Q1-2014

EP-1		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/5/14	(1)		7.92	6.73	5.35 ms	5.341	4.55	999.9	-247.0
GAUGE TIME	—	(2)								
DTB (feet) Depth to Bottom	—	(3)								
DEDICATED PUMP	—									
DTW (feet) Depth to Water	—									
DTB - DTW	—									
Capicty per foot	—									
1 Well Volume	—									
3 Well Volumes	—									
PURGE DATE	—									
PURGE TIME	—									
SAMPLE DAY	3/5/14									
SAMPLE TIME	0910									
PUMP DEPTH	—									
DTW (feet) at end of Purging	—									

WEATHER CONDITIONS

cool (~50), breezy, sunny

WATER APPEARANCE

light brown, slight oda

SAMPLE LOG

sampled @ 0910

STP-1 to EP-2		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/5/14	(1)	0940	8.29	20.03	4.1 bms	3.051	2.48	999.9	-325.4
GAUGE TIME	—	(2)								
DTB (feet) Depth to Bottom	—	(3)								
DEDICATED PUMP	—	(4)								
DTW (feet) Depth to Water	—									
DTB - DTW	—									
Capicity per foot	—									
1 Well Volume	—									
3 Well Volumes	—									
PURGE DATE	—									
PURGE TIME	—									
SAMPLE DAY	3/5/14									
SAMPLE TIME	0940									
PUMP DEPTH	—									
DTW (feet) at end of Purging	—									

WEATHER CONDITIONS

WATER APPEARANCE

light green, strong odor

SAMPLE LOG

sampled @ 0940

INSTRUMENTS USED:

Signature:

EP-2

WESTERN REFINING - GALLUP REFINERY
Q1-2014

		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/5/14	(1)	1020	8.31	9.06	6.199 mS	5.59	4.98	27.6	-317.2
GAUGE TIME	—	(2)								
DTB (feet) Depth to Bottom	—	(3)								
DEDICATED PUMP	—									
DTW (feet) Depth to Water	—									
DTB - DTW	—									
Capicty per foot	—									
1 Well Volume	—									
3 Well Volumes	—									
PURGE DATE	—									
PURGE TIME	—									
SAMPLE DAY	3/5/14									
SAMPLE TIME	10:20									
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

sunny, cool (~50)

WATER APPEARANCE

light green, very ~~too~~ faint odor

SAMPLE LOG

sampled @ 10:20

		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/5/14	(1)	1100	8.54	10.04	6.143 mS	5.607	4.83	22.7	-183.2
GAUGE TIME	—	(2)								
DTB (feet) Depth to Bottom	—	(3)								
DEDICATED PUMP	—	(4)								
DTW (feet) Depth to Water	—									
DTB - DTW	—									
Capicity per foot	—									
1 Well Volume	—									
3 Well Volumes	—									
PURGE DATE	—									
PURGE TIME	—									
SAMPLE DAY	3/5/14									
SAMPLE TIME	1100									
PUMP DEPTH										
DTW (feet) at end of Purging										

12B

WEATHER CONDITIONS

Sunny, cool (~50°F)

WATER APPEARANCE

Silty, No odor

SAMPLE LOG

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

12A

		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/5/14	(1)	1125	8.41	10.23	6.399 mS	5.784	4.97	22.6	-83.6
GAUGE TIME	—	(2)								
DTB (feet) Depth to Bottom	—	(3)								
DEDICATED PUMP	—									
DTW (feet) Depth to Water	—									
DTB - DTW	—									
Capicty per foot	—									
1 Well Volume	—									
3 Well Volumes	—									
PURGE DATE	—									
PURGE TIME	—									
SAMPLE DAY	3/5/14									
SAMPLE TIME	1125									
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

Sunny, Cool (~50°F)

WATER APPEARANCE

Light Red
No odor

SAMPLE LOG

11

		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/5/14	(1)	1150	8.17	9.99	24.61 mS	22.45	21.64	58.0	-60.0
GAUGE TIME	—	(2)								
DTB (feet) Depth to Bottom	—	(3)								
DEDICATED PUMP	—	(4)								
DTW (feet) Depth to Water	—									
DTB - DTW	—									
Capicity per foot	—									
1 Well Volume	—									
3 Well Volumes	—									
PURGE DATE	—									
PURGE TIME	—									
SAMPLE DAY	3/5/14									
SAMPLE TIME	1150									
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

Sunny, Cool (~50°F)

WATER APPEARANCE

Silty, No odor

SAMPLE LOG

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

7

		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/5/14	(1)	1215	8.02	8.94	74.31 mS	69.98	77.91	155.2	-55.4
GAUGE TIME	—	(2)								
DTB (feet) Depth to Bottom	—	(3)								
DEDICATED PUMP	—									
DTW (feet) Depth to Water	—									
DTB - DTW	—									
Capicty per foot	—									
1 Well Volume	—									
3 Well Volumes	—									
PURGE DATE	—									
PURGE TIME	—									
SAMPLE DAY	3/5/14									
SAMPLE TIME	1215									
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

Sunny, cool (~50°F)
Breezy

WATER APPEARANCE

Lime Green
No odor

SAMPLE LOG

8

		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/5/14	(1)	1235	8.02	9.01	69.38 mS	69.39	77.17	153.3	-48.9
GAUGE TIME	—	(2)								
DTB (feet) Depth to Bottom	—	(3)								
DEDICATED PUMP	—	(4)								
DTW (feet) Depth to Water	—									
DTB - DTW	—									
Capicity per foot	—									
1 Well Volume	—									
3 Well Volumes	—									
PURGE DATE	—									
PURGE TIME	—									
SAMPLE DAY	3/5/14									
SAMPLE TIME	1235									
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

Sunny, cool (~50°F)
Breezy

WATER APPEARANCE

Light Green
No odor

SAMPLE LOG

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

9

		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/5/14	(1)	1255	7.78	9.11	90.07 mS	84.16	97.38	260.8	-35.0
GAUGE TIME	—	(2)								
DTB (feet) Depth to Bottom	—	(3)								
DEDICATED PUMP	—									
DTW (feet) Depth to Water	—									
DTB - DTW	—									
Capicty per foot	—									
1 Well Volume	—									
3 Well Volumes	—									
PURGE DATE	—									
PURGE TIME	—									
SAMPLE DAY	3/5/14									
SAMPLE TIME	1255									
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

Sunny, cool (~50°F)
Breezy

WATER APPEARANCE

Silty
No odor

SAMPLE LOG

EP-6

		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/5/14	(1)	1325	8.47	8.94	16.89	15.81	14.69	21.8	-79.9
GAUGE TIME	—	(2)								
DTB (feet) Depth to Bottom	—	(3)								
DEDICATED PUMP	—	(4)								
DTW (feet) Depth to Water	—									
DTB - DTW	—									
Capicity per foot	—									
1 Well Volume	—									
3 Well Volumes	—									
PURGE DATE	—									
PURGE TIME	—									
SAMPLE DAY	3/5/14									
SAMPLE TIME	1325									
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

Sunny, cool (~50°F)
Breezy

WATER APPEARANCE

Silty, Light Red
No odor

SAMPLE LOG

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

EP-5

		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/5/14	(1)	1425	8.38	8.39	12.27 mS	11.66	10.57	27.0	-211.4
GAUGE TIME	—	(2)								
DTB (feet) Depth to Bottom	—	(3)								
DEDICATED PUMP	—									
DTW (feet) Depth to Water	—									
DTB - DTW	—									
Capicty per foot	—									
1 Well Volume	—									
3 Well Volumes	—									
PURGE DATE	—									
PURGE TIME	—									
SAMPLE DAY	3/5/14									
SAMPLE TIME	1425									
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

Sunny, cool (~50°F)

Breezy

WATER APPEARANCE

Silty, no odor

SAMPLE LOG

EP-4

		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/5/14	(1)	1450	8.39	11.08	11.40 mS	10.07	9.06	31.9	-276.7
GAUGE TIME	—	(2)								
DTB (feet) Depth to Bottom	—	(3)								
DEDICATED PUMP	—	(4)								
DTW (feet) Depth to Water	—									
DTB - DTW	—									
Capicity per foot	—									
1 Well Volume	—									
3 Well Volumes	—									
PURGE DATE	—									
PURGE TIME	—									
SAMPLE DAY	3/5/14									
SAMPLE TIME	1450									
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

Sunny, Warm (~50°F)

Breezy

WATER APPEARANCE

Silty

Slight odor

SAMPLE LOG

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

EP-3

		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/5/14	(1)	1530	8.43	14.64	11.08 mS	8.988	8.03	25.0	-282.1
GAUGE TIME	—	(2)								
DTB (feet) Depth to Bottom	—	(3)								
DEDICATED PUMP	—									
DTW (feet) Depth to Water	—									
DTB - DTW	—									
Capicty per foot	—									
1 Well Volume	—									
3 Well Volumes	—									
PURGE DATE	—									
PURGE TIME	—									
SAMPLE DAY	3/5/14									
SAMPLE TIME	1530									
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

Sunny, warm (~50°F)

WATER APPEARANCE

Silty, no odor

SAMPLE LOG

BW to EP-2

		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/5/14	(1)	1545	8.61	18.37	7.278 mS	5.426	4.66	73.6	-68.0
GAUGE TIME	—	(2)								
DTB (feet) Depth to Bottom	—	(3)								
DEDICATED PUMP	—	(4)								
DTW (feet) Depth to Water	—									
DTB - DTW	—									
Capicity per foot	—									
1 Well Volume	—									
3 Well Volumes	—									
PURGE DATE	—									
PURGE TIME	—									
SAMPLE DAY	3/5/14									
SAMPLE TIME	1545									
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

Sunny, warm

WATER APPEARANCE

Clear, no odor

SAMPLE LOG

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

OW-29		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity ~~(uS)~~ (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/7/14	(1)	0920	9.36	12.72	1.386	1.178	0.93	69.4	-116.0
GAUGE TIME	0910	(2)	0927	8.81	12.86	~~1.170~~	1.171	0.92	18.0	-117.6
DTB (feet) Depth to Bottom	51.08	(3)	0934	8.61	12.76	1.384	1.175	0.92	18.2	-110.1
DEDICATED PUMP	✓	(4)	0950	8.50	12.85	1.391	1.19	0.94	18.4	-93.8
DTW (feet) Depth to Water	19.85					1.406				
DTB - DTW	32.23									
Capicty per foot	0.65									
1 Well Volume	20.95									
3 Well Volumes	62.84									
PURGE DATE	3-7-14									
PURGE TIME										
SAMPLE DAY	3-7-14									
SAMPLE TIME	0951									
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

Cool, Breezy

WATER APPEARANCE

Clear
No odor

SAMPLE LOG

motor Freq = 153 Hz

OW-14		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity ~~(uS)~~ (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/7/14	(1)	1017	9.25	13.56	1.830	1.572	1.21	36.8	-169.0
GAUGE TIME	1013	(2)	1022	8.81	13.52	1.813	1.511	1.20	27.6	-160.6
DTB (feet) Depth to Bottom	46.52	(3)	1026	8.63	12.95	1.823	1.523	1.21	36.0	-156.4
DEDICATED PUMP	✓	(4)	1031	8.50	12.72	1.821	1.523	1.21	35.0	-154.0
DTW (feet) Depth to Water	24.12									
DTB - DTW	22.4									
Capicity per foot	0.65									
1 Well Volume	14.56									
3 Well Volumes	43.68									
PURGE DATE	3-7-14									
PURGE TIME	1015									
SAMPLE DAY	3/7/14									
SAMPLE TIME	1032									
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

Cool, Breezy

WATER APPEARANCE

Clear
moderate odor

SAMPLE LOG

motor Freq = 181 Hz

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

OW-13		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/7/14	(1)	1050	9.27	12.44	0.941	0.805	.62	45.0	-96.2
GAUGE TIME	1046	(2)	1102	9.42	12.59	0.950	0.807	.62	31.3	-88.2
DTB (feet) Depth to Bottom	99.15	(3)	1116	9.36	12.61	0.951	0.807	.62	39.2	-109.0
DEDICATED PUMP	✓	4	1128	9.46	12.95	0.960	0.811	.63	45.1	-68.5
DTW (feet) Depth to Water	21.77									
DTB - DTW	77.38									
Capicty per foot	0.65									
1 Well Volume	50.30									
3 Well Volumes	151									
PURGE DATE	3/7/14									
PURGE TIME										
SAMPLE DAY	3/7/14									
SAMPLE TIME	1129									
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

Light rain, breezy, 48°F

WATER APPEARANCE

Clear
moderate odor

SAMPLE LOG

motor Freq = 300 Hz

OW-1		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3/7/14	(1)	1200	9.79	11.83	1.004	.871	.67	16.4	-62.2
GAUGE TIME	1150	(2)	1206	9.44	11.58	0.999	.871	.67	17.7	-70.0
DTB (feet) Depth to Bottom	94.55	(3)	1221	9.48	11.61	0.994	.867	.67	17.7	-96.8
DEDICATED PUMP	✓	(4)	1235	10.07	12.75	1.034	.875	.68	14.5	-77.3
DTW (feet) Depth to Water	0.00									
DTB - DTW	94.55									
Capicity per foot	0.65									
1 Well Volume	61.45									
3 Well Volumes	184.4									
PURGE DATE	3/7/14									
PURGE TIME										
SAMPLE DAY	3/7/14									
SAMPLE TIME	1238									
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

Cool, Breezy, 48°F

WATER APPEARANCE

Started murky then cleared up after 10 gals

SAMPLE LOG

motor Freq = 133 Hz

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

OW-10

GAUGE DATE	3/7/14
GAUGE TIME	1255
DTB (feet) Depth to Bottom	60.33
DEDICATED PUMP	✓
DTW (feet) Depth to Water	0.00
DTB - DTW	60.33
Capicty per foot	0.65
1 Well Volume	39.21
3 Well Volumes	117.63
PURGE DATE	3/7/14
PURGE TIME	1300
SAMPLE DAY	3/7/14
SAMPLE TIME	1325
PUMP DEPTH	
DTW (feet) at end of Purging	

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity ~~(uS)~~ (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1307	9.71	12.89	1.515	1.276	1.01	53.1	-47.6
(2)	1308	8.88	12.91	4.847	4.099	3.46	37.7	-45.1
(3)	1314	8.78	12.53	4.416	3.741	3.14	38.7	-47.1
	1321	8.75	12.75	4.054	3.436	2.87	34.6	-46.5

WEATHER CONDITIONS

Windy, cool ~ 48°F

WATER APPEARANCE

Clear
moderate odor

SAMPLE LOG

motor Freq = 305 Hz

OW-30

GAUGE DATE	3/7/14
GAUGE TIME	1352
DTB (feet) Depth to Bottom	49.90
DEDICATED PUMP	✓
DTW (feet) Depth to Water	23.42
DTB - DTW	26.48
Capicity per foot	~~17.21~~ .65
1 Well Volume	17.21
3 Well Volumes	51.63
PURGE DATE	3/7/14
PURGE TIME	1354
SAMPLE DAY	3/7/14
SAMPLE TIME	1405
PUMP DEPTH	
DTW (feet) at end of Purging	

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity ~~(uS)~~ (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	~~1400~~ 1354	9.49	12.69	1.444	1.225	.96	35.6	-60.0
(2)	1356	9.36	12.61	1.440	1.226	.96	46.4	-61.2
(3)	1359	9.15	12.24	1.431	1.223	.96	47.9	-65.6
(4)	1402	9.07	12.50	1.443	1.230	.97	47.8	-62.6

WEATHER CONDITIONS

Windy, cool ~ 48°F

WATER APPEARANCE

Clear, then muddy
No odor

SAMPLE LOG

Motor Freq = 307

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

OIL SUMP LDU

		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3-10-14	(1)								
GAUGE TIME	0840	(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP										
DTW (feet) Depth to Water	DRY	WEATHER CONDITIONS								
DTB - DTW										
Capicty per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG WELL DRY

EAST LDU

		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3-10-14	(1)								
GAUGE TIME	0847	(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP		(4)								
DTW (feet) Depth to Water	3.2	WEATHER CONDITIONS								
DTB - DTW										
Capicity per foot		CLEAR, COOL.								
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY	3-10-14									
SAMPLE TIME	0850	YELLOW								
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

WEST LDU		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3-10-14	(1)								
GAUGE TIME	0906	(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP										
DTW (feet) Depth to Water	5.6	WEATHER CONDITIONS								
DTB - DTW		CLEAR, COOL, CALM								
Capicty per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY	3-10-14	GRAY								
SAMPLE TIME	0910									
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

NAPIS-2		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3-10-14	(1)	1012	9.76	16.13	1.776	1.388	1.10	38.6	-280.1
GAUGE TIME	1007	(2)	1014	9.44	17.60	1.864	1.412	1.12	28.6	-174.1
DTB (feet) Depth to Bottom	13.62	(3)	1016	9.18	17.92	1.875	1.410	1.12	26.0	-161.5
DEDICATED PUMP	—	(4)	1018	9.04	18.25	1.826	1.371	1.08	25.9	-158.0
DTW (feet) Depth to Water	8.03	WEATHER CONDITIONS								
DTB - DTW	5.58	CLEAR, CALM								
Capicity per foot	0.16									
1 Well Volume	0.89									
3 Well Volumes	2.7									
PURGE DATE	3-10-14									
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY	3-10-14	CLEAR								
SAMPLE TIME	1020									
PUMP DEPTH										
DTW (feet) at end of Purging										

QC. AMBER

SAMPLE LOG ~ 6" OF SURFACE WATER IN CASING EMPTIED PRIOR TO OPENING WELL

INSTRUMENTS USED: BAILER, YSI METER

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

KA-3		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3-10-14	(1)	1045	9.62	19.26	1.780	1.289	1.01	42.0	-67.9
GAUGE TIME	1042	(2)	1048	9.35	19.55	1.718	1.247	0.98	21.0	-51.0
DTB (feet) Depth to Bottom	23.20	(3)	1056	9.06	19.52	1.649	1.191	0.93	44.4	-61.5
DEDICATED PUMP	—		1104	9.12	19.60	1.733	1.269	0.99	43.0	-50.8
DTW (feet) Depth to Water	8.03	WEATHER CONDITIONS								
DTB - DTW	15.17									
Capicty per foot	0.16	CLEAR, WARM								
1 Well Volume	2.4									
3 Well Volumes	7.3									
PURGE DATE	3-10-14									
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY	3-10-14									
SAMPLE TIME	1110	CLEAR, NO ODOR								
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG ~ 4" SURFACE WATER IN CASING EMPTIED PRIOR TO OPENING WELL

NAPIS-3		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3-10-14	(1)	1130	9.37	18.36	3.905	2.904	2.40	126.3	-70.1
GAUGE TIME	1125	(2)	1138	9.48	18.44	4.025	2.990	2.47	58.5	-70.6
DTB (feet) Depth to Bottom	30.42	(3)								
DEDICATED PUMP	—	(4)								
DTW (feet) Depth to Water	8.90	WEATHER CONDITIONS								
DTB - DTW	21.52									
Capicity per foot	0.16	CLEAR, WARM								
1 Well Volume	3.45									
3 Well Volumes	10.32									
PURGE DATE	3-10-14									
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY	3-10-14									
SAMPLE TIME	1145	CLOUDY, LT. RED								
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG ~ 4" SURFACE WATER IN CASING EMPTIED PRIOR TO OPENING WELL
WELL PURGED DRY @ 5 GAL - SAMPLED

INSTRUMENTS USED: BAILER, YSI METER

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

NAPIS-1			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3-10-14	(1)	1212	9.81	12.21	1.518	1.306	1.03	70.1	-22.7
GAUGE TIME	1210	(2)	1214	9.59	11.53	1.432	1.260	0.99	58.0	-58.4
DTB (feet) Depth to Bottom	13.53	(3)	1216	9.43	11.60	1.439	1.265	0.99	54.1	-52.5
DEDICATED PUMP	—		1218	9.33	11.77	1.452	1.281	1.00	67.0	-50.9
DTW (feet) Depth to Water	6.78									
DTB - DTW	6.75									
Capicty per foot	0.16									
1 Well Volume	1.08									
3 Well Volumes	3.24									
PURGE DATE	3-10-14									
PURGE TIME										
SAMPLE DAY	3-10-14									
SAMPLE TIME	1225									
PUMP DEPTH										
DTW (feet) at end of Purging										

TEST PARAMATERS

WEATHER CONDITIONS

CLEAR, WARM

WATER APPEARANCE

CLEAR, NO ODOR

SAMPLE LOG NO SURFACE WATER IN CASING

OAPIS-1			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3-10-14	(1)	1249	9.53	14.50	5.413	4.403	3.74	42.0	-283.0
GAUGE TIME	1245	(2)	1255	9.04	14.14	5.368	4.400	3.73	20.1	-124.1
DTB (feet) Depth to Bottom	28.30	(3)	1301	9.00	14.72	5.500	4.446	3.76	31.0	-127.3
DEDICATED PUMP	—	(4)	1308	8.80	15.09	4.490	4.400	3.73	29.3	-113.1
DTW (feet) Depth to Water	11.50									
DTB - DTW	16.80									
Capicity per foot	0.16									
1 Well Volume	2.7									
3 Well Volumes	8.1									
PURGE DATE	3-10-14									
PURGE TIME										
SAMPLE DAY	3-10-14									
SAMPLE TIME	1315									
PUMP DEPTH										
DTW (feet) at end of Purging										

TEST PARAMATERS

WEATHER CONDITIONS

CLEAR, WARM, BREEZY

WATER APPEARANCE

GOLDEN, SLIGHT ODOR

SAMPLE LOG

INSTRUMENTS USED: BAILER, YSI METER

Signature:

WESTERN REFINING - GALLUP REFINERY
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GWM-2		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3-11-14	(1)								
GAUGE TIME	0814	(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP										
DTW (feet) Depth to Water	—	WEATHER CONDITIONS								
DTB - DTW										
Capicty per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG WELL DRY

GWM-1		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3-11-14	(1)	0858	9.33	11.51	4.389	3.837	3.22	51.7	-184.7
GAUGE TIME	0815	(2)	0901	8.91	11.53	4.401	3.864	3.24	42.1	-161.0
DTB (feet) Depth to Bottom	26.24	(3)	0904	8.66	11.62	4.406	3.875	3.23	47.0	-146.8
DEDICATED PUMP	—	(4)								
DTW (feet) Depth to Water	18.92	WEATHER CONDITIONS								
DTB - DTW	7.32									
Capicity per foot	0.16	CLEAR, CALM, COOL								
1 Well Volume	1.17									
3 Well Volumes	3.5									
PURGE DATE	3-11-14									
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY	3-11-14									
SAMPLE TIME	0910	YELLOWISH, SLIGHT ODOR								
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
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GWM-3			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3-11-14	(1)								
GAUGE TIME	0818	(2)								
DTB (feet) Depth to Bottom	17.8	(3)								
DEDICATED PUMP	—									
DTW (feet) Depth to Water	—		WEATHER CONDITIONS							
DTB - DTW										
Capicty per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME			WATER APPEARANCE							
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG WELL DRY

			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)								
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP		(4)								
DTW (feet) Depth to Water			WEATHER CONDITIONS							
DTB - DTW										
Capicity per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME			WATER APPEARANCE							
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

INSTRUMENTS USED:

Signature:

CONTENTS

PAGE	REFERENCE	DATE

Location Western Refining / Gallup Date 3/5/14

Project / Client Qtrly GW + Pond Sampling

weather: cool (~50), sunny, breezy

0700 - Onsite, check in w/ Cheryl + Janice

0725 - Tailgate safety meeting

0745 - Calibrate water quality meter

0830 - Pick up ice, check in @ blast shelter, get work permit from API operator

0845 - At EP-1; begin sampling ponds

- Use decon'd dipper to obtain samples; decon w/ H_2O / Alconox solution, potable water rinse, then distilled rinse. EB-#1 collected from clean dipper prior to sampling
- Obtain water quality parameters while sampling

Location Western Refining | Gallup Date 3/5/14

Project / Client Qtrly GW + Pond Sampling

1330 - Most of pond sampling complete; wrap up for the time being; had all collected samples to ACT (western contractor) who will transport them to Hall Labs

1415 - Resume Sampling

1600 - Pond sampling complete; check in w/ Cheryl J.

1615 - Stake out grid locations for tomorrow's land farm sampling.

1700 - Lock up enviro-shed; depart refinery.

1730 - End of Day

Hoby Waldrop

Location Western Refining | Gallup Date 3/6/14

Project / Client Landfarm sampling

0730 - ARRIVE @ PLANT
- CHECK IN W/ JANICE + CHERYL
- GET EXCAVATION PERMIT

0800 - SIGN IN @ WWTU
GET WORK PERMIT

0812 - MEET W/ BACKHOE OPERATOR @ OLD LANDFARM

0820- COLLECT BLANKS
BEGIN EXCAVATIONS

COLLECTED BD @ OCD-04-3-6

COLLECTED MS + MSD @ OCD-01-3-6

1110 FINAL EXCAVATION BACKFILLED

Location WESTERN Date 3-7-14

Project / Client

0730	ARRIVE @ PLANT ✓ IN W/ CHERYL CALIBRATE METER LOAD SUPPLIES
0845	PROCURE WORK PERMIT
0853	ARRIVE @ WELL 29 COLLECTED FB GROUP #5 COLLECTED EQ BLANK OFF OF GAUGE PROBE
0900	COMMENCE PURGING
1200	COLLECT FB FOR GROUP #4 @ QW.1
1430	COMPLETE DAYS SAMPLING PACK SAMPLES / UNLOAD TRUCK
1500	HEAD TO LAB

Location WESTERN Date 3-10-14

Project / Client

0730	ARRIVE @ PLANT LOAD SUPPLIES ✓ IN W/ CHERYL
0800	OBTAIN PERMIT FROM WWT OPERATOR SIGN IN @ WWT PERFORM TAILGATE MTG
0830	COLLECT FB FOR GROUP 1 COMMENCE SAMPLING GROUP 1 OIL SUMP LDU <u>DRY</u>
0925	COLLECT FB FI GROUP 3 SAMPLE GROUP 3
1330	COMPLETE SAMPLING GROUP 3
1430	HEAD TO LAB W/ DAYS SAMPLES

Location WESTERN Date 3-11-14

Project / Client

0730 ARRIVE @ PLANT
LOAD SAMPLING SUPPLIES

0745 SIGN IN @ WWTV,
OBTAIN WORK PERMIT
TAILGATE SAFETY MTG

0830 ISH COLLECT FB #1 GROUP 2
SAMPLE GWM 1 (273 DRY)

CLEAN + STRAIGHTEN
UP ENVIRON SHEDS

1200 GAUGE NEW MKTE
WELLS

Location Date

Project / Client

TRIHYDRO CORPORATION

FIELD BORING LOG

Sheet _____ of _____ Sheets

Project & Project Number: 697-039-006	Date:
Project Location/Address: Gallup Refinery OCD Landfarms	Drilling Company:
Client: Western Refining	Driller:
Weather:	Rig Type / Method:
Logged by:	Sample Method (circle one): Direct Push Split Spoon Shelby Tube Other:
	Surface Elevation: Casing Elevation: GE Elevation:
Logger's Signature:	Equipment List:

BORING ID:

Boring Location: Central OCD Landfarm

Interval (ft bgs)	Texture - Grain Size Major	Texture - Grain Size Minor	Color Major	Color Modifier	Plasticity	Consistency	Moisture	Odor	PID Interval/Reading	Additional Comments (Odor descriptor, sheen, nodules, structure, vegitation, etc.)
6'	GVL - F M C Sand - F M C Silt Clay	Grvlly Sandy Silty Clayey	Black Gray - L M D Brn - L M D Red - L M D Other	Red Brown Gray Green Rust Yellow Other %	High Moderate Low Non --	Very Soft Soft Firm Hard Very Hard	Dry Moist Saturated -- --	Strong Moderate Slight None Noted --		OCD-04-3-6 + BD
6'	GVL - F M C Sand - F M C Silt Clay	Grvlly Sandy Silty Clayey	Black Gray - L M D Brn - L M D Red - L M D Other	Red Brown Gray Green Rust Yellow Other %	High Moderate Low Non --	Very Soft Soft Firm Hard Very Hard	Dry Moist Saturated -- --	Strong Moderate Slight None Noted --		OCD-02-3-6
5 1/2'	GVL - F M C Sand - F M C Silt Clay	Grvlly Sandy Silty Clayey	Black Gray - L M D Brn - L M D Red - L M D Other	Red Brown Gray Green Rust Yellow Other %	High Moderate Low Non --	Very Soft Soft Firm Hard Very Hard	Dry Moist Saturated -- --	Strong Moderate Slight None Noted --		OCD-01-3-6 + MS + MSD NATIVE @ ~ 4'
5 1/2'	GVL - F M C Sand - F M C Silt Clay	Grvlly Sandy Silty Clayey	Black Gray - L M D Brn - L M D Red - L M D Other	Red Brown Gray Green Rust Yellow Other %	High Moderate Low Non --	Very Soft Soft Firm Hard Very Hard	Dry Moist Saturated -- --	Strong Moderate Slight None Noted --		OCD-03-3-6
	GVL - F M C Sand - F M C Silt Clay	Grvlly Sandy Silty Clayey	Black Gray - L M D Brn - L M D Red - L M D Other	Red Brown Gray Green Rust Yellow Other %	High Moderate Low Non --	Very Soft Soft Firm Hard Very Hard	Dry Moist Saturated -- --	Strong Moderate Slight None Noted --		
	GVL - F M C Sand - F M C Silt Clay	Grvlly Sandy Silty Clayey	Black Gray - L M D Brn - L M D Red - L M D Other	Red Brown Gray Green Rust Yellow Other %	High Moderate Low Non --	Very Soft Soft Firm Hard Very Hard	Dry Moist Saturated -- --	Strong Moderate Slight None Noted --		
	GVL - F M C Sand - F M C Silt Clay	Grvlly Sandy Silty Clayey	Black Gray - L M D Brn - L M D Red - L M D Other	Red Brown Gray Green Rust Yellow Other %	High Moderate Low Non --	Very Soft Soft Firm Hard Very Hard	Dry Moist Saturated -- --	Strong Moderate Slight None Noted --		

Sample Collected: Yes

Sample ID:

Date:

Time:

Depth:

Number/Size of Containers:

Analysis to be Performed: TPH, BTEX, and Chlorides for VZ, Same for TZ + DRO, GRO, and NMAC 3103

Duplicate Collected:

Notes:

WESTERN REFINING - GALLUP REFINERY
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OW 29		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-2-14	(1)	1441	8.61	13.60	1.404	1.176	.92	83.0	-49.0
GAUGE TIME	1430	(2)	1446	7.35	13.09	1.411	1.186	.93	37.0	-65.9
DTB (feet) Depth to Bottom	51.03	(3)	1451	7.32	13.21	1.419	1.190	.93	22.0	-68.3
DEDICATED PUMP	✓	(4)	1518	7.53	13.73	1.450	1.200	.94	25.0	-69.6
DTW (feet) Depth to Water	18.95									
DTB - DTW	32.08									
Capicty per foot	.65									
1 Well Volume	20.85									
3 Well Volumes	62.55									
PURGE DATE	6-2-14									
PURGE TIME	1438									
SAMPLE DAY	6-2-14									
SAMPLE TIME	1522									
PUMP DEPTH	—									
DTW (feet) at end of Purging										

WEATHER CONDITIONS

Clear 86° F winds are 10mph out SW

WATER APPEARANCE

Clear
No odor

SAMPLE LOG

Pump freq @ 153 Hz
Purged 55 gals, that is all the purge barrel will hold
Barrel was labeled "Purge water only"

OW 14		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-3-14	(1)	817	7.38	14.84	1.887	1.530	1.22	51.0	-117.4
GAUGE TIME	802	(2)	822	7.22	13.84	1.833	1.514	1.20	30.0	-127.6
DTB (feet) Depth to Bottom	46.80	(3)	824	7.20	13.78	1.825	1.509	1.20	31.0	-131.0
DEDICATED PUMP	✓	(4)	827	7.23	13.88	1.829	1.510	1.20	20.0	-126.0
DTW (feet) Depth to Water	24.15									
DTB - DTW	22.65									
Capicity per foot	.65									
1 Well Volume	14.72									
3 Well Volumes	44.16									
PURGE DATE	6-3-14									
PURGE TIME	813									
SAMPLE DAY	6-3-14									
SAMPLE TIME	832									
PUMP DEPTH	—									
DTW (feet) at end of Purging	24.23									

WEATHER CONDITIONS

Clear 56°F and no winds

WATER APPEARANCE

Clear, ~~no~~ slight odor

SAMPLE LOG

Pump freq @ 181 Hz
Purged 45 gallons
Barrel was labeled "Purge water only"

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
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OW 13	
GAUGE DATE	6-3-14
GAUGE TIME	912
DTB (feet) Depth to Bottom	99.25
DEDICATED PUMP	✓
DTW (feet) Depth to Water	21.95
DTB - DTW	77.3
Capicty per foot	.65
1 Well Volume	50.25
3 Well Volumes	150.75
PURGE DATE	6-3-14
PURGE TIME	919
SAMPLE DAY	6-3-14
SAMPLE TIME	953
PUMP DEPTH	——
DTW (feet) at end of Purging	24.65

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	924	8.52	14.48	1.010	0.821	0.63	14.7	-57.5
(2)	934	8.39	13.77	0.985	0.815	0.63	25.1	-50.7
(3)	943	8.34	13.40	0.973	0.812	0.63	19.4	-48.4
(4)	950	8.35	13.36	0.971	0.811	0.63	16.5	-51.1

WEATHER CONDITIONS

Clear, 75°F winds are 13 mph out of the SW

WATER APPEARANCE

Clear, slight odor

SAMPLE LOG

Pump @ 300 Hz
Purged 150 gallons
Tote is already labeled "Purged well water only"

OW - 1	
GAUGE DATE	6-3-14
GAUGE TIME	1016
DTB (feet) Depth to Bottom	95.70
DEDICATED PUMP	✓
DTW (feet) Depth to Water	0.00
DTB - DTW	95.70
Capicity per foot	.65
1 Well Volume	62.21
3 Well Volumes	186.63
PURGE DATE	6-3-14
PURGE TIME	1022
SAMPLE DAY	6-3-14
SAMPLE TIME	1150
PUMP DEPTH	——
DTW (feet) at end of Purging	37.93

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1025	9.20	13.85	1.059	0.877	0.68	15.2	-56.6
(2)	1033	9.02	13.23	1.036	0.868	0.67	8.0	-48.8
(3)	1048	9.06	14.79	1.100	0.887	0.69	19.2	-49.5
(4)	1143	9.10	14.71	1.119	0.905	0.70	70.0	-58.0

WEATHER CONDITIONS

Clear, 79°F winds are ~~17~~ 21 mph out of the SW

WATER APPEARANCE

Clear

SAMPLE LOG

Pump @ 133 Hz, Pump does not seem to be in the Screened Interval
Purged 25 gallons, well had to be turned off several times to recharge to reach 25 gallons
Barrel is already labeled "Purge well water only", about 30 gallons was in Barrel upon
INSTRUMENTS USED: Casivual

Signature:

WESTERN REFINING - GALLUP REFINERY
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OW 30

GAUGE DATE	6-3-14
GAUGE TIME	1246
DTB (feet) Depth to Bottom	49.80
DEDICATED PUMP	✓
DTW (feet) Depth to Water	23.51
DTB - DTW	26.29
Capicty per foot	.65
1 Well Volume	17.08
3 Well Volumes	51.24
PURGE DATE	6-3-14
PURGE TIME	1249
SAMPLE DAY	6-3-14
SAMPLE TIME	1305
PUMP DEPTH	—
DTW (feet) at end of Purging	24.35

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1252	8.3	14.14	1.535	1.257	0.99	71.3	-50.0
(2)	1255	7.69	13.44	1.485	1.238	0.97	47.0	-42.0
(3)	1258	7.62	13.14	1.476	1.240	0.98	45.0	-40.3
(4)	1301	7.59	13.15	1.473	1.238	0.98	40.0	-39.1

WEATHER CONDITIONS

85°F, Clear, winds are 10 mph out SSW

WATER APPEARANCE

Clear, no odor, to cloudy and Red tint

SAMPLE LOG
motor @ 30 Hz
Purged 55 gallons
Purge barrels already labeled "well purge water only", about 40 gallons was in one barrel upon arrival

OW 10

GAUGE DATE	6-3-14
GAUGE TIME	1349
DTB (feet) Depth to Bottom	60.30
DEDICATED PUMP	✓
DTW (feet) Depth to Water	1.45
DTB - DTW	58.85
Capicity per foot	.65
1 Well Volume	38.25
3 Well Volumes	114.75
PURGE DATE	6-3-14
PURGE TIME	1353
SAMPLE DAY	6-3-14
SAMPLE TIME	1415
PUMP DEPTH	—
DTW (feet) at end of Purging	

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1357	8.45	14.33	2.027	1.654	1.32	45.9	-45.8
(2)	1403	7.75	13.76	6.044	5.000	4.28	34.7	-36.8
(3)	1410	7.68	13.60	6.089	5.059	4.33	37.1	-33.8
(4)	1413	7.66	13.48	5.964	4.967	4.25	51.9	-30.9

WEATHER CONDITIONS

85°F, Clear, winds are 10 mph out SSW

WATER APPEARANCE

Clear, NO odor

SAMPLE LOG
motor @ 30 Hz, Lock broke when opening
Purged 120 gallons
Tote was already labeled "Purged well water only"

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
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Oil Sump LDU		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-3-14	(1)								
GAUGE TIME	1507	(2)								
DTB (feet) Depth to Bottom	6.61	(3)								
DEDICATED PUMP	—									
DTW (feet) Depth to Water	6.60	WEATHER CONDITIONS								
DTB - DTW		86° F, Clear with winds 21 mph out of SW								
Capicty per foot	.65									
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

Grab Sample, well Dry

-No Sample

East LDU		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-3-14	(1)								
GAUGE TIME	1516	(2)								
DTB (feet) Depth to Bottom	12.50	(3)								
DEDICATED PUMP	—	(4)								
DTW (feet) Depth to Water	7.50	WEATHER CONDITIONS								
DTB - DTW		86° F, Clear with winds 21 mph out of SW								
Capicity per foot	.65									
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY	6-3-14	Yellow, Greasy								
SAMPLE TIME	1540									
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

Grab Sample, recovered about 1 Liter of Product before Sampling. Collected the product and disposed of on bundle pad

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
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West LD4

		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-3-14	(1)								
GAUGE TIME	1548	(2)								
DTB (feet) Depth to Bottom	12.45	(3)								
DEDICATED PUMP	—									
DTW (feet) Depth to Water	11.85									
DTB - DTW										
Capicty per foot	.65									
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME										
SAMPLE DAY	6-3-14									
SAMPLE TIME	1556									
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

86°F, Clear with winds 21 mph out of SW

WATER APPEARANCE

Gray with Bits in it

SAMPLE LOG

Grab Sample

NAPIS - 3

		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-4-14	(1)	802	8.39	19.27	4.030	2.936	2.42	59.9	-58.0
GAUGE TIME	818	(2)	820	8.16	18.91	3.953	2.914	2.40	56.5	-66.4
DTB (feet) Depth to Bottom	30.70	(3)								
DEDICATED PUMP	—	(4)								
DTW (feet) Depth to Water	8.85									
DTB - DTW	21.85									
Capicity per foot	.16									
1 Well Volume	3.49									
3 Well Volumes	10.47									
PURGE DATE	6-5-14									
PURGE TIME	800									
SAMPLE DAY	6-5-14									
SAMPLE TIME	0828									
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

60°F, Clear, winds are 9 mph out of NE

WATER APPEARANCE

Clear w/ pink tint

SAMPLE LOG Well bailed dry after 5 gallons

*Removed about 4" of water out of vault lid

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
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MKTF 27			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity ~~(uS)~~, (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-4-14	(1)	932	8.17	13.57	6.676	5.557	4.78	487.1	-42.2
GAUGE TIME	925	(2)	934	8.07	12.65	6.569	5.592	4.82	87.2	-36.5
DTB (feet) Depth to Bottom	14.70	(3)	936	7.47	12.16	6.498	5.594	4.82	42.0	-34.5
DEDICATED PUMP	No	(4)								
DTW (feet) Depth to Water	7.67									
DTB - DTW	7.03									
Capicty per foot	.16									
1 Well Volume	1.12									
3 Well Volumes	3.36									
PURGE DATE	6-4-14									
PURGE TIME	932									
SAMPLE DAY	6-4-14									
SAMPLE TIME	952									
PUMP DEPTH	NA									
DTW (feet) at end of Purging	13.87									

WEATHER CONDITIONS

69°F, Clear, winds 4mph at NNE

WATER APPEARANCE

Light brown, murky

No odor

SAMPLE LOG

Sampled but supposed to guage only

MKTF 24			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-4-14	(1)								
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom	30.50	(3)								
DEDICATED PUMP	NO	(4)								
DTW (feet) Depth to Water	21.50									
DTB - DTW	9									
Capicity per foot	.16									
1 Well Volume	1.44									
3 Well Volumes	4.32									
PURGE DATE										
PURGE TIME										
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

69°F, Clear winds 4mp at NNE

WATER APPEARANCE

SAMPLE LOG

Guage only

INSTRUMENTS USED:

Signature:

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MKTF 31		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-4-14	(1)								
GAUGE TIME	1024	(2)								
DTB (feet) Depth to Bottom	22.80	(3)								
DEDICATED PUMP	NO	(4)								
DTW (feet) Depth to Water	7.70	WEATHER CONDITIONS								
DTB - DTW										
Capicty per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

Guage only

MKTF 25		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-4-14	(1)								
GAUGE TIME	1029	(2)								
DTB (feet) Depth to Bottom	19.10	(3)								
DEDICATED PUMP	NO	(4)								
DTW (feet) Depth to Water	10.88	WEATHER CONDITIONS								
DTB - DTW										
Capicity per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

Guage only

INSTRUMENTS USED:

Signature:

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MKTF 28		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-4-14	(1)								
GAUGE TIME	1035	(2)								
DTB (feet) Depth to Bottom	16.15	(3)								
DEDICATED PUMP	NO									
DTW (feet) Depth to Water	11.80	WEATHER CONDITIONS								
DTB - DTW										
Capicty per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

Guage only

MKTF 29		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-4-14	(1)								
GAUGE TIME	1041	(2)								
DTB (feet) Depth to Bottom	22.80	(3)								
DEDICATED PUMP	NO	(4)								
DTW (feet) Depth to Water	2.14	WEATHER CONDITIONS								
DTB - DTW										
Capicity per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

Guage only

INSTRUMENTS USED:

Signature:

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MKTF 30			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-4-14	(1)								
GAUGE TIME	1045	(2)								
DTB (feet) Depth to Bottom	23.18	(3)								
DEDICATED PUMP	NO									
DTW (feet) Depth to Water	14.71		WEATHER CONDITIONS							
DTB - DTW										
Capicty per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME			WATER APPEARANCE							
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

Guage only

MKTF 26			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-4-14	(1)								
GAUGE TIME	1052	(2)								
DTB (feet) Depth to Bottom	17.15	(3)								
DEDICATED PUMP	NO	(4)								
DTW (feet) Depth to Water	8.63		WEATHER CONDITIONS							
DTB - DTW										
Capicity per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME			WATER APPEARANCE							
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG NO Lock on outer Casing

Guage only

INSTRUMENTS USED:

Signature:

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MKTF 32		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-4-14	(1)								
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom	27.74	(3)								
DEDICATED PUMP	NO									
DTW (feet) Depth to Water	16.52	WEATHER CONDITIONS								
DTB - DTW										
Capicty per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

Guage only

MKTF 34		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-4-14	(1)								
GAUGE TIME	1117	(2)								
DTB (feet) Depth to Bottom	27.70	(3)								
DEDICATED PUMP	NO	(4)								
DTW (feet) Depth to Water	18.59	WEATHER CONDITIONS								
DTB - DTW										
Capicity per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG No Lock on outer Casing

Guage only

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
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MKTF 33		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-4-14	(1)								
GAUGE TIME	1122	(2)								
DTB (feet) Depth to Bottom	33.20	(3)								
DEDICATED PUMP	NO									
DTW (feet) Depth to Water	23.40	WEATHER CONDITIONS								
DTB - DTW										
Capicty per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG No outer Casing or Concrete pad + Bollards

Guage only

MKTF 22		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-4-14	(1)								
GAUGE TIME	1125	(2)								
DTB (feet) Depth to Bottom	35.25	(3)								
DEDICATED PUMP	NO	(4)								
DTW (feet) Depth to Water	26.25	WEATHER CONDITIONS								
DTB - DTW										
Capicity per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG NO Lock on outer Casing

Guage only

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
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MKTF 04		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-4-14	(1)	~~15.7443~~	7.63	15.74	1.835	1.441	1.14	20.2	-124.6
GAUGE TIME	1457	(2)	1542	7.22	15.49	1.730	1.375	1.09	23.2	-118.1
DTB (feet) Depth to Bottom	22.22	(3)	1605	7.31	15.40	1.821	1.380	1.11	15.7	-120.8
DEDICATED PUMP	NO	(4)	1610	7.21	14.72	1.656	1.340	1.06	58.3	-91.2
DTW (feet) Depth to Water	10.99									
DTB - DTW	11.23									
Capicty per foot	.65									
1 Well Volume	7.30									
3 Well Volumes	21.9									
PURGE DATE	6-4-14									
PURGE TIME										
SAMPLE DAY	6-4-14									
SAMPLE TIME	1610									
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

85°F, Clear, winds 23 mph out of SW

WATER APPEARANCE

Slight turbidity, light brown.

SAMPLE LOG

Collected ~~BD-MKTF~~ BD-MKTF-060414

MKTF 03		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-4-14	(1)								
GAUGE TIME	1542	(2)								
DTB (feet) Depth to Bottom	18.50	(3)								
DEDICATED PUMP	NO	(4)								
DTW (feet) Depth to Water	9.32									
DTB - DTW	9.18									
Capicity per foot	.65									
1 Well Volume	5.96									
3 Well Volumes	17.88									
PURGE DATE	6-4-14									
PURGE TIME	1550									
SAMPLE DAY	—									
SAMPLE TIME	—									
PUMP DEPTH	—									
DTW (feet) at end of Purging	10.00 DTP 10.25 DTW									

WEATHER CONDITIONS

85°F, Clear, winds 23 mph out of SW

WATER APPEARANCE

Red color on the product + mossy grey to Chocolate color

Product at 8.85'

SAMPLE LOG

INSTRUMENTS USED:

Signature:

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MKTF - 14	
GAUGE DATE	6-4-14
GAUGE TIME	1141
DTB (feet) Depth to Bottom	17.47
DEDICATED PUMP	NO
DTW (feet) Depth to Water	8.73
DTB - DTW	8.74
Capicty per foot	.65
1 Well Volume	5.68
3 Well Volumes	17.04
PURGE DATE	6-4-14
PURGE TIME	
SAMPLE DAY	—
SAMPLE TIME	
PUMP DEPTH	
DTW (feet) at end of Purging	8.25 DTP 8.75 DTW

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)								
(2)								
(3)								
(4)								

WEATHER CONDITIONS

78°F, Clear with winds 3 mph out of SSE

WATER APPEARANCE

Purple to dark brown color
Hydrocarbon odor

Product @ 7.91 ft

SAMPLE LOG
Purged 17 gallons of GW
Purged .5 gallons of product
Did not collect Sample

MKTF 13	
GAUGE DATE	6-4-14
GAUGE TIME	1235
DTB (feet) Depth to Bottom	21.50
DEDICATED PUMP	NO
DTW (feet) Depth to Water	15.25
DTB - DTW	~~4.486.9~~ .65
Capicity per foot	.65
1 Well Volume	4.49
3 Well Volumes	13.47
PURGE DATE	6-4-14
PURGE TIME	
SAMPLE DAY	—
SAMPLE TIME	—
PUMP DEPTH	
DTW (feet) at end of Purging	16.6

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)								
(2)								
(3)								
(4)								

WEATHER CONDITIONS

78°F Clear with winds 3 mph out of SSE

WATER APPEARANCE

Purple to dark brown with gold specules in it. Hydrocarbon odor

Product @ 14.6

SAMPLE LOG Purged 14 gallons of GW
Purged .43 gallons of Product
Did not collect Sample

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
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MKTF-12		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6/4/14	(1)								
GAUGE TIME	1300	(2)								
DTB (feet) Depth to Bottom	25.37	(3)								
DEDICATED PUMP	NO	(4)								
DTW (feet) Depth to Water	19.82									
DTB - DTW	5.55									
Capicty per foot	0.65									
1 Well Volume	3.61									
3 Well Volumes	10.80									
PURGE DATE	6/4/14									
PURGE TIME	—									
SAMPLE DAY	NA									
SAMPLE TIME	NA									
PUMP DEPTH	NA									
DTW (feet) at end of Purging	24.50									

WEATHER CONDITIONS

85°F, Clear with winds 13 mph out of SW

WATER APPEARANCE

dark brown, silty, product appearance.

.08' product thickness

SAMPLE LOG

Bailed dry @ 7 gallons

MKTF 5		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-4-14	(1)								
GAUGE TIME	1439	(2)								
DTB (feet) Depth to Bottom	17.74	(3)								
DEDICATED PUMP	NO	(4)								
DTW (feet) Depth to Water	15.65									
DTB - DTW	2.09									
Capicity per foot	.65									
1 Well Volume	1.36									
3 Well Volumes	4.08									
PURGE DATE										
PURGE TIME										
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

85°F, Clear with winds 13 mph out SW

WATER APPEARANCE

Yellow colored product to Brown GW

Product @ 15.60

SAMPLE LOG

Bailed dry after 2 gallons

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY

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MKTF - 23			TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-4-14	(1)								
GAUGE TIME	1129	(2)								
DTB (feet) Depth to Bottom	20.36	(3)								
DEDICATED PUMP	NO									
DTW (feet) Depth to Water	14.85		WEATHER CONDITIONS							
DTB - DTW										
Capicty per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME			WATER APPEARANCE							
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG No lock on outer Casing

Guage only

MKTF 20			TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-4-14	(1)								
GAUGE TIME	1719	(2)								
DTB (feet) Depth to Bottom	9.55	(3)								
DEDICATED PUMP	NO	(4)								
DTW (feet) Depth to Water	7.91		WEATHER CONDITIONS							
DTB - DTW										
Capicity per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME			WATER APPEARANCE							
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

Guage only

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY

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MKTF 21			TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-4-14	(1)								
GAUGE TIME	1724	(2)								
DTB (feet) Depth to Bottom	8.77	(3)								
DEDICATED PUMP	NO									
DTW (feet) Depth to Water	7.68		WEATHER CONDITIONS							
DTB - DTW										
Capicty per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME			WATER APPEARANCE							
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

Guage only

MKTF 19			TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-4-14	(1)								
GAUGE TIME	1741	(2)								
DTB (feet) Depth to Bottom	16.80	(3)								
DEDICATED PUMP	NO	(4)								
DTW (feet) Depth to Water	11.91		WEATHER CONDITIONS							
DTB - DTW										
Capicity per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME			WATER APPEARANCE							
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

Guage only

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
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MKTF 16

GAUGE DATE	6/5/14
GAUGE TIME	1605
DTB (feet) Depth to Bottom	14.07
DEDICATED PUMP	NO
DTW (feet) Depth to Water	10.52
DTB - DTW	3.55
Capicty per foot	0.16
1 Well Volume	0.568
3 Well Volumes	1.70
PURGE DATE	6/5/14
PURGE TIME	1610
SAMPLE DAY	6/5/14
SAMPLE TIME	1635
PUMP DEPTH	
DTW (feet) at end of Purging	

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1610	7.78	21.67	3.409	2.371	1.93	22.7	-177.4
(2)	1618	7.50	20.67	3.339	2.363	1.92	23.5	-155.5
(3)	1622	7.38	20.91	3.404	2.391	1.94	24.0	-151.7
	1628	7.33	20.29	3.394	2.423	1.96	20.0	-149.9

WEATHER CONDITIONS

Sunny, 85° wind 10 mph from west

WATER APPEARANCE

Dark Grey to black, low turbidity, hydrocarbon Smell.

SAMPLE LOG

Does not recharge very fast

MKTF 09

GAUGE DATE	6-5-14
GAUGE TIME	1610
DTB (feet) Depth to Bottom	22.85
DEDICATED PUMP	NO
DTW (feet) Depth to Water	14.9
DTB - DTW	7.95
Capicity per foot	.65
1 Well Volume	5.16
3 Well Volumes	15.48
PURGE DATE	6-5-14
PURGE TIME	1621
SAMPLE DAY	6-5-14
SAMPLE TIME	1730
PUMP DEPTH	—
DTW (feet) at end of Purging	16.7

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1636	7.42	14.26	1.531	1.243	.98	14.8	-120.1
(2)	1657	7.69	14.17	1.532	1.265	1.00	80.1	-156.6
(3)	1715	7.86	13.25	1.506	1.263	1.00	24.9	-156.4
(4)	1721	7.53	12.35	1.477	1.266	1.00	22.0	-131.7

WEATHER CONDITIONS

85°F, Clear winds 15 mph out W

WATER APPEARANCE

Clear to Cloudy

SAMPLE LOG

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
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MKTF 15	
GAUGE DATE	6/5/14
GAUGE TIME	1421
DTB (feet) Depth to Bottom	19.48
DEDICATED PUMP	NO
DTW (feet) Depth to Water	13.81
DTB - DTW	5.67
Capicty per foot	0.16
1 Well Volume	0.9072
3 Well Volumes	2.72
PURGE DATE	6/5/14
PURGE TIME	1430
SAMPLE DAY	6/5/14
SAMPLE TIME	1500
PUMP DEPTH	—
DTW (feet) at end of Purging	16.81

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1430	6.90	16.51	16.21	10.02	10.50	45.1	-175.2
(2)	1435	6.91	16.07	14.77	10.12	10.24	40.7	-150.5
(3)	1445	7.10	15.99	14.79	10.30	10.98	29.2	-169.4
	1450	6.70	15.51	14.11	11.20	10.18	19.4	-162.7

WEATHER CONDITIONS

Sunny, 85° wind 10-15mph from west.

WATER APPEARANCE

dark brown, slight turbidity Purged 3 gallons.

SAMPLE LOG

Purged 3 gallons

MKTF 11	
GAUGE DATE	6-5-14
GAUGE TIME	1352
DTB (feet) Depth to Bottom	18.4
DEDICATED PUMP	NO
DTW (feet) Depth to Water	9.20
DTB - DTW	9.20
Capicity per foot	.65
1 Well Volume	5.98
3 Well Volumes	17.94
PURGE DATE	6-5-14
PURGE TIME	1407
SAMPLE DAY	6-5-14
SAMPLE TIME	1515
PUMP DEPTH	—
DTW (feet) at end of Purging	9.2

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (~~uS~~), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1423	7.31	15.71	2.601	2.652	1.66	20.8	-156.6
(2)	1441	7.61	15.35	2.530	2.017	1.63	22.4	-189.1
(3)	1459	7.68	16.81	2.691	2.075	1.68	52.0	-159.4
(4)	1506	7.53	14.85	2.481	2.001	1.62	23.4	-150.8

WEATHER CONDITIONS

85°F, Clear, winds 15mph out W

WATER APPEARANCE

Grey to Chocolate color

SAMPLE LOG Well recharged quickly

Purged 18 gallons

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

GWM-3			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-5-14	(1)								
GAUGE TIME	932	(2)								
DTB (feet) Depth to Bottom	18.05	(3)								
DEDICATED PUMP	NO									
DTW (feet) Depth to Water	Dry		WEATHER CONDITIONS							
DTB - DTW										
Capicty per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME			WATER APPEARANCE							
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

Well is Dry

OAPIS-1			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-5-14	(1)	1015	7.65	16.05	5.825	4.537	3.84	17.4	-136.4
GAUGE TIME	1000	(2)	1024	7.14	15.33	5.729	4.567	3.88	12.5	-119.9
DTB (feet) Depth to Bottom	28.55	(3)	1030	7.05	15.82	5.831	4.583	3.89	18.0	-113.0
DEDICATED PUMP	NO	(4)								
DTW (feet) Depth to Water	11.75		WEATHER CONDITIONS							
DTB - DTW	16.8									
Capicity per foot	.16									
1 Well Volume	2.68									
3 Well Volumes	8.04									
PURGE DATE	6-5-14									
PURGE TIME	1005		WATER APPEARANCE							
SAMPLE DAY	6/5/14									
SAMPLE TIME	1030									
PUMP DEPTH	—									
DTW (feet) at end of Purging	26.85									

SAMPLE LOG

Well was going dry after 6.5 gallons

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

GWM-1		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-5-14	(1)	1102	8.23	12.70	4.546	4.000	3.36	46.4	-140.3
GAUGE TIME	925	(2)	1106	7.48	12.44	4.565	3.885	3.25	30.1	-124.9
DTB (feet) Depth to Bottom	26.47	(3)	1110	7.24	12.61	4.537	3.843	3.22	24.4	-120.1
DEDICATED PUMP	NO									
DTW (feet) Depth to Water	19.10	WEATHER CONDITIONS								
DTB - DTW	7.37									
Capicty per foot	.16									
1 Well Volume	1.17									
3 Well Volumes	3.51									
PURGE DATE	6-5-14									
PURGE TIME	1100	WATER APPEARANCE								
SAMPLE DAY	6-5-14									
SAMPLE TIME	1112									
PUMP DEPTH										
DTW (feet) at end of Purging	23.84									

SAMPLE LOG

Purged ~~3.5~~ 3.0 gallons and indicated it was going dry

GWM-2		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-5-14	(1)								
GAUGE TIME	923	(2)								
DTB (feet) Depth to Bottom	19.05	(3)								
DEDICATED PUMP	NO	(4)								
DTW (feet) Depth to Water	Dry	WEATHER CONDITIONS								
DTB - DTW										
Capicity per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

Well is Dry

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

NAPIS - 2			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-5-14	(1)	1144	8.39	22.06	2.188	1.502	1.19	37.1	-151.7
GAUGE TIME	1138	(2)	1146	7.34	22.03	2.126	1.465	1.16	6.3	-125.5
DTB (feet) Depth to Bottom	13.80	(3)								
DEDICATED PUMP	NO									
DTW (feet) Depth to Water	8.20		**WEATHER CONDITIONS**							
DTB - DTW	5.6									
Capicty per foot	.16									
1 Well Volume	~~.10~~ .89									
3 Well Volumes	2.68									
PURGE DATE	6-5-14									
PURGE TIME	1135		**WATER APPEARANCE**							
SAMPLE DAY	6/5/14									
SAMPLE TIME	1146									
PUMP DEPTH										
DTW (feet) at end of Purging	9.0									

SAMPLE LOG Well not producing after 1.0 gallons.

Removed 4" of water off of well cap in the well vault

MKTF 10			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-5-14	(1)	1403	7.14	18.07	3.722	2.748	2.25	35.2	-171.2
GAUGE TIME	1343	(2)								
DTB (feet) Depth to Bottom	15.70	(3)								
DEDICATED PUMP	NO	(4)								
DTW (feet) Depth to Water	8.90		**WEATHER CONDITIONS**							
DTB - DTW	6.80									
Capicity per foot	.65									
1 Well Volume	4.42									
3 Well Volumes	13.26									
PURGE DATE	6/5/14									
PURGE TIME	1400		**WATER APPEARANCE**							
SAMPLE DAY	6/5/14		Dark brown, high turbidity							
SAMPLE TIME	1430									
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

Well bailed dry after 5.5 gallons purged.
Did not collect full bottle set due to well going dry

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

KA - 3			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-5-14	(1)	815	8.12	20.89	1.864	1.309	1.03	31.1	-65.9
GAUGE TIME	805	(2)	823	8.08	20.78	1.78	1.256	.98	35.7	-62.9
DTB (feet) Depth to Bottom	22.4	(3)	831	8.04	20.57	1.773	1.259	.99	50.9	-59.2
DEDICATED PUMP	NO	4)	835	7.87	20.61	1.777	1.261	.99	36.5	-61.8
DTW (feet) Depth to Water	7.95									
DTB - DTW	14.45									
Capicty per foot	.16									
1 Well Volume	2.31									
3 Well Volumes	6.93									
PURGE DATE	6-5-14									
PURGE TIME	807									
SAMPLE DAY	6-5-14									
SAMPLE TIME	840									
PUMP DEPTH	—									
DTW (feet) at end of Purging										

WEATHER CONDITIONS

67°F, Clear + No wind

WATER APPEARANCE

Clear to light brown

SAMPLE LOG ☆ Removed about 4" of water out of well
Purged 7.0 gallons
Collected - BD-NAPIS-060514
Did not record DTW after sampling. A welding crew needed to get in where we are at

NAPIS-1			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-5-14	(1)	919	8.21	16.97	1.604	1.230	0.97	31.2	-71.6
GAUGE TIME	914	(2)	925	7.72	16.44	1.578	1.225	0.96	17.6	-63.5
DTB (feet) Depth to Bottom	13.77	(3)	928	7.60	15.74	1.499	1.230	0.99	19.3	-60.2
DEDICATED PUMP	NO	(4)	932	7.56	17.41	1.445	1.249	.98	28.2	-58.9
DTW (feet) Depth to Water	6.86									
DTB - DTW	6.91									
Capicity per foot	.16									
1 Well Volume	1.11									
3 Well Volumes	3.33									
PURGE DATE	6-5-14									
PURGE TIME	919									
SAMPLE DAY	6-5-14									
SAMPLE TIME	932									
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

67°F, Clear + No wind

WATER APPEARANCE

Clear, No odor

SAMPLE LOG

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

MKTF-02			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6/6/14	(1)	1045	8.34	12.33	2.712	2.325	1.89	32.5	-99.5
GAUGE TIME	1035	(2)	1100	7.91	12.77	3.134	2.65	2.18	27.5	-112.2
DTB (feet) Depth to Bottom	20.25	(3)	1115	7.75	11.55	2.843	2.512	2.05	25.2	-76.6
DEDICATED PUMP	NO									
DTW (feet) Depth to Water	7.60									
DTB - DTW	12.65									
Capicty per foot	~~0.70~~ 0.65									
1 Well Volume	8.22									
3 Well Volumes	24.67									
PURGE DATE	6/6/14									
PURGE TIME	1045									
SAMPLE DAY	6/6/14									
SAMPLE TIME	1130									
PUMP DEPTH	—									
DTW (feet) at end of Purging	16.79									

WEATHER CONDITIONS

Sunny, 75° wind from west at 10mph

WATER APPEARANCE

Slightly cloudy, clear, no hydrocarbon detected.

SAMPLE LOG Well going dry after ~15 gallons - sample taken *

*-Note recovery wells were being pumped within 50' during purge.

			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)								
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP		(4)								
DTW (feet) Depth to Water										
DTB - DTW										
Capicity per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME										
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

WATER APPEARANCE

SAMPLE LOG

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

MKTF 17

GAUGE DATE	6-6-14
GAUGE TIME	954
DTB (feet) Depth to Bottom	23.25
DEDICATED PUMP	NO
DTW (feet) Depth to Water	11.28
DTB - DTW	11.97
Capicty per foot	.16
1 Well Volume	1.92
3 Well Volumes	5.75
PURGE DATE	6-6-14
PURGE TIME	~~1015~~ 957
SAMPLE DAY	6/6/14
SAMPLE TIME	1015
PUMP DEPTH	
DTW (feet) at end of Purging	

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1007	7.35	13.56	1.225	1.017	0.79	50.1	-138.1
(2)								
(3)								

WEATHER CONDITIONS

Sunny, 75° winds from West at 5 mph

WATER APPEARANCE

Reddish Grey, high turbidity

SAMPLE LOG

Well bailed dry @ 2 gallons - Sample collected

Did not Collect full bottle set

MKTF - 01

GAUGE DATE	6-6-14
GAUGE TIME	1035
DTB (feet) Depth to Bottom	16.90
DEDICATED PUMP	NO
DTW (feet) Depth to Water	7.0
DTB - DTW	9.9
Capicity per foot	.65
1 Well Volume	6.43
3 Well Volumes	19.3
PURGE DATE	6-6-14
PURGE TIME	1050
SAMPLE DAY	6-6-14
SAMPLE TIME	1135
PUMP DEPTH	
DTW (feet) at end of Purging	

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity ~~(uS)~~, (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1058	8.09	12.68	1.908	1.622	1.29	22.9	-148.1
(2)	1110	7.76	12.59	1.915	1.631	1.30	15.7	-130.9
(3)	1117	7.61	12.16	1.899	1.635	1.31	19.2	-128.8
(4)	1126	7.88	12.32	1.904	1.633	1.30	10.4	-142.7

WEATHER CONDITIONS

Sunny, Clear winds 5 mph / W

WATER APPEARANCE

Strong odor
Gold flecks in it
Red tint, to chocolate milk

SAMPLE LOG

Purged 20 gallons

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

MKTF 06

GAUGE DATE	6-6-14
GAUGE TIME	843
DTB (feet) Depth to Bottom	23.8
DEDICATED PUMP	NO
DTW (feet) Depth to Water	14.0
DTB - DTW	9.8
Capicty per foot	.65
1 Well Volume	6.37
3 Well Volumes	19.11
PURGE DATE	6-6-14
PURGE TIME	850
SAMPLE DAY	
SAMPLE TIME	
PUMP DEPTH	
DTW (feet) at end of Purging	Dry

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)								
(2)								
(3)								

WEATHER CONDITIONS

Water level meter wouldnt give a prominate reading, but gave a slight reading at 14'

54°F, clear and No winds

WATER APPEARANCE

Water level meter did not indicate any product. But there was product with a yellow sheen the whole time bailing until went dry after 6 gallons

Strong odor

SAMPLE LOG Bailed dry at 910 after 6 gallons

Did Not Sample

MKTF 18

GAUGE DATE	6-6-14
GAUGE TIME	845
DTB (feet) Depth to Bottom	24.9
DEDICATED PUMP	NO
DTW (feet) Depth to Water	8.45
DTB - DTW	16.45
Capicity per foot	.16
1 Well Volume	2.632
3 Well Volumes	7.90
PURGE DATE	6-6-14
PURGE TIME	905
SAMPLE DAY	6-6-14
SAMPLE TIME	920
PUMP DEPTH	—
DTW (feet) at end of Purging	

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	907	6.59	15.94	1.491	1.131	~~1.23~~ .93	15.3	-157.2
(2)	915	7.15	17.43	1.502	1.141	.89	12.7	-175.7
(3)								
(4)								

WEATHER CONDITIONS

54°F, clear and no winds

WATER APPEARANCE

Light Brown

SAMPLE LOG Bailed 2.5 gallons and well indicated it was going dry and not recharging very fast, So took Sample

INSTRUMENTS USED: Did not collect Full bottle set due to well going dry

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

MKTF 08		TEST PARAMATERS	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-6-14	(1)								
GAUGE TIME	7:25	(2)								
DTB (feet) Depth to Bottom	22	(3)								
DEDICATED PUMP	NO									
DTW (feet) Depth to Water	15									
DTB - DTW	7									
Capicty per foot	.65									
1 Well Volume	4.55									
3 Well Volumes	13.65									
PURGE DATE	6-6-14									
PURGE TIME	734									
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging	Dry									

WEATHER CONDITIONS

43°f, Clear and no wind

WATER APPEARANCE

Product was black w/yellow Sheen then GW was chocolate brown

Product @ 14.3' Strong odor

SAMPLE LOG Bassed for purge water left here

Bailed dry after 10 gallons

MKTF 07		TEST PARAMATERS	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-6-14	(1)								
GAUGE TIME	756	(2)								
DTB (feet) Depth to Bottom	17.85	(3)								
DEDICATED PUMP	NO	(4)								
DTW (feet) Depth to Water	13.1									
DTB - DTW	4.75									
Capicity per foot	.65									
1 Well Volume	3.08									
3 Well Volumes	9.26									
PURGE DATE	6-6-14									
PURGE TIME	810									
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging	Dry									

WEATHER CONDITIONS

50°f, Clear and No wind

WATER APPEARANCE

Strong odor

Jet black w/yellow Sheen

SAMPLE LOG
Water level meter didnt read any product. After pulling first several bailers there was definite product in the well. Did not Sample, Bailed dry after 6.5 gallons

INSTRUMENTS USED:

Signature:

9.0
7.97

72.9 42.64

WELL INFORMATION

WELL	DEDICATED PUMP	TOTAL DEPTH	DTW	WATER LEVEL	CAPACITY PER FOOT	2X	3X	SCREENED INTERVAL
BW-1A	N	42.63	~~Dry 42.64~~	NA	0.163	NA	NA	30-35
BW-1B	N	72.9	~~Dry 12.97~~	NA	0.163	NA	NA	54.6-64.6
BW-1C	N	141.89	12.97	128.92	0.163	42	63	
BW-2A	Y	67.57	32.25	35.32	0.163	11.5	17.3	
BW-2B	Y	92.26	28.15	63.85	0.163	20.8	31.2	
BW-2C	N	152.84	20.70	132.14	0.163	42	63	139.5-149.5
BW-3A	N	52.35	Dry 52.35	NA	0.163	NA	NA	39.5-49.5
BW-3B	Y	69.4	33.25	36.15	0.163	11.8	17.7	
BW-3C	N	154.55	7.83	146.72	0.163	48	71.7	144.5-154.5
GWM-1	N	26.2	19.56	6.64	0.163	2.2	NA	
GWM-2	N	18.81	19.01	NA	0.163	NA	NA	
GWM-3	N	17.8	18.05	NA	0.163	NA	NA	
OAPIS-1	N	26	11.11	14.89	0.163	4.8	NA	
MW-1	Y	130.83	7.11	123.73	1.02	252.4	378.61	
MW-2	Y	137.48	9.20	128.28	1.02	261.7	392.5	
MW-4	Y	121.72	7.68	114.04	1.02	232.6	348.9	
MW-5	Y	130.83	11.38	119.45	0.74	176.8	265.2	
SMW-2	N	52.8	25.10	27.7	0.163	9.0	13.5	34.31-54.31
SMW-4	Y	69.68	29.10	40.58	0.163	13	19.8	
OW-1	Y	94.55	0.01	94.54	0.74	139.9	209.9	
OW-10	Y	60.33	2.33	58	0.74	85	128	
OW-11	N	65.79	20.11	45.68	0.74	67.6	101.4	43-65
OW-12	N	128.85	47.78	81.07	0.74	120	180	117.8-137.8
OW-13	Y	99.15	22.61	76.54	0.74	113	170	
OW-14	Y	46.52	24.40	22.12	0.74	32.7	49.1	
OW-29	Y	51.08	19.35	31.73	0.74	63.5	95.19	
OW-30	Y	49.90	23.84	26.06	0.74	38	58	
OW-50	N	64.00	16.86	47.14	0.163	15.4	23	48-63
OW-52	N	77.74	15.80	61.94	0.163	20.19	30.3	64-79
NAPIS 1	N	13.53	6.85	6.68	0.163	2.2	3.3	
NAPIS 2	N	13.61	8.10	5.51	0.163	1.8	2.7	
NAPIS 3	N	30.42	7.97	22.45	0.163	7	10	
KA-3	N	23.20	9.00	14.2	0.163	4.6	6.9	
RW-1	N	43.04	~~32.86~~ 28.05	NA	0.74	NA	NA	
RW-2	N	39.8	~~Dry 40.0~~ 23.95	15.85	0.74	23.5	35	
RW-5	N	39.59	28.81	10.78	0.74	16	24	
RW-6	N	40.9	28.89	12.01	0.74	17.8	26.6	

Dry

Move Drums

~~Lock broken~~

Dry

Need tote 350 gal

Need tote

More Drums only 2

Need more drums

4 5 2 1

28.05 DTP

23.95

Need drums

.46

Notes:

BW-1A, 1B, 1C - All wells had the casing extended - new DTB measurements (8-2014)

BW-1C - Removed dedicated pump - pipe casing extended - will re-order replacement.

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

X Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) Trihydro Format

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

2014 ANNUAL GW

Project #:

MKTF WELLS

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8260B + MTBE	8015B extended	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Air Bubbles (Y or N)
9/15/14	0945	H_2O	MKTF-04				X	X	X	X	X	
9/15/14	1030	H_2O	MKTF-11				X	X	X	X	X	
9/17/14	0940	H_2O	MKTF-15				X	X	X	X	X	
9/17/14	1100	H_2O	MKTF-16				X	X	X	X	X	
9/18/14	0815	H_2O	MKTF-10				X	X	X	X	X	
9/18/14	0900	H_2O	MKTF-9				X	X	X	X	X	
9/18/14	0930	H_2O	MKTF-2				X	X	X	X	X	
9/18/14	1440	H_2O	MKTF-18				X	X	X	X	X	
9/18/14	1520	H_2O	MKTF-17				X	X	X	X	X	

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/19/14	1245	[signature]	[signature]	09/19/14	1245
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

Page 2 of 2

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

? Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

2041 ANNUAL GW

Project #:

RW-1,-2,-5,-6

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: X Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8260 + MTBE	8015B extended	8270 + phenols	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	Major Cations/Anions							Air Bubbles (Y or N)
~~9/18/14~~																			
9/18/14	1050	H_2O	RW-6				X	X	X	X	X								
9/18/14	1140	H_2O	RW-5				X	X	X	X	X								
9/18/14	1215	H_2O	RW-2				X	X	X	X	X								
9/18/14	1500	H_2O	RW-1																
9/18/14	1235	H_2O	FB-Group8-9/18/14																
9/17/14	1830	H_2O	OW-30				X	X	X	X	X	X							
9/17/14	1005	H_2O	BW-2A						X										
9/17/14	1000	H_2O	BW-2B						X										

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/19/14	1245	[signature]	[signature]	09/19/14	1245
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

2 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard ☐ Rush

Project Name:

2041 ANNUAL GW

Project #:

MW-1,-2,-4,-5

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8260 + MTBE	8015B extended	8270 + phenols	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	Major Cations/Anions	Cyanide							Air Bubbles (Y or N)
9/16/14	1615	H_2O	MW-1				X	X	X	X	X	X	X							
9/16/14	1900	H_2O	MW-2				X	X	X	X	X	X	X							
9/17/14	1140	H_2O	MW-5				X	X	X	X	X	X	X							
9/17/14	1515	H_2O	MW-4																	
9/19/14	0840	H_2O	EB-#2-9/19/14				X													
9/19/14	0830	H_2O	EB-#1-9/19/14				X													
9/16/14	1700	H_2O	FB-Group10-9/16/14				X													

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/19/14	1245			09/19/14	1245
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

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Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

X Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) Trihydro Format

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

2014 ANNUAL GW

Project #:

MKTF WELLS

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8260B + MTBE	8015B extended	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	UCC's										Air Bubbles (Y or N)
		09/19/14																				
		AT																				
9/19/14		AT	TB-~~#5~~									X										
9/19/14			TB-~~#4~~									X										
9/19/14			TB-~~#3~~									X										
9/19/14			TB-~~#2~~									X										
9/19/14		H_2O	TB-~~#1~~									X										
9/15/14		H_2O	ISD-MKTF-9/15/14						X													
9/15/14	0945	H_2O	FB-Group2-9/15/14				X															

Date:	Time:	Relinquished by:	Received by:	Date Time
9/19/14	1245	[signature]	[signature]	09/19/14 1245
Date:	Time:	Relinquished by:	Received by:	Date Time

Remarks:

Page 1 of 2

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

2 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

2041 ANNUAL GW

Project #:

BW Wells

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8260 + MTBE	8270 + phenols	WQCC Metals - Total	WQCC Metals - Dissolved, filtered	Major cations/anions								Air Bubbles (Y or N)
~~9/9/14~~	~~1610~~	~~H_2O~~	~~BW-2B~~ 13S																
9/9/14	1610	H_2O	BW-2B				X	X	X	X	X								
9/9/14	1210	H_2O	BW-2A				X	X	X	X	X								
9/10/14	1345	H_2O	BW-1C				X	X	X	X	X								
9/10/14	1540	H_2O	BW-2C				X	X	X	X	X								
~~9/10/14~~	~~0805~~	~~H_2O~~	~~PW-3~~				~~X~~	~~X~~	~~X~~	~~X~~									13S
9/10/14	1650	H_2O	BW-3C				X	X	X	X	X								
9/10/14	1740	H_2O	BW-3B				X	X	X	X	X								
9/10/14	1210	H_2O	FB-Group9-9/11/14				X												

Date:	Time:	Relinquished by:	Received by:	Date Time
9/16/14	1450			9-16-14/1450
Date:	Time:	Relinquished by:	Received by:	Date Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

☐ Standard ☐ **Rush**_____

Project Name:

2014 ANNUAL GW

Project #:

OW-13,-14,-29,-30

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8260 + MTBE	8015B extended	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major cations/anions										Air Bubbles (Y or N)
		~~H_2O~~																				
9/15/14	1545	H_2O	OW-29				X	X	X	X	X	X										
9/15/14	1645	H_2O	OW-14				X	X	X	X	X	X										
9/15/14	1835	H_2O	OW-13				X	X	X	X	X	X										

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/16/14	1450	[signature]	[signature]	9/16/14	1450
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

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Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

? Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

2041 ANNUAL GW

Project #:

OW-50,-52

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8260 + MTBE	8015B extended	8270 + phenols	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	Major Cations/Anions								Air Bubbles (Y or N)
9/15/14	1245	H_2O	OW-52				X	X	X	X	X	X								
9/15/14	1335	H_2O	OW-50				X	X	X	X	X	X								
9/15/14	1135	H_2O	FB-Group3-9/15/14				X													

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/16/14	1450	[signature]	[signature]	9/16/14	1450
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

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Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

? Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ **Rush**_____

Project Name:

2041 ANNUAL GW

Project #:

GWM-1,-2,-3,OAPIS-1

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8260 + MTBE	8015B extended	8270 + phenols	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	Major Cations/Anions	Cyanide							Air Bubbles (Y or N)
9/12/14	0250	H_2O	GWM-2				X	X	X	X	X	X								
9/12/14	0805	H_2O	OAPIS-2				X	X	X	X	X	X	X							
9/12/14	0815	H_2O	FB-Group 4-9/12/14				X													

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/16/14	1450	[signature]	[signature]	9/16/14	1450
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

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Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

2014 ANNUAL GW

Project #:

OW-1,-10,-11,-12

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8260 + MTBE	8015B extended	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major Cations/Anions									Air Bubbles (Y or N)
9/11/14	1600	H_2O	OW-1				X	X	X	X	X	X									
9/12/14	0935	H_2O	OW-10				X	X	X	X	X	X									
9/12/14	1100	H_2O	OW-12				X	X	X	X	X	X									
9/12/14	1220	H_2O	OW-11				X	X	X	X	X	X									
9/11/14	1815	H_2O	FB-Group 1-9/11/14				X														

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/16/14	1450	[signature]	[signature]	9/16/14	1450
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

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Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

? Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

2041 ANNUAL GW

Project #:

NAPIS-1,-2,-3,KA-3

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8260 + MTBE	8015B extended	8270 + phenols	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	Major Cations/Anions								Air Bubbles (Y or N)
9/11/14	0950	H_2O	KA-3				X	X	X	X	X	X								
9/11/14	1015	H_2O	NAPIS-1				X	X	X	X	X	X								
9/11/14	1120	H_2O	NAPIS-3				X	X	X	X	X	X								
9/11/14	1135	H_2O	NAPIS-2				X	X	X	X	X	X								
9/11/14		H_2O	BD-NAPIS-9/11/14						X											

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/16/14	1450	[signature]	[signature]	9-16-14	1450
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

? Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ **Rush**_____

Project Name:

2041 ANNUAL GW

Project #:

East/West/Oil Sump LDUs

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8021 + MTBE	8015B extended	WQCC Metals - Total	WQCC Metals - Dissolved, Filtered									Air Bubbles (Y or N)
9/11/14	0945	H_2O	West LDU				X	X	X	X									
9/11/14	1200	H_2O	FB-Group6-9/11/14				X												
9/11/14	1210	H_2O	FB-Group5-9/11/14				X												

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/16/14	1450			9/16/14	1450
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

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Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

2 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ **Rush**_____

Project Name:

2041 ANNUAL GW

Project #:

SMW-2,-4

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8260 + MTBE	8015B extended	8270 + phenols	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	Major Cations/Anions	Cyanide							Air Bubbles (Y or N)
9/11/14	1510	H_2O	SMW-2				X	X	X	X	X	X	X							
9/11/14	1640	H_2O	SMW-4				X	X	X	X	X	X	X							
9/11/14	1625	H_2O	FB-Group 32-9/11/14				X													

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/16/14	1450	[signature]	[signature]	9/16/14	1450
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

WESTERN REFINING - GALLUP REFINERY
Q3-2014

MKTF-18		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	9-18-14	(1)	8:32	7.56	15.34	1.419	1.131	0.89	16.4	-191
GAUGE TIME	8:20	(2)								
DTB (feet) Depth to Bottom	25.17	(3)								
DEDICATED PUMP	NO									
DTW (feet) Depth to Water	8.81									
DTB - DTW	16.36									
Capicty per foot										
2 Well Volume	5.3									
3 Well Volumes	8.0									
PURGE DATE	9-18-14									
PURGE TIME	8:27									
SAMPLE DAY	9-18-14									
SAMPLE TIME	1440									
PUMP DEPTH	NA									
DTW (feet) at end of Purging										

WEATHER CONDITIONS

Clear, sunny, 60°F, winds from E @ 5mph

WATER APPEARANCE

Clear. No odor

SAMPLE LOG

well purged dry after 4 gallons

MKTF-17		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	9-18-14	(1)	9:45	7.52	15.39	1.279	1.018	0.79	19.7	-195
GAUGE TIME	930	(2)								
DTB (feet) Depth to Bottom	24.05	(3)								
DEDICATED PUMP	NO	(4)								
DTW (feet) Depth to Water	11.27									
DTB - DTW	12.78									
Capicity per foot	4.4									
2 Well Volume	~~4.2~~ 4.1									
3 Well Volumes	6.2									
PURGE DATE	9-18-14									
PURGE TIME	9:40									
SAMPLE DAY	9-18-14									
SAMPLE TIME	1520									
PUMP DEPTH	NA									
DTW (feet) at end of Purging										

WEATHER CONDITIONS

Clear, sunny, 65°F, winds from E @ 5mph

WATER APPEARANCE

Clear, no odor.

SAMPLE LOG

Purge 1.6 gallons And hit bottom of well, will let recharge and collect sample.

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY

3rd QTR - ANNUAL

MKTF-22	
GAUGE DATE	9/15/14
GAUGE TIME	0945
DTB (feet) Depth to Bottom	18.40
DEDICATED PUMP	N
DTW (feet) Depth to Water	9.35
DTB - DTW	9.05
Capacity per foot	~~0.1630~~ 0.74
3 Well Volumes	20 gal.
PURGE DATE	9/15/14
PURGE TIME	0955
SAMPLE DAY	9/15/14
SAMPLE TIME	
PUMP DEPTH DTW (feet) at end of Purging	

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	10:05	7.22	18.09	2.588	1.938	1.56	11.3	-190
(2)	10:12	7.23	17.55	2.642	2.002	1.62	9.4	-202
(3)	10:19	7.32	17.20	2.714	2.073	1.68	14.8	-202
(4)	10:25	7.52	17.07	2.738	2.091	1.69	16.1	-212

WEATHER CONDITIONS

Sunny, 70°

WATER APPEARANCE

Grey, Slight turbidity, No odor

SAMPLE LOG

~~MKTF-20~~	
GAUGE DATE	
GAUGE TIME	
DTB (feet) Depth to Bottom	
DEDICATED PUMP	
DTW (feet) Depth to Water	
DTB - DTW	
Capacity per foot	
3 Well Volumes	
PURGE DATE	
PURGE TIME	
SAMPLE DAY	
SAMPLE TIME	
PUMP DEPTH DTW (feet) at end of Purging	NA NA

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)								
(2)								
(3)								
(4)								

WEATHER CONDITIONS

WATER APPEARANCE

SAMPLE LOG

INSTRUMENTS USED:

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.

Bailer

Signature:

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MKTF-16			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	9-17-14	(1)	10.45	7.34	23.68	3.186	2.125	1.71	15.5	-212
GAUGE TIME	1030	(2)	1050	7.32	23.34	3.284	2.205	1.78	13.8	-205
DTB (feet) Depth to Bottom	14.08	(3)	10:55	7.36	23.14	3.334	2.247	1.82	15.0	-203
DEDICATED PUMP	NO		10:57	7.34	23.06	3.399	2.298	1.86	14.0	-204
DTW (feet) Depth to Water	10.6									
DTB - DTW	3.48									
Capicty per foot										
2 Well Volume	1.1									
3 Well Volumes	1.7									
PURGE DATE	9-17-14									
PURGE TIME	1040									
SAMPLE DAY	9-17-14									
SAMPLE TIME	1100									
PUMP DEPTH	N/A									
DTW (feet) at end of Purging										

WEATHER CONDITIONS

Cloudy, 65°F, E winds @ 5mph - 10mph

WATER APPEARANCE

Clear, no odor

SAMPLE LOG

MKTF-09			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	9-17-14	(1)	1334	7.38	14.67	1.526	1.235	0.97	23.5	-198
GAUGE TIME	1115	(2)	1345	7.33	14.55	1.540	1.252	0.99	33.3	-196
DTB (feet) Depth to Bottom	~~14.84~~ 22.73	(3)	1355	7.33	14.51	1.578	1.282	1.01	29.0	-197
DEDICATED PUMP	N	(4)	1405	7.36	14.55	1.595	1.296	1.02	18.2	-199
DTW (feet) Depth to Water	14.89									
DTB - DTW	7.84									
Capicity per foot	0.74									
2 ~~1~~ Well Volume	11									
3 Well Volumes	17									
PURGE DATE	9-17-14									
PURGE TIME	1320									
SAMPLE DAY	9/18/14									
SAMPLE TIME	0900									
PUMP DEPTH	NA									
DTW (feet) at end of Purging	NA									

WEATHER CONDITIONS

Cloudy, 65°F, Winds from E @ 5-10 mph

WATER APPEARANCE

Initially Clear + No odor; Hit bottom causing sediment disruption and became cloudy after 10 gallons of purging.

SAMPLE LOG

INSTRUMENTS USED:

Signature:

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MKTF-15			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	9/17/14	(1)	9.15	6.79	16.85	15.55	11.97	10.96	16.0	-179
GAUGE TIME	0905	(2)	928	6.80	16.72	15.35	11.85	10.85	17.3	-185
DTB (feet) Depth to Bottom	19.5	(3)	931	6.80	16.75	15.60	12.04	11.03	14.2	-175
DEDICATED PUMP	N		935	6.83	16.49	15.44	11.99	10.97	20.7	-175
DTW (feet) Depth to Water	13.71									
DTB - DTW	5.79									
Capicty per foot	0.163									
2 1 Well Volume	1.9									
3 Well Volumes	2.8									
PURGE DATE	9-17-14									
PURGE TIME	9:10									
SAMPLE DAY	9-17-14									
SAMPLE TIME	9:40									
PUMP DEPTH	N.A									
DTW (feet) at end of Purging	NA									

WEATHER CONDITIONS

Cloudy, 60°F, Wind 5mph from E.

WATER APPEARANCE

Cloudy brown / reddish light color, product odor

SAMPLE LOG

MKTF-20			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	9/17/14	(1)	0919	6.99	16.20	4.138	3.198	2.65	21.1	-178
GAUGE TIME	0900	(2)								
DTB (feet) Depth to Bottom	15.88	(3)								
DEDICATED PUMP	N	(4)								
DTW (feet) Depth to Water	8.99									
DTB - DTW	6.89									
Capicity per foot	0.14									
2 1 Well Volume	1.0									
3 Well Volumes	1.5									
PURGE DATE	9/17/14									
PURGE TIME	0910									
SAMPLE DAY	9/18/14									
SAMPLE TIME	0815									
PUMP DEPTH	NA									
DTW (feet) at end of Purging	NA									

WEATHER CONDITIONS

Cloudy, 65°, wind 5mph from E.

WATER APPEARANCE

dark brown, high turbidity

SAMPLE LOG well bailed dry, will sample tomorrow (9/18)

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
3rd QTR - ANNUAL

MW-4

GAUGE DATE	9/9/14
GAUGE TIME	945
DTB (feet) Depth to Bottom	121.72
DEDICATED PUMP	N
DTW (feet) Depth to Water	7.68
DTB - DTW	114.04
Capacity per foot	0.163
3 Well Volumes	349
PURGE DATE	9/17/14
PURGE TIME	1200
SAMPLE DAY	9/17/14
SAMPLE TIME	1515
PUMP DEPTH	NA
DTW (feet) at end of Purging	NA

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1310	8.80	13.83	0.930	0.769	0.59	13.0	-199
(2)	1400	8.81	13.78	0.933	0.769	0.59	9.5	-192
(3)	1430	8.82	13.90	0.933	0.771	0.59	12.3	-199
(4)	15.05	8.92	13.42	0.930	0.769	0.59	10.1	-204

WEATHER CONDITIONS

Cloudy, 65°, wind 15mph from S.

WATER APPEARANCE

Clear, no odor

SAMPLE LOG

6

OW-30

GAUGE DATE	9/9/14
GAUGE TIME	1130
DTB (feet) Depth to Bottom	49.90
DEDICATED PUMP	Y
DTW (feet) Depth to Water	23.84
DTB - DTW	26.06
Capacity per foot	0.74
3 Well Volumes	58
PURGE DATE	9/17/14
PURGE TIME	1645
SAMPLE DAY	9/17/14
SAMPLE TIME	1830
PUMP DEPTH	NA
DTW (feet) at end of Purging	NA

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1722	7.54	13.50	1.520	1.265	1.00	10.1	-189
(2)	1746	7.42	13.49	1.512	1.259	0.99	7.7	-182
(3)	1805	7.66	12.92	1.494	1.259	0.99	15.4	-193
(4)	1825	7.60	12.95	1.497	1.258	0.99	10.5	-189

WEATHER CONDITIONS

Cloudy, 70°,

WATER APPEARANCE

Clear, No odor

SAMPLE LOG

INSTRUMENTS USED:
Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Bailer

Signature:

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MW-1		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	9-8-14	(1)	1405	9.12	15.30	0.917	0.731	0.56	28.0	-197
GAUGE TIME	1330	(2)	1500	9.20	14.40	0.900	0.733	0.56	25.5	-206
DTB (feet) Depth to Bottom	130.83	(3)	1545	9.20	15.27	0.916	0.731	0.56	18.2	-208
DEDICATED PUMP	Yes		1610	9.26	14.25	0.894	0.734	0.56	15.5	-210
DTW (feet) Depth to Water	7.11									
DTB - DTW	123.73									
Capicty per foot	1.04									
1 Well Volume										
3 Well Volumes	378.6									
PURGE DATE	13:30									
PURGE TIME	9-16-14									
SAMPLE DAY	9-16-14									
SAMPLE TIME	1615									
PUMP DEPTH	NA									
DTW (feet) at end of Purging	NA									

WEATHER CONDITIONS

Cloudy, 70°F, E winds @ 0-5mph

WATER APPEARANCE

Clear No odor.

SAMPLE LOG

MW-5		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	9/8/14	(1)	0838	9.24	13.32	0.897	0.751	0.58	12.9	-191
GAUGE TIME	1415	(2)	0950	9.46	13.44	0.915	0.763	0.59	8.5	-188
DTB (feet) Depth to Bottom	130.85	(3)	1030	9.44	13.40	0.907	0.760	0.59	8.0	-189
DEDICATED PUMP	Y	(4)	1130	9.37	13.84	0.916	0.757	0.58	8.9	-214
DTW (feet) Depth to Water	11.38									
DTB - DTW	119.45									
Capicity per foot	0.74									
1 Well Volume										
3 Well Volumes	265									
PURGE DATE	9/17/14									
PURGE TIME	0745									
SAMPLE DAY	9/17/14									
SAMPLE TIME	1140									
PUMP DEPTH	NA									
DTW (feet) at end of Purging	NA									

WEATHER CONDITIONS

Cloudy, 65°, wind 5mph from E.

WATER APPEARANCE

Clear, no odor

SAMPLE LOG

INSTRUMENTS USED:

Signature:

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OW-13

GAUGE DATE	9/8/14
GAUGE TIME	1650
DTB (feet) Depth to Bottom	99.15
DEDICATED PUMP	~~N~~ Y
DTW (feet) Depth to Water	22.61
DTB - DTW	76.54
Capacity per foot	0.74 ~~0.163~~
3 Well Volumes	170
PURGE DATE	9/15/14
PURGE TIME	1700
SAMPLE DAY	9/15/14
SAMPLE TIME	1838
PUMP DEPTH DTW (feet) at end of Purging	NA

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1730	8.37	13.50	0.988	0.822	0.63	13.6	-205
(2)	1752	8.27	13.37	0.970	0.810	0.63	10.0	-199
(3)	1805	8.41	13.52	0.973	0.810	0.63	11.5	-206
(4)	1833	8.56	13.20	0.973	0.816	0.63		—

WEATHER CONDITIONS

Partly cloudy, 75°, wind 10mph from NE

WATER APPEARANCE

Clear, No odor

SAMPLE LOG 170 gallons

MW-2

GAUGE DATE	9/8/14
GAUGE TIME	1355
DTB (feet) Depth to Bottom	137.48
DEDICATED PUMP	Y
DTW (feet) Depth to Water	9.20
DTB - DTW	128.28
Capacity per foot	1.02
3 Well Volumes	392.5
PURGE DATE	9/16/14
PURGE TIME	1530
SAMPLE DAY	9/16/14
SAMPLE TIME	1900
PUMP DEPTH DTW (feet) at end of Purging	NA NA

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1810	9.07	13.80	0.895	0.739	0.57	7.0	-192
(2)	1830	9.09	13.50	0.886	0.738	0.57	7.5	-192
(3)	1845	9.08	13.50	0.885	0.737	0.57	7.3	-192
(4)	1900	9.08	15.49	0.886	0.737	0.58	7.0	-192

WEATHER CONDITIONS

Cloudy, 70°, wind 5-10 from S.

WATER APPEARANCE

Clear, No odor.

SAMPLE LOG

INSTRUMENTS USED:
Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Bailer

Signature:

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OW-29

GAUGE DATE	9/8/14
GAUGE TIME	1645
DTB (feet) Depth to Bottom	51.08
DEDICATED PUMP	N/Y
DTW (feet) Depth to Water	19.35
DTB - DTW	31.73
Capacity per foot	0.94 ~~0.103~~
3 Well Volumes	95.19
PURGE DATE	9/15/14
PURGE TIME	1405
SAMPLE DAY	9/15/14
SAMPLE TIME	1545
PUMP DEPTH DTW (feet) at end of Purging	NA

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1430	7.81	14.20	1.469	1.202	0.94	12.1	-215
(2)	1455	7.49	13.45	1.446	1.208	0.95	7.2	-202
(3)	1528	7.79	13.56	1.481	1.214	0.96	10.2	-210
(4)	1540	7.70	13.52	1.464	1.217	0.96	9.4	-197

WEATHER CONDITIONS

Sunny, 85°, wind 10mph from S.

WATER APPEARANCE

Clear, no odor

SAMPLE LOG

OW-14

GAUGE DATE	9/8/14
GAUGE TIME	1655
DTB (feet) Depth to Bottom	46.52
DEDICATED PUMP	Y
DTW (feet) Depth to Water	24.40
DTB - DTW	22.12
Capacity per foot	0.74
3 Well Volumes	49.1
PURGE DATE	9/15/14
PURGE TIME	16:05
SAMPLE DAY	9/15/14
SAMPLE TIME	1645
PUMP DEPTH DTW (feet) at end of Purging	NA NA

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1615	7.47	15.23	1.847	1.48	1.12	20.1	-201
(2)	1628	7.39	15.20	1.852	1.48	1.17	19.2	-218
(3)	1635	7.39	14.71	1.850	1.51	1.17	14.2	-209
(4)	1643	7.36	14.39	1.843	1.499	1.19	12.4	-203

WEATHER CONDITIONS

Partly Cloudy ~ 78°F, winds 10mph from S.

WATER APPEARANCE

Clear, no odor

SAMPLE LOG

INSTRUMENTS USED:
Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Bailer

Signature:

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OW-52

GAUGE DATE	9/8/14
GAUGE TIME	1545
DTB (feet) Depth to Bottom	77.74
DEDICATED PUMP	N
DTW (feet) Depth to Water	15.80
DTB - DTW	61.94
Capacity per foot	0.163
3 Well Volumes	30.3
PURGE DATE	9/15/14
PURGE TIME	1150
SAMPLE DAY	9/15/14
SAMPLE TIME	1245
PUMP DEPTH DTW (feet) at end of Purging	NA

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1206	8.26	14.64	0.835	0.67	0.51	22.0	-188
(2)	1225	8.31	14.66	0.812	0.65	0.50	11.7	-174
(3)	1240	8.49	14.63	0.816	0.66	0.51	12.4	-183
(4)	1245	8.45	14.64	0.813	0.65	0.51	13.2	-180

WEATHER CONDITIONS

Sunny, 75°, wind 5mph from NE

WATER APPEARANCE

Clear, No odor.

SAMPLE LOG

OW-50

GAUGE DATE	9/8/14
GAUGE TIME	1630
DTB (feet) Depth to Bottom	64
DEDICATED PUMP	N
DTW (feet) Depth to Water	16.86
DTB - DTW	47.14
Capacity per foot	0.163
3 Well Volumes	23
PURGE DATE	9/15/14
PURGE TIME	1315
SAMPLE DAY	9/15/14
SAMPLE TIME	1335
PUMP DEPTH DTW (feet) at end of Purging	NA NA

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1320	8.24	14.97	0.911	0.73	0.56	15.1	-208
(2)	1329	8.45	14.68	0.902	0.730	0.56	15.0	-211
(3)	1335	8.45	14.52	0.903	0.734	0.56	15.3	-206
(4)	13.40	8.42	14.92	0.903	0.727	0.56	8.3	-203

WEATHER CONDITIONS

Sunny, 80°, 10mph wind from S.

WATER APPEARANCE

Slightly red, Some sediment, no odor

SAMPLE LOG

INSTRUMENTS USED:
Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Bailer

Signature:

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RW-5

GAUGE DATE	9/9/14
GAUGE TIME	1200
DTB (feet) Depth to Bottom	39.59
DEDICATED PUMP	N
DTW (feet) Depth to Water	28.81
DTB - DTW	12.01
Capacity per foot	~~0.163~~ 0.74
3 Well Volumes	24
PURGE DATE	9-18-14
PURGE TIME	11:10
SAMPLE DAY	9/18/14
SAMPLE TIME	1140
PUMP DEPTH	35
DTW (feet) at end of Purging	NA

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1120	7.77	16.47	0.674	0.523	0.40	24.7	-197
(2)	1125	7.72	16.25	0.654	0.511	0.39	25	~~-195~~
(3)	1130	7.65	16.28	0.649	0.506	0.38	19.5	-193
(4)	1135	7.61	16.57	0.654	0.507	0.38	16.9	-195

WEATHER CONDITIONS

Sunny, 70°, wind 10 mph from East

WATER APPEARANCE

Clear, Slight hydrocarbon odor

SAMPLE LOG

RW-2

GAUGE DATE	9/9/14
GAUGE TIME	1230
DTB (feet) Depth to Bottom	39.8
DEDICATED PUMP	N
DTW (feet) Depth to Water	23.95
DTB - DTW	15.85
Capacity per foot	0.74
3 Well Volumes	35
PURGE DATE	9/18/14
PURGE TIME	1055
SAMPLE DAY	9/18/14
SAMPLE TIME	1215
PUMP DEPTH	NA
DTW (feet) at end of Purging	NA

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1100	7.18	16.21	1.323	0.934	0.72	14.2	-194
(2)	1115	7.16	15.90	1.325	0.937	0.72	10.2	-193
(3)	1130	7.17	15.95	1.325	0.939	0.72	13.1	-195
(4)	1150	7.17	15.65	1.323	0.939	0.73	10.5	-192.

WEATHER CONDITIONS

Sunny, 70°, wind 10 mph from East

WATER APPEARANCE

Clear, Slight hydrocarbon odor

SAMPLE LOG

INSTRUMENTS USED:
Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Bailer

Signature:

WESTERN REFINING - GALLUP REFINERY
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SMW-4		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	9/8/14	(1)	1620	8.56	14.02	1.060	0.872	0.68	36.0	-187
GAUGE TIME	1515	(2)	1630	8.51	13.85	1.061	0.876	0.68	10.3	-179.
DTB (feet) Depth to Bottom	69.68	(3)								
DEDICATED PUMP	Y.									
DTW (feet) Depth to Water	29.10									
DTB - DTW	40.58									
Capicty per foot	0.163									
1 Well Volume										
3 Well Volumes	19.8									
PURGE DATE	9-11-14									
PURGE TIME	1600									
SAMPLE DAY	9/11/14									
SAMPLE TIME	1640									
PUMP DEPTH	NA									
DTW (feet) at end of Purging										

WEATHER CONDITIONS

Clear skys, 0-5 mph NW, Sunny

WATER APPEARANCE

Clear, No Odor

SAMPLE LOG Pump lost suction @ 10 gallons, let well recharge then sample.

OW-1		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	9/8/14	(1)	1730	8.71	13.00	1.042	0.872	0.68	20.1	-185
GAUGE TIME	11:30	(2)	1747	8.87	14.90	1.088	0.874	0.68	9.2	-181
DTB (feet) Depth to Bottom	94.55	(3)								
DEDICATED PUMP	Yes	(4)								
DTW (feet) Depth to Water	~~94.54~~ 0.01									
DTB - DTW	94.54									
Capicity per foot	0.74									
1 Well Volume										
3 Well Volumes	209									
PURGE DATE	9-11-14									
PURGE TIME	1720									
SAMPLE DAY	9-11-14									
SAMPLE TIME	1800									
PUMP DEPTH	NA									
DTW (feet) at end of Purging										

WEATHER CONDITIONS

Clear Sunny Skies, Winds NW 0-5mph

WATER APPEARANCE

Clear, No odor, turned high turbidity.

SAMPLE LOG

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q3-2014

OW-10		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	9/9/14	(1)	8:55	7.68	13.09	4.902	4.125	3.48	12.0	-165
GAUGE TIME	0745	(2)	9:00	7.65	13.02	5.100	4.296	3.63	11.3	-165
DTB (feet) Depth to Bottom	60.33	(3)	9:15	7.55	13.00	4.801	4.046	3.41	10.9	-162
DEDICATED PUMP	Y		9:30	7.60	13.16	4.824	4.052	3.42	14.5	-172
DTW (feet) Depth to Water	2.33									
DTB - DTW	58									
Capicty per foot	0.74									
1 Well Volume	60									
3 Well Volumes	180 128									
PURGE DATE	9-12-14									
PURGE TIME	8:40									
SAMPLE DAY	9-12-14									
SAMPLE TIME	~~9/12/14~~ 9:35									
PUMP DEPTH	NA									
DTW (feet) at end of Purging										

WEATHER CONDITIONS

Clear skies, calm winds, 65°F

WATER APPEARANCE

Clear, No odor.

SAMPLE LOG

OW-12		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	9/9/14	(1)	1035	9.37	15.33	0.953	0.744	0.57	57	-186
GAUGE TIME	0815	(2)	1050	9.50	15.80	0.913	0.711	0.55	51.9	-182
DTB (feet) Depth to Bottom	128.65	(3)								
DEDICATED PUMP	N	(4)								
DTW (feet) Depth to Water	42.78									
DTB - DTW	86.07									
Capicity per foot	0.74									
1 Well Volume	60									
3 Well Volumes	180									
PURGE DATE	9/12/14									
PURGE TIME	1015									
SAMPLE DAY	~~9~~ 9/12/14									
SAMPLE TIME	1100									
PUMP DEPTH	123'									
DTW (feet) at end of Purging										

WEATHER CONDITIONS

Sunny, 70°, wind 5mph from west.

WATER APPEARANCE

Clear, no odor,

SAMPLE LOG

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
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OW-11			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	9/9/14	(1)	1140	8.64	15.40	2.393	1.896	1.53	24.8	-184
GAUGE TIME	1450	(2)	1155	8.47	14.73	2.306	1.864	1.50	21.0	-181
DTB (feet) Depth to Bottom	65.79	(3)	1208	8.69	15.00	2.332	1.874	1.51	14.8	-177
DEDICATED PUMP	N		1215	8.88	15.00	2.363	1.898	1.53	18.0	-187
DTW (feet) Depth to Water	20.11									
DTB - DTW	45.68									
Capicty per foot	0.74									
1 Well Volume										
3 Well Volumes	101									
PURGE DATE	9-12-14									
PURGE TIME	11:30									
SAMPLE DAY	9/12/14									
SAMPLE TIME	1220									
PUMP DEPTH	60									
DTW (feet) at end of Purging										

WEATHER CONDITIONS

Clear, Calm winds, 70°F

WATER APPEARANCE

Clear, No odor

SAMPLE LOG

MKTF-04			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	9/15/14	(1)	0905	7.09	16.28	1.918	1.496	1.19	25.1	-182
GAUGE TIME	0850	(2)	0920	7.12	15.16	1.843	1.424	1.17	39.8	-178
DTB (feet) Depth to Bottom	22.15	(3)	0927	7.13	14.94	1.785	1.434	1.14	33.5	-177
DEDICATED PUMP	N	(4)	0935	7.13	14.90	1.781	1.439	1.13	30.2	-177
DTW (feet) Depth to Water	11.09									
DTB - DTW	11.06									
Capicity per foot	0.84									
1 Well Volume										
3 Well Volumes	24.5									
PURGE DATE	9/15/14									
PURGE TIME	0855									
SAMPLE DAY	9/15/14									
SAMPLE TIME	0945									
PUMP DEPTH	NA									
DTW (feet) at end of Purging										

WEATHER CONDITIONS

Sunny, 70°, wind from NE @ 5mph.

WATER APPEARANCE

brown, high turbidity, No odor.

SAMPLE LOG

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
3rd QTR - ANNUAL

NAPIS - 3

GAUGE DATE	9/8/14
GAUGE TIME	1445
DTB (feet) Depth to Bottom	30.42
DEDICATED PUMP	N
DTW (feet) Depth to Water	7.97
DTB - DTW	22.45
Capacity per foot	0.163
2 ~~3~~ Well Volumes	7
PURGE DATE	9/11/14
PURGE TIME	0850
SAMPLE DAY	9/11/14
SAMPLE TIME	1120
PUMP DEPTH DTW (feet) at end of Purging	NA

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	910	7.37	23.30	1.829	1.229	0.96	38.5	-162
(2)	922	7.40	24.39	1.465	0.964	0.74	46.4	-163
(3)								
(4)								

WEATHER CONDITIONS

Clear, Calm Winds, Sunny, 65°F

WATER APPEARANCE

Clear, No odor

SAMPLE LOG

NAPIS - 2

GAUGE DATE	9/8/14
GAUGE TIME	1455
DTB (feet) Depth to Bottom	13.61
DEDICATED PUMP	N
DTW (feet) Depth to Water	8.10
DTB - DTW	5.51
Capacity per foot	
2 ~~3~~ Well Volumes	1.8
PURGE DATE	9/11/14
PURGE TIME	9:35
SAMPLE DAY	9/11/14
SAMPLE TIME	1135
PUMP DEPTH DTW (feet) at end of Purging	NA NA

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	940	7.30	25.55	2.475	1.592	1.26	12.1	-189
(2)								
(3)								
(4)								

WEATHER CONDITIONS

Clear, Calm winds, Sunny, 65°F

WATER APPEARANCE

Clear, No odor.

SAMPLE LOG * Water found in annulus around well casing, water was bailed and the cap to the casing seemed to be tight and did not allow surface contamination.

INSTRUMENTS USED:
Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Bailer

Signature:

WESTERN REFINING - GALLUP REFINERY
3rd QTR - ANNUAL

NAPTS-1

GAUGE DATE	9-8-14
GAUGE TIME	1500
DTB (feet) Depth to Bottom	13.53
DEDICATED PUMP	N
DTW (feet) Depth to Water	6.85
DTB - DTW	6.68
Capacity per foot	0.163
2 ~~3~~ Well Volumes	2.2
PURGE DATE	9/11/14
PURGE TIME	913
SAMPLE DAY	9/11/14
SAMPLE TIME	1015
PUMP DEPTH DTW (feet) at end of Purging	NA

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	915	7.33	20.39	1.726	1.229	0.96	19.5	-161
(2)	918	7.31	20.31	1.712	1.223	0.96	25.1	-153
(3)								
(4)								

WEATHER CONDITIONS

Clear, Calm Winds, Sunny, 65°F

WATER APPEARANCE

Clear, No odor

SAMPLE LOG

SMW-2

GAUGE DATE	9/8/14
GAUGE TIME	1510
DTB (feet) Depth to Bottom	52.8
DEDICATED PUMP	N
DTW (feet) Depth to Water	25.10
DTB - DTW	27.7
Capacity per foot	0.163
3 Well Volumes	13.5
PURGE DATE	9-11-14
PURGE TIME	1440
SAMPLE DAY	9/11/14
SAMPLE TIME	1510
PUMP DEPTH DTW (feet) at end of Purging	NA NA

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1449	7.35	16.59	9.227	7.139	6.26	28.9	-178
(2)	1455	7.23	17.12	9.111	6.977	6.12	33.5	-168
(3)	1500	7.24	17.70	9.234	6.988	6.12	45.7	-165
(4)	1505	7.25	17.94	9.211	6.923	6.06	43.3	-165

WEATHER CONDITIONS

Sunny, 80°, wind 10mph from West

WATER APPEARANCE

Clear, no odor

SAMPLE LOG

INSTRUMENTS USED:
Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Bailer

Signature:

WESTERN REFINING - GALLUP REFINERY
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OWM-1

GAUGE DATE	9/8/14
GAUGE TIME	1530
DTB (feet) Depth to Bottom	94.55
DEDICATED PUMP	N
DTW (feet) Depth to Water	19.56
DTB - DTW	6.64
Capacity per foot	0.163
2 ~~3~~ Well Volumes	2.2
PURGE DATE	9/12/14
PURGE TIME	0730
SAMPLE DAY	9/12/14
SAMPLE TIME	0750
PUMP DEPTH DTW (feet) at end of Purging	NA

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	0739	7.26	13.21	4.686	3.93	3.31	26.5	-180
(2)								
(3)								
(4)								

WEATHER CONDITIONS

Clear, 50°, No wind

WATER APPEARANCE

Yellow, slight turbidity

SAMPLE LOG

OAPIS-1

GAUGE DATE	9/8/14
GAUGE TIME	1550
DTB (feet) Depth to Bottom	26.0
DEDICATED PUMP	N
DTW (feet) Depth to Water	11.11
DTB - DTW	14.89
Capacity per foot	0.163
2 ~~3~~ Well Volumes	4.8
PURGE DATE	9/12/14
PURGE TIME	0735
SAMPLE DAY	9/12/14
SAMPLE TIME	0805
PUMP DEPTH DTW (feet) at end of Purging	NA NA

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	0741	7.25	12.64	6.157	4.65	3.96	18.2	-175
(2)	0750	7.22	16.82	5.993	4.61	3.93	13.2	-176
(3)	0754	7.21	16.14	5.867	4.59	3.91	12.5	-173
(4)	0759	7.21	15.96	5.845	4.59	3.91	14.0	-170

WEATHER CONDITIONS

Clear, 50°, no wind

WATER APPEARANCE

Yellow, Slight turbidity

SAMPLE LOG

INSTRUMENTS USED:
Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Bailer

Signature:

WESTERN REFINING - GALLUP REFINERY
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STP-1 to EP-2

		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)	8:23	8.87	21.26	4.883	3.426	2.85	5.3	289
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP										
DTW (feet) Depth to Water										
DTB - DTW										
Capicty per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME										
SAMPLE DAY	8-10-14									
SAMPLE TIME	8:23									
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

Partly Cloudy, 0-5 mph wind from SW, calm 70°

WATER APPEARANCE

light grey ~~Mod~~ JB color

SAMPLE LOG

~~BW1-C~~ JB BW1-C

		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	9-8-14	(1)	12:15	8.78	15.90	1.148	0.902	0.70	12.8	-161
GAUGE TIME	1230	(2)	12:36	8.82	15.64	1.156	0.915	0.71	7.0	-161
DTB (feet) Depth to Bottom	141.89	(3)	1340	8.94	15.42	1.134	0.903	0.70	16.4	-161
DEDICATED PUMP	N	(4)								
DTW (feet) Depth to Water	12.97									
DTB - DTW	128.92									
Capicity per foot	0.163									
1 Well Volume	21									
3 Well Volumes	63									
PURGE DATE	9-10-14									
PURGE TIME	1200									
SAMPLE DAY	9-10-14									
SAMPLE TIME	1345									
PUMP DEPTH	135'									
DTW (feet) at end of Purging	NA									

WEATHER CONDITIONS

Partly Cloudy, 75°, wind from West, 5-10 mph

WATER APPEARANCE

Start: High turbidity, red color, no odor to Clear water, no odor

SAMPLE LOG * Pump lost Suction after 45 gallons purged, let well recharge and collected sample.

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
3rd QTR - ANNUAL

BW-2B

GAUGE DATE	9/8/14
GAUGE TIME	1330
DTB (feet) Depth to Bottom	92.26
DEDICATED PUMP	~~N~~ Yes
DTW (feet) Depth to Water	28.15
DTB - DTW	63.85'
Capacity per foot	0.163
3 Well Volumes	31.2 gal
PURGE DATE	9/9/14
PURGE TIME	1615
SAMPLE DAY	9/9/14
SAMPLE TIME	1610
PUMP DEPTH DTW (feet) at end of Purging	NA

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1517	7.60	14.50	1.831	1.481	1.18	11.5	-170
(2)	1528	7.60	14.28	1.834	1.482	1.18	6.8	-164
(3)	1547	7.66	14.30	1.835	1.493	1.18	8.2	-167
(4)	1558	7.82	14.40	1.807	1.460	1.16	17.5	-165

WEATHER CONDITIONS

Partly Cloudy, 75°, wind from west @ 10mph

WATER APPEARANCE

Clear, NO odor

SAMPLE LOG * BD Taken

BW-2A

GAUGE DATE	9/8/14
GAUGE TIME	1340
DTB (feet) Depth to Bottom	67.57
DEDICATED PUMP	Yes
DTW (feet) Depth to Water	32.25
DTB - DTW	35.32
Capacity per foot	0.163
3 Well Volumes	17.3
PURGE DATE	9/9/14
PURGE TIME	1630
SAMPLE DAY	
SAMPLE TIME	1710
PUMP DEPTH DTW (feet) at end of Purging	NA NA

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1643	7.85	14.26	1.123	0.89	0.69	9.9	-170
(2)	1655	7.90	13.89	1.085	0.86	0.69	9.2	-167
(3)	1704	7.91	14.19	1.081	0.87	0.68	8.4	-165
(4)		7.93	14.16	1.083	0.88	0.69	6.0	-165

WEATHER CONDITIONS

Partly Cloudy, 75°, wind from west @ 15mph.

WATER APPEARANCE

Clear, No odor.

SAMPLE LOG

INSTRUMENTS USED:
Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Bailer

Signature:

WESTERN REFINING - GALLUP REFINERY
3rd QTR - ANNUAL

BW2-C

GAUGE DATE	9-8-14
GAUGE TIME	1345
DTB (feet) Depth to Bottom	152.84
DEDICATED PUMP	N
DTW (feet) Depth to Water	20.70
DTB - DTW	132.4
Capacity per foot	0.163
3 Well Volumes	63
PURGE DATE	9-10-14
PURGE TIME	1420
SAMPLE DAY	9-10-14
SAMPLE TIME	1540
PUMP DEPTH	240'
DTW (feet) at end of Purging	NA

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1442	8.73	14.19	1.064	0.872	0.68	24.0	-172
(2)	1525	9.07	14.45	1.079	0.878	0.68	28.5	-167
(3)	1537	8.98	16.74	1.135	0.876	0.68	33.8	-161
(4)								

WEATHER CONDITIONS

Partly Cloudy, 75°F, winds-Calm 5-10(W),

WATER APPEARANCE

Clear, No odor

SAMPLE LOG Well purged below pump, recharge and took sample

BW3-B

GAUGE DATE	9/8/14
GAUGE TIME	1415
DTB (feet) Depth to Bottom	69.4
DEDICATED PUMP	Yes
DTW (feet) Depth to Water	33.25
DTB - DTW	36.15
Capacity per foot	
3 Well Volumes	17
PURGE DATE	9-10-14
PURGE TIME	17:05
SAMPLE DAY	9-10-14
SAMPLE TIME	1740
PUMP DEPTH	240' ~~NA~~
DTW (feet) at end of Purging	NA

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1714	8.15	14.19	1.234	1.010	0.79	12.4	-196
(2)	1719	8.17	13.90	1.219	1.005	0.78	12.0	-194
(3)	1725	8.13	14.20	1.218	0.997	0.78	9.3	-185
(4)	1735	8.42	14.08	1.224	1.004	0.78	12.2	-185

WEATHER CONDITIONS

Partly Cloudy, 75°F, Wind from West @ 5-10 mph

WATER APPEARANCE

light yellowish color, No odor.

SAMPLE LOG

INSTRUMENTS USED:
Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Bailer

Signature:

WESTERN REFINING - GALLUP REFINERY
3rd QTR - ANNUAL

BW3 - C

GAUGE DATE	9-8-14
GAUGE TIME	1420
DTB (feet) Depth to Bottom	154.55
DEDICATED PUMP	N
DTW (feet) Depth to Water	7.83
DTB - DTW	146.72
Capacity per foot	0.163
3 Well Volumes	71
PURGE DATE	9-10-14
PURGE TIME	1605
SAMPLE DAY	9-10-14
SAMPLE TIME	1650
PUMP DEPTH	140'
DTW (feet) at end of Purging	NA

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1625	8.55	14.44	1.324	1.024	0.80	16.1	-199
(2)	1645	8.66	14.50	1.314	1.024	0.80	16.7	-206
(3)								
(4)								

WEATHER CONDITIONS

Partly Cloudy, 75°F, Winds - 5-10 from W

WATER APPEARANCE

Grey, Some turbidity, no odor

SAMPLE LOG Well purged below pump, recharge and sampled.

KA-3

GAUGE DATE	9/8/14
GAUGE TIME	1430
DTB (feet) Depth to Bottom	23.20
DEDICATED PUMP	N
DTW (feet) Depth to Water	9.0'
DTB - DTW	14.2
Capacity per foot	0.163
2 3 Well Volumes	4.6
PURGE DATE	9/11/14
PURGE TIME	0925
SAMPLE DAY	9/11/14
SAMPLE TIME	0950
PUMP DEPTH	NA
DTW (feet) at end of Purging	NA

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)		8.08	19.11	3.897	2.852	2.35	54.0	-166
(2)								
(3)								
(4)								

WEATHER CONDITIONS

Sunny, 70°, Wind 5mph from West

WATER APPEARANCE

No odor, Slightly cloudy

SAMPLE LOG

* Water found in annulus before guaging well, bailed water and well casing lid seemed to have a tight seal.

INSTRUMENTS USED:
Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Bailer

Signature:

WESTERN REFINING - GALLUP REFINERY
3rd QTR - ANNUAL

RW - 1

		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	9/9/14	(1)	None taken due to product in well, Sampled per Cheryl's request							
GAUGE TIME	1550	(2)								
DTB (feet) Depth to Bottom	43.04	(3)								
DEDICATED PUMP	N	(4)								
DTW (feet) Depth to Water	28.05									
DTB - DTW	NA									
Capacity per foot	0.163									
3 Well Volumes										
PURGE DATE	9/18/14									
PURGE TIME	1440									
SAMPLE DAY	9/18/14									
SAMPLE TIME	1500									
PUMP DEPTH	NA									
DTW (feet) at end of Purging	NA									

WEATHER CONDITIONS

WATER APPEARANCE

heavy product, clear with moderate turbidity in Sample portion

SAMPLE LOG * State wants RW wells Sampled regardless of product detection.

		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)								
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP		(4)								
DTW (feet) Depth to Water										
DTB - DTW										
Capacity per foot										
3 Well Volumes										
PURGE DATE										
PURGE TIME										
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH	NA									
DTW (feet) at end of Purging	NA									

WEATHER CONDITIONS

WATER APPEARANCE

SAMPLE LOG

INSTRUMENTS USED:
Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Bailer

Signature:

WESTERN REFINING - GALLUP REFINERY
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MKTF-2		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	9-17-14	(1)	1630	7.57	15.39	2.967	2.366	1.93	29.0	-198
GAUGE TIME	1400	(2)	1643	7.51	13.55	3.200	2.661	2.18	29.1	-193
DTB (feet) Depth to Bottom	~~40.08~~ 20.42	(3)								
DEDICATED PUMP	N									
DTW (feet) Depth to Water	8.41									
DTB - DTW	12.01									
Capicty per foot	0.74									
2/1 Well Volume	17									
3 Well Volumes	26									
PURGE DATE	9-17-14									
PURGE TIME	1620									
SAMPLE DAY	9/18/14									
SAMPLE TIME	0930									
PUMP DEPTH	NA									
DTW (feet) at end of Purging	NA									

WEATHER CONDITIONS

Cloudy, 70°F, wind from E @ 5-10mph

WATER APPEARANCE

clear: no odor; bailed 17gals before hitting bottom.

SAMPLE LOG Well purged dry after 17 gallons, & sampled the following day.

RW-6		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	9/9/14	(1)	1035	7.72	15.91	1.128	0.887	0.69	24.3	-202
GAUGE TIME	1450	(2)	1040	7.64	15.71	1.111	0.879	0.68	16.5	-197
DTB (feet) Depth to Bottom	40.9	(3)	1045	7.50	15.76	1.110	0.826	0.68	15.0	-194
DEDICATED PUMP	N	(4)	1050	7.45	15.90	1.118	0.879	0.68	12.2	-194
DTW (feet) Depth to Water	28.89									
DTB - DTW	12.01									
Capicity per foot	0.74									
2/1 Well Volume	17.8									
3 Well Volumes	26.6									
PURGE DATE	9/18/14									
PURGE TIME	1000									
SAMPLE DAY	9/18/14									
SAMPLE TIME	1050									
PUMP DEPTH	35									
DTW (feet) at end of Purging	NA									

WEATHER CONDITIONS

Sunny, 70°; wind 5mph from E.

WATER APPEARANCE

Clear, hydrocarbon Smell

SAMPLE LOG

INSTRUMENTS USED:

Signature:

geotech
Geotech Environmental Equipment, Inc.
2650 East 40th Avenue
Denver, CO 80205 (800) 833-7958 Fax (303) 322-7242
sales@geotechenv.com • www.geotechenv.com

Name Brandt Schiche
Zac Bitsuie

Address

Phone

Project Western Refinery
9/8/14 – 9/19/14

Rite in the Rain – A patented, environmentally responsible, all-weather writing paper that sheds water and enables you to write anywhere, in any weather. Using a pencil or all-weather pen, *Rite in the Rain* ensures that your notes survive the rigors of the field, regardless of the conditions.

RiteintheRain.com

Western Refinery 9/8/14

0730 - Arrived on-Site, obtained badge/Vehicle Pass.

0800 - Met w/ Cheryl, Conducted tailgate Safety Meeting

08:30 - Started prep for guaging wells/GW Sampling

0915 - Calibrated YSI Meter W/ 3-Point Calibration (4, 7, 10) Continued prep.

1000 - Zac finished w/ Site training, met at environmental Shed, Conducted tailgate meeting, reviewed JSA's for tasks to be completed.

1145 - Begin guaging wells

1700 - Finished guaging wells for the day, cleaned up Env. Shed.

1720 - Trihydro Off-Site

Rite in the Rain

Wells Guaged 9/8/14:

BW-1A
BW-1B
BW-1C
BW-2A
BW-2B
BW-2C
BW-3A
BW-3B
BW-3C
MW-1
MW-2
MW-4
MW-5
SMW-2
SMW-4
OW-1
OW-13
OW-14
OW-29
OW-30
OW-50
OW-52
RW-1
RW-5
RW-6

Western Refinery, BS, ZB 9/9/14

0645 - On site, conduct tailgate safety meeting. Talk about tasks to be completed today.

0730 - Enter refinery to begin guaging wells.

0900 - Finished guaging all Non-MKTF wells.
* Note - GWM 1 has broken lock
- NAPIS 2,3 + KA-3 covered by equipment. Cheryl informed equipment will be moved today 9/9.

0920 - Begin guaging Non-Sampled MKTF wells:

MKTF 19 -	MKTF-27 - 8.36
MKTF 20 - 8.25	MKTF 28 - 6.44
MKTF 21 - 8.18/8.21	MKTF 29 - 4.04
MKTF 22 - 26.41	MKTF 30 - 15.66
MKTF 23 - DTP 15.25 DTW 16.27	MKTF 31 - 8.20
MKTF 24 - 22.34	MKTF 32 - 16.54
MKTF 25 - 11.89	MKTF 33 - 23.45
MKTF 26 - 9.21	MKTF 34 - 18.76

Rite in the Rain

9/9/14

1030 - Water was found in the annulus at wells KA-3, NAPIS-3. Water was bailed and well lids tightly sealed.

1200 - Finished guaging all wells, prep for Sampling.

1245 - Into refinery ~~to~~ for free product removal + begin Sampling.

1300 - Removed < 0.1 gal product from MKTF 21.
- Removed < 0.1 gal. product from MKTF 23.

1610 - Finished purging at BW-2B Sampled @ 1610. All containers filled.

1630 - Started purging well BW-2A. Sampled BW-2A @ 1710. All Containers filled

1730 - Return to equipment Shed to put equipment away.

1815 - Trihydro Personnel off-Site

Rite in the Rain.

Western Refinery, BS, ZB
9/10/14

0845 - Trihydro on-site, conduct tailgate safety meeting. Prep coolers for sampling.

0800 - Met with Cheryl to sample PW-3. Sampled @0805.
* FB-Group 12 taken @0820.

0820 - Sampled STP-1 to EP-2 @ 823.* Field blank FB-13 @ 830.

0850 - Sampled PW-2 @0850.

0900 - Returned to environmental shed to pack Groups 12, 13 for lab. (48hr. hold time).

0945 - Joey off-site, prep for next sample group.

9/10/14

1100 - Arrived at BW-1C, began purging well. - Did not have Male → Female adapter for Submersible pump. Returned to environmental Shed.

1200 - Begin purging BW-1C.
* FB-Group 9-9/10/14 Sampled at 1210.
- Pump lost suction after 45 gal purged, let recharge and took sample @ 1345

1415 - Begin purging at well BW-2C, Sampled BW2-3C at 1540.
- Pump lost suction after purging ~40 gal, let recharge and Sampled.

1600 - Begin purging at 1605 - BW3-C Pump lost suction after purging 30 gallons, let well recharge and Sampled at 1650.

Rite in the Rain

9/10/14

1705 - Begin purging well BW3-B at 1705.
Sampled BW3-B at 1740

1755 - Returned to Environmental Shed to put equipment away

1820 - Trihydro Personnel off-Site

Western Refinery BS, 2B
9/11/14

0700 - Trihydro on-site, conduct safety meeting, prep for sampling.

0825 - Begin purging KA-3. purged 4 gallons at KA-3

0850 - Begin purging NAPIS-3.
* Removed 0.5 gallons of product out of East LDU well. Will not collect sample.
* Purged *2 well volumes at NAPIS-3.
0905 - Begin purging NAPIS-1.
* Purged X2 well volumes
0910 - Begin purging NAPIS-2.
* Purged X2 well volumes.
0945 - Collected sample for West LDU at 945.
0950 - Collected KA-3 sample
1015 - Collected sample for NAPIS-1 at 1015.

1020 - Collected BD-NAPIS-9/11/14 from NAPIS-1

Rite in the Rain

Western BS, ZB 9/11/14

1115 - Oil Sump could not Sampled * Dry at 6.70'

1120 - Sampled NAPIS-3 at 1120.

1135 - Sampled NAPIS-2 at ~~1120.~~ 1135.

1200 - Returned to environmental shed to drop off samples

1210 * Collected FB-Group5-9/11/14
*Collected FB-Group6-9/11/14

1510 - Sample taken at SMW-2.

1625 - Collected FB-Group II-9/11/14

1640 - Sample collected at SMW-4.
* Pump lost suction after 10 gallons, let recharge & sampled at 1640.

Western BS,ZB 9/11/14

1800- Pump lost Suction after purging 60 gallons. Sampled OW-1 at 1800.

*Collected F13-Group I-9/11/14 at 1815.

1945- Trihydro off-site

Rite in the Rain

Western Refinery 13S, 21B 9/12/14

0645 - Conducted tailgate safety meeting.

0750 - Collected sample from GWM-7.

0805 - Collected sample from OAIPTS-2.

0815 - Collected FB-Group4-9/12/14.

0935 - Collected Sample from OW-10

1100 - Collected Sample from OW-12.
* OW-12 lost suction after purging 30 gallons, let recharge and sampled.

1220 - Sampled well OW-11

1300 - Returned to eno. Sled & prep for Monday

1400 - Trihydro Off Site

Western Refinery BS, CR
9/15/14

0700 - Trihydro on Site, conduct tailgate Safety meeting.

0800 - Obtained permit for MK Tank Farm wells, need additional drum at site, tried to contact Maint.

0836 - Product in MKTF-05 from 15.31' to 15.66', bailed < 0.5 gallons. Did not Sample.

0912 - Product in MKTF-03 from 9.06' to 9.16', bailed 1.5 gallons. Did not Sample.

0945 - Sampled well MKTF-04.
* Collected FB-Group7-9/15/14 @ 1010

1030 - Collected Sample at MKTF-22
* Collected 13D-MKTF-9/15/14 from MKTF-22.

Rite in the Rain

Western MKTF wells

	DTW	TD	X2	X
MKTF01	DTP=6.94	DTW=6.98	No S	
MKTF02	8.41	20.42	17	
MKTF03	DTP=9.06	DTW=9.16	No Sa	
MKTF04	11.09	22.15	16.4	2
MKTF05	DTP=15.3 15.46	NO Sample		
MKTF06	DTP=18.15	DTW=18.90	No Sa	
MKTF07	DTP=12.0	DTW=13.60	No Sam	
MKTF08	DTP=14.36	DTW=15.05	No	
MKTF09	14.89	22.73	11	1
MKTF10	8.99	15.88	10	1
MKTF11	9.35	18.40	~~6.7~~ 13.3	2
MKTF12	DTP=19.81	DTW=21.0	No Sa	
MKTF13	DTP=14.61	DTW=15.75	No Sa	
MKTF14	DTP=8.30	DTW=8.75	No Sa	
MKTF15	13.71	19.5	1.9	2.
MKTF16	10.6	14.08	1.1	1.
MKTF17	11.27	24.05	4.1	6.
MKTF18	8.81	25.17	5.3	8.

Western BS, ZB 9/15/14

#1135- Collected FB-Group3-9/15/14

1245- Sampled OW-52.

1335- Sampled OW-50

1545- Sampled OW-29

1645- Sampled OW-14

1835- Sampled OW-13.

1930- Trihydro Off-Site.

Rite in the Rain

Western Refinery 13S, 2B 9/16/14

1330- Returned to environmental Shed to pack Sample coolers for Shipment to lab via Kenny.

1615- Sample collected at MW-1.

1900- Sample collected at MW-2.

1945- Trihydro off-site

*1700- FB-Group10-9/16/14 collected

Rite in the Rain

Western Refinery BS, 2B 9/17/14

0645 - Trihydro on-site

0715 - Begin purging well ~~MW-2~~ MW-5.

0845 - Moved tote to MKTF area to begin Sampling MKTF wells.
*See MKTF well page for purge volumes.

0940 - Sampled MKTF-15.

0945 - MKTF-10 purged dry after ~7 gallons, will let recharge and sample 9/18.

1000 - Re-Sampled BW-2B for 8270.
1005 - Re-Sampled BW-2A for 8270.

Western Refinery 13S, 21B 9/12/14

1100 - Sampled MKTF-16

1115 - guaged MKTF-6, 7, 8, 9. Product measured in MKTF-6, 7, 48. No Samples will be collected from these wells.

1140 - Sampled MW-5

1330 - Bailed product totals:

MKTF-6: 3 gal.
MKTF-7: 2 gal.
MKTF-8: 2 gal.
MKTF-14: 1 gal.
MKTF-13: 3 gal.
MKTF-12: 2 gal.
MKTF-1: 0.1 gal.
MKTF-3: <.5 gal.
MKTF-5: <.5 gal.

1515 - Sampled MW-4

1830 - Sampled OW-30.

1915 - Trihydro off-site

Rite in the Rain

Western Refinery BS, ZB 9/18/14

0645 - Trihydro on-site

0815 - Sampled MKTF-10.
* check phenol hold time for BD-MKTF.

0850 - Bailed MKTF-18 dry after 2.5 gallons. will check afternoon for sample

0900 - Sampled MKTF-~~10~~ BS-9

0930 - Sampled MKTF-2.

1050 - Sampled RW-6.

1140 - Sampled RW-5.

1215 - Sampled RW-2

1235 - Collected FB-Group8-9/18/14

Western Refinery BS,ZB 9/18/14

1500 - Sampled RW-1.
* Bailed 4 gallons of product before taking Sample, per Cheryl's request.

1440 - Sampled MKTF-18.

1520 - Sampled MKTF-17.

1545 - Returned to environmental Shed to put equipment away and begin clearing area for demob.

1700 - Trihydro Off-Site

Rite in the Rain

Western Refinery BS, 9/19/14

0800 - Trihydro on-site.
begin packing coolers,
clean equipment sleds.

0830 - Collected EB-#1 - 9/19/14

0840 - Collected EB-#2 - 9/19/14

1000 - Trihydro off-site

Rite in the Rain.

WESTERN REFINING - GALLUP REFINERY
Q1-2014

OW - 1	
GAUGE DATE	11-10-14
GAUGE TIME	1015
DTB (feet) Depth to Bottom	96.40
DEDICATED PUMP	Yes
DTW (feet) Depth to Water	0
DTB - DTW	96.40
Capicty per foot	~~62.66~~ .65
1 Well Volume	62.66
3 Well Volumes	187.98
PURGE DATE	11-10-14
PURGE TIME	1020
SAMPLE DAY	11-10-14
SAMPLE TIME	1110
PUMP DEPTH	—
DTW (feet) at end of Purging	

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity ~~(uS)~~, (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1035	8.13	12.44	1.027	.878	.68	61.6	-97.1
(2)	1043	8.51	12.66	1.036	.881	.68	42.2	-94.0
(3)	1057	8.6	12.86	1.041	.881	.68	33.1	-94.7
(4)	1105	8.81	12.90	1.041	.880	.68	33.6	-94.9

WEATHER CONDITIONS

53 °F + Clear

Winds are SW 22mph

WATER APPEARANCE

Clear no odor

SAMPLE LOG

Pump @ 133 Hz, Purged 30 gallons

Collected @ 1110

OW - 10	
GAUGE DATE	11-10-14
GAUGE TIME	1153
DTB (feet) Depth to Bottom	60.7
DEDICATED PUMP	Yes
DTW (feet) Depth to Water	2.8
DTB - DTW	57.9
Capicity per foot	.65
1 Well Volume	37.63
3 Well Volumes	112.89
PURGE DATE	11-10-14
PURGE TIME	1155
SAMPLE DAY	11-10-14
SAMPLE TIME	1424
PUMP DEPTH	—
DTW (feet) at end of Purging	2.8

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity ~~(uS)~~, (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1210	7.36	13.05	4.595	3.874	3.26	33.5	-99.1
(2)	1220	7.37	13.06	4.604	3.878	3.26	30.8	-98.1
(3)	1225	7.36	13.06	4.608	3.878	3.26	27.7	-98.7
(4)	1230	7.35	13.09	4.601	3.871	3.25	25.4	-98.5

WEATHER CONDITIONS

53 °F + Clear

Winds are SW 22mph

Really high Gust

WATER APPEARANCE

Clear no odor

SAMPLE LOG

Pump @ 190 Hz, Purged 120 gallons

Collected @ 1424

INSTRUMENTS USED:

YSI 556 MPS water quality meter

Solinst 100' water level meter

Signature: Rob Sanders

SBB

WESTERN REFINING - GALLUP REFINERY
Q1-2014

OW - 13	
GAUGE DATE	11-10-14
GAUGE TIME	1502
DTB (feet) Depth to Bottom	99.21
DEDICATED PUMP	Yes
DTW (feet) Depth to Water	22.45
DTB - DTW	76.76
Capicty per foot	.65
1 Well Volume	49.89
3 Well Volumes	149.68
PURGE DATE	11-10-14
PURGE TIME	1509
SAMPLE DAY	11-10-14
SAMPLE TIME	1550
PUMP DEPTH	—
DTW (feet) at end of Purging	24.50

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity ~~(uS)~~, (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1525	8.33	13.05	.961	.809	.63	70.7	-139.0
(2)	1535	8.26	12.92	.955	.807	.62	44.4	-121.6
(3)	1540	8.25	12.72	.958	.813	.63	42.1	-117.9
	1546	8.22	12.94	.961	.811	.63	40.1	-117.3

WEATHER CONDITIONS

67°F
winds are 33 mph out of WSW

WATER APPEARANCE

Clear, No odor

SAMPLE LOG

Pump @ 300 Hz
Purged ~ 150 gallons
Collected @ 1550

OW - 14	
GAUGE DATE	11-10-14
GAUGE TIME	1610
DTB (feet) Depth to Bottom	46.83
DEDICATED PUMP	Yes
DTW (feet) Depth to Water	24.25
DTB - DTW	22.58
Capicity per foot	.65
1 Well Volume	14.67
3 Well Volumes	44.03
PURGE DATE	11-10-14
PURGE TIME	1615
SAMPLE DAY	11-10-14
SAMPLE TIME	1635
PUMP DEPTH	—
DTW (feet) at end of Purging	23.63

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity ~~(uS)~~, (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	1620	7.72	13.19	1.771	1.488	1.18	39.4	-187.3
(2)	1624	7.54	13.29	1.775	1.488	1.18	28.4	-186.4
(3)	1626	7.51	13.38	1.481	1.481	1.18	27.6	-184.7
(4)	1630	7.45	13.34	1.775	1.485	1.18	24.1	-174.5

WEATHER CONDITIONS

67°F
winds are 33 mph out of WSW

WATER APPEARANCE

Clear, No odor

SAMPLE LOG

Pump @ 180 Hz
Purged ~ 44 gallons
Collect @ 1635

INSTRUMENTS USED:

YSI 556 MPS water Quality meter
Solinst 100' water level meter

Signature: Pat Lander

WESTERN REFINING - GALLUP REFINERY
Q1-2014

OW-29	
GAUGE DATE	11-11-14
GAUGE TIME	811
DTB (feet) Depth to Bottom	52.75
DEDICATED PUMP	Yes
DTW (feet) Depth to Water	19.16
DTB - DTW	~~[illegible]~~ 33.59
Capicty per foot	.65
1 Well Volume	21.83
2 ~~3~~ Well Volumes	43.67
PURGE DATE	11-11-14
PURGE TIME	815
SAMPLE DAY	11-11-14
SAMPLE TIME	845
PUMP DEPTH	——
DTW (feet) at end of Purging	33.50

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity ~~(uS)~~, (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	827	8.26	12.85	1.433	1.212	.95	45.6	-154.0
(2)	830	7.91	12.96	1.429	1.209	.95	18.2	-146.5
(3)	833	7.79	12.83	1.421	1.204	.95	16.1	-144.4
	837	7.72	13.04	1.429	1.205	.95	12.6	-142.5

WEATHER CONDITIONS

41°F + Clear

winds are Calm

WATER APPEARANCE

Clear + No odor

SAMPLE LOG
Pumped @ 153 Hz
Purged 49 gallons

Collected @ 845

OW-30	
GAUGE DATE	11-11-14
GAUGE TIME	920
DTB (feet) Depth to Bottom	50.1
DEDICATED PUMP	Yes
DTW (feet) Depth to Water	23.7
DTB - DTW	26.4
Capicity per foot	.65
1 Well Volume	17.16
2 ~~3~~ Well Volumes	34.32
PURGE DATE	11-11-14
PURGE TIME	927
SAMPLE DAY	11-11-14
SAMPLE TIME	940
PUMP DEPTH	——
DTW (feet) at end of Purging	24.55

TEST PARAMATERS

	Time (hrs)	pH	Temperature Deg C	Conductivity ~~(uS)~~, (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
(1)	930	7.68	12.78	1.488	1.262	1.00	69.2	-125.8
(2)	933	7.58	12.18	1.476	1.263	.99	46.4	-128.4
(3)	935	7.55	12.07	1.475	1.264	.99	41.7	-125.7
(4)	937	7.48	12.76	1.487	1.262	1.00	33.3	-127.2

WEATHER CONDITIONS

48°F + Clear

winds are lemph out of SW

WATER APPEARANCE

Clear No odor

SAMPLE LOG
Pumped @ 200 Hz
Purged 35 gallons
Collected @ 940

INSTRUMENTS USED:
YSI 556 water Quality meter
Solinst 100' water level meter

Signature: Paden Standard

WESTERN REFINING - GALLUP REFINERY
Q1-2014

NAPIS - 3			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (µS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	11-11-14	(1)	1244	8.11	22.21	4.107	2.830	2.33	83.1	-142.2
GAUGE TIME	1210	(2)	1252	8.03	18.14	3.869	2.887	2.38	53.5	-141.4
DTB (feet) Depth to Bottom	30.66 ~~1210~~	(3)								
DEDICATED PUMP	NO									

DTW (feet) Depth to Water	9.18	**WEATHER CONDITIONS** 57°F, Clear
DTB - DTW	21.48	
Capicty per foot	.16	
1 Well Volume	3.44	
2 Well Volumes	6.87	
PURGE DATE	11-11-14	winds are 19mph out of SW
PURGE TIME	1235	**WATER APPEARANCE**
SAMPLE DAY	11-13-14	
SAMPLE TIME	1230	
PUMP DEPTH	—	
DTW (feet) at end of Purging		Clear No odor

SAMPLE LOG Bailed 5 gallons and went dry

KA - 3			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (µS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	11-11-14	(1)	1255	7.68	24.81	1.891	1.240	.97	25.8	-140.2
GAUGE TIME	1215	(2)	1304	7.48	23.82	1.858	1.238	.97	26.1	-144.3
DTB (feet) Depth to Bottom	23.4	(3)								
DEDICATED PUMP	NO	(4)								

DTW (feet) Depth to Water	8.0	**WEATHER CONDITIONS** 57°F, Clear
DTB - DTW	15.4	
Capicity per foot	.16	
1 Well Volume	2.46	
2 Well Volumes	4.93	
PURGE DATE	11-11-14	winds are 19 mph out of SW
PURGE TIME	1240	**WATER APPEARANCE**
SAMPLE DAY	11-11-14	
SAMPLE TIME	1313	
PUMP DEPTH	—	
DTW (feet) at end of Purging		Clear No odor

SAMPLE LOG
Bailed about 1 gallon out of well box before opening well casing
Bailed 5 gallons

Collected @ 1313

INSTRUMENTS USED:
Solinst 100' water level meter
YSI 556 MPS water quality meter
Bailer

Signature: Pete Sandoval

WESTERN REFINING - GALLUP REFINERY
Q1-2014

NAPIS-2		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (µS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	11-11-14	(1)	1340	7.67	24.38	2.330	1.534	1.21	17.5	-182.3
GAUGE TIME	1222	(2)								
DTB (feet) Depth to Bottom	13.81	(3)								
DEDICATED PUMP	NO									
DTW (feet) Depth to Water	8.20									
DTB - DTW	5.61									
Capicty per foot	.16									
1 Well Volume	.89									
2 ~~3~~ Well Volumes	1.79									
PURGE DATE	11-11-14									
PURGE TIME										
SAMPLE DAY	11-11-14									
SAMPLE TIME	1350									
PUMP DEPTH	—									
DTW (feet) at end of Purging										

WEATHER CONDITIONS

63°F + Clear

winds ~~15~~ 26 mph out of SW

WATER APPEARANCE

Clear No odor

SAMPLE LOG Bailed about 1 gallon out of well box before opening well casing
Purged about 2 gallons

Collected @ 1350

NAPIS-1		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (µS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	11-11-14	(1)	1455	7.62	18.50	1.611	1.238	0.94	28.5	-159.6
GAUGE TIME	1225	(2)	1506	7.63	18.62	1.684	1.247	0.98	15.0	-157.7
DTB (feet) Depth to Bottom	13.77	(3)								
DEDICATED PUMP	NO	(4)								
DTW (feet) Depth to Water	6.96									
DTB - DTW	6.81									
Capicity per foot	.16									
1 Well Volume	1.08									
2 ~~3~~ Well Volumes	2.17									
PURGE DATE	11-11-14									
PURGE TIME	1450									
SAMPLE DAY	11-11-14									
SAMPLE TIME	1510									
PUMP DEPTH	—									
DTW (feet) at end of Purging										

WEATHER CONDITIONS

63°F + Clear

winds 26 mph out of SW

WATER APPEARANCE

Clear, No odor

SAMPLE LOG
Purged about 2.5 gallons

Collected @ 1510

INSTRUMENTS USED:
YSI 556 MPS water quality meter
Solinst 100' water level meter

Bailer

Signature: Rob Lambert

WESTERN REFINING - GALLUP REFINERY

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Oil Sump LDU			TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	11-11-14	(1)								
GAUGE TIME	1530	(2)								
DTB (feet) Depth to Bottom	6.92	(3)								
DEDICATED PUMP	NO									
DTW (feet) Depth to Water	Ø									
DTB - DTW										
Capicty per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME										
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

Clear, winds from West @ 20mph.

62° F

WATER APPEARANCE

Dry Well

SAMPLE LOG Dry Well.

East LDU			TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	11-11-14	(1)								
GAUGE TIME	1535	(2)								
DTB (feet) Depth to Bottom	12.51	(3)								
DEDICATED PUMP	~~NO~~	(4)								
DTW (feet) Depth to Water	10.28									
DTB - DTW										
Capicity per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME										
SAMPLE DAY										
SAMPLE TIME	1550									
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

62°F + Clear

winds 23 mph out of the WSW

WATER APPEARANCE

dark grey, slight odor

SAMPLE LOG

Grab Sample

INSTRUMENTS USED:

Solinst 100' water level meter

Bailer

Signature: Pat Lawler

3

WESTERN REFINING - GALLUP REFINERY
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West LDU

		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	11-11-14	(1)								
GAUGE TIME	1600	(2)								
DTB (feet) Depth to Bottom	17.50	(3)								
DEDICATED PUMP	NO									
DTW (feet) Depth to Water		WEATHER CONDITIONS								
DTB - DTW		62°F + Clear								
Capicty per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE		23 mph out of WSW								
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG Well is Dry

Grab Sample

OAPIS - 1

		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	11-11-14	(1)	1640	7.33	17.79	6.087	4.641	3.90	17.8	-168.8
GAUGE TIME	1626	(2)	1644	7.28	17.32	6.053	4.615	3.92	15.9	-166.6
DTB (feet) Depth to Bottom	28.54	(3)	1649	7.26	16.85	5.976	4.562	3.88	15.9	-160.4
DEDICATED PUMP	NO	(4)	1653	7.31	16.79	5.918	4.561	3.88	13.6	-160.2
DTW (feet) Depth to Water	17.21	WEATHER CONDITIONS								
DTB - DTW	11.33	60°F + Clear								
Capicity per foot	.16									
1 Well Volume	1.81									
2 3 Well Volumes	3.62									
PURGE DATE	11-11-14	Winds 23 mph out of SW								
PURGE TIME	1635	WATER APPEARANCE								
SAMPLE DAY	11-11-14									
SAMPLE TIME	1700									
PUMP DEPTH	—									
DTW (feet) at end of Purging		Slick looking, Slight odor								

SAMPLE LOG

Purged about 4 gallons

Collected @ 1700

INSTRUMENTS USED:

YSI 556 MPS water quality meter

Solinst 100' water level meter

Bailer

Signature:

WESTERN REFINING - GALLUP REFINERY

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GWM-3		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	11-11-14	(1)								
GAUGE TIME	1635	(2)								
DTB (feet) Depth to Bottom	18.04	(3)								
DEDICATED PUMP	—									
DTW (feet) Depth to Water	Dry	WEATHER CONDITIONS								
DTB - DTW		60°F + clear								
Capicty per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE		winds 23 mph out of SW								
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

Well is Dry

GWM-2		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	11-11-14	(1)								
GAUGE TIME	1640	(2)								
DTB (feet) Depth to Bottom	19.05	(3)								
DEDICATED PUMP	—	(4)								
DTW (feet) Depth to Water	Dry	WEATHER CONDITIONS								
DTB - DTW		60°F + clear								
Capicity per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE		winds 23 mph out of SW								
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

Well is Dry

INSTRUMENTS USED:

Solinst 100' water level meter

Signature:

Pete Sanders

BBiles

WESTERN REFINING - GALLUP REFINERY
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GWM-1			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity ~~(uS)~~, (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	11-11-14	(1)	1316	7.64	14.58	6.057	4.889	4.17	172.4	-180.3
GAUGE TIME	1643	(2)	1318	7.56	14.04	4.833	3.965	3.34	82.6	-181.1
DTB (feet) Depth to Bottom	26.44	(3)	1320	7.49	13.94	4.774	3.922	3.30	57.2	-178.1
DEDICATED PUMP	NO		1322	7.50	13.68	4.696	3.894	3.28	56.6	-176.0
DTW (feet) Depth to Water	20.08									
DTB - DTW	6.36									
Capicty per foot	.16									
1 Well Volume	1.01									
2 ~~3~~ Well Volumes	2.03									
PURGE DATE	11-13-14									
PURGE TIME	1314									
SAMPLE DAY	11-13-14									
SAMPLE TIME	1325									
PUMP DEPTH	—									
DTW (feet) at end of Purging										

WEATHER CONDITIONS

60°F + Clear

Winds are 23 mph at of SW

WATER APPEARANCE

SAMPLE LOG

			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)								
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP		(4)								
DTW (feet) Depth to Water										
DTB - DTW										
Capicity per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME										
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

WATER APPEARANCE

SAMPLE LOG

INSTRUMENTS USED:
YSI 556 MPS water quality meter
Solinst 100' water level meter
Bailer

Signature: Pete Sanders

WESTERN REFINING - GALLUP REFINERY
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EP-1

			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)		8.41	8.51	6.529	6.529	5.35	119.2	-204.3
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP										
DTW (feet) Depth to Water										
DTB - DTW										
Capicty per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME										
SAMPLE DAY	11-12-14									
SAMPLE TIME	950									
PUMP DEPTH										
DTW (feet) at end of Purging										

TEST PARAMATERS

WEATHER CONDITIONS

51°F + Clear

Winds 17mph from WSW

WATER APPEARANCE

Red

SAMPLE LOG

~~EP-2~~ BW to EP-2

			Time (hrs)	pH	Temperature Deg C	Conductivity (~~uS~~), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)	840	7.73	19.93	63.57	47.72	51.02	111.6	-144.4
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP		(4)								
DTW (feet) Depth to Water										
DTB - DTW										
Capicity per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME										
SAMPLE DAY	11-12-14									
SAMPLE TIME	847									
PUMP DEPTH										
DTW (feet) at end of Purging										

TEST PARAMATERS

WEATHER CONDITIONS

Winds 17 mph from WSW

51°F + Clear

WATER APPEARANCE

Gray

SAMPLE LOG

~~BD 11/14 Total~~

INSTRUMENTS USED: YSI 556 MPS water quality meter

~~Bailer~~ Dipper

Signature: Pat Landers BBtc

WESTERN REFINING - GALLUP REFINERY

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STP-1 to EP-2			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (~~uS~~), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)	1040	8.50	13.41	3.717	3.103	2.57	93.3	-158.0
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP										
DTW (feet) Depth to Water			WEATHER CONDITIONS							
DTB - DTW			54°F + Clear							
Capicty per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE			winds 17 mph from SW							
PURGE TIME			WATER APPEARANCE							
SAMPLE DAY	11-12-14									
SAMPLE TIME	1030									
PUMP DEPTH										
DTW (feet) at end of Purging			Clear							

SAMPLE LOG

EP-2			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (~~uS~~), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)	1113	8.20	9.26	6.981	6.489	5.64	40.7	-138.8
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP		(4)								
DTW (feet) Depth to Water			WEATHER CONDITIONS							
DTB - DTW			54°F + Clear							
Capicity per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE			winds 17 mph from SW							
PURGE TIME			WATER APPEARANCE							
SAMPLE DAY	11-12-14									
SAMPLE TIME	1055									
PUMP DEPTH										
DTW (feet) at end of Purging			Reddish							

SAMPLE LOG

INSTRUMENTS USED:
YSI 556 MPS Water Quality meter

Dipper

Signature: Pak Sanders

WESTERN REFINING - GALLUP REFINERY
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EP-3		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (µS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)	1144	8.38	9.08	9.721	9.085	8.09	30.6	-46.6
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP										
DTW (feet) Depth to Water		WEATHER CONDITIONS								
DTB - DTW		55°F + clear								
Capicty per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE		winds 21 mph from SSW								
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY	11-12-14									
SAMPLE TIME	1130									
PUMP DEPTH										
DTW (feet) at end of Purging		Red tint								

SAMPLE LOG

EP-4		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (µS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)	1204	8.13	10.17	10.60	9.614	8.61	31.9	-132.6
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP		(4)								
DTW (feet) Depth to Water		WEATHER CONDITIONS								
DTB - DTW		55°F + clear								
Capicity per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE		winds 21 mph from SSW								
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY	11-12-14									
SAMPLE TIME	1200									
PUMP DEPTH										
DTW (feet) at end of Purging		Red tint								

SAMPLE LOG

BD-111214 Pond

INSTRUMENTS USED:

YSI 556 MPS - water quality meter

Dipper

Signature: Pat Sanders

WESTERN REFINING - GALLUP REFINERY

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Z-84-326-N		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)								
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP										
DTW (feet) Depth to Water		WEATHER CONDITIONS								
DTB - DTW		55°F + Clear								
Capicty per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE		Winds 21 mph from SSW								
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY	11-12-14									
SAMPLE TIME	1220									
PUMP DEPTH										
DTW (feet) at end of Purging		Slight Red tint								

SAMPLE LOG

New Evaporators - North

From EP-2

EP-5		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (~~uS~~), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)	1430	8.39	16.38	26.24	23.65	22.87	56.7	-139.1
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP		(4)								
DTW (feet) Depth to Water		WEATHER CONDITIONS								
DTB - DTW		59°F + Clear								
Capicity per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE		Winds 23 mph from SW								
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY	11-12-14									
SAMPLE TIME	1420									
PUMP DEPTH										
DTW (feet) at end of Purging		Clear to murky								

SAMPLE LOG

INSTRUMENTS USED:
YSI 556 MPS water Quality meter
Dipper

Signature: Rick Sanders SBito

WESTERN REFINING - GALLUP REFINERY

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12B		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity ~~(uS)~~ (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)	1520	8.86	9.72	6.473	5.932	5.11	78.3	-130.6
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP										
DTW (feet) Depth to Water		WEATHER CONDITIONS								
DTB - DTW		60°F + Clear								
Capicty per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE		Winds 18 mph from SW								
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY	11-12-14									
SAMPLE TIME	1515									
PUMP DEPTH										
DTW (feet) at end of Purging		Clear								

SAMPLE LOG

12A		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity ~~(uS)~~ (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)	1540	8.78	9.36	8.558	7.433	6.99	94.4	-124.3
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP		(4)								
DTW (feet) Depth to Water		WEATHER CONDITIONS								
DTB - DTW		60°F + Clear								
Capicity per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE		Winds 18 mph from SW								
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY	11-12-14									
SAMPLE TIME	1535									
PUMP DEPTH										
DTW (feet) at end of Purging		Clear								

SAMPLE LOG

INSTRUMENTS USED: YSI 556 MPS water quality meter

Dipper

Signature: Pete Sanders ZBH

WESTERN REFINING - GALLUP REFINERY

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EP-6		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity ~~(uS)~~ (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)	1450	8.31	11.04	29.44	26.52	26.03	78.2	-134.5
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP										
DTW (feet) Depth to Water		WEATHER CONDITIONS								
DTB - DTW		60°F + Clear								
Capicty per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE		winds 18 mph from SW								
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY	11-12-14									
SAMPLE TIME	1445									
PUMP DEPTH										
DTW (feet) at end of Purging		Clear + Frothy								

SAMPLE LOG

EP-7		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity ~~(uS)~~ (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)	1632	8.20	9.52	85.41	78.83	89.98	88.6	-122.9
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP		(4)								
DTW (feet) Depth to Water		WEATHER CONDITIONS								
DTB - DTW		55°F + clear								
Capicity per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE		winds 16 mph from WSW								
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY	11-12-14									
SAMPLE TIME	1624									
PUMP DEPTH										
DTW (feet) at end of Purging		Clear w/Green tint								

SAMPLE LOG

INSTRUMENTS USED:
YSI 556 MPS water quality meter

Dipper

Signature: Pat Sanders

WESTERN REFINING - GALLUP REFINERY

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EP-11

		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (µS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)	1612	8.49	9.83	89.17	81.61	93.99	87.5	-138.2
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP										
DTW (feet) Depth to Water		WEATHER CONDITIONS								
DTB - DTW		55°F + clear								
Capicty per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE		Winds 1 lemph from WSW								
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY	11-17-14									
SAMPLE TIME	1606									
PUMP DEPTH										
DTW (feet) at end of Purging		Clear w/ Green Tint								

SAMPLE LOG

EP-8

		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (µS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)	1659	8.58	8.79	83.80	78.88	89.83	97.1	-138.0
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP		(4)								
DTW (feet) Depth to Water		WEATHER CONDITIONS								
DTB - DTW		55°F + clear								
Capicity per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE		Winds 1 lemph from WSW								
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY	11-17-14									
SAMPLE TIME	1653									
PUMP DEPTH										
DTW (feet) at end of Purging		Clear w/ Green Tint								

SAMPLE LOG

INSTRUMENTS USED:
YSI 556 MPS water Quality meter
Dipper

Signature:
Pete Sanders

WESTERN REFINING - GALLUP REFINERY
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EP-9

		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (~~uS~~), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)	835	7.09	8.63	134.9	127.9	166.97	72.3	-131.3
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP										
DTW (feet) Depth to Water										
DTB - DTW										
Capicty per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME										
SAMPLE DAY	11-13-14									
SAMPLE TIME	830									
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

46°F + Clear

winds 5mph from W

WATER APPEARANCE

Clear No odor

SAMPLE LOG

EP-2 E-coli

		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)								
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP		(4)								
DTW (feet) Depth to Water										
DTB - DTW										
Capicity per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME										
SAMPLE DAY	11-13-14									
SAMPLE TIME	858									
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

46°F + Clear

winds 5 mph from W

WATER APPEARANCE

Reddish Tint

SAMPLE LOG

INSTRUMENTS USED:

Dipper

Signature: Pat Lawley BBL

WESTERN REFINING - GALLUP REFINERY

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EP-3 E-coli		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)								
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP										
DTW (feet) Depth to Water		WEATHER CONDITIONS								
DTB - DTW										
Capicty per foot		46°F + clear								
1 Well Volume										
3 Well Volumes										
PURGE DATE		winds 5 mph from W								
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY	11-13-14									
SAMPLE TIME	903									
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

EP-4 E-coli		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)								
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP		(4)								
DTW (feet) Depth to Water		WEATHER CONDITIONS								
DTB - DTW										
Capicity per foot		46°F + clear								
1 Well Volume										
3 Well Volumes										
PURGE DATE		winds 5 mph from W								
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY	11-13-14									
SAMPLE TIME	905									
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

INSTRUMENTS USED:

Dipper

Signature: Pat Lawley BBG

WESTERN REFINING - GALLUP REFINERY

Q1-2014

EP-5 E-coli.		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)								
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP										
DTW (feet) Depth to Water		WEATHER CONDITIONS								
DTB - DTW		46°F + Clear								
Capicty per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE		Winds 5 mph from W								
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY	11-13-14									
SAMPLE TIME	913									
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

EP-6 E-coli.		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)								
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP		(4)								
DTW (feet) Depth to Water		WEATHER CONDITIONS								
DTB - DTW		46°F + Clear								
Capicity per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE		Winds 5 mph from W								
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY	11-13-14									
SAMPLE TIME	916									
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

INSTRUMENTS USED:

Dipper

Signature: Rob Sanders

WESTERN REFINING - GALLUP REFINERY

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EP-8 E-coli		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)								
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP										
DTW (feet) Depth to Water		WEATHER CONDITIONS								
DTB - DTW		46°F + clear								
Capicty per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE		Winds 5mph from W								
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY	11-13-14									
SAMPLE TIME	924									
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

EP-7 E-coli		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)								
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP		(4)								
DTW (feet) Depth to Water		WEATHER CONDITIONS								
DTB - DTW		46° F + Clear								
Capicity per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE		Winds 5mph from W								
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY	11-13-14									
SAMPLE TIME	931									
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

INSTRUMENTS USED:

Dipper

Signature: Rob Lawler

WESTERN REFINING - GALLUP REFINERY
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EP-11 E-coli

			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)								
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP										
DTW (feet) Depth to Water			WEATHER CONDITIONS							
DTB - DTW			46°F + clear							
Capicty per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE			winds 5 mph from West							
PURGE TIME			WATER APPEARANCE							
SAMPLE DAY	11-13-14									
SAMPLE TIME	934									
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

EP-12A E-coli

			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)								
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP		(4)								
DTW (feet) Depth to Water			WEATHER CONDITIONS							
DTB - DTW			48°F + clear							
Capicity per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE			winds 17 mph from SW							
PURGE TIME			WATER APPEARANCE							
SAMPLE DAY	11-13-14									
SAMPLE TIME	942									
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

INSTRUMENTS USED:

Dipper

Signature:

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EP-12B E-coli

			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)								
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP										
DTW (feet) Depth to Water			WEATHER CONDITIONS							
DTB - DTW			48°F + Clear							
Capicty per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE			Winds 17 mph from SW							
PURGE TIME			WATER APPEARANCE							
SAMPLE DAY	11-13-14									
SAMPLE TIME	944									
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE		(1)								
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP		(4)								
DTW (feet) Depth to Water			WEATHER CONDITIONS							
DTB - DTW										
Capicity per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME			WATER APPEARANCE							
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

INSTRUMENTS USED:

Dipper

Signature: Pak Lucas

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MKTF-04			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	11-13-14	(1)	1525	7.97	15.57	1.963	1.557	1.24	70.9	-194.1
GAUGE TIME	1441	(2)	1531	7.60	15.14	1.939	1.553	1.24	31.8	-171.6
DTB (feet) Depth to Bottom	20.15	(3)	1535	7.69	14.91	1.885	1.518	1.21	34.3	-173.7
DEDICATED PUMP	NO									
DTW (feet) Depth to Water	~~11.44~~ 11.35									
DTB - DTW	8.8									
Capicty per foot	.65									
1 Well Volume	5.72									
2 ~~3~~ Well Volumes	11.44									
PURGE DATE	11-13-14									
PURGE TIME	1520									
SAMPLE DAY	11-13-14									
SAMPLE TIME	1545									
PUMP DEPTH	~~15~~									
DTW (feet) at end of Purging	15.20									

WEATHER CONDITIONS

59°F + Clear
winds 15 mph from W

WATER APPEARANCE

Clear to Red murky

SAMPLE LOG

MKTF-05			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	11-13-14	(1)								
GAUGE TIME	1449	(2)								
DTB (feet) Depth to Bottom	17.73	(3)								
DEDICATED PUMP	NO	(4)								
DTW (feet) Depth to Water	16.17									
DTB - DTW	1.56									
Capicity per foot	.65									
1 Well Volume	1.01									
2 ~~3~~ Well Volumes	2.02									
PURGE DATE	11-13-14									
PURGE TIME	1516									
SAMPLE DAY	NA									
SAMPLE TIME	NA									
PUMP DEPTH	NA									
DTW (feet) at end of Purging	17.93									

WEATHER CONDITIONS

59°F + Clear
winds 15 mph from W

WATER APPEARANCE

15.74 to Product

SAMPLE LOG Purged 2.0 gallons
Did not Sample

INSTRUMENTS USED:
Solinst 100' water level meter
YSI 556 mps water Quality meter

Signature:

WESTERN REFINING - GALLUP REFINERY
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MKTF - 03		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	11-13-14	(1)								
GAUGE TIME	1500	(2)								
DTB (feet) Depth to Bottom	18.48	(3)								
DEDICATED PUMP	NO									
DTW (feet) Depth to Water	9.31									
DTB - DTW	9.17									
Capicty per foot	.65									
1 Well Volume	5.96									
2 ~~3~~ Well Volumes	11.92									
PURGE DATE	11-13-14									
PURGE TIME	1537									
SAMPLE DAY	NA									
SAMPLE TIME	NA									
PUMP DEPTH										
DTW (feet) at end of Purging	7.45									

WEATHER CONDITIONS

57°F + clear

winds 11 mph from WSW

WATER APPEARANCE

9.31' to Product

SAMPLE LOG

Did not Sample; 1/8 gallon of product.

MKTF - 11		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (~~uS~~), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	11-13-14	(1)	1614	7.69	16.54	2.698	2.089	1.69	33.1	-172.2
GAUGE TIME	1505	(2)	1618	7.63	16.80	2.992	2.377	1.88	32.6	-178.2
DTB (feet) Depth to Bottom	18.38	(3)	1620	7.63	16.65	3.227	2.496	2.04	33.7	-184.3
DEDICATED PUMP	NO	(4)	1624	7.61	16.69	3.298	2.547	2.08	38.4	-192.8
DTW (feet) Depth to Water	9.55									
DTB - DTW	8.83									
Capicity per foot	.65									
1 Well Volume	5.73									
2 ~~3~~ Well Volumes	11.48									
PURGE DATE	11-13-14									
PURGE TIME	1602									
SAMPLE ~~DAY~~ Time	1642									
SAMPLE ~~TIME~~ Day	11-13-14									
PUMP DEPTH	NA									
DTW (feet) at end of Purging	11.60									

WEATHER CONDITIONS

57°F + clear

winds 11 mph from WSW

WATER APPEARANCE

Cloudy; Dark grey; odor

SAMPLE LOG

INSTRUMENTS USED:
YSI 556 MPS water quality meter
Solinst 100' water level meter

Signature:

WESTERN REFINING - GALLUP REFINERY
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MLTF -15		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	11-14-14	(1)								
GAUGE TIME	843	(2)								
DTB (feet) Depth to Bottom	19.48	(3)								
DEDICATED PUMP	NO									

		WEATHER CONDITIONS
DTW (feet) Depth to Water	14.55	45°F + ~~Clear~~ Cloudy
DTB - DTW	4.93	
Capicty per foot	.16	
1 Well Volume	.78	
2 ~~3~~ Well Volumes	1.57	
PURGE DATE	11-14-14	winds 8 mph from WSW
PURGE TIME	850	**WATER APPEARANCE**
SAMPLE DAY		
SAMPLE TIME		
PUMP DEPTH		
DTW (feet) at end of Purging		13.5' to Product

SAMPLE LOG

Bailed 3 gallons

MLTF-10		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	11-14-14	(1)	957	7.06	16.46	4.85	3.77	3.17	38.3	-175.4
GAUGE TIME	900	(2)	1007	6.99	16.21	4.682	3.657	3.06	26.7	-160.8
DTB (feet) Depth to Bottom	15.87	(3)								
DEDICATED PUMP	NO	(4)								

		WEATHER CONDITIONS
DTW (feet) Depth to Water	10.05	46°F + cloudy
DTB - DTW	5.87	
Capicity per foot	.65	
1 Well Volume	3.78	
2 ~~3~~ Well Volumes	7.56	
PURGE DATE	11-14-14	winds 15 mph from SW
PURGE TIME	945	**WATER APPEARANCE**
SAMPLE DAY	11-14-14	
SAMPLE TIME	1010	
PUMP DEPTH	—	
DTW (feet) at end of Purging		Clear to Chocolate Brown

SAMPLE LOG

Well was bailing dry at 4 gallons So I grabbed Sample

INSTRUMENTS USED:
YSI 556 MPS water quality meter
Solinst 100' water level meter
Bailer

Signature: Rob Landers

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MKTF-09			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	11-14-14	(1)	947	7.41	13.97	1.459	1.199	0.94	65.0	-160.0
GAUGE TIME	911	(2)	953	7.46	14.22	1.487	1.214	0.96	50.7	-180.0
DTB (feet) Depth to Bottom	22.48	(3)	957	7.61	14.01	1.500	1.234	0.97	42.1	-182.1
DEDICATED PUMP	NO		10.02	7.52	14.30	1.517	1.240	0.98	47.9	-185.6
DTW (feet) Depth to Water	15.21									
DTB - DTW	7.27									
Capicty per foot	.65									
1 Well Volume	4.72									
2 ~~3~~ Well Volumes	9.45									
PURGE DATE	11-14-14									
PURGE TIME	942									
SAMPLE DAY	11-14-14									
SAMPLE TIME	1013									
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

46°F + Cloudy

Winds 15 mph from SW

WATER APPEARANCE

Clear @ the beginning; midpoint Dark greyish Color; Sheen, odor of product

SAMPLE LOG

MKTF-08			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	11-14-14	(1)								
GAUGE TIME	914	(2)								
DTB (feet) Depth to Bottom	21.97	(3)								
DEDICATED PUMP	NO	(4)								
DTW (feet) Depth to ~~Water~~ Prod.	14.88									
DTB - DTW										
Capicity per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME										
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

WATER APPEARANCE

SAMPLE LOG Depth to product 14.88

INSTRUMENTS USED:
YSI 556 MPS water quality meter
Solinst 100' water level meter
Bailer

Signature:

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MKTF-07		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	11-14-14	(1)								
GAUGE TIME	920	(2)								
DTB (feet) Depth to Bottom	17.66	(3)								
DEDICATED PUMP	NO									
DTW (feet) ~~Depth to Water~~ Prod	13.32	WEATHER CONDITIONS								
DTB - DTW										
Capicty per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging		13.32' to Product								

SAMPLE LOG

MKTF-06		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	11-14-14	(1)								
GAUGE TIME	925	(2)								
DTB (feet) Depth to Bottom	23.75	(3)								
DEDICATED PUMP	NO	(4)								
DTW (feet) ~~Depth to Water~~ Prod	18.58	WEATHER CONDITIONS								
DTB - DTW										
Capicity per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging		18.58 to Product								

SAMPLE LOG

INSTRUMENTS USED:
Solinst 100' water level meter

Signature:
Rak Pandey

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MKTF - 01		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	11-14-14	(1)								
GAUGE TIME	1100	(2)								
DTB (feet) Depth to Bottom	16.42	(3)								
DEDICATED PUMP	no									
DTW (feet) Depth to Water	7.32	WEATHER CONDITIONS								
DTB - DTW	.10									
Capicty per foot	9.65									
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME		WATER APPEARANCE								
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging		7.30' to product								

SAMPLE LOG

MKTF - 02		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (µS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	11-14-14	(1)	1123	8.00	13.30	2.437	2.040	1.65	77.4	-157.6
GAUGE TIME	1105	(2)	1126	7.87	13.65	2.536	2.104	1.70	56.8	-157.5
DTB (feet) Depth to Bottom	20.42	(3)	1137	7.93	13.18	2.758	2.318	1.89	44.9	-155.0
DEDICATED PUMP	no	(4)	1140	7.74	13.25	3.007	2.520	2.06	44.2	-155.4
DTW (feet) Depth to Water	8.21	WEATHER CONDITIONS								
DTB - DTW	12.21	51°F + cloudy								
Capicity per foot	.65									
1 Well Volume	7.93									
2 Well Volumes	15.87									
PURGE DATE	11-14-14	winds 11 mph from SW								
PURGE TIME	1116	WATER APPEARANCE								
SAMPLE DAY	11-14-14									
SAMPLE TIME	1145									
PUMP DEPTH	—									
DTW (feet) at end of Purging		Clear to murky								

SAMPLE LOG

Purged 15 gallons and well was indicating that is was going dry

Collected BD-111414

INSTRUMENTS USED:

YSI 556 MPS water quality meter
Solinst 100' water level meter
Bailer

Signature: BB

Pat Landers

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MKTF-26		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (µS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	11-14-14	(1)	1233	7.51	13.92	3.553	2.929	2.42	45.5	-145.7
GAUGE TIME	1123	(2)	1240	7.64	13.76	3.285	2.720	2.24	41.5	-147.0
DTB (feet) Depth to Bottom	17.16	(3)								
DEDICATED PUMP	NO									
DTW (feet) Depth to Water	8.72	WEATHER CONDITIONS								
DTB - DTW	8.45									
Capicty per foot										
1 Well Volume	1.35									
2 ~~3~~ Well Volumes	2.70									
PURGE DATE	11-14-14									
PURGE TIME	1230	WATER APPEARANCE								
SAMPLE DAY	11-14-14									
SAMPLE TIME	1248									
PUMP DEPTH	—									
DTW (feet) at end of Purging		Clear No odor								

SAMPLE LOG

Purged 2.75 gallons

MKTF-27		TEST PARAMATERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (µS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	11-14-14	(1)	1205	7.67	15.33	7.333	5.848	5.06	79.1	-139.5
GAUGE TIME	1115	(2)	1212	7.59	15.41	7.399	5.894	5.10	58.6	-137.7
DTB (feet) Depth to Bottom	14.71	(3)								
DEDICATED PUMP	NO	(4)								
DTW (feet) Depth to Water	8.15	WEATHER CONDITIONS								
DTB - DTW	6.56	53°F + Cloudy								
Capicity per foot										
1 Well Volume	1.05									
2 ~~3~~ Well Volumes	2.09									
PURGE DATE	11-14-14	Winds 18 mph from SW								
PURGE TIME	1200	WATER APPEARANCE								
SAMPLE DAY	11-14-14									
SAMPLE TIME	1221									
PUMP DEPTH	—	Cloudy, ~~Pink~~ Pinkish color								
DTW (feet) at end of Purging										

SAMPLE LOG Purged 2 gallons

BD-111414-2

INSTRUMENTS USED:

YSI ~~MPS~~ 556 water Quality meter

Solinst 100' water level meter

Bailer

Signature: [signature]

Pat Landers

WESTERN REFINING - GALLUP REFINERY
Q1-2014

MKTF - 28			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (~~uS~~), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	11-14-14	(1)	1342	8.65	18.97	2.532	1.861	1.49	110.2	-164.6
GAUGE TIME	1321	(2)	1345	8.79	19.41	2.614	1.902	1.53	77.8	-162.0
DTB (feet) Depth to Bottom	16.13	(3)	1349	8.07	19.76	2.708	1.957	1.57	64.1	-159.3
DEDICATED PUMP	NO									
DTW (feet) Depth to Water	6.00									
DTB - DTW	10.13									
Capicty per foot	.16									
1 Well Volume	1.65									
2 ~~3~~ Well Volumes	3.30									
PURGE DATE	11-14-14									
PURGE TIME	1337									
SAMPLE DAY	11-14-14									
SAMPLE TIME	1355									
PUMP DEPTH	—									
DTW (feet) at end of Purging										

WEATHER CONDITIONS

53°F + cloudy

winds 11 mph from WSW

WATER APPEARANCE

Clear

SAMPLE LOG

Purged 3.5 gallons

MKTF - 29			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	11-14-14	(1)								
GAUGE TIME	1330	(2)								
DTB (feet) Depth to Bottom	22.80	(3)								
DEDICATED PUMP	NO	(4)								
DTW (feet) Depth to Water	3.05									
DTB - DTW	19.75									
Capicity per foot	.16									
1 Well Volume	3.16									
2 ~~3~~ Well Volumes	6.32									
PURGE DATE										
PURGE TIME										
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

WEATHER CONDITIONS

WATER APPEARANCE

SAMPLE LOG

INSTRUMENTS USED:
YSI 556 MPS Water Quality
Solinst 100' water level meter
Bailer

Signature: SBC

WESTERN REFINING - GALLUP REFINERY

Q1-2014

MKTF - 24			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity ~~(uS)~~, (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	11-14-14	(1)	1531	7.61	12.46	2.437	2.083	1.69	46.3	-147.9
GAUGE TIME	1431	(2)	1534	7.57	12.49	2.509	2.143	1.74	46.6	-147.1
DTB (feet) Depth to Bottom	30.47	(3)								
DEDICATED PUMP	NO									

		WEATHER CONDITIONS
DTW (feet) Depth to Water	22.21	52°F + Cloudy
DTB - DTW	8.26	
Capicty per foot	.16	
1 Well Volume	1.32	
2~~3~~ Well Volumes	2.64	
PURGE DATE	11-14-14	Winds 18 mph from SW
PURGE TIME	1525	**WATER APPEARANCE**
SAMPLE DAY	11-14-14	
SAMPLE TIME	1540	
PUMP DEPTH	—	
DTW (feet) at end of Purging		Red tint + murky

SAMPLE LOG

Purged 2.75 gallons

MKTF - 25			TEST PARAMATERS							
			Time (hrs)	pH	Temperature Deg C	Conductivity ~~(uS)~~, (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	11-14-14	(1)	1520	7.91	13.31	2.456	2.500	2.05	76.4	-150.4
GAUGE TIME	1443	(2)	1525	7.84	13.55	2.499	2.442	2.04	47.7	-151.0
DTB (feet) Depth to Bottom	19.58	(3)								
DEDICATED PUMP	NO	(4)								

		WEATHER CONDITIONS
DTW (feet) Depth to Water	11.46	52°F + Cloudy
DTB - DTW	8.12	
Capicity per foot	.16	
1 Well Volume	1.29	
2~~3~~ Well Volumes	2.59	
PURGE DATE	11-14-14	Winds 18 mph from SW
PURGE TIME	1515	**WATER APPEARANCE**
SAMPLE DAY	11-14-14	Cloudy, reddish/brown color
SAMPLE TIME	1533	
PUMP DEPTH	—	
DTW (feet) at end of Purging		Purged 2.5 gallons

SAMPLE LOG

INSTRUMENTS USED:

YSI 556 MPS water ~~test~~ quality meter

Solinst 100' water level meter

Bailer

Signature: [illegible]

APPENDIX D

SUMMARY OF WASTE WATER MONTHLY FLOW RATE

(The monthly waste water flow data is submitted on a monthly basis to NMED and OCD.)

APPENDIX E

(BLANK)

APPENDIX F

NEW WELLS – MKTF-19 THRU MKTF-45

DePauli Engineering
& Surveying, LLC.
Civil Engineers and Land Surveyors

Phone: 505-863-5440 • Fax: 505-863-1919 • www.depauliengineering.com
307 South 4th Street • Gallup, NM 87301
PO BOX 876 • Gallup, NM 87305

May 12, 2014

Mr. Ed Riege, Environmental Manager
Western Refining-Gallup Refinery
Route 3 Box 7
Gallup, NM 87301

Re: Western Refining Monitoring Wells

Dear Mr. Riege:

DePauli Engineering & Surveying, LLC completed the field survey of the 16 monitoring wells at Western Refining-Gallup Refinery on April 30, 2014. The wells were surveyed for the following parameter: ground level elevation, ground level elevation inside steel sleeve, center top steel lid elevation, well casing rim elevation and corresponding measuring point description associated with each elevation. The survey was conducted by an enlisted NM Surveyor in Training and a Technician (under my direct supervision), from DePauli Engineering & Surveying, LLC and one Gallup Refinery representative to assist with the location of the wells.

The instruments used to complete the survey consisted of a Leica VIVA GS10 GPS (global positing system) and System 1200 GPS. The method used to survey the wells was Real-time Kinematic GPS Surveying (RTK). RTK surveying requires that two or more receivers are operated simultaneously. The aspect of the procedure involves a radio transmitting a signal from the base station. The base station's coordinates are utilized to make the appropriate corrections to the error involved with the GPS signals. The rover receives the corrections thence giving the rover observation corrected valves. The horizontal and vertical positions are determined by differential GPS involving the base line surveyed from local base station to survey position. The base line measurements are surveyed for one minute (60 observations). This is verified by surveying known local control points and bench marks.

The horizontal positions of the top of the PVC casing or top of the lid (unless otherwise noted) and the vertical positions for the PVC casing, lid, ground elevation inside the steel casing, and the surrounding ground elevation is shown on the attached sheet labeled "Coordinate and Elevation Summary, Western Refining Monitoring Wells" The horizontal position is NAD 83

datum and the vertical positions are NGVD 1929. Elevations were taken using the concrete pad surrounding each well and locations noted on the report. Ground elevation was taken using the concrete pad surrounding each well and locations shown on the report.

The requested field survey was completed on April 30, 2014 in accordance with sections 500.1 through 500.12 of the Regulations and Rules of the Board of Registration for Professional Engineers and Surveyors Minimum Standards for Surveying in New Mexico; which horizontal positions were measured to the nearest 0.1-ft and vertical elevations were measured to an accuracy of 0.01-ft.

If you have any questions concerning this survey please do not hesitate to contact our office.

Sincerely,

Marc DePauli

Marc DePauli, PE/PS

MARC A. DEPAULI
NEW MEXICO
13606
REGISTERED PROFESSIONAL SURVEYOR

DePauli Engineering & Surveying, LLC.
307 S. 4th Street
Gallup, NM 87301

April 30, 2014

Coordinate and Elevation Summary, Western Refining Monitoring Wells

Well #	Northing	Easting	Elevation	Description
MKTF-21	1633570.30	2546110.00	6952.57	North edge PVC casing.
			6952.77	Center Steel Lid
			6952.00	North side ground elevation inside steel sleeve
			6952.68	Average elevation of concrete collar.
MKTF-20	1633698.28	2546111.23	6951.78	North edge PVC casing.
			6952.05	Center Steel Lid
			6951.17	North side ground elevation inside steel sleeve
			6951.89	Average elevation of concrete collar.
MKTF-24	1633853.19	2545468.48	6928.72	North edge PVC casing.
			6929.21	Center Steel Lid
			6924.62	North side ground elevation inside steel sleeve
			6926.07	Average elevation of concrete collar.
MKTF-23			6929.98	North edge PVC casing.
	1633750.93	2545503.70	6930.55	Center Steel Lid
			6925.79	North side ground elevation inside steel sleeve
			6927.23	Average elevation of concrete collar.
MKTF-22			6942.31	**North edge PVC casing.
	1633501.64	2545478.20	6942.94	Center Steel Lid
			6938.57	North side ground elevation inside steel sleeve
			6939.76	Average elevation of concrete collar.
				** PVC casing not typical.
MKTF-31			6906.87	North edge PVC casing.
	1633898.83	2544938.99	6907.58	Center Steel Lid
			6903.11	North side ground elevation inside steel sleeve
			6904.26	Average elevation of concrete collar.
MKTF-25			6916.19	North edge PVC casing.
	1634015.86	2545275.68	6916.66	Center Steel Lid
			6911.79	North side ground elevation inside steel sleeve
			6913.35	Average elevation of concrete collar.
MKTF-30			6900.80	North edge PVC casing.
	1634225.67	2544937.91	6901.34	Center Steel Lid
			6896.68	North side ground elevation inside steel sleeve
			6898.10	Average elevation of concrete collar.

Coordinate and Elevation Summary, Western Refining Monitoring Wells

Well #	Northing	Easting	Elevation	Description
MKTF-29			6901.62	North edge PVC casing.
	1634249.76	2545258.34	6901.98	Center Steel Lid
			6897.67	North side ground elevation inside steel sleeve
			6898.83	Average elevation of concrete collar.
MKTF-28			6921.52	North edge PVC casing.
	1634263.44	2545650.04	6922.11	Center Steel Lid
			6917.51	North side ground elevation inside steel sleeve
			6918.67	Average elevation of concrete collar.
MKTF-27			6917.90	North edge PVC casing. (ex. mark)
	1634115.56	2545620.98	6918.49	Center Steel Lid
			6914.18	North side ground elevation inside steel sleeve
			6915.36	Average elevation of concrete collar.
MKTF-26			6915.31	North edge PVC casing.
	1634033.63	2545492.39	6915.86	Center Steel Lid
			6911.35	North side ground elevation inside steel sleeve
			6912.55	Average elevation of concrete collar.
MKTF-19	1633381.19	2545842.82	6944.67	North edge PVC casing.
			6945.00	Center Steel Lid
			6944.34	North side ground elevation inside steel sleeve
			6944.89	Average elevation of concrete collar.
MKTF-34			6945.35	North edge PVC casing.
	1633118.42	2545681.30	6945.71	Center Steel Lid
			6943.52	North side ground elevation inside steel sleeve
			6942.42	Average elevation of concrete collar.
MKTF-32			6911.11	North edge PVC casing.
	1633443.56	2544840.32	6911.68	Center Steel Lid
			6907.16	North side ground elevation inside steel sleeve
			6908.44	Average elevation of concrete collar.
MKTF-33	1633261.99	2545318.27	6939.75	North edge PVC casing.
			N/A	Center Steel Lid
			N/A	North side ground elevation inside steel sleeve
			6936.59	Elevation of surrounding ground.

Monitoring well has no concrete collar and steel casing.

MARC A. DEPAULI NEW MEXICO 13606 REGISTERED PROFESSIONAL SURVEYOR

Marc DePauli 5-12-2014

Marc DePauli PS13606 Date

DiSorbo Consulting, LLC 1010 Travis Street, Suite 916 | Houston, Texas 77002 713.955.1230 www.disorboconsult.com

Client: WESTERN REFINING SW, INC.	Project Number: WEST 14003	Boring No. \ Well No.: MKTF-35
Project Name: GALLUP REFINERY - HYDROCARBON SEEP		Sheet 1 of 1
Saturation Depth: 10' / Total Depth: 18'	GPS Coordinates: N35°29.240'N W108°25.692'	Logged By: TRACY PAYNE
Drilling Methods \ Auger Size \ Bit Size: HOLLOW STEM AUGER 7.5"	Drilling Rig: CME 75 / Driller: C. ORTIZ	Drilling Company: ENVIRO-DRILL, INC.
Sampling Method \ Size of Sampler: SPLIT SPOON 2" DIA, 2' LONG		Start Date: 11·19·14 / Finish Date: 11·19·14
Comments		Start Time: 0815 / Finish Time: 1045

Field Screening: Depth (feet bgl)	PID (ppm)	Air Temp. (°F)	Lithologic Interval (feet bgl)	Symbol	% Recovery	Description of Lithology
			0-6"	—	100	ASPHALT / BASE
6"-2'	4.5	28°	6"-2'	CL	100	SILTY CLAY - LOW, V. STIFF, DAMP, BROWN
2-4'	46.6	28	2-4'	CL	20	SILTY CLAY - STA, ODOR, GRAVEL PRESENT
4-6'	95	28	4-6'	CL/SP/GP	90	SILTY CLAY / SAND / GRAVEL - LOW, DAMP, REDDISH BROWN
						ODOR - V. COARSE GRAIN SAND - 1/4" → 1"
						GRAVEL, ODOR
6-8'	64	28	6-8'	CL	80	SILTY CLAY - LOW, FIRM, DAMP, REDDISH BROWN,
						ODOR, OCCASIONAL GRAVEL
8-10	78	28	8-10	CL/SP/GP	90	SILTY CLAY / SAND / GRAVEL - ST 4-6'
						DAMP ⇒ MOIST, ODOR
10-12	1790	28	10-11.5	CL/SP/GP	80	SILTY CLAY / SAND / GRAVEL - STA, SAT., HC
						ODOR
			11.5-12	CL	90	SILTY CLAY - LOW, STIFF, DAMP, REDDISH
						BROWN, LT GRAY CLAY AT BASE, HC ODOR
12-14	2400	28	12-14	CL	90	SILTY CLAY / SANDY CLAY - LOW, FIRM TO
						STIFF, DAMP ~~[illegible]~~, GRAY HC
						ODOR SAND / SILT VARIES ACROSS
						INTERVAL - GRAVELLY
14-16	745	28	14-16	CL	~~90~~ 50	~~SILTY~~ SANDY CLAY - STA, DAMP, GRAY,
						BROWN AT BASE, HC ODOR
16-18	37	28	16-18	CL	90	CLAY - MOD, V. STIFF, DAMP, BROWN AND
						GRAY, FAINT ODOR

DiSorbo Consulting, LLC 1010 Travis Street, Suite 916 | Houston, Texas 77002 713.955.1230 www.disorboconsult.com

WELL CONSTRUCTION DATA

Well Number: MKTF-35

Prepared by: TRACY PAYNE

Start Date: 11.19.14

Finish Date: 11.19.14

WELL LOCATION:

Client Name: WESTERN REFINING SW, INC.

Project No. WEST14003

Project Name: GALLUP REFINERY - HYDROCARBON SEEP

Address of Site: 92 GIANT CROSSING RD GALLUP, NM 87301

Drilling Contractor: ENVIRO-DRILL, INC.

Driller: C. ORTIZ

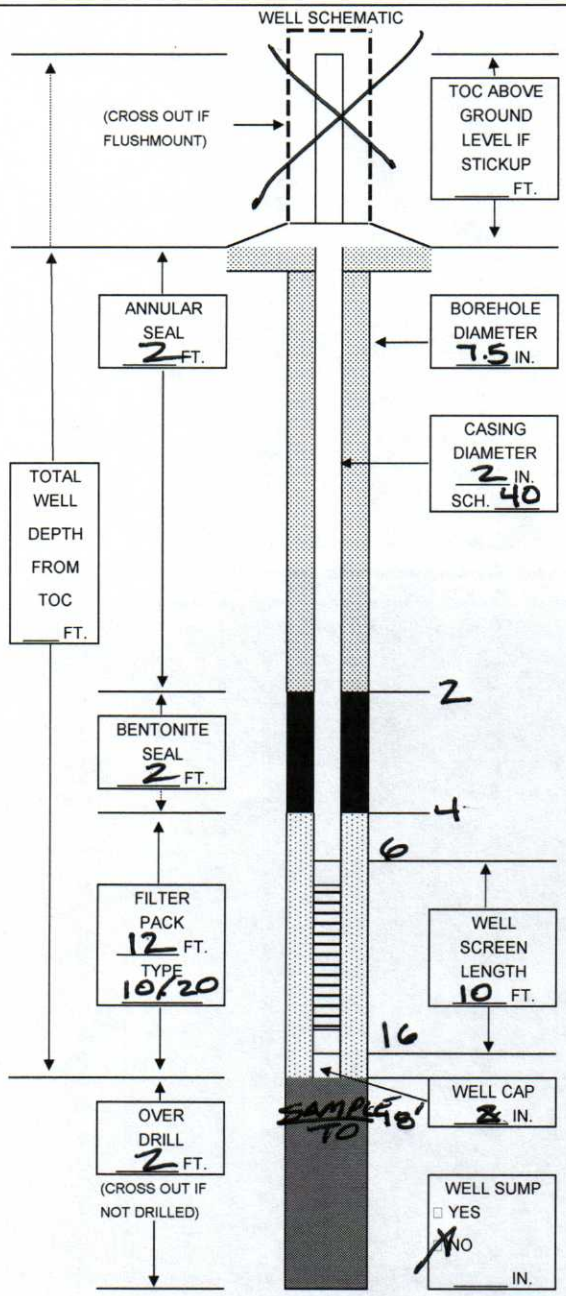
GPS Coordinates: N35°29.240' N W108°25.692'

WELL TYPE: ☒ MONITOR ☐ RECOVERY ☐ OBSERVATION

☐ TEMPORARY ☐ PERMANENT ☐ REPLACEMENT ☐ SINGLE CASED

☐ SHALLOW ☐ INTERMEDIATE ☐ DEEP ☐ DOUBLE CASED ☐ OTHER

WELL SCHEMATIC



INSTALLATION DATA

DECONTAMINATION:	☐ STEAM CLEAN	☐ SOAP WASH	☐ HIGH PRESSURE WASH	
CASING TYPE:	☐ PVC	☐ STAINLESS	☐ TEFLON	☐ OTHER
JOINTS:	☐ THREADED	☐ WELDED	☐ COUPLED	☐ SCREWED
SURFACE CASING:	☐ NO	☐ YES	☐ DESCRIBE ___	
WELL SCREEN:	☐ PVC	☐ STAINLESS	☐ TEFLON	☐ OTHER
DIAMETER:	☐ 2"	☐ 4"	☐ 6"	☐ OTHER ___ IN
SLOT SIZE:	☐ 0.010	☐ 0.020	☐ OTHER ___ IN	
SAND:	SIZE 10.20	LBS/SACK ___		# 5
BENTONITE:	SIZE 3/8"	LBS/SACK ___	LBS/BUCKET ___	# 1
DRILLING METHOD:	☒ HOLLOW STEM	☐ SOLID STEM	☐ MUD ROTARY	☐ HAND AUGER
	☐ AIR ROTARY	☐ DIRECT PUSH	☐ OTHER ___	
BIT SIZE:	☐6" ☐8"	☐10" ☐12"	☐14"	☒ OTHER 7.5 IN
DRILLING MUD:	☒ NONE	☐ BENTONITE	☐ WATER	☐ OTHER ___
CENTRALIZER:	☒ NO	☐ YES	INTERVAL ___	
COMPLETION:	☒ FLUSH MOUNT	☐ STICKUP	☐ VAULT	
PAD:	☐ 4' X 4'	☐ 5' X 5'	☐ OTHER ___	
CUTTINGS:	☒ DRUMMED	NUMBER OF DRUMS 1		
	☐ ROLLOFF BOX	ID NUMBER OF BOX ___		
	☐ SPREAD	☐ OTHER ___		

COMMENTS:

WELL DEVELOPMENT DATA

DATE: ___ TIME: ___

PRE-DEVELOPMENT MEASUREMENTS/OBSERVATIONS:

DEPTH TO HC:	___	☐ BTOC	☐ BGL		
DEPTH TO GW:	___	☐ BTOC	☐ BGL		
TOTAL DEPTH:	___	☐ BTOC	☐ BGL		
APPEARANCE:	☐ PSH	☐ SILTY	☐ TURBID	☐ OPAQUE	☐ CLEAR
ODOR:	☐ YES	☐ NO	TYPE ___		

DEVELOPMENT METHOD:	☐ NONE	☐ BAILING	☐ PUMPING	☐ AIR LIFT
	☐ SURGE & BLOCK	☐ OTHER ___		
TIME:	☐ 10 MIN	☐ 20 MIN	☐ OTHER ___	
AMOUNT:	☐ 5 GAL	☐ 10 GAL	☐ OTHER ___ GAL	

POST-DEVELOPMENT MEASUREMENTS/OBSERVATIONS:

DEPTH TO HC:	___	☐ BTOC	☐ BGL		
DEPTH TO GW:	___	☐ BTOC	☐ BGL		
TOTAL DEPTH:	___	☐ BTOC	☐ BGL		
APPEARANCE:	☐ PSH	☐ SILTY	☐ TURBID	☐ OPAQUE	☐ CLEAR
ODOR:	☐ YES	☐ NO	TYPE ___		

DISPOSITION OF FLUIDS	☐ DRUMMED	☐ WWTS	☐ TREATED	☐ POTW	☐ OTHER
	☐ OTHER ___				

COMMENTS:

DiSorbo Consulting, LLC 1010 Travis Street, Suite 916 | Houston, Texas 77002 713.955.1230 www.disorboconsult.com

Client: WESTERN REFINING SW INC.	Project Number: WEST14003	Boring No. \ Well No.: MKTF-36
Project Name: GALLUP REFINERY - HYDROCARBON SEEP		Sheet 1 of 1
Saturation Depth: 10' / Total Depth: 16 / GPS Coordinates: N35°29.266' W108°25.708'		Logged By: TRACY PAYNE
Drilling Methods \ Auger Size \ Bit Size: HOLLOW STEM AUGER 7.5"	Drilling Rig: CME 75 / Driller: C. ORTIZ	Drilling Company: ENVIRO-DRILL, INC.
Sampling Method \ Size of Sampler: SPLIT SPOON 2" DIA 2' LONG		Start Date: 11.19.14 / Finish Date: 11.19.14
Comments		Start Time: 1242 / Finish Time: 1445

Field Screening: Depth (feet bgl)	PID (ppm)	Air Temp. (°F)	Lithologic Interval (feet bgl)	Symbol	% Recovery	5-15' Description of Lithology
			0-6"	–	100	ASPHALT / BASE
6"-2'	812	54	6"-2	CL	90	SANDY CLAY - LOW, STIFF, DRY, TAN, NO ODOR GRAVEL THROUGHOUT
2-4'	276	54	2-4	CL	60	SILTY CLAY - LOW, V. STIFF, DRY, BROWN, HC ODOR
4-6'	1700	54	4-6	CL	60	SILTY CLAY - STA, TRACE SAND/GRAVEL, HC ODOR
6-8'	2411	54	6-8	CL	90	SILTY CLAY / SAND/GRAVEL - LOW, FIRM, DAMP TAN, ~~COARE~~ V. COARSE SAND, 1/4" -> 1" GRAVEL, HC ODOR, MOIST -> V. MOIST IN SEAMS
8-10'	2278	54	8-10	CL SP GP	90	SILTY CLAY / SAND/GRAVEL - STA, MOIST, FLUID IN TOP OF SAMPLING ~~TO~~ SPOON STRONG HC ODOR TRACE PSH
10-12'	1879	54	10-12	CL SP GP	90	SILTY CLAY / SAND / GRAVEL - STA, ~~SAT.~~, PSH
12-14'	405	54	12-13	CL/SP/GP	90	SILTY CLAY / SAND / GRAVEL - STA, SAT., PSH
			13-14	CL	90	SILTY CLAY - LOW, STIFF, DAMP, BROWN, HC ODOR
14-16'	450	54	14-16	CL	90	SILTY CLAY - STA, DAMP, HC ODOR

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WELL CONSTRUCTION DATA

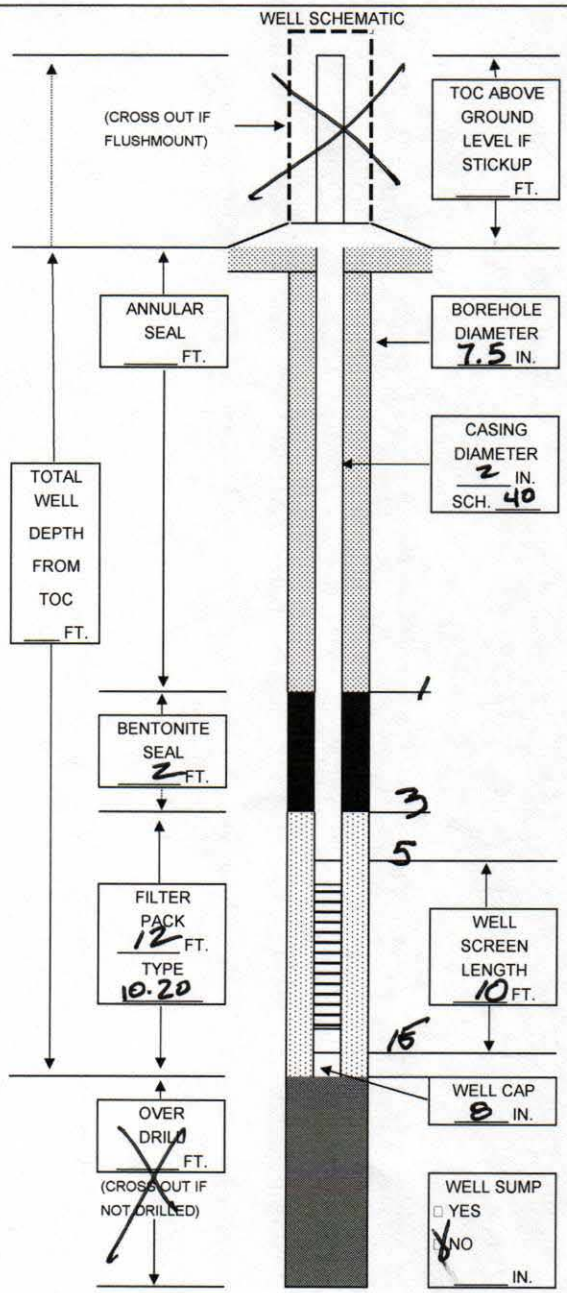
Well Number: MKTF-36
Prepared by: TRACY PAYNE
Start Date: 11.19.14
Finish Date: 11.19.14

WELL LOCATION:

Client Name: WESTERN REFINING SW INC.
Project No. WEST14003
Project Name: GALLUP REFINERY- HYDROCARBON SEEP
Address of Site: 92 GIANT CROSSING RD GALLUP NM 87301
Drilling Contractor: ENVIRO-DRILL, INC
Driller: C. ORTIZ
GPS Coordinates: N35°29.266' W108°25.708

WELL TYPE: X MONITOR ☐ RECOVERY ☐ OBSERVATION
☐ TEMPORARY ☐ PERMANENT ☐ REPLACEMENT ☐ SINGLE CASED
☐ SHALLOW ☐ INTERMEDIATE ☐ DEEP ☐ DOUBLE CASED ☐ OTHER

WELL SCHEMATIC



INSTALLATION DATA

DECONTAMINATION:	☐ STEAM CLEAN	☐ SOAP WASH	X HIGH PRESSURE WASH	
CASING TYPE:	X PVC	☐ STAINLESS	☐ TEFLON	☐ OTHER
JOINTS:	X THREADED	☐ WELDED	☐ COUPLED	☐ SCREWED
SURFACE CASING:	X NO	☐ YES	☐ DESCRIBE ____	
WELL SCREEN:	X PVC	☐ STAINLESS	☐ TEFLON	☐ OTHER
DIAMETER:	X 2"	☐ 4"	☐ 6"	☐ OTHER ____ IN
SLOT SIZE:	X 0.010	☐ 0.020	☐ OTHER ____ IN	
SAND:	SIZE 10.20	LBS/SACK ____		# 9
BENTONITE:	SIZE 3/8"	LBS/SACK ____	LBS/BUCKET ____	# 1
DRILLING METHOD:	X HOLLOW STEM	☐ SOLID STEM	☐ MUD ROTARY	☐ HAND AUGER
	☐ AIR ROTARY	☐ DIRECT PUSH	☐ OTHER ____	
BIT SIZE:	☐ 6" ☐ 8"	☐ 10" ☐ 12"	☐ 14"	X OTHER 7.5 IN
DRILLING MUD:	☐ NONE	☐ BENTONITE	☐ WATER	☐ OTHER ____
CENTRALIZER:	☐ NO	☐ YES	INTERVAL ____	
COMPLETION:	X FLUSH MOUNT	☐ STICKUP	☐ VAULT	
PAD:	☐ 4' X 4'	☐ 5' X 5'	☐ OTHER ____	
CUTTINGS:	X DRUMMED	NUMBER OF DRUMS 2		
	☐ ROLLOFF BOX	ID NUMBER OF BOX ____		
	☐ SPREAD	☐ OTHER ____		

COMMENTS: ____

WELL DEVELOPMENT DATA

DATE: ____ TIME: ____

PRE-DEVELOPMENT MEASUREMENTS/OBSERVATIONS:

DEPTH TO HC:	____	☐ BTOC	☐ BGL		
DEPTH TO GW:	____	☐ BTOC	☐ BGL		
TOTAL DEPTH:	____	☐ BTOC	☐ BGL		
APPEARANCE:	☐ PSH	☐ SILTY	☐ TURBID	☐ OPAQUE	☐ CLEAR
ODOR:	☐ YES	☐ NO	TYPE ____		

DEVELOPMENT METHOD:	☐ NONE	☐ BAILING	☐ PUMPING	☐ AIR LIFT
	☐ SURGE & BLOCK	☐ OTHER ____		
TIME:	☐ 10 MIN	☐ 20 MIN	☐ OTHER ____	
AMOUNT:	☐ 5 GAL	☐ 10 GAL	☐ OTHER ____ GAL	

POST-DEVELOPMENT MEASUREMENTS/OBSERVATIONS:

DEPTH TO HC:	____	☐ BTOC	☐ BGL		
DEPTH TO GW:	____	☐ BTOC	☐ BGL		
TOTAL DEPTH:	____	☐ BTOC	☐ BGL		
APPEARANCE:	☐ PSH	☐ SILTY	☐ TURBID	☐ OPAQUE	☐ CLEAR
ODOR:	☐ YES	☐ NO	TYPE ____		

DISPOSITION OF FLUIDS	☐ DRUMMED	☐ WWTS	☐ TREATED	☐ POTW	☐ OTHER
	☐ OTHER ____				

COMMENTS: ____

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Client: WESTERN REFINING SW INC.	Project Number: WEST14003		Boring No. \ Well No.: MKTF-37
Project Name: GALLUP REFINERY – HYDROCARBON SEEP			Sheet 1 of 1
Saturation Depth: 8'?	Total Depth: 30	GPS Coordinates: N35°29.253' W108°25.649'	Logged By: TRACY PAYNE
Drilling Methods \ Auger Size \ Bit Size: HOLLOW STEM AUGER	Drilling Rig: CME 75	Driller: C. ORTIZ	Drilling Company: ENVIRO-DRILL, INC.
Sampling Method \ Size of Sampler: SPLIT SPOON SAMPLER 2" DIA 2' LONG			Start Date: 11.18.14 Finish Date: 11.18.14
Comments			Start Time: 1351 Finish Time: 1645

Field Screening: Depth (feet bgl)	PID (ppm)	Air Temp. (°F)	Lithologic Interval (feet bgl)	Symbol	% Recovery	Description of Lithology
0-2	69	48	0-2	–	40	ASPHALT / GRAVEL BASE – CLAY – V. STIFF, BROWN, DAMP, ODOR – FAINT
2-4	367	48	2-4	CL	50	SILTY CLAY – LOW, V. STIFF, BROWN, DAMP, ODOR, GRAVEL PRESENT
4-6	355	48	4-6	CL/SP/GP	60	SILTY CLAY / SANDY / GRAVELLY LOW, TO FIRM, DAMP, BROWN WITH SAND/GRAVEL ODOR
6-8	1790	48	6-8	CL/SP/GP	80	SILTY CLAY / SANDY / GRAVELLY – STA, ODOR
8-10	2140	48	8-9	CL	90	SILTY CLAY – LOW, SOFT, MOIST TO V. MOIST, BROWN, STRONG ODOR
			9-10	SW/GW	90	SANDY GRAVEL / GRAVELLY SAND – COARSE TO COARSE GRAIN, COMPACT, V. MOIST, ODOR, TAN
10-12	404	48	10-12	CL/SP/GP	90	SILTY CLAY / SAND / GRAVELL – LOW → FIRM DAMP, BROWN WITH COARSE SAND & GRAVEL, ODOR
12-14	454	48	12-14	CL	90	SANDY CLAY – LOW, SOFT, DAMP, ODOR, LIGHT GRAY, GRAVEL AT BASE
14-16	660	48	14-16	CL	50	SANDY CLAY – LOW, V. STIFF, DAMP, ODOR LIGHT GRAY
16-18	340	48	16-18	CL	30	SANDY CLAY – STA
18-20	344	48	18-20	CL	30	SANDY CLAY – STA
20-22	421	48	20-21	CL	60	SANDY CLAY – STA
			21-22	–	60	SHALE – CLAYEY – LT. PURPLE, DAMP, V. STIFF, ODOR
22-24	375	48	22-24	–	30	SHALE – STA

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WELL CONSTRUCTION DATA

Well Number: MKTF-37

Prepared by: TRACY PAYNE

Start Date: 11.18.14

Finish Date: 11.18.14

Client Name: WESTERN REFINING SW, INC.

Project No. WEST14003

Project Name: GALLUP REFINERY - HYDROCARBON SEEP

Address of Site: 92 GIANT CROSSING ROAD GALLUP, NM 87301

Drilling Contractor: ENVIRO-DRILL, INC.

Driller: C. ORTIZ

GPS Coordinates: N35°29.253' W108° 25.649

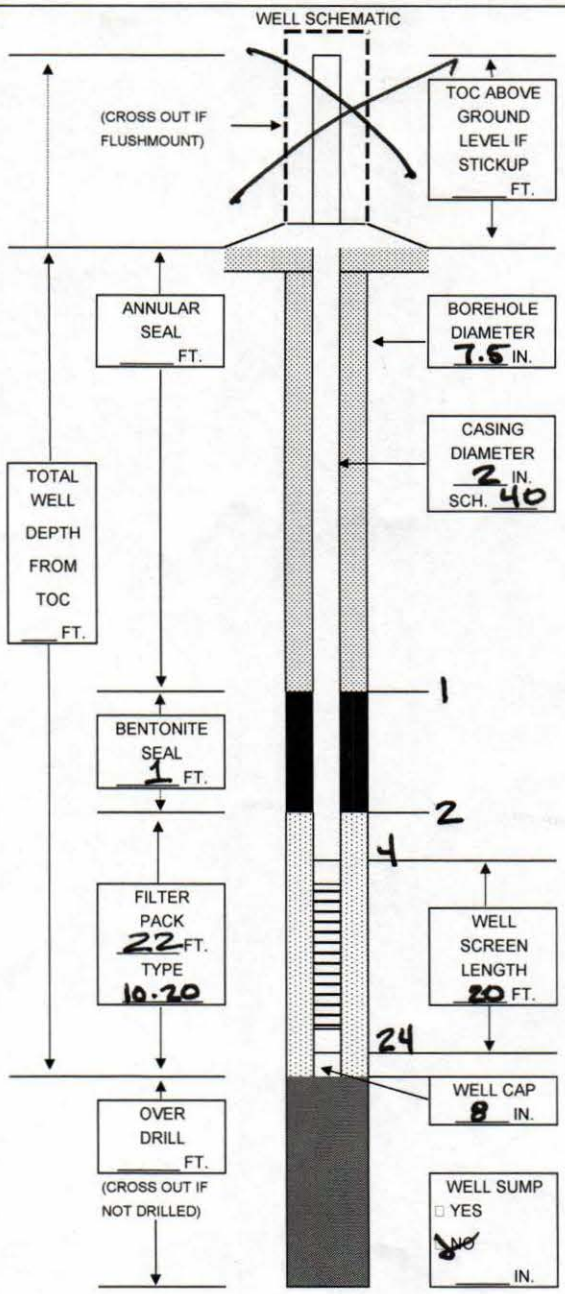
WELL LOCATION:

WELL TYPE: [X] MONITOR [ ] RECOVERY [ ] OBSERVATION

[ ] TEMPORARY [ ] PERMANENT [ ] REPLACEMENT [ ] SINGLE CASED

[ ] SHALLOW [ ] INTERMEDIATE [ ] DEEP [ ] DOUBLE CASED [ ] OTHER

WELL SCHEMATIC



INSTALLATION DATA

DECONTAMINATION:	[ ] STEAM CLEAN	[ ] SOAP WASH	[X] HIGH PRESSURE WASH		
CASING TYPE:	[X] PVC	[ ] STAINLESS	[ ] TEFLON	[ ] OTHER	
JOINTS:	[X] THREADED	[ ] WELDED	[ ] COUPLED	[ ] SCREWED	
SURFACE CASING:	[X] NO	[ ] YES	[ ] DESCRIBE ___		
WELL SCREEN:	[X] PVC	[ ] STAINLESS	[ ] TEFLON	[ ] OTHER	
DIAMETER:	[X] 2"	[ ] 4"	[ ] 6"	[ ] OTHER ___ IN	
SLOT SIZE:	[X] 0.010	[ ] 0.020	[ ] OTHER ___ IN		
SAND:	SIZE 10.20	LBS/SACK ___			# 13
BENTONITE:	SIZE 3/8"	LBS/SACK ___	LBS/BUCKET ___		# 1
DRILLING METHOD:	[X] HOLLOW STEM	[ ] SOLID STEM	[ ] MUD ROTARY	[ ] HAND AUGER	
	[ ] AIR ROTARY	[ ] DIRECT PUSH	[ ] OTHER ___		
BIT SIZE:	[ ] 6" [ ] 8"	[ ] 10" [ ] 12"	[ ] 14"	[X] OTHER 7.5" IN	
DRILLING MUD:	[X] NONE	[ ] BENTONITE	[ ] WATER	[ ] OTHER ___	
CENTRALIZER:	[X] NO	[ ] YES	INTERVAL ___		
COMPLETION:	[X] FLUSH MOUNT	[ ] STICKUP	[ ] VAULT		
PAD:	[ ] 4' X 4'	[ ] 5' X 5'	[ ] OTHER ___		
CUTTINGS:	[X] DRUMMED	NUMBER OF DRUMS 2			
	[ ] ROLLOFF BOX	ID NUMBER OF BOX ___			
	[ ] SPREAD	[ ] OTHER ___			

COMMENTS: ___

WELL DEVELOPMENT DATA

DATE: ___ TIME: ___

PRE-DEVELOPMENT MEASUREMENTS/OBSERVATIONS:

DEPTH TO HC:	___	[ ] BTOC	[ ] BGL		
DEPTH TO GW:	___	[ ] BTOC	[ ] BGL		
TOTAL DEPTH:	___	[ ] BTOC	[ ] BGL		
APPEARANCE:	[ ] PSH	[ ] SILTY	[ ] TURBID	[ ] OPAQUE	[ ] CLEAR
ODOR:	[ ] YES	[ ] NO	TYPE ___		
DEVELOPMENT METHOD:	[ ] NONE	[ ] BAILING	[ ] PUMPING	[ ] AIR LIFT	
	[ ] SURGE & BLOCK	[ ] OTHER ___			
TIME:	[ ] 10 MIN	[ ] 20 MIN	[ ] OTHER ___		
AMOUNT:	[ ] 5 GAL	[ ] 10 GAL	[ ] OTHER ___ GAL		

POST-DEVELOPMENT MEASUREMENTS/OBSERVATIONS:

DEPTH TO HC:	___	[ ] BTOC	[ ] BGL		
DEPTH TO GW:	___	[ ] BTOC	[ ] BGL		
TOTAL DEPTH:	___	[ ] BTOC	[ ] BGL		
APPEARANCE:	[ ] PSH	[ ] SILTY	[ ] TURBID	[ ] OPAQUE	[ ] CLEAR
ODOR:	[ ] YES	[ ] NO	TYPE ___		
DISPOSITION OF FLUIDS	[ ] DRUMMED	[ ] WWTS	[ ] TREATED	[ ] POTW	[ ] OTHER
	[ ] OTHER ___				

COMMENTS: ___

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Client: WESTERN REFINING SW, INC.	Project Number: WEST 14003	Boring No. \ Well No.: MKTF-~~[illegible]~~ 38
Project Name: GALLUP REFINERY - HYDROCARBON SEEP		Sheet 1 of 1
Saturation Depth: 8' / Total Depth: 20' BGL / GPS Coordinates: N35°29.277' W108°25.647'		Logged By: TRACY PAYNE
Drilling Methods \ Auger Size \ Bit Size: HOLLOW STEM AUGER 7.5' / Drilling Rig: CME 75 / Driller: C. ORTIZ		Drilling Company: ENVIRO-DRILL INC
Sampling Method \ Size of Sampler: SPLIT SPOON 2" DIA, 2' LONG		Start Date: 11.20.14 / Finish Date: 11.20.14
Comments		Start Time: 0845 / Finish Time: 1100

Field Screening: Depth (feet bgl)	PID (ppm)	Air Temp. (°F)	Lithologic Interval (feet bgl)	Symbol	% Recovery	5-20' Description of Lithology
			0-6"	-	100	ASPHALT / BASE
6"-2'	217	37	6"-2'	CL/SP/GP	90	SILTY CLAY / SAND / GRAVEL - LOW, FIRM
						DAMP, BROWN, COARSE GRAIN SAND,
						1/4" → 1" GRAVEL, ODOR
2-4	70	37	2-4	CL/SP/GP	90	SILTY CLAY / SAND / GRAVEL - STA, ODOR
4-6	42	37	4-6	↓	90	SILTY CLAY / SAND / GRAVEL - STA, ODOR
6-8	20	37	6-8	↓	90	SILTY CLAY / SAND / GRAVEL - STA, ODOR
8-10	9	37	8-10	↓	90	SILTY CLAY / SAND / GRAVEL - STA DECREASE
						IN CLAY CONTENT - V. MOIST TO SAT.
						ODOR
10-12	7	37	10-11	GW	90	SANDY GRAVEL - COMPACT, BROWN, SAT.
						FAINT ODOR V. COARSE SAND
						1/4" → 1.5" GRAVEL
			11-11.5	CL	90	~~SILTY~~ SANDY CLAY - LOW, FIRM → SOFT, MOIST,
						BROWN
			11.5-12	GW	90	SANDY GRAVEL - STA (10-11) SAT.
12-14	8	37	12-14	GW	10	SANDY GRAVEL - STA, SAT.
14-16	6	37	14-16	GW	10	SANDY GRAVEL - STA, SAT. → MOIST
16-18	4	37	16-18	CL	50	SANDY CLAY - LOW, FIRM, DAMP, GRAYISH
						BROWN, FAINT, ODOR
18-20	5	37	18-20	CL	60	SANDY CLAY - STA

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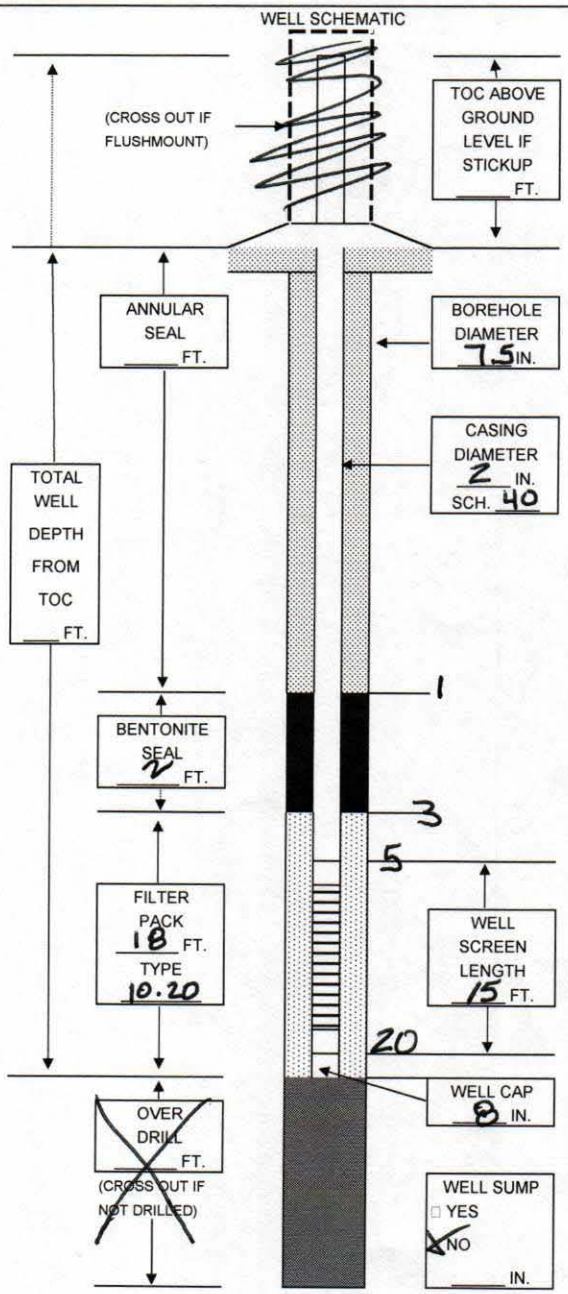
WELL CONSTRUCTION DATA

Well Number: MKTF-38	Prepared by: TRACY PAYNE
Start Date: 11.20.14	Finish Date: 11.20.14
Client Name: WESTERN REFINING SW INC.	Project No. WEST14003
Project Name: GALLUP REFINERY – HYDROCARBON SEEP	
Address of Site: 92 GIANT CROSSING RD, GALLUP NM 87301	
Drilling Contractor: ENVIRO-DRILL, INC.	Driller: C. ORTIZ
GPS Coordinates: N35°29.277' W108°25.647'	

WELL LOCATION:

WELL TYPE: ☒ MONITOR ☐ RECOVERY ☐ OBSERVATION
☐ TEMPORARY ☐ PERMANENT ☐ REPLACEMENT ☐ SINGLE CASED
☐ SHALLOW ☐ INTERMEDIATE ☐ DEEP ☐ DOUBLE CASED ☐ OTHER

WELL SCHEMATIC



INSTALLATION DATA

DECONTAMINATION:	☐ STEAM CLEAN	☐ SOAP WASH	☒ HIGH PRESSURE WASH	
CASING TYPE:	☒ PVC	☐ STAINLESS	☐ TEFLON	☐ OTHER
JOINTS:	☒ THREADED	☐ WELDED	☐ COUPLED	☐ SCREWED
SURFACE CASING:	☒ NO	☐ YES	☐ DESCRIBE ___	
WELL SCREEN:	☒ PVC	☐ STAINLESS	☐ TEFLON	☐ OTHER
DIAMETER:	☒ 2"	☐ 4"	☐ 6"	☐ OTHER ___ IN
SLOT SIZE:	☒ 0.010	☐ 0.020	☐ OTHER ___ IN	
SAND:	SIZE 10.20	LBS/SACK ___		# ___
BENTONITE:	SIZE 3/8"	LBS/SACK ___	LBS/BUCKET ___	# ___
DRILLING METHOD:	☒ HOLLOW STEM	☐ SOLID STEM	☐ MUD ROTARY	☐ HAND AUGER
	☐ AIR ROTARY	☐ DIRECT PUSH	☐ OTHER ___	
BIT SIZE:	☐ 6" ☐ 8"	☐ 10" ☐ 12"	☐ 14"	☒ OTHER 7.5 IN
DRILLING MUD:	☒ NONE	☐ BENTONITE	☐ WATER	☐ OTHER ___
CENTRALIZER:	☒ NO	☐ YES	INTERVAL ___	
COMPLETION:	☒ FLUSH MOUNT	☐ STICKUP	☐ VAULT	
PAD:	☐ 4' X 4'	☐ 5' X 5'	☒ OTHER ___	
CUTTINGS:	☒ DRUMMED	NUMBER OF DRUMS 2		
	☐ ROLLOFF BOX	ID NUMBER OF BOX ___		
	☐ SPREAD	☐ OTHER ___		

COMMENTS:

WELL DEVELOPMENT DATA

DATE: ___ TIME: ___

PRE-DEVELOPMENT MEASUREMENTS/OBSERVATIONS:

DEPTH TO HC:	___	☐ BTOC	☐ BGL		
DEPTH TO GW:	___	☐ BTOC	☐ BGL		
TOTAL DEPTH:	___	☐ BTOC	☐ BGL		
APPEARANCE:	☐ PSH	☐ SILTY	☐ TURBID	☐ OPAQUE	☐ CLEAR
ODOR:	☐ YES	☐ NO	TYPE ___		

DEVELOPMENT METHOD:	☐ NONE	☐ BAILING	☐ PUMPING	☐ AIR LIFT	
	☐ SURGE & BLOCK	☐ OTHER ___			
TIME:	☐ 10 MIN	☐ 20 MIN	☐ OTHER ___		
AMOUNT:	☐ 5 GAL	☐ 10 GAL	☐ OTHER ___ GAL		

POST-DEVELOPMENT MEASUREMENTS/OBSERVATIONS:

DEPTH TO HC:	___	☐ BTOC	☐ BGL		
DEPTH TO GW:	___	☐ BTOC	☐ BGL		
TOTAL DEPTH:	___	☐ BTOC	☐ BGL		
APPEARANCE:	☐ PSH	☐ SILTY	☐ TURBID	☐ OPAQUE	☐ CLEAR
ODOR:	☐ YES	☐ NO	TYPE ___		

DISPOSITION OF FLUIDS	☐ DRUMMED	☐ WWTS	☐ TREATED	☐ POTW	☐ OTHER
	☐ OTHER ___				

COMMENTS:

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Client: WESTERN REFINING SOUTHWEST, INC.	Project Number: WEST14003		Boring No. \ Well No.: MKTF-39
Project Name: GALLUP REFINERY - HYDROCARBON SEEP			Sheet 1 of 1
Saturation Depth:	Total Depth: 16' BGL	GPS Coordinates: N 35° 29.321' W 108° 25.641'	Logged By: TRACY PAYNE
Drilling Methods \ Auger Size \ Bit Size: HOLLOW STEM AUGER 7.5"	Drilling Rig: CME 75	Driller: C. ORTIZ	Drilling Company: ENVIRO-DRILL, INC
Sampling Method \ Size of Sampler: SPLIT SPOON 2" DIA 2' ~~LOG~~ LONG			Start Date: 11.14.14 Finish Date: 11.14.14
Comments:			Start Time: 1340 Finish Time: 1530

Field Screening: Depth (feet bgl)	PID (ppm)	Air Temp. (°F)	Lithologic Interval (feet bgl)	Symbol	% Recovery	Description of Lithology
0-2	2.1	53	0-2	ML	100	GRAVEL / CLAY SILT - FILL - BROWN, DAMP FAINT ODOR
2-4	29.4	53	2-4	CL	100	GRAVEL / SILTY CLAY - FILL - MOD, STIFF, DAMP, BROWN, NO ODOR
4-6	6.5	53	4-6	CL	90	SANDY SILTY CLAY - FILL LOW, SOFT, DAMP, BROWN PEASIZE GRAVEL, NO ODOR
6-8	4.5	53	6-8	SW	90	SILTY GRAVELLY SAND - FILL - LOOSE, MEDIUM SAND TO 1.5" GRAVEL, BROWN, NO ODOR, DAMP
8-10	400	53	8-10	CL/SC	90	SANDY CLAY / CLAYEY SAND - COARSE, COMPACT, DAMP TO MOIST, BROWN, HYDROCARBON ODOR - GRAVELLY
10-12	569	53	10-12	CL/SC	90	SANDY CLAY / CLAYEY SAND - STA, MOIST/OILY HC ODOR - GRAVELLY
12-13	—	~	12-13	GP	90	SANDY GRAVEL - LOOSE, BROWN, SAT., HC ODOR V. COARSE SAND TO 3/4" GRAVEL
13-14	51	53	13-14	CL	90	SILTY CLAY - LOW, V. STIFF, DRY → DAMP, GRAY, FAINT ODOR @ BASE
14-16	18	53	14-16	CL	90	SILTY CLAY - STA

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WELL CONSTRUCTION DATA

Well Number: MKTF-39

Prepared by: TRACY PAYNE

Start Date: 11.14.14

Finish Date:

WELL LOCATION:

Client Name: WESTERN REFINING SW, INC.

Project No. WEST14003

Project Name: GALLUP REFINERY-HYDROCARBON SEEP

Address of Site: 92 GIANT CROSSING RD GALLUP NM 87301

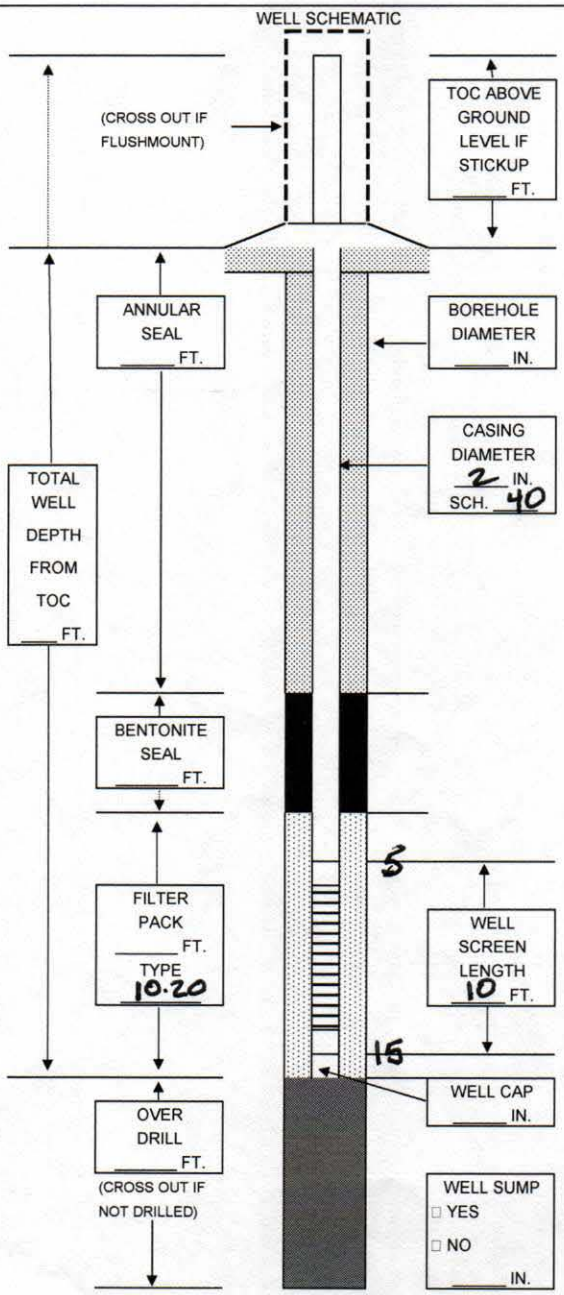
Drilling Contractor: ENVIRO-DRILL INC.

Driller: C. ORTIZ

GPS Coordinates: N 35°29.321' W108° 25.641

WELL TYPE: ☒ MONITOR ☐ RECOVERY ☐ OBSERVATION ☐ TEMPORARY ☐ PERMANENT ☐ REPLACEMENT ☐ SINGLE CASED ☐ SHALLOW ☐ INTERMEDIATE ☐ DEEP ☐ DOUBLE CASED ☐ OTHER

WELL SCHEMATIC



INSTALLATION DATA

DECONTAMINATION:	☐ STEAM CLEAN	☐ SOAP WASH	☒ HIGH PRESSURE WASH		
CASING TYPE:	☒ PVC	☐ STAINLESS	☐ TEFLON	☐ OTHER	
JOINTS:	☒ THREADED	☐ WELDED	☐ COUPLED	☐ SCREWED	
SURFACE CASING:	☒ NO	☐ YES	☐ DESCRIBE ____		
WELL SCREEN:	☒ PVC	☐ STAINLESS	☐ TEFLON	☐ OTHER	
DIAMETER:	☒ 2"	☐ 4"	☐ 6"	☐ OTHER ____ IN	
SLOT SIZE:	☒ 0.010	☐ 0.020	☐ OTHER ____ IN		
SAND:	SIZE 10.20	LBS/SACK ____			# ____
BENTONITE:	SIZE 3/8"	LBS/SACK ____	LBS/BUCKET ____		# ____
DRILLING METHOD:	☒ HOLLOW STEM	☐ SOLID STEM	☐ MUD ROTARY	☐ HAND AUGER	
	☐ AIR ROTARY	☐ DIRECT PUSH	☐ OTHER ____		
BIT SIZE:	☐ 6" ☐ 8"	☐ 10" ☐ 12"	☐ 14"	☐ OTHER ____ IN	
DRILLING MUD:	☐ NONE	☐ BENTONITE	☐ WATER	☐ OTHER ____	
CENTRALIZER:	☐ NO	☐ YES	INTERVAL ____		
COMPLETION:	☒ FLUSH MOUNT	☐ STICKUP	☐ VAULT		
PAD:	☒ 4' X 4'	☐ 5' X 5'	☐ OTHER ____		
CUTTINGS:	☒ DRUMMED	NUMBER OF DRUMS 1			
	☐ ROLLOFF BOX	ID NUMBER OF BOX ____			
	☐ SPREAD	☐ OTHER ____			

COMMENTS: ____

WELL DEVELOPMENT DATA

DATE: ____ TIME: ____

PRE-DEVELOPMENT MEASUREMENTS/OBSERVATIONS:

DEPTH TO HC:	____	☐ BTOC	☐ BGL		
DEPTH TO GW:	____	☐ BTOC	☐ BGL		
TOTAL DEPTH:	____	☐ BTOC	☐ BGL		
APPEARANCE:	☐ PSH	☐ SILTY	☐ TURBID	☐ OPAQUE	☐ CLEAR
ODOR:	☐ YES	☐ NO	TYPE ____		
DEVELOPMENT METHOD:	☐ NONE	☐ BAILING	☐ PUMPING	☐ AIR LIFT	
	☐ SURGE & BLOCK	☐ OTHER ____			
TIME:	☐ 10 MIN	☐ 20 MIN	☐ OTHER ____		
AMOUNT:	☐ 5 GAL	☐ 10 GAL	☐ OTHER ____ GAL		

POST-DEVELOPMENT MEASUREMENTS/OBSERVATIONS:

DEPTH TO HC:	____	☐ BTOC	☐ BGL		
DEPTH TO GW:	____	☐ BTOC	☐ BGL		
TOTAL DEPTH:	____	☐ BTOC	☐ BGL		
APPEARANCE:	☐ PSH	☐ SILTY	☐ TURBID	☐ OPAQUE	☐ CLEAR
ODOR:	☐ YES	☐ NO	TYPE ____		
DISPOSITION OF FLUIDS	☐ DRUMMED	☐ WWTS	☐ TREATED	☐ POTW	☐ OTHER
	☐ OTHER ____				

COMMENTS: ____

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Client: WESTERN REFINING SOUTHWEST, INC.	Project Number: WEST14003	Boring No. \ Well No.: MKTF-40
Project Name: GALLUP REFINERY-HYDROCARBON SEEP		Sheet 1 of 1
Saturation Depth: 10' / Total Depth: 22' / GPS Coordinates: N35° 29.383' W108° 25.971'		Logged By: TRACY PAYNE
Drilling Methods \ Auger Size \ Bit Size: HOLLOW STEM AUGER 7.5" / Drilling Rig: CME 75 / Driller: C.ORTIZ		Drilling Company: ENVIRO-DRILL, INC.
Sampling Method \ Size of Sampler: SPLIT SPOON 2" DIA, 2' LONG		Start Date: 11.13.14 / Finish Date: 11.13.14
Comments		Start Time: 1440 / Finish Time: 1600

Field Screening: Depth (feet bgl)	PID (ppm)	Air Temp. (°F)	Lithologic Interval (feet bgl)	Symbol	% Recovery	Description of Lithology
0-2	0.8	54	0-2	CL	100	CLAY - MOD, STIFF, DAMP, BROWN, NO ODOR, GRAVEL
2-4	0.1	54	2-4	CL	90	CLAY - STA - GRAVEL
4-6	0.7	54	4-6	CL	80	CLAY - STA
6-8	1.8	54	6-8	CL	90	SANDY CLAY - LOW, FIRM → SOFT, DAMP, BROWN, NO ODOR, MOIST 7-8'
8-10	2.0	54	8-10	CL	70	SANDY CLAY - STA, DAMP → MOIST
10-12	0.6	54	10-12	CL/SC	90	SANDY CLAY / CLAYEY SAND - STA, MOIST TO SATURATED IN CLAYEY SAND SEAMS, NO ODOR
12-14	1.5	54	12-14	CL	20	SANDY SILTY CLAY - LOW, STIFF, DAMP, BROWN NO ODOR - MOIST TO SAT. IN SAND SEAMS
14-16	2.2	54	14-16	CL/SC	80	SANDY CLAY / CLAYEY SAND - LOW, FIRM → SOFT, MOIST TO SAT. IN CLAYEY SAND SEAMS
16-18	2.2	54	16-17.5	CL/SC	80	SANDY CLAY / CLAYEY SAND - STA, MOIST TO SAT.
			17.5-18	CL	90	SILTY CLAY - LOW, V. STIFF, DAMP, REDDISH BROWN AND GRAY, NO ODOR
18-20	2.5	54	18-20	CL	80	SILTY CLAY - ~~[illegible]~~ STA
20-22	2.6	54	20-22	CL	50	SILTY CLAY - STA

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WELL CONSTRUCTION DATA

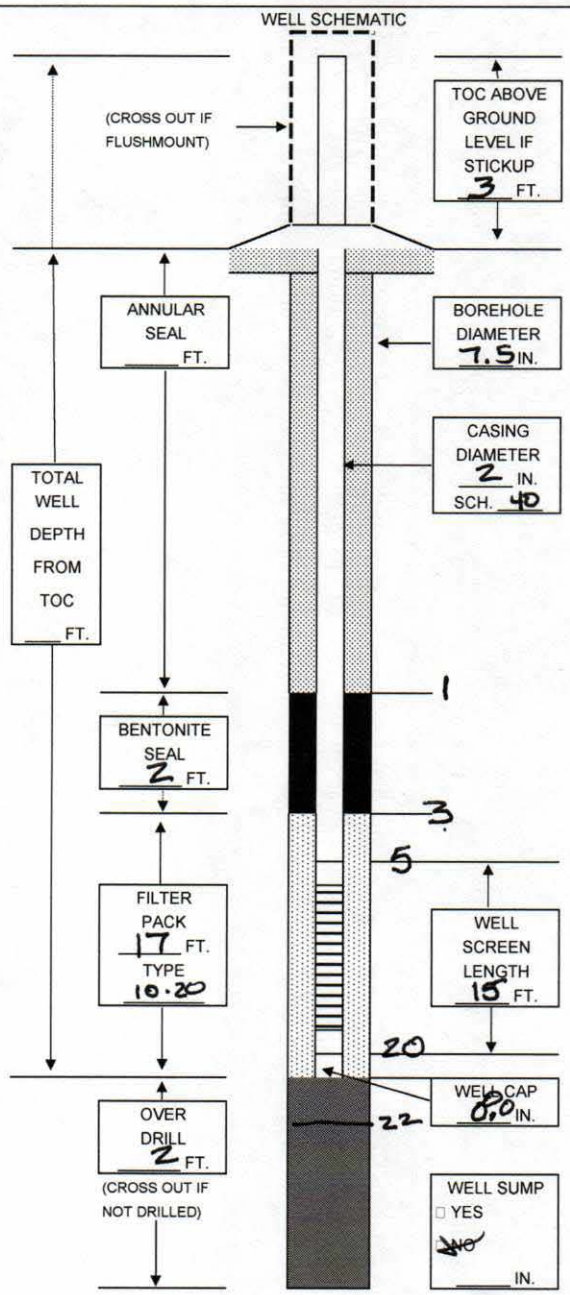
Well Number: MKTF-40
Prepared by: TRACY PAYNE
Start Date: 11.13.14
Finish Date: 11.13.14

WELL LOCATION:

Client Name: WESTERN REFINING SW, INC.
Project No. WEST14003
Project Name: GALLUP REFINERY-HYDROCARBON SEEP
Address of Site: 92 GIANT CROSSING RD., GALLUP NM 87301
Drilling Contractor: ENVIRO-DRILL, INC.
Driller: C. ORTIZ
GPS Coordinates: N35°29.383' W108°25.971'

WELL TYPE: X MONITOR ☐ RECOVERY ☐ OBSERVATION
☐ TEMPORARY ☐ PERMANENT ☐ REPLACEMENT ☐ SINGLE CASED
☐ SHALLOW ☐ INTERMEDIATE ☐ DEEP ☐ DOUBLE CASED ☐ OTHER

WELL SCHEMATIC



INSTALLATION DATA

DECONTAMINATION: ☐ STEAM CLEAN ☐ SOAP WASH X HIGH PRESSURE WASH
CASING TYPE: X PVC ☐ STAINLESS ☐ TEFLON ☐ OTHER
JOINTS: X THREADED ☐ WELDED ☐ COUPLED ☐ SCREWED
SURFACE CASING: X NO ☐ YES ☐ DESCRIBE ___
WELL SCREEN: X PVC ☐ STAINLESS ☐ TEFLON ☐ OTHER
DIAMETER: X 2" ☐ 4" ☐ 6" ☐ OTHER ___ IN
SLOT SIZE: X 0.010 ☐ 0.020 ☐ OTHER ___ IN
SAND: SIZE 10-20 LBS/SACK ___ #___
BENTONITE: SIZE 3/8" LBS/SACK ___ LBS/BUCKET ___ #___
DRILLING METHOD: X HOLLOW STEM ☐ SOLID STEM ☐ MUD ROTARY ☐ HAND AUGER ☐ AIR ROTARY ☐ DIRECT PUSH ☐ OTHER ___
BIT SIZE: ☐ 6" ☐ 8" ☐ 10" ☐ 12" ☐ 14" X OTHER 7.5 IN
DRILLING MUD: X NONE ☐ BENTONITE ☐ WATER ☐ OTHER ___
CENTRALIZER: X NO ☐ YES INTERVAL ___
COMPLETION: ☐ FLUSH MOUNT X STICKUP ☐ VAULT
PAD: X 4' X 4' ☐ 5' X 5' ☐ OTHER ___
CUTTINGS: X DRUMMED NUMBER OF DRUMS 1
☐ ROLLOFF BOX ID NUMBER OF BOX ___
☐ SPREAD ☐ OTHER ___

COMMENTS:

WELL DEVELOPMENT DATA

DATE: ___ TIME: ___

PRE-DEVELOPMENT MEASUREMENTS/OBSERVATIONS:
DEPTH TO HC: ___ ☐ BTOC ☐ BGL
DEPTH TO GW: ___ ☐ BTOC ☐ BGL
TOTAL DEPTH: ___ ☐ BTOC ☐ BGL
APPEARANCE: ☐ PSH ☐ SILTY ☐ TURBID ☐ OPAQUE ☐ CLEAR
ODOR: ☐ YES ☐ NO TYPE ___

DEVELOPMENT METHOD: ☐ NONE ☐ BAILING ☐ PUMPING ☐ AIR LIFT ☐ SURGE & BLOCK ☐ OTHER ___
TIME: ☐ 10 MIN ☐ 20 MIN ☐ OTHER ___
AMOUNT: ☐ 5 GAL ☐ 10 GAL ☐ OTHER ___ GAL

POST-DEVELOPMENT MEASUREMENTS/OBSERVATIONS:
DEPTH TO HC: ___ ☐ BTOC ☐ BGL
DEPTH TO GW: ___ ☐ BTOC ☐ BGL
TOTAL DEPTH: ___ ☐ BTOC ☐ BGL
APPEARANCE: ☐ PSH ☐ SILTY ☐ TURBID ☐ OPAQUE ☐ CLEAR
ODOR: ☐ YES ☐ NO TYPE ___

DISPOSITION OF FLUIDS: ☐ DRUMMED ☐ WWTS ☐ TREATED ☐ POTW ☐ OTHER ☐ OTHER ___

COMMENTS:

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Client: WESTERN REFINING SOUTHWEST, INC.	Project Number: WEST14003	Boring No. \ Well No.: MKTF-41
Project Name: GALLUP REFINERY- HYDROCARBON SEEP		Sheet 1 of 1
Saturation Depth: 34' BGL / Total Depth: 37' / GPS Coordinates: N 35° 29.287' W 108° 25.983'		Logged By: TRACY PAYNE
Drilling Methods \ Auger Size \ Bit Size: HOLLOW STEM AUGER 7.5" / Drilling Rig: CME 75 / Driller: C. ORTIZ		Drilling Company: ENVIRO-DRILL, INC
Sampling Method \ Size of Sampler: SPLIT SPOON 2" DIA, 2' LONG		Start Date: 11.13.14 / Finish Date: 11.14.14
Comments		Start Time: 1015 / Finish Time: 1130

Field Screening: Depth (feet bgl)	PID (ppm)	Air Temp. (°F)	Lithologic Interval (feet bgl)	Symbol	% Recovery	Description of Lithology
0-2	2.6	54	0-2	CL	80	SANDY SILTY CLAY- LOW, STIFF, DRY, BROWN, NO ODOR FINE GRAINED SAND, OCCASIONAL GRAVEL
2-4	2.3	54	2-4	CL	70	SANDY SILTY CLAY- STA, NO ODOR
4-6	1.2	54	4-6	CL	40	SANDY SILTY CLAY- STA, NO ODOR
6-8	2.4	54	6-8	CL/ML	50	SILTY CLAY / CLAYEY SILT- LOW FIRM, DRY, BROWN NO ODOR
8-10	3.9	54	8-10	CL	60	SANDY CLAY- LOW, V. STIFF, DRY, BROWN, NO ODOR
10-12	4.8	54	10-12	CL	30	SANDY CLAY - STA, DAMP
12-14	3.5	54	12-14	CL	40	SANDY CLAY - STA
14-16	1.2	54	14-16	CL	10	SANDY CLAY - STA
16-18	3.9	54	16-18	CL	50	SILTY CLAY- LOW, V. ~~SOFT~~ STIFF, ~~DRY~~ DRY/DAMP LT REDDISH BROWN WITH GRAY AT BASE, NO ODOR
~~20~~ 18-20	4.0	54	18-20	CL	80	SILTY CLAY - STA, REDDISH BROWN AND LT GRAY
20-22	3.9	54	20-22	CL	50	SILTY CLAY - STA, LT REDDISH BROWN
22-24	3.6	54	22-24	CL	40	SILTY CLAY - STA, LT REDDISH BROWN & TRACE GRAY
24-26	3.3	54	24-26	CL	50	SILTY CLAY - STA, LT REDDISH BROWN
26-28	2.1	54	26-28	CL	10	SILTY CLAY - STA
28-30	2.8	54	28-30	CL	20	SILTY CLAY - STA
						RESUMED SAMPLING ON 11.14.14
30-32	2.6	46	30-32	CL	40	SILTY CLAY - STA, MOIST AT TOP OF SAMPLE
32-34	3.1	46	32-34	CL	50	SILTY CLAY - STA, CALCAREOUS
34-36	2.9	46	34-36	CL	50	SILTY CLAY - STA, GRAVELLY, MOIST TO SAT., NO ODOR, SHALE AT BASE
	-	-	36-37	-	10	SHALE - DARK GRAY, DENSE TO V. DENSE TD @ 37'

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WELL CONSTRUCTION DATA

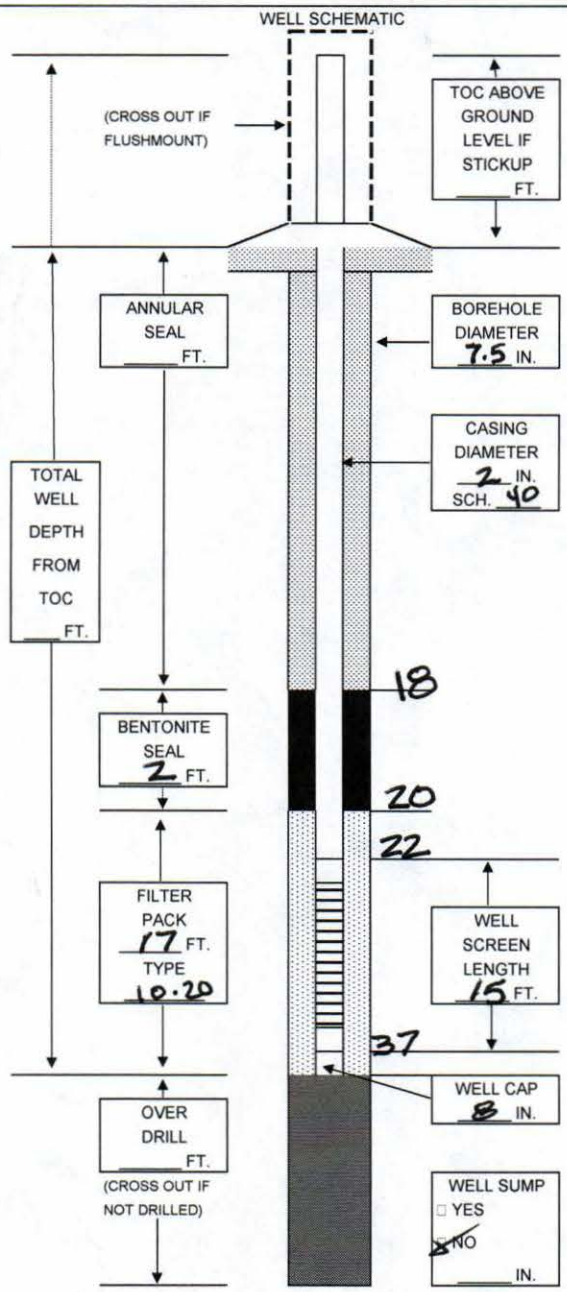
Well Number: MKTF-41
Prepared by: TRACY PAYNE
Start Date: 11.14.14
Finish Date: 11.14.14

WELL LOCATION:

Client Name: WESTERN REFINING SW, INC
Project No. WEST14003
Project Name: GALLUP REFINERY - HYDROCARBON SEEP
Address of Site: 92 GIANT CROSSING ROAD - GALLUP, NM 87301
Drilling Contractor: ENVIRO-DRILL, INC.
Driller: C. ORTIZ
GPS Coordinates: N35°29.287' W108° 25.983'

WELL TYPE: X MONITOR ☐ RECOVERY ☐ OBSERVATION
☐ TEMPORARY ☐ PERMANENT ☐ REPLACEMENT ☐ SINGLE CASED
☐ SHALLOW ☐ INTERMEDIATE ☐ DEEP ☐ DOUBLE CASED ☐ OTHER

WELL SCHEMATIC



INSTALLATION DATA

DECONTAMINATION:	☐ STEAM CLEAN	☐ SOAP WASH	☒ HIGH PRESSURE WASH		
CASING TYPE:	☒ PVC	☐ STAINLESS	☐ TEFLON	☐ OTHER	
JOINTS:	☒ THREADED	☐ WELDED	☐ COUPLED	☐ SCREWED	
SURFACE CASING:	☒ NO	☐ YES	☐ DESCRIBE ___		
WELL SCREEN:	☒ PVC	☐ STAINLESS	☐ TEFLON	☐ OTHER	
DIAMETER:	☒ 2"	☐ 4"	☐ 6"	☐ OTHER ___ IN	
SLOT SIZE:	☒ 0.010	☐ 0.020	☐ OTHER ___ IN		
SAND:	SIZE 10.20	LBS/SACK ___		# 8	
BENTONITE:	SIZE 3/8"	LBS/SACK ___	LBS/BUCKET ___	# 1	
DRILLING METHOD:	☒ HOLLOW STEM	☐ SOLID STEM	☐ MUD ROTARY	☐ HAND AUGER	
	☐ AIR ROTARY	☐ DIRECT PUSH	☐ OTHER ___		
BIT SIZE:	☐ 6" ☐ 8"	☐ 10" ☐ 12"	☐ 14"	☒ OTHER 7.5 IN	
DRILLING MUD:	☒ NONE	☐ BENTONITE	☐ WATER	☐ OTHER ___	
CENTRALIZER:	☒ NO	☐ YES	INTERVAL ___		
COMPLETION:	☐ FLUSH MOUNT	☒ STICKUP	☐ VAULT		
PAD:	☒ 4' X 4'	☐ 5' X 5'	☐ OTHER ___		
CUTTINGS:	☒ DRUMMED	NUMBER OF DRUMS 3			
	☐ ROLLOFF BOX	ID NUMBER OF BOX ___			
	☐ SPREAD	☐ OTHER ___			

COMMENTS: ___

WELL DEVELOPMENT DATA

DATE: ___ TIME: ___

PRE-DEVELOPMENT MEASUREMENTS/OBSERVATIONS:

DEPTH TO HC:	___	☐ BTOC	☐ BGL		
DEPTH TO GW:	___	☐ BTOC	☐ BGL		
TOTAL DEPTH:	___	☐ BTOC	☐ BGL		
APPEARANCE:	☐ PSH	☐ SILTY	☐ TURBID	☐ OPAQUE	☐ CLEAR
ODOR:	☐ YES	☐ NO	TYPE ___		

DEVELOPMENT METHOD:	☐ NONE	☐ BAILING	☐ PUMPING	☐ AIR LIFT
	☐ SURGE & BLOCK	☐ OTHER ___		
TIME:	☐ 10 MIN	☐ 20 MIN	☐ OTHER ___	
AMOUNT:	☐ 5 GAL	☐ 10 GAL	☐ OTHER ___ GAL	

POST-DEVELOPMENT MEASUREMENTS/OBSERVATIONS:

DEPTH TO HC:	___	☐ BTOC	☐ BGL		
DEPTH TO GW:	___	☐ BTOC	☐ BGL		
TOTAL DEPTH:	___	☐ BTOC	☐ BGL		
APPEARANCE:	☐ PSH	☐ SILTY	☐ TURBID	☐ OPAQUE	☐ CLEAR
ODOR:	☐ YES	☐ NO	TYPE ___		

DISPOSITION OF FLUIDS	☐ DRUMMED	☐ WWTS	☐ TREATED	☐ POTW	☐ OTHER
	☐ OTHER ___				

COMMENTS: ___

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Client: WESTERN REFINING SOUTHWEST, INC.	Project Number: WEST14003		Boring No. \ Well No.: MKTF-42
Project Name: GALLUP REFINERY - HYDROCARBON SEEP			Sheet 1 of 1
Saturation Depth: UNK	Total Depth: 30' BGL	GPS Coordinates: N35°29.216' W108°25.957	Logged By: TRACY PAYNE
Drilling Methods \ Auger Size \ Bit Size: HOLLOW-STEM AUGER 7.5"	Drilling Rig: CME 75	Driller: C. ORTIZ	Drilling Company: ENVIRO-DRILL, INC.
Sampling Method \ Size of Sampler: SPLIT SPOON - 2" DIA, 2' LONG			Start Date: 11.12.14 Finish Date: 11.12.14
Comments			Start Time: 1505 Finish Time: 1700

Field Screening: Depth (feet bgl)	PID (ppm)	Air Temp. (°F)	Lithologic Interval (feet bgl)	Symbol	% Recovery	Description of Lithology
0-2	1.7	50	0-2	CL	100	SILTY CLAY - LOW, FIRM, DRY, LT BROWN, NO ODOR
2-4	2.8	50	2-4	CL	90	SILTY CLAY - LOW, V. STIFF, DRY, LT BROWN, CALCAREOUS, NO ODOR, CRUMBLY
4-6	3.8	50	4-6	CL	60	SILTY CLAY - STA
6-8	2.4	50	6-8	CL	60	SILTY CLAY - STA
8-10	4.1	50	8-10	CL	30	SILTY CLAY - STA
10-12	2.8	50	10-12	CL	50	SANDY CLAY - LOW, STIFF, DRY, LT REDDISH BROWN WITH MEDIUM GRAINED SAND & INTERBEDDED SANDSTONE - LESS THAN 1/2" THICK
12-13	3.9	50	12-13	CL	80	SANDY CLAY - STA
13-14	[illegible]	50	13-14	CL	80	SILTY CLAY - LOW, V. STIFF, DAMP/DRY, LT REDDISH BROWN, NO ODOR, CALCAREOUS
14-16	2.5	50	14-16	CL	60	SILTY CLAY - STA, INCREASE IN MOISTURE
16-18	2.3	50	16-18	CL	50	SILTY CLAY - STA, TRACE SAND, SANDSTONE SEAM AT 17.5' V. DENSE
18-20	2.4	50	18-20	CL	80	SILTY CLAY - STA, ODOR, EXTREMELY CALCAREOUS (50%)
20-22	1.5	50	20-22	CL	80	SILTY CLAY - STA, CALCAROUS
22-24	2.5	50	22-24	CL	10	SILTY CLAY - LOW, STIFF, DAMP, REDDISH BROWN, NO ODOR
24-26	1.4	48	24-26	CL	60	SILTY CLAY - STA
26-28	1.5	48	26-28	CL	60	SILTY CLAY - STA, TRACE GRAY
28-30	1.2	48	28-30	CL	50	SILTY CLAY - STA, GRAY & REDDISH BROWN

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WELL CONSTRUCTION DATA

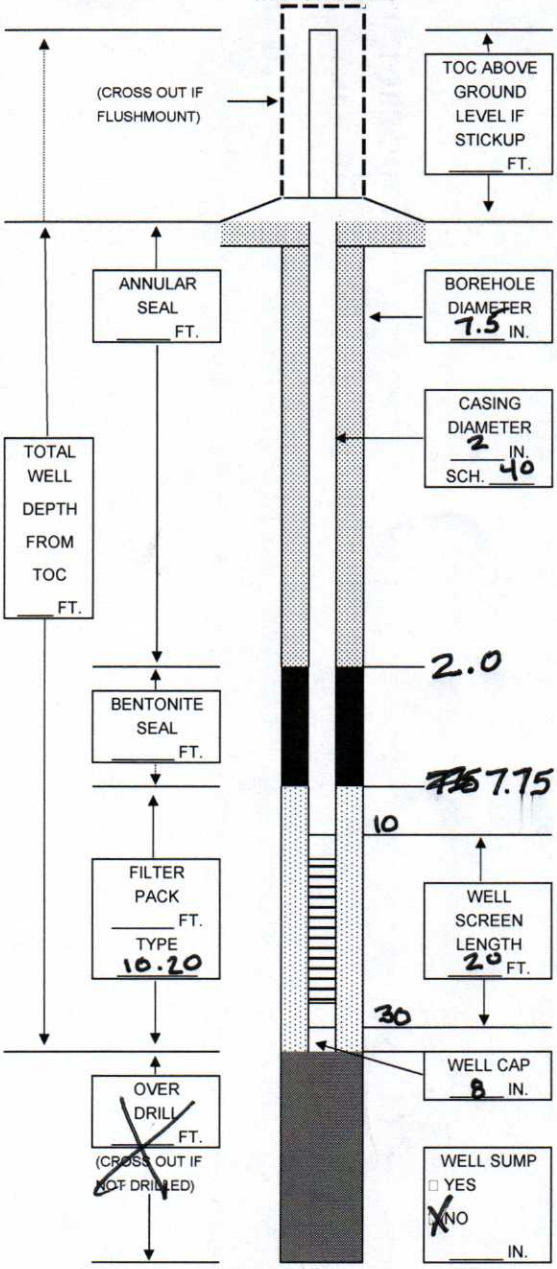
Well Number: MKTF-42
Prepared by: TRACY PAYNE
Start Date: 11.13.14
Finish Date: 11.13.14

WELL LOCATION:

Client Name: WESTERN REFINING SW, INC
Project No. WEST14003
Project Name: GALLUP REFINERY - HYDROCARBON SEEP
Address of Site: 92 GIANT CROSSING ROAD, GALLUP NM 87301
Drilling Contractor: ENVIRO-DRILL, INC.
Driller: C. ORTIZ
GPS Coordinates: N 35°29.216' W108°25.957

WELL TYPE: X MONITOR ☐ RECOVERY ☐ OBSERVATION
☐ TEMPORARY ☐ PERMANENT ☐ REPLACEMENT ☐ SINGLE CASED
☐ SHALLOW ☐ INTERMEDIATE ☐ DEEP ☐ DOUBLE CASED ☐ OTHER

WELL SCHEMATIC



INSTALLATION DATA

DECONTAMINATION: ☐ STEAM CLEAN ☐ SOAP WASH X HIGH PRESSURE WASH
CASING TYPE: X PVC ☐ STAINLESS ☐ TEFLON ☐ OTHER
JOINTS: X THREADED ☐ WELDED ☐ COUPLED ☐ SCREWED
SURFACE CASING: X NO ☐ YES ☐ DESCRIBE ____
WELL SCREEN: X PVC ☐ STAINLESS ☐ TEFLON ☐ OTHER
DIAMETER: X 2" ☐ 4" ☐ 6" ☐ OTHER ____ IN
SLOT SIZE: X 0.010 ☐ 0.020 ☐ OTHER ____ IN
SAND: SIZE 10.20 LBS/SACK ____ # 16
BENTONITE: SIZE 3/8" LBS/SACK ____ LBS/BUCKET ____ # 3
DRILLING METHOD: X HOLLOW STEM ☐ SOLID STEM ☐ MUD ROTARY ☐ HAND AUGER
☐ AIR ROTARY ☐ DIRECT PUSH ☐ OTHER ____
BIT SIZE: ☐ 6" ☐ 8" ☐ 10" ☐ 12" ☐ 14" X OTHER 7.5 IN
DRILLING MUD: X NONE ☐ BENTONITE ☐ WATER ☐ OTHER ____
CENTRALIZER: X NO ☐ YES INTERVAL ____
COMPLETION: ☐ FLUSH MOUNT X STICKUP ☐ VAULT
PAD: X 4' X 4' ☐ 5' X 5' ☐ OTHER ____
CUTTINGS: X DRUMMED NUMBER OF DRUMS 2
☐ ROLLOFF BOX ID NUMBER OF BOX ____
☐ SPREAD ☐ OTHER ____

COMMENTS:

WELL DEVELOPMENT DATA

DATE: ____ TIME: ____

PRE-DEVELOPMENT MEASUREMENTS/OBSERVATIONS:
DEPTH TO HC: ____ ☐ BTOC ☐ BGL
DEPTH TO GW: ____ ☐ BTOC ☐ BGL
TOTAL DEPTH: ____ ☐ BTOC ☐ BGL
APPEARANCE: ☐ PSH ☐ SILTY ☐ TURBID ☐ OPAQUE ☐ CLEAR
ODOR: ☐ YES ☐ NO TYPE ____

DEVELOPMENT METHOD: ☐ NONE ☐ BAILING ☐ PUMPING ☐ AIR LIFT
☐ SURGE & BLOCK ☐ OTHER ____
TIME: ☐ 10 MIN ☐ 20 MIN ☐ OTHER ____
AMOUNT: ☐ 5 GAL ☐ 10 GAL ☐ OTHER ____ GAL

POST-DEVELOPMENT MEASUREMENTS/OBSERVATIONS:
DEPTH TO HC: ____ ☐ BTOC ☐ BGL
DEPTH TO GW: ____ ☐ BTOC ☐ BGL
TOTAL DEPTH: ____ ☐ BTOC ☐ BGL
APPEARANCE: ☐ PSH ☐ SILTY ☐ TURBID ☐ OPAQUE ☐ CLEAR
ODOR: ☐ YES ☐ NO TYPE ____

DISPOSITION OF FLUIDS: ☐ DRUMMED ☐ WWTS ☐ TREATED ☐ POTW ☐ OTHER
☐ OTHER ____

COMMENTS:

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Client: WESTERN REFINING SOUTHWEST	Project Number: WEST14003	Boring No. \ Well No.: MKTF-43
Project Name: GALLUP REFINERY- HYDROCARBON SEEP		Sheet 1 of 1
Saturation Depth: NE / Total Depth: 28'	GPS Coordinates: N 35°29.277' W 108°26.055'	Logged By: TRACY PAYNE
Drilling Methods \ Auger Size \ Bit Size: HOLLOW STEM AUGER	Drilling Rig: CME 75 / Driller: C. ORTIZ	Drilling Company: ENVIRO-DRILL, INC.
Sampling Method \ Size of Sampler: SPLIT SPOON 2" DIA; 2' LONG		Start Date: 11.11.14 / Finish Date: 11.11.14
Comments		Start Time: 0810 / Finish Time: 1040

Field Screening: Depth (feet bgl)	PID (ppm)	Air Temp. (°F)	Lithologic Interval (feet bgl)	Symbol	% Recovery	Description of Lithology
0-2	3.6	49	0-2	CH	100	CLAY- HIGH, STIFF, DAMP, BROWN, NO ODOR
2-4	4.6	49	2-4	CH	50	CLAY- STA, MOIST IN SEAMS
4-6	4.2	49	4-6	CH	90	CLAY - STA, MOIST IN SEAMS
6-8	4.6	49	6-8	CH	90	CLAY-STA, REDDISH BROWN
8-10	4.0	49	8-10	CL	90	SILTY CLAY- LOW, SOFT, DAMP, REDDISH BROWN,
						CRUMBLY, NO ODOR, TRACE GRAY CLAY @
						9.5'
10-12	3.3	49	10-12	CL	80	SILTY CLAY- STA, STIFF.
12-14	3.8	49	12-14	CL	60	SILTY CLAY - STA, VERY STIFF
14-16	3.8	49	14-16	CL	80	SILTY CLAY - STA, VERY STIFF, CALCAREOUS
16-18	2.9	49	16-18	CL	80	SILTY CLAY-STA
18-20	3.1	49	18-20	CL	50	SILTY CLAY- STA
20-22	3.1	49	20-22	CL	60	SILTY CLAY- STA
22-24	3.2	49	22-24	CL	10	SILTY CLAY-STA
24-26	3.3	49	24-26	CL	30	SILTY CLAY- STA, SANDSTONE SEAM 24.50'
26-28	3.2	49	26-28	CL	30	SILTY CLAY - STA

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WELL CONSTRUCTION DATA

Well Number: MKTF-43

Prepared by: TRACY PAYNE

Start Date: 11·11·14

Finish Date: 11·11·14

Client Name: WESTERN REFINING SW, INC.

Project No. WEST14003

Project Name: GALLUP REFINERY - HYDROCARBON SEEP

Address of Site: 92 GIANT CROSSING ROAD - GALLUP, NM 87301

Drilling Contractor: ENVIRO-DRILL INC.

Driller: C. ORTIZ

GPS Coordinates:

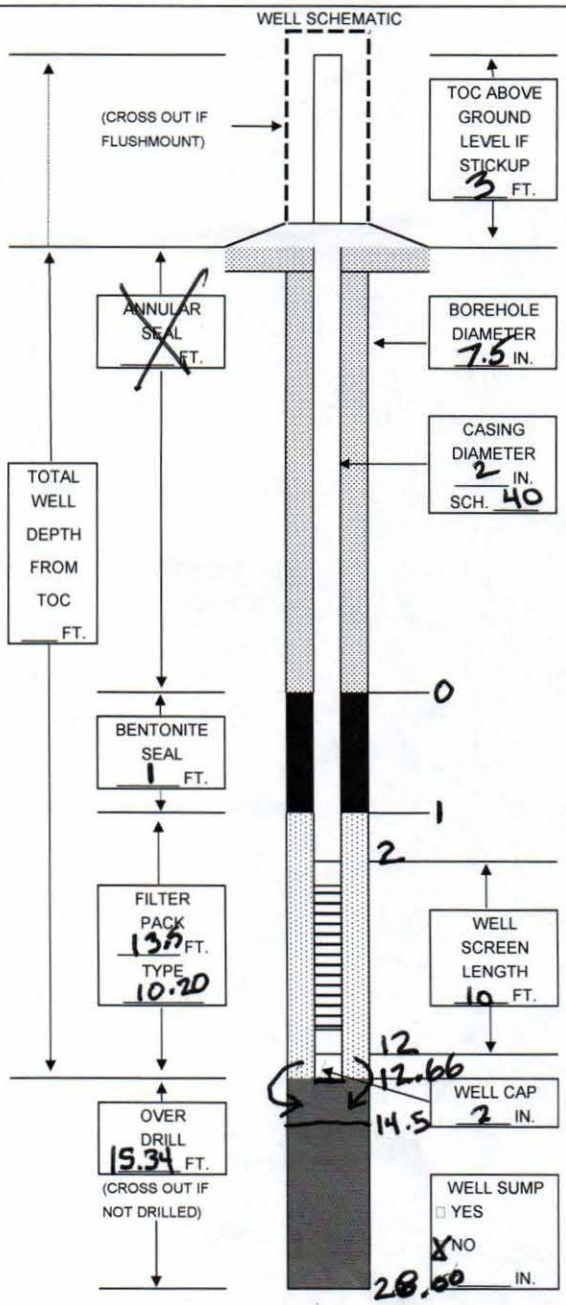
WELL LOCATION:

WELL TYPE: ☒ MONITOR ☐ RECOVERY ☐ OBSERVATION

☐ TEMPORARY ☐ PERMANENT ☐ REPLACEMENT ☐ SINGLE CASED

☐ SHALLOW ☐ INTERMEDIATE ☐ DEEP ☐ DOUBLE CASED ☐ OTHER

WELL SCHEMATIC



INSTALLATION DATA

DECONTAMINATION:	☐ STEAM CLEAN	☐ SOAP WASH	☒ HIGH PRESSURE WASH	
CASING TYPE:	☒ PVC	☐ STAINLESS	☐ TEFLON	☐ OTHER
JOINTS:	☒ THREADED	☐ WELDED	☐ COUPLED	☐ SCREWED
SURFACE CASING:	☒ NO	☐ YES	☐ DESCRIBE	
WELL SCREEN:	☒ PVC	☐ STAINLESS	☐ TEFLON	☐ OTHER
DIAMETER:	☒ 2"	☐ 4"	☐ 6"	☐ OTHER ____ IN
SLOT SIZE:	☒ 0.010	☐ 0.020	☐ OTHER ____ IN	
SAND:	SIZE 10.20	LBS/SACK		# 10.5
BENTONITE:	SIZE 3/8"	LBS/SACK	LBS/BUCKET	# 4
DRILLING METHOD:	☐ HOLLOW STEM	☐ SOLID STEM	☐ MUD ROTARY	☐ HAND AUGER
	☐ AIR ROTARY	☐ DIRECT PUSH	☐ OTHER	
BIT SIZE:	☐ 6" ☐ 8"	☐ 10" ☐ 12"	☐ 14"	☒ OTHER 7.5 IN
DRILLING MUD:	☒ NONE	☐ BENTONITE	☐ WATER	☐ OTHER
CENTRALIZER:	☒ NO	☐ YES	INTERVAL	
COMPLETION:	☐ FLUSH MOUNT	☒ STICKUP	☐ VAULT	
PAD:	☒ 4' X 4'	☐ 5' X 5'	☐ OTHER	
CUTTINGS:	☒ DRUMMED	NUMBER OF DRUMS 2		
	☐ ROLLOFF BOX	ID NUMBER OF BOX		
	☐ SPREAD	☐ OTHER		

COMMENTS:

WELL DEVELOPMENT DATA

DATE: TIME:

PRE-DEVELOPMENT MEASUREMENTS/OBSERVATIONS:

DEPTH TO HC:		☐ BTOC	☐ BGL		
DEPTH TO GW:		☐ BTOC	☐ BGL		
TOTAL DEPTH:		☐ BTOC	☐ BGL		
APPEARANCE:	☐ PSH	☐ SILTY	☐ TURBID	☐ OPAQUE	☐ CLEAR
ODOR:	☐ YES	☐ NO	TYPE		
DEVELOPMENT METHOD:	☐ NONE	☐ BAILING	☐ PUMPING	☐ AIR LIFT	
	☐ SURGE & BLOCK	☐ OTHER			
TIME:	☐ 10 MIN	☐ 20 MIN	☐ OTHER		
AMOUNT:	☐ 5 GAL	☐ 10 GAL	☐ OTHER ____ GAL		

POST-DEVELOPMENT MEASUREMENTS/OBSERVATIONS:

DEPTH TO HC:		☐ BTOC	☐ BGL		
DEPTH TO GW:		☐ BTOC	☐ BGL		
TOTAL DEPTH:		☐ BTOC	☐ BGL		
APPEARANCE:	☐ PSH	☐ SILTY	☐ TURBID	☐ OPAQUE	☐ CLEAR
ODOR:	☐ YES	☐ NO	TYPE		
DISPOSITION OF FLUIDS	☐ DRUMMED	☐ WWTS	☐ TREATED	☐ POTW	☐ OTHER
	☐ OTHER				

COMMENTS:

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Client: WESTERN REFINING SW, INC.	Project Number: WEST14003		Boring No. \ Well No.: MKTF-44
Project Name: GALLUP REFINERY - HYDROCARBON SEEP			Sheet 1 of 2
Saturation Depth: NE	Total Depth: 50	GPS Coordinates: N35°29.313' W108°26.303'W	Logged By: TRACY PAYNE
Drilling Methods \ Auger Size \ Bit Size: HOLLOW STEM AUGER 7.5"	Drilling Rig: CME 75	Driller: C. ORTIZ	Drilling Company: ENVIRO-DRILL, INC.
Sampling Method \ Size of Sampler: SPLIT SPOON 2" DIAMETER 2' LONG			Start Date: 11.11.14 Finish Date:
Comments			Start Time: 1215 Finish Time:

Field Screening: Depth (feet bgl)	PID (ppm)	Air Temp. (°F)	Lithologic Interval (feet bgl)	Symbol	% Recovery	Description of Lithology
0-2	6.3	60	0-2	CH	100	CLAY- HIGH, V. STIFF, DAMP, BROWN, NO ODOR
2-4	8.3	60	2-4	CH	80	CLAY- STA
4-6	8.2	60	4-6	CH	70	CLAY-STA
6-8	8.6	60	6-8	CH	90	CLAY-STA
8-10	8.2	60	8-10	CH	80	CLAY- STA
10-12	7.9	60	10-12	CH	90	CLAY-STA, TRACE SILT
12-14	7.8	60	12-14	CH	90	CLAY - HIGH, V. STIFF, DAMP, BROWN, NO ODOR
14-16	6.5	60	14-16	CH	10	CLAY-STA
16-18	7.1	60	16-18	CH	80	CLAY- STA
18-20	7.6	60	18-20	CL	70	SANDY SILTY CLAY- LOW, STIFF, DAMP,
						LIGHT BROWN, NO ODOR, GRAVEL
						AT BASE; SOFT / CRUMBLY 19-19.5' WITH
						LESSER AMOUNT OF CLAY
20-22	5.5	60	20-22	CL	80	SILTY CLAY- STA WITH SAND SEAMS /
						SANDSTONE FROM 20.5-22', DRY
						CRUMBLY
22-24	6.4	60	22-24	CL	80	SANDY SILTY CLAY- LOW, STIFF, DRY -> DAMP
						LIGHT BROWN, NO ODOR
24-26	4.8	60	24-26	CL	70	GRAVELLY CLAY - STA, @ GRAVEL
26-28	3.8	60	26-28	CL	50	GRAVELLY CLAY- STA, V. STIFF
28-30	4.8	60	28-30	CL	50	SILTY CLAY - LOW, V. STIFF, DAMP / DRY, REDDISH-
						BROWN, NO ODOR, CALCAREOUS
30-32	4.6	60	30-32	CL	90	SILTY CLAY- LOW, FIRM / CRUMBLY, DAMP -> DRY
						REDDISH BROWN, NO ODOR, CALAREOUS
32-34	4.3	60	32-34	CL	80	SILTY CLAY- STA, STIFF -> V. STIFF
34-36	3.6	60	34-36	CL	80	SILTY CLAY-STA
36-38	1.9	56	36-38	CL	80	SILTY CLAY-STA
38-40	4.4	56	38-40	CL	20	SILTY CLAY- STA
40-42	3.8	56	40-42	CL	80	SILTY CLAY-STA

DiSorbo Consulting, LLC 1010 Travis Street, Suite 916 | Houston, Texas 77002 713.955.1230 www.disorboconsult.com

Client		Project Number	Boring No. \ Well No. MKTF-44
Project Name			Sheet 2 of 2
Saturation Depth	Total Depth	GPS Coordinates	Logged By
Drilling Methods \ Auger Size \ Bit Size	Drilling Rig	Driller	Drilling Company
Sampling Method \ Size of Sampler			Start Date 11.11.14 / Finish Date
Comments			Start Time 1215 / Finish Time

Field Screening: Depth (feet bgl)	PID (ppm)	Air Temp. (°F)	Lithologic Interval (feet bgl)	Symbol	% Recovery	Description of Lithology
42-44	3.8	56	42-44	CL	20	SILTY CLAY- LOW, ~~V-STIF~~ V. STIFF, CRUMBLY, DAMP → DRY, REDDISH BROWN, NO ODOR
44-46	3.9	56	44-46	CL	60	SILTY CLAY- STA
46-48	3.8	56	46-48	CL	40	SILTY CLAY- STA
48-50	3.7	56	48-50	CL	20	SILTY CLAY- STA

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

November 25, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: Hydrocarbon Seep OrderNo.: 1411731

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 5 sample(s) on 11/18/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1411731**
Date Reported: **11/25/2014**

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-43
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 8:20:00 AM
Lab ID: 1411731-001
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/19/2014 6:49:23 PM	16462
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/19/2014 6:49:23 PM	16462
Surr: DNOP	103	59-141		%REC	1	11/19/2014 6:49:23 PM	16462
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/19/2014 6:37:43 PM	R22638
Surr: BFB	92.3	80-120		%REC	1	11/19/2014 6:37:43 PM	R22638
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Acenaphthylene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Aniline	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Anthracene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Azobenzene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Benz(a)anthracene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Benzo(a)pyrene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Benzo(b)fluoranthene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Benzo(k)fluoranthene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Benzoic acid	ND	20		µg/L	1	11/20/2014 3:43:36 PM	16481
Benzyl alcohol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Butyl benzyl phthalate	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Carbazole	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
4-Chloroaniline	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
2-Chloronaphthalene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
2-Chlorophenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Chrysene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Di-n-butyl phthalate	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Di-n-octyl phthalate	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Dibenzofuran	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
1,2-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
1,3-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-43
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 8:20:00 AM
Lab ID: 1411731-001
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,4-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Diethyl phthalate	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Dimethyl phthalate	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
2,4-Dichlorophenol	ND	20		µg/L	1	11/20/2014 3:43:36 PM	16481
2,4-Dimethylphenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/20/2014 3:43:36 PM	16481
2,4-Dinitrophenol	ND	20		µg/L	1	11/20/2014 3:43:36 PM	16481
2,4-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
2,6-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Fluoranthene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Fluorene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Hexachlorobenzene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Hexachlorobutadiene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Hexachloroethane	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Isophorone	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
1-Methylnaphthalene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
2-Methylnaphthalene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
2-Methylphenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
3+4-Methylphenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
N-Nitrosodimethylamine	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Naphthalene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
2-Nitroaniline	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
3-Nitroaniline	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
4-Nitroaniline	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Nitrobenzene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
2-Nitrophenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
4-Nitrophenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Pentachlorophenol	ND	20		µg/L	1	11/20/2014 3:43:36 PM	16481
Phenanthrene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Phenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Pyrene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Pyridine	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-43
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 8:20:00 AM
Lab ID: 1411731-001
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Surr: 2-Fluorophenol	30.5	17.6-104		%REC	1	11/20/2014 3:43:36 PM	16481
Surr: Phenol-d5	29.8	17.7-89.9		%REC	1	11/20/2014 3:43:36 PM	16481
Surr: 2,4,6-Tribromophenol	30.6	16.3-122		%REC	1	11/20/2014 3:43:36 PM	16481
Surr: Nitrobenzene-d5	81.1	45.3-117		%REC	1	11/20/2014 3:43:36 PM	16481
Surr: 2-Fluorobiphenyl	74.3	43-113		%REC	1	11/20/2014 3:43:36 PM	16481
Surr: 4-Terphenyl-d14	80.8	47.6-122		%REC	1	11/20/2014 3:43:36 PM	16481
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Toluene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Ethylbenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Naphthalene	ND	2.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
2-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Acetone	ND	10		µg/L	1	11/22/2014 7:34:21 AM	R22714
Bromobenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Bromodichloromethane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Bromoform	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Bromomethane	ND	10		µg/L	1	11/22/2014 7:34:21 AM	R22714
2-Butanone	ND	10		µg/L	1	11/22/2014 7:34:21 AM	R22714
Carbon disulfide	ND	10		µg/L	1	11/22/2014 7:34:21 AM	R22714
Carbon Tetrachloride	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Chlorobenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Chloroethane	ND	2.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Chloroform	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Chloromethane	ND	3.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
2-Chlorotoluene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
4-Chlorotoluene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
cis-1,2-DCE	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Dibromochloromethane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Dibromomethane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-43
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 8:20:00 AM
Lab ID: 1411731-001
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,1-Dichloroethane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,1-Dichloroethene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,2-Dichloropropane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,3-Dichloropropane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
2,2-Dichloropropane	ND	2.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,1-Dichloropropene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Hexachlorobutadiene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
2-Hexanone	ND	10		µg/L	1	11/22/2014 7:34:21 AM	R22714
Isopropylbenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
4-Isopropyltoluene	3.6	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
4-Methyl-2-pentanone	ND	10		µg/L	1	11/22/2014 7:34:21 AM	R22714
Methylene Chloride	ND	3.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
n-Butylbenzene	ND	3.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
n-Propylbenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
sec-Butylbenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Styrene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
tert-Butylbenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
trans-1,2-DCE	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Trichlorofluoromethane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Vinyl chloride	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Xylenes, Total	ND	1.5		µg/L	1	11/22/2014 7:34:21 AM	R22714
Surr: 1,2-Dichloroethane-d4	97.7	70-130		%REC	1	11/22/2014 7:34:21 AM	R22714
Surr: 4-Bromofluorobenzene	110	70-130		%REC	1	11/22/2014 7:34:21 AM	R22714
Surr: Dibromofluoromethane	104	70-130		%REC	1	11/22/2014 7:34:21 AM	R22714
Surr: Toluene-d8	100	70-130		%REC	1	11/22/2014 7:34:21 AM	R22714

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-42
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 9:00:00 AM
Lab ID: 1411731-002
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	44	1.0		mg/L	1	11/19/2014 7:10:32 PM	16462
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/19/2014 7:10:32 PM	16462
Surr: DNOP	97.2	59-141		%REC	1	11/19/2014 7:10:32 PM	16462
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.50		mg/L	10	11/21/2014 12:06:22 PM	R22716
Surr: BFB	87.0	80-120		%REC	10	11/21/2014 12:06:22 PM	R22716
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Acenaphthylene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Aniline	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Anthracene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Azobenzene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Benz(a)anthracene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Benzo(a)pyrene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Benzo(b)fluoranthene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Benzo(k)fluoranthene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Benzoic acid	ND	20		µg/L	1	11/20/2014 5:07:01 PM	16481
Benzyl alcohol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Bis(2-ethylhexyl)phthalate	13	10	B	µg/L	1	11/20/2014 5:07:01 PM	16481
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Butyl benzyl phthalate	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Carbazole	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
4-Chloroaniline	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
2-Chloronaphthalene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
2-Chlorophenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Chrysene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Di-n-butyl phthalate	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Di-n-octyl phthalate	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Dibenzofuran	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
1,2-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
1,3-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-42
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 9:00:00 AM
Lab ID: 1411731-002
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,4-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Diethyl phthalate	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Dimethyl phthalate	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
2,4-Dichlorophenol	ND	20		µg/L	1	11/20/2014 5:07:01 PM	16481
2,4-Dimethylphenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/20/2014 5:07:01 PM	16481
2,4-Dinitrophenol	ND	20		µg/L	1	11/20/2014 5:07:01 PM	16481
2,4-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
2,6-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Fluoranthene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Fluorene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Hexachlorobenzene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Hexachlorobutadiene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Hexachloroethane	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Isophorone	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
1-Methylnaphthalene	72	10		µg/L	1	11/20/2014 5:07:01 PM	16481
2-Methylnaphthalene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
2-Methylphenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
3+4-Methylphenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
N-Nitrosodimethylamine	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Naphthalene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
2-Nitroaniline	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
3-Nitroaniline	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
4-Nitroaniline	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Nitrobenzene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
2-Nitrophenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
4-Nitrophenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Pentachlorophenol	ND	20		µg/L	1	11/20/2014 5:07:01 PM	16481
Phenanthrene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Phenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Pyrene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Pyridine	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-42
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 9:00:00 AM
Lab ID: 1411731-002
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Surr: 2-Fluorophenol	68.9	17.6-104		%REC	1	11/20/2014 5:07:01 PM	16481
Surr: Phenol-d5	53.9	17.7-89.9		%REC	1	11/20/2014 5:07:01 PM	16481
Surr: 2,4,6-Tribromophenol	1.72	16.3-122	S	%REC	1	11/20/2014 5:07:01 PM	16481
Surr: Nitrobenzene-d5	80.1	45.3-117		%REC	1	11/20/2014 5:07:01 PM	16481
Surr: 2-Fluorobiphenyl	61.3	43-113		%REC	1	11/20/2014 5:07:01 PM	16481
Surr: 4-Terphenyl-d14	78.6	47.6-122		%REC	1	11/20/2014 5:07:01 PM	16481
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	12	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Toluene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Ethylbenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,2,4-Trimethylbenzene	27	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,3,5-Trimethylbenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Naphthalene	35	20		µg/L	10	11/22/2014 8:00:58 AM	R22714
1-Methylnaphthalene	73	40		µg/L	10	11/22/2014 8:00:58 AM	R22714
2-Methylnaphthalene	58	40		µg/L	10	11/22/2014 8:00:58 AM	R22714
Acetone	ND	100		µg/L	10	11/22/2014 8:00:58 AM	R22714
Bromobenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Bromodichloromethane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Bromoform	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Bromomethane	ND	30		µg/L	10	11/22/2014 8:00:58 AM	R22714
2-Butanone	ND	100		µg/L	10	11/22/2014 8:00:58 AM	R22714
Carbon disulfide	ND	100		µg/L	10	11/22/2014 8:00:58 AM	R22714
Carbon Tetrachloride	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Chlorobenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Chloroethane	ND	20		µg/L	10	11/22/2014 8:00:58 AM	R22714
Chloroform	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Chloromethane	ND	30		µg/L	10	11/22/2014 8:00:58 AM	R22714
2-Chlorotoluene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
4-Chlorotoluene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
cis-1,2-DCE	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/22/2014 8:00:58 AM	R22714
Dibromochloromethane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Dibromomethane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,2-Dichlorobenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-42
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 9:00:00 AM
Lab ID: 1411731-002
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,3-Dichlorobenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,4-Dichlorobenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Dichlorodifluoromethane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,1-Dichloroethane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,1-Dichloroethene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,2-Dichloropropane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,3-Dichloropropane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
2,2-Dichloropropane	ND	20		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,1-Dichloropropene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Hexachlorobutadiene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
2-Hexanone	ND	100		µg/L	10	11/22/2014 8:00:58 AM	R22714
Isopropylbenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
4-Isopropyltoluene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
4-Methyl-2-pentanone	ND	100		µg/L	10	11/22/2014 8:00:58 AM	R22714
Methylene Chloride	ND	30		µg/L	10	11/22/2014 8:00:58 AM	R22714
n-Butylbenzene	ND	30		µg/L	10	11/22/2014 8:00:58 AM	R22714
n-Propylbenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
sec-Butylbenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Styrene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
tert-Butylbenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	11/22/2014 8:00:58 AM	R22714
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
trans-1,2-DCE	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,1,1-Trichloroethane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,1,2-Trichloroethane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Trichloroethene (TCE)	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Trichlorofluoromethane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,2,3-Trichloropropane	ND	20		µg/L	10	11/22/2014 8:00:58 AM	R22714
Vinyl chloride	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Xylenes, Total	56	15		µg/L	10	11/22/2014 8:00:58 AM	R22714
Surr: 1,2-Dichloroethane-d4	94.2	70-130		%REC	10	11/22/2014 8:00:58 AM	R22714
Surr: 4-Bromofluorobenzene	92.7	70-130		%REC	10	11/22/2014 8:00:58 AM	R22714
Surr: Dibromofluoromethane	96.0	70-130		%REC	10	11/22/2014 8:00:58 AM	R22714
Surr: Toluene-d8	101	70-130		%REC	10	11/22/2014 8:00:58 AM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-41
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 9:45:00 AM
Lab ID: 1411731-003
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/19/2014 7:31:35 PM	16462
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/19/2014 7:31:35 PM	16462
Surr: DNOP	132	59-141		%REC	1	11/19/2014 7:31:35 PM	16462
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/19/2014 7:32:53 PM	R22638
Surr: BFB	88.3	80-120		%REC	1	11/19/2014 7:32:53 PM	R22638
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Acenaphthylene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Aniline	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Anthracene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Azobenzene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Benz(a)anthracene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Benzo(a)pyrene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Benzo(b)fluoranthene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Benzo(k)fluoranthene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Benzoic acid	ND	20		µg/L	1	11/20/2014 4:11:28 PM	16481
Benzyl alcohol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Bis(2-ethylhexyl)phthalate	14	10	B	µg/L	1	11/20/2014 4:11:28 PM	16481
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Butyl benzyl phthalate	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Carbazole	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
4-Chloroaniline	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
2-Chloronaphthalene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
2-Chlorophenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Chrysene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Di-n-butyl phthalate	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Di-n-octyl phthalate	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Dibenzofuran	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
1,2-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
1,3-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-41
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 9:45:00 AM
Lab ID: 1411731-003
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,4-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Diethyl phthalate	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Dimethyl phthalate	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
2,4-Dichlorophenol	ND	20		µg/L	1	11/20/2014 4:11:28 PM	16481
2,4-Dimethylphenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/20/2014 4:11:28 PM	16481
2,4-Dinitrophenol	ND	20		µg/L	1	11/20/2014 4:11:28 PM	16481
2,4-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
2,6-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Fluoranthene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Fluorene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Hexachlorobenzene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Hexachlorobutadiene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Hexachloroethane	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Isophorone	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
1-Methylnaphthalene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
2-Methylnaphthalene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
2-Methylphenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
3+4-Methylphenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
N-Nitrosodimethylamine	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Naphthalene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
2-Nitroaniline	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
3-Nitroaniline	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
4-Nitroaniline	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Nitrobenzene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
2-Nitrophenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
4-Nitrophenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Pentachlorophenol	ND	20		µg/L	1	11/20/2014 4:11:28 PM	16481
Phenanthrene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Phenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Pyrene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Pyridine	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-41
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 9:45:00 AM
Lab ID: 1411731-003
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Surr: 2-Fluorophenol	73.1	17.6-104		%REC	1	11/20/2014 4:11:28 PM	16481
Surr: Phenol-d5	57.2	17.7-89.9		%REC	1	11/20/2014 4:11:28 PM	16481
Surr: 2,4,6-Tribromophenol	81.0	16.3-122		%REC	1	11/20/2014 4:11:28 PM	16481
Surr: Nitrobenzene-d5	81.4	45.3-117		%REC	1	11/20/2014 4:11:28 PM	16481
Surr: 2-Fluorobiphenyl	77.9	43-113		%REC	1	11/20/2014 4:11:28 PM	16481
Surr: 4-Terphenyl-d14	94.4	47.6-122		%REC	1	11/20/2014 4:11:28 PM	16481
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Toluene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Ethylbenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,2-Dichloroethane (EDC)	2.0	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Naphthalene	ND	2.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
2-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Acetone	ND	10		µg/L	1	11/22/2014 8:27:44 AM	R22714
Bromobenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Bromodichloromethane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Bromoform	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Bromomethane	ND	3.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
2-Butanone	ND	10		µg/L	1	11/22/2014 8:27:44 AM	R22714
Carbon disulfide	ND	10		µg/L	1	11/22/2014 8:27:44 AM	R22714
Carbon Tetrachloride	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Chlorobenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Chloroethane	ND	2.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Chloroform	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Chloromethane	ND	3.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
2-Chlorotoluene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
4-Chlorotoluene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
cis-1,2-DCE	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Dibromochloromethane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Dibromomethane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-41
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 9:45:00 AM
Lab ID: 1411731-003
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,1-Dichloroethane	3.6	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,1-Dichloroethene	3.8	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,2-Dichloropropane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,3-Dichloropropane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
2,2-Dichloropropane	ND	2.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,1-Dichloropropene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Hexachlorobutadiene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
2-Hexanone	ND	10		µg/L	1	11/22/2014 8:27:44 AM	R22714
Isopropylbenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
4-Isopropyltoluene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
4-Methyl-2-pentanone	ND	10		µg/L	1	11/22/2014 8:27:44 AM	R22714
Methylene Chloride	ND	3.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
n-Butylbenzene	ND	3.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
n-Propylbenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
sec-Butylbenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Styrene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
tert-Butylbenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
trans-1,2-DCE	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Trichlorofluoromethane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Vinyl chloride	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Xylenes, Total	ND	1.5		µg/L	1	11/22/2014 8:27:44 AM	R22714
Surr: 1,2-Dichloroethane-d4	94.6	70-130		%REC	1	11/22/2014 8:27:44 AM	R22714
Surr: 4-Bromofluorobenzene	99.4	70-130		%REC	1	11/22/2014 8:27:44 AM	R22714
Surr: Dibromofluoromethane	90.9	70-130		%REC	1	11/22/2014 8:27:44 AM	R22714
Surr: Toluene-d8	103	70-130		%REC	1	11/22/2014 8:27:44 AM	R22714

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-39
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 11:15:00 AM
Lab ID: 1411731-004
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	15	1.0		mg/L	1	11/19/2014 7:52:48 PM	16462
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/19/2014 7:52:48 PM	16462
Surr: DNOP	107	59-141		%REC	1	11/19/2014 7:52:48 PM	16462
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	0.39	0.25		mg/L	5	11/21/2014 3:17:45 PM	R22716
Surr: BFB	109	80-120		%REC	5	11/21/2014 3:17:45 PM	R22716
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Acenaphthylene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Aniline	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Anthracene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Azobenzene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Benz(a)anthracene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Benzo(a)pyrene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Benzo(b)fluoranthene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Benzo(k)fluoranthene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Benzoic acid	ND	20		µg/L	1	11/20/2014 4:39:15 PM	16481
Benzyl alcohol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Bis(2-ethylhexyl)phthalate	12	10	B	µg/L	1	11/20/2014 4:39:15 PM	16481
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Butyl benzyl phthalate	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Carbazole	21	10		µg/L	1	11/20/2014 4:39:15 PM	16481
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
4-Chloroaniline	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
2-Chloronaphthalene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
2-Chlorophenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Chrysene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Di-n-butyl phthalate	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Di-n-octyl phthalate	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Dibenzofuran	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
1,2-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
1,3-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481

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Qualifiers:

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S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-39
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 11:15:00 AM
Lab ID: 1411731-004
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,4-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Diethyl phthalate	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Dimethyl phthalate	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
2,4-Dichlorophenol	ND	20		µg/L	1	11/20/2014 4:39:15 PM	16481
2,4-Dimethylphenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/20/2014 4:39:15 PM	16481
2,4-Dinitrophenol	ND	20		µg/L	1	11/20/2014 4:39:15 PM	16481
2,4-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
2,6-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Fluoranthene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Fluorene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Hexachlorobenzene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Hexachlorobutadiene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Hexachloroethane	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Isophorone	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
1-Methylnaphthalene	79	10		µg/L	1	11/20/2014 4:39:15 PM	16481
2-Methylnaphthalene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
2-Methylphenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
3+4-Methylphenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
N-Nitrosodimethylamine	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Naphthalene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
2-Nitroaniline	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
3-Nitroaniline	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
4-Nitroaniline	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Nitrobenzene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
2-Nitrophenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
4-Nitrophenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Pentachlorophenol	ND	20		µg/L	1	11/20/2014 4:39:15 PM	16481
Phenanthrene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Phenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Pyrene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Pyridine	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-39
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 11:15:00 AM
Lab ID: 1411731-004
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Surr: 2-Fluorophenol	69.4	17.6-104		%REC	1	11/20/2014 4:39:15 PM	16481
Surr: Phenol-d5	57.4	17.7-89.9		%REC	1	11/20/2014 4:39:15 PM	16481
Surr: 2,4,6-Tribromophenol	83.7	16.3-122		%REC	1	11/20/2014 4:39:15 PM	16481
Surr: Nitrobenzene-d5	83.3	45.3-117		%REC	1	11/20/2014 4:39:15 PM	16481
Surr: 2-Fluorobiphenyl	75.4	43-113		%REC	1	11/20/2014 4:39:15 PM	16481
Surr: 4-Terphenyl-d14	71.9	47.6-122		%REC	1	11/20/2014 4:39:15 PM	16481
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	20	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Toluene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Ethylbenzene	60	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Methyl tert-butyl ether (MTBE)	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,2,4-Trimethylbenzene	43	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,3,5-Trimethylbenzene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Naphthalene	120	10		µg/L	5	11/22/2014 8:54:27 AM	R22714
1-Methylnaphthalene	170	20		µg/L	5	11/22/2014 8:54:27 AM	R22714
2-Methylnaphthalene	130	20		µg/L	5	11/22/2014 8:54:27 AM	R22714
Acetone	ND	50		µg/L	5	11/22/2014 8:54:27 AM	R22714
Bromobenzene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Bromodichloromethane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Bromoform	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Bromomethane	ND	15		µg/L	5	11/22/2014 8:54:27 AM	R22714
2-Butanone	ND	50		µg/L	5	11/22/2014 8:54:27 AM	R22714
Carbon disulfide	ND	50		µg/L	5	11/22/2014 8:54:27 AM	R22714
Carbon Tetrachloride	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Chlorobenzene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Chloroethane	ND	10		µg/L	5	11/22/2014 8:54:27 AM	R22714
Chloroform	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Chloromethane	ND	15		µg/L	5	11/22/2014 8:54:27 AM	R22714
2-Chlorotoluene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
4-Chlorotoluene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
cis-1,2-DCE	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
cis-1,3-Dichloropropene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,2-Dibromo-3-chloropropane	ND	10		µg/L	5	11/22/2014 8:54:27 AM	R22714
Dibromochloromethane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Dibromomethane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,2-Dichlorobenzene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-39
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 11:15:00 AM
Lab ID: 1411731-004
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,3-Dichlorobenzene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,4-Dichlorobenzene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Dichlorodifluoromethane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,1-Dichloroethane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,1-Dichloroethene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,2-Dichloropropane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,3-Dichloropropane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
2,2-Dichloropropane	ND	10		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,1-Dichloropropene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Hexachlorobutadiene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
2-Hexanone	ND	50		µg/L	5	11/22/2014 8:54:27 AM	R22714
Isopropylbenzene	15	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
4-Isopropyltoluene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
4-Methyl-2-pentanone	ND	50		µg/L	5	11/22/2014 8:54:27 AM	R22714
Methylene Chloride	ND	15		µg/L	5	11/22/2014 8:54:27 AM	R22714
n-Butylbenzene	ND	15		µg/L	5	11/22/2014 8:54:27 AM	R22714
n-Propylbenzene	19	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
sec-Butylbenzene	5.5	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Styrene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
tert-Butylbenzene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,1,2,2-Tetrachloroethane	ND	10		µg/L	5	11/22/2014 8:54:27 AM	R22714
Tetrachloroethene (PCE)	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
trans-1,2-DCE	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
trans-1,3-Dichloropropene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,2,3-Trichlorobenzene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,2,4-Trichlorobenzene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,1,1-Trichloroethane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,1,2-Trichloroethane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Trichloroethene (TCE)	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Trichlorofluoromethane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,2,3-Trichloropropane	ND	10		µg/L	5	11/22/2014 8:54:27 AM	R22714
Vinyl chloride	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Xylenes, Total	ND	7.5		µg/L	5	11/22/2014 8:54:27 AM	R22714
Surr: 1,2-Dichloroethane-d4	97.3	70-130		%REC	5	11/22/2014 8:54:27 AM	R22714
Surr: 4-Bromofluorobenzene	89.3	70-130		%REC	5	11/22/2014 8:54:27 AM	R22714
Surr: Dibromofluoromethane	99.0	70-130		%REC	5	11/22/2014 8:54:27 AM	R22714
Surr: Toluene-d8	106	70-130		%REC	5	11/22/2014 8:54:27 AM	R22714

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Duplicate 01
Project: Hydrocarbon Seep
Collection Date: 11/18/2014
Lab ID: 1411731-005
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	50	1.0		mg/L	1	11/19/2014 8:35:04 PM	16462
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/19/2014 8:35:04 PM	16462
Surr: DNOP	105	59-141		%REC	1	11/19/2014 8:35:04 PM	16462
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.50		mg/L	10	11/21/2014 3:45:06 PM	R22716
Surr: BFB	89.5	80-120		%REC	10	11/21/2014 3:45:06 PM	R22716
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Acenaphthylene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Aniline	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Anthracene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Azobenzene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Benz(a)anthracene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Benzo(a)pyrene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Benzo(b)fluoranthene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Benzo(k)fluoranthene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Benzoic acid	ND	20		µg/L	1	11/20/2014 6:02:10 PM	16481
Benzyl alcohol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Bis(2-ethylhexyl)phthalate	11	10	B	µg/L	1	11/20/2014 6:02:10 PM	16481
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Butyl benzyl phthalate	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Carbazole	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
4-Chloroaniline	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
2-Chloronaphthalene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
2-Chlorophenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Chrysene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Di-n-butyl phthalate	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Di-n-octyl phthalate	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Dibenzofuran	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
1,2-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
1,3-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Duplicate 01
Project: Hydrocarbon Seep
Collection Date: 11/18/2014
Lab ID: 1411731-005
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,4-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Diethyl phthalate	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Dimethyl phthalate	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
2,4-Dichlorophenol	ND	20		µg/L	1	11/20/2014 6:02:10 PM	16481
2,4-Dimethylphenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/20/2014 6:02:10 PM	16481
2,4-Dinitrophenol	ND	20		µg/L	1	11/20/2014 6:02:10 PM	16481
2,4-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
2,6-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Fluoranthene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Fluorene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Hexachlorobenzene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Hexachlorobutadiene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Hexachloroethane	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Isophorone	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
1-Methylnaphthalene	83	10		µg/L	1	11/20/2014 6:02:10 PM	16481
2-Methylnaphthalene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
2-Methylphenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
3+4-Methylphenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
N-Nitrosodimethylamine	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Naphthalene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
2-Nitroaniline	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
3-Nitroaniline	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
4-Nitroaniline	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Nitrobenzene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
2-Nitrophenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
4-Nitrophenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Pentachlorophenol	ND	20		µg/L	1	11/20/2014 6:02:10 PM	16481
Phenanthrene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Phenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Pyrene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Pyridine	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481

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Hall Environmental Analysis Laboratory, Inc.

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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Surr: 2-Fluorophenol	45.6	17.6-104		%REC	1	11/20/2014 6:02:10 PM	16481
Surr: Phenol-d5	41.5	17.7-89.9		%REC	1	11/20/2014 6:02:10 PM	16481
Surr: 2,4,6-Tribromophenol	2.22	16.3-122	S	%REC	1	11/20/2014 6:02:10 PM	16481
Surr: Nitrobenzene-d5	55.0	45.3-117		%REC	1	11/20/2014 6:02:10 PM	16481
Surr: 2-Fluorobiphenyl	48.4	43-113		%REC	1	11/20/2014 6:02:10 PM	16481
Surr: 4-Terphenyl-d14	62.4	47.6-122		%REC	1	11/20/2014 6:02:10 PM	16481
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	11	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Toluene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Ethylbenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,2,4-Trimethylbenzene	27	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,3,5-Trimethylbenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Naphthalene	36	20		µg/L	10	11/22/2014 9:21:14 AM	R22714
1-Methylnaphthalene	80	40		µg/L	10	11/22/2014 9:21:14 AM	R22714
2-Methylnaphthalene	63	40		µg/L	10	11/22/2014 9:21:14 AM	R22714
Acetone	ND	100		µg/L	10	11/22/2014 9:21:14 AM	R22714
Bromobenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Bromodichloromethane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Bromoform	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Bromomethane	ND	30		µg/L	10	11/22/2014 9:21:14 AM	R22714
2-Butanone	ND	100		µg/L	10	11/22/2014 9:21:14 AM	R22714
Carbon disulfide	ND	100		µg/L	10	11/22/2014 9:21:14 AM	R22714
Carbon Tetrachloride	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Chlorobenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Chloroethane	ND	20		µg/L	10	11/22/2014 9:21:14 AM	R22714
Chloroform	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Chloromethane	ND	30		µg/L	10	11/22/2014 9:21:14 AM	R22714
2-Chlorotoluene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
4-Chlorotoluene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
cis-1,2-DCE	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/22/2014 9:21:14 AM	R22714
Dibromochloromethane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Dibromomethane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,2-Dichlorobenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Duplicate 01
Project: Hydrocarbon Seep
Collection Date: 11/18/2014
Lab ID: 1411731-005
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,3-Dichlorobenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,4-Dichlorobenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Dichlorodifluoromethane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,1-Dichloroethane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,1-Dichloroethene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,2-Dichloropropane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,3-Dichloropropane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
2,2-Dichloropropane	ND	20		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,1-Dichloropropene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Hexachlorobutadiene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
2-Hexanone	ND	100		µg/L	10	11/22/2014 9:21:14 AM	R22714
Isopropylbenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
4-Isopropyltoluene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
4-Methyl-2-pentanone	ND	100		µg/L	10	11/22/2014 9:21:14 AM	R22714
Methylene Chloride	ND	30		µg/L	10	11/22/2014 9:21:14 AM	R22714
n-Butylbenzene	ND	30		µg/L	10	11/22/2014 9:21:14 AM	R22714
n-Propylbenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
sec-Butylbenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Styrene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
tert-Butylbenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	11/22/2014 9:21:14 AM	R22714
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
trans-1,2-DCE	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,1,1-Trichloroethane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,1,2-Trichloroethane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Trichloroethene (TCE)	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Trichlorofluoromethane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,2,3-Trichloropropane	ND	20		µg/L	10	11/22/2014 9:21:14 AM	R22714
Vinyl chloride	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Xylenes, Total	54	15		µg/L	10	11/22/2014 9:21:14 AM	R22714
Surr: 1,2-Dichloroethane-d4	94.2	70-130		%REC	10	11/22/2014 9:21:14 AM	R22714
Surr: 4-Bromofluorobenzene	95.3	70-130		%REC	10	11/22/2014 9:21:14 AM	R22714
Surr: Dibromofluoromethane	91.9	70-130		%REC	10	11/22/2014 9:21:14 AM	R22714
Surr: Toluene-d8	99.7	70-130		%REC	10	11/22/2014 9:21:14 AM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411731**
25-Nov-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **LCS-16462** SampType: **LCS** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSW** Batch ID: **16462** RunNo: **22625**
Prep Date: **11/19/2014** Analysis Date: **11/19/2014** SeqNo: **667726** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.7	1.0	5.000	0	114	69.7	142			
Surr: DNOP	0.61		0.5000		123	59	141			

Sample ID **MB-16462** SampType: **MBLK** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **PBW** Batch ID: **16462** RunNo: **22625**
Prep Date: **11/19/2014** Analysis Date: **11/19/2014** SeqNo: **668220** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.0		1.000		105	59	141			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411731**
25-Nov-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW** Batch ID: **R22638** RunNo: **22638**
Prep Date: Analysis Date: **11/19/2014** SeqNo: **668015** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	17		20.00		84.5	80	120			

Sample ID **2.5UG GRO LCS** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW** Batch ID: **R22638** RunNo: **22638**
Prep Date: Analysis Date: **11/19/2014** SeqNo: **668016** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	92.6	80	120			
Surr: BFB	18		20.00		91.0	80	120			

Sample ID **1411731-002BMS** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-42** Batch ID: **R22638** RunNo: **22638**
Prep Date: Analysis Date: **11/19/2014** SeqNo: **668024** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	2.5	25.00	0	94.6	70.4	127			
Surr: BFB	920		1000		92.2	80	120			

Sample ID **1411731-002BMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-42** Batch ID: **R22638** RunNo: **22638**
Prep Date: Analysis Date: **11/19/2014** SeqNo: **668025** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	2.5	25.00	0	93.6	70.4	127	1.02	20	
Surr: BFB	930		1000		92.6	80	120	0	0	

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW** Batch ID: **R22716** RunNo: **22716**
Prep Date: Analysis Date: **11/21/2014** SeqNo: **670112** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		92.8	80	120			

Sample ID **2.5UG GRO LCS** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW** Batch ID: **R22716** RunNo: **22716**
Prep Date: Analysis Date: **11/21/2014** SeqNo: **670113** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411731**
25-Nov-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID	**2.5UG GRO LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**
Client ID:	**LCSW**	Batch ID:	**R22716**	RunNo:	**22716**
Prep Date:		Analysis Date:	**11/21/2014**	SeqNo:	**670113** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.45	0.050	0.5000	0	89.6	80	120			
Surr: BFB	19		20.00		94.0	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411731**
25-Nov-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **5mL rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R22714**	RunNo: **22714**			
Prep Date:	Analysis Date: **11/21/2014**	SeqNo: **669903**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411731**
25-Nov-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **5mL rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22714** RunNo: **22714**
Prep Date: Analysis Date: **11/21/2014** SeqNo: **669903** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.7		10.00		96.5	70	130			
Surr: 4-Bromofluorobenzene	14		10.00		136	70	130			S
Surr: Dibromofluoromethane	9.4		10.00		94.4	70	130			
Surr: Toluene-d8	11		10.00		108	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22714** RunNo: **22714**
Prep Date: Analysis Date: **11/21/2014** SeqNo: **669905** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	70	130			
Toluene	20	1.0	20.00	0	101	80	120			
Chlorobenzene	19	1.0	20.00	0	96.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411731**
25-Nov-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **LCSW**	Batch ID: **R22714**	RunNo: **22714**			
Prep Date:	Analysis Date: **11/21/2014**	SeqNo: **669905**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	18	1.0	20.00	0	92.4	82.6	131			
Trichloroethene (TCE)	17	1.0	20.00	0	86.5	70	130			
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.5	70	130			
Surr: 4-Bromofluorobenzene	14		10.00		136	70	130			S
Surr: Dibromofluoromethane	9.3		10.00		93.3	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411731**
25-Nov-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **mb-16481**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **16481**	RunNo: **22682**			
Prep Date: **11/19/2014**	Analysis Date: **11/20/2014**	SeqNo: **668827**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	10	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411731**
25-Nov-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **mb-16481**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **16481**	RunNo: **22682**			
Prep Date: **11/19/2014**	Analysis Date: **11/20/2014**	SeqNo: **668827**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	150		200.0		72.8	17.6	104			
Surr: Phenol-d5	140		200.0		70.0	17.7	89.9			
Surr: 2,4,6-Tribromophenol	160		200.0		81.6	16.3	122			
Surr: Nitrobenzene-d5	70		100.0		69.6	45.3	117			
Surr: 2-Fluorobiphenyl	74		100.0		74.0	43	113			
Surr: 4-Terphenyl-d14	99		100.0		99.0	47.6	122			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411731**
25-Nov-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **lcs-16481** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **16481** RunNo: **22682**
Prep Date: **11/19/2014** Analysis Date: **11/20/2014** SeqNo: **668828** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	80	10	100.0	0	79.8	47.9	114			
4-Chloro-3-methylphenol	180	10	200.0	0	88.4	51.7	122			
2-Chlorophenol	150	10	200.0	0	73.0	40.7	113			
1,4-Dichlorobenzene	70	10	100.0	0	69.9	39.6	99.9			
2,4-Dinitrotoluene	70	10	100.0	0	70.1	40.8	113			
N-Nitrosodi-n-propylamine	79	10	100.0	0	79.0	51.2	111			
4-Nitrophenol	170	10	200.0	0	85.4	15.7	86.9			
Pentachlorophenol	120	20	200.0	0	60.0	21.6	104			
Phenol	160	10	200.0	0	80.1	28.6	71.7			S
Pyrene	76	10	100.0	0	75.8	54.2	128			
1,2,4-Trichlorobenzene	72	10	100.0	0	72.1	40.9	101			
Surr: 2-Fluorophenol	130		200.0		63.8	17.6	104			
Surr: Phenol-d5	130		200.0		66.5	17.7	89.9			
Surr: 2,4,6-Tribromophenol	160		200.0		82.5	16.3	122			
Surr: Nitrobenzene-d5	67		100.0		66.8	45.3	117			
Surr: 2-Fluorobiphenyl	72		100.0		72.0	43	113			
Surr: 4-Terphenyl-d14	81		100.0		81.0	47.6	122			

Sample ID **lcsd-16481** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **16481** RunNo: **22682**
Prep Date: **11/19/2014** Analysis Date: **11/20/2014** SeqNo: **668829** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	83	10	100.0	0	82.9	47.9	114	3.83	27.2	
4-Chloro-3-methylphenol	160	10	200.0	0	82.2	51.7	122	7.36	25.9	
2-Chlorophenol	140	10	200.0	0	71.6	40.7	113	1.87	22.5	
1,4-Dichlorobenzene	69	10	100.0	0	69.3	39.6	99.9	0.948	24.6	
2,4-Dinitrotoluene	71	10	100.0	0	70.8	40.8	113	0.966	25.3	
N-Nitrosodi-n-propylamine	77	10	100.0	0	77.0	51.2	111	2.61	23.6	
4-Nitrophenol	180	10	200.0	0	88.7	15.7	86.9	3.77	34.7	S
Pentachlorophenol	130	20	200.0	0	63.1	21.6	104	4.97	32.8	
Phenol	160	10	200.0	0	78.3	28.6	71.7	2.37	25.5	S
Pyrene	81	10	100.0	0	81.1	54.2	128	6.83	31.4	
1,2,4-Trichlorobenzene	70	10	100.0	0	70.0	40.9	101	2.96	25.9	
Surr: 2-Fluorophenol	120		200.0		62.4	17.6	104	0	0	
Surr: Phenol-d5	130		200.0		64.7	17.7	89.9	0	0	
Surr: 2,4,6-Tribromophenol	170		200.0		85.0	16.3	122	0	0	
Surr: Nitrobenzene-d5	66		100.0		66.0	45.3	117	0	0	
Surr: 2-Fluorobiphenyl	74		100.0		74.2	43	113	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411731**
25-Nov-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID	**lcsd-16481**	SampType:	**LCSD**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**LCSS02**	Batch ID:	**16481**	RunNo:	**22682**
Prep Date:	**11/19/2014**	Analysis Date:	**11/20/2014**	SeqNo:	**668829** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	89		100.0		89.4	47.6	122	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Western Refining Gallup** Work Order Number: **1411731** RcptNo: **1**

Received by/date: 11/18/14

Logged By: **Ashley Gallegos** **11/18/2014 4:15:00 PM**

Completed By: **Ashley Gallegos** **11/18/2014 5:10:29 PM**

Reviewed By: CS 11/19/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: WESTERN REFINING SW, INC.

Mailing Address: GALLUP REFINERY
92 GIANT CROSSING ROAD GALLUP NM 87301

Phone #: 505.722.3833

email or Fax#: 505.863.0930

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: HYDROCARBON SEEP

Project #: HYDROCARBON SEEP

Project Manager: C. JOHNSON CHERYL.JOHNSON@WNR.COM

Sampler: TRACY PAYNE

On Ice: ☒ Yes ☐ No

Sample Temperature: 0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1411131	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)				Air Bubbles (Y or N)
11/18/14	0820	GW	MKTF-43	7	HCL/NEAT	-001			✓							✓	✓				
	0900	GW	MKTF-42	7		-002			✓							✓	✓				
	0945	GW	MKTF-41	7		-003			✓							✓	✓				
	1115	GW	MKTF-39	7		-004			✓							✓	✓				
	—	GW	DUPLICATE 01	7		-005			✓							✓	✓				

Date	Time	Relinquished by:	Received by:	Date	Time
11.18.14	1220			11-18-14	2:00
11-18-14	1615			11/18/14	1615

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 04, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: Hydrocarbon Seep OrderNo.: 1411984

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 7 sample(s) on 11/22/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-44
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 8:30:00 AM
Lab ID: 1411984-001
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**JME**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/25/2014 3:55:34 PM	16539
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/25/2014 3:55:34 PM	16539
Surr: DNOP	110	59-141		%REC	1	11/25/2014 3:55:34 PM	16539
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/26/2014 3:25:31 PM	R22836
Surr: BFB	89.8	80-120		%REC	1	11/26/2014 3:25:31 PM	R22836
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
Acenaphthene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Acenaphthylene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Aniline	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Anthracene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Azobenzene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Benz(a)anthracene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Benzo(a)pyrene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Benzo(b)fluoranthene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Benzo(g,h,i)perylene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Benzo(k)fluoranthene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Benzoic acid	ND	20		µg/L	1	12/2/2014 4:38:40 PM	16584
Benzyl alcohol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Bis(2-chloroethyl)ether	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
4-Bromophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Butyl benzyl phthalate	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Carbazole	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
4-Chloro-3-methylphenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
4-Chloroaniline	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
2-Chloronaphthalene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
2-Chlorophenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Chrysene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Di-n-butyl phthalate	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Di-n-octyl phthalate	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Dibenz(a,h)anthracene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Dibenzofuran	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
1,2-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
1,3-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-44
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 8:30:00 AM
Lab ID: 1411984-001
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
1,4-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
3,3´-Dichlorobenzidine	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Diethyl phthalate	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Dimethyl phthalate	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
2,4-Dichlorophenol	ND	20		µg/L	1	12/2/2014 4:38:40 PM	16584
2,4-Dimethylphenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	12/2/2014 4:38:40 PM	16584
2,4-Dinitrophenol	ND	20		µg/L	1	12/2/2014 4:38:40 PM	16584
2,4-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
2,6-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Fluoranthene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Fluorene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Hexachlorobenzene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Hexachlorobutadiene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Hexachlorocyclopentadiene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Hexachloroethane	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Isophorone	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
1-Methylnaphthalene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
2-Methylnaphthalene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
2-Methylphenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
3+4-Methylphenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
N-Nitrosodimethylamine	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
N-Nitrosodiphenylamine	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Naphthalene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
2-Nitroaniline	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
3-Nitroaniline	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
4-Nitroaniline	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Nitrobenzene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
2-Nitrophenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
4-Nitrophenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Pentachlorophenol	ND	20		µg/L	1	12/2/2014 4:38:40 PM	16584
Phenanthrene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Phenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Pyrene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Pyridine	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
1,2,4-Trichlorobenzene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
2,4,5-Trichlorophenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-44
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 8:30:00 AM
Lab ID: 1411984-001
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
2,4,6-Trichlorophenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Surr: 2-Fluorophenol	75.3	17.6-104		%REC	1	12/2/2014 4:38:40 PM	16584
Surr: Phenol-d5	64.5	17.7-89.9		%REC	1	12/2/2014 4:38:40 PM	16584
Surr: 2,4,6-Tribromophenol	91.5	16.3-122		%REC	1	12/2/2014 4:38:40 PM	16584
Surr: Nitrobenzene-d5	84.9	45.3-117		%REC	1	12/2/2014 4:38:40 PM	16584
Surr: 2-Fluorobiphenyl	95.8	43-113		%REC	1	12/2/2014 4:38:40 PM	16584
Surr: 4-Terphenyl-d14	94.3	47.6-122		%REC	1	12/2/2014 4:38:40 PM	16584
EPA METHOD 8260B: VOLATILES						Analyst:	**DJF**
Benzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Toluene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Ethylbenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Methyl tert-butyl ether (MTBE)	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,2,4-Trimethylbenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,3,5-Trimethylbenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,2-Dichloroethane (EDC)	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,2-Dibromoethane (EDB)	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Naphthalene	ND	4.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1-Methylnaphthalene	ND	8.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
2-Methylnaphthalene	ND	8.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Acetone	ND	20		µg/L	2	11/25/2014 3:56:09 PM	R22805
Bromobenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Bromodichloromethane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Bromoform	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Bromomethane	ND	6.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
2-Butanone	ND	20		µg/L	2	11/25/2014 3:56:09 PM	R22805
Carbon disulfide	ND	20		µg/L	2	11/25/2014 3:56:09 PM	R22805
Carbon Tetrachloride	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Chlorobenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Chloroethane	ND	4.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Chloroform	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Chloromethane	ND	6.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
2-Chlorotoluene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
4-Chlorotoluene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
cis-1,2-DCE	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
cis-1,3-Dichloropropene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,2-Dibromo-3-chloropropane	ND	4.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Dibromochloromethane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Dibromomethane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,2-Dichlorobenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-44
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 8:30:00 AM
Lab ID: 1411984-001
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,3-Dichlorobenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,4-Dichlorobenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Dichlorodifluoromethane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,1-Dichloroethane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,1-Dichloroethene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,2-Dichloropropane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,3-Dichloropropane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
2,2-Dichloropropane	ND	4.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,1-Dichloropropene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Hexachlorobutadiene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
2-Hexanone	ND	20		µg/L	2	11/25/2014 3:56:09 PM	R22805
Isopropylbenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
4-Isopropyltoluene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
4-Methyl-2-pentanone	ND	20		µg/L	2	11/25/2014 3:56:09 PM	R22805
Methylene Chloride	ND	6.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
n-Butylbenzene	ND	6.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
n-Propylbenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
sec-Butylbenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Styrene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
tert-Butylbenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,1,2,2-Tetrachloroethane	ND	4.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Tetrachloroethene (PCE)	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
trans-1,2-DCE	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
trans-1,3-Dichloropropene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,2,3-Trichlorobenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,2,4-Trichlorobenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,1,1-Trichloroethane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,1,2-Trichloroethane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Trichloroethene (TCE)	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Trichlorofluoromethane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,2,3-Trichloropropane	ND	4.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Vinyl chloride	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Xylenes, Total	ND	3.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Surr: 1,2-Dichloroethane-d4	86.5	70-130		%REC	2	11/25/2014 3:56:09 PM	R22805
Surr: 4-Bromofluorobenzene	91.3	70-130		%REC	2	11/25/2014 3:56:09 PM	R22805
Surr: Dibromofluoromethane	95.8	70-130		%REC	2	11/25/2014 3:56:09 PM	R22805
Surr: Toluene-d8	89.7	70-130		%REC	2	11/25/2014 3:56:09 PM	R22805

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-40
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 9:30:00 AM
Lab ID: 1411984-002
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**JME**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/25/2014 4:25:45 PM	16539
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/25/2014 4:25:45 PM	16539
Surr: DNOP	110	59-141		%REC	1	11/25/2014 4:25:45 PM	16539
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/26/2014 3:52:49 PM	R22836
Surr: BFB	96.7	80-120		%REC	1	11/26/2014 3:52:49 PM	R22836
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
Acenaphthene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Acenaphthylene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Aniline	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Anthracene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Azobenzene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Benz(a)anthracene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Benzo(a)pyrene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Benzo(b)fluoranthene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Benzo(g,h,i)perylene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Benzo(k)fluoranthene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Benzoic acid	ND	20		µg/L	1	12/2/2014 5:06:02 PM	16584
Benzyl alcohol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Bis(2-chloroethyl)ether	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
4-Bromophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Butyl benzyl phthalate	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Carbazole	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
4-Chloro-3-methylphenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
4-Chloroaniline	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
2-Chloronaphthalene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
2-Chlorophenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Chrysene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Di-n-butyl phthalate	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Di-n-octyl phthalate	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Dibenz(a,h)anthracene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Dibenzofuran	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
1,2-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
1,3-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-40
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 9:30:00 AM
Lab ID: 1411984-002
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
1,4-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
3,3´-Dichlorobenzidine	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Diethyl phthalate	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Dimethyl phthalate	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
2,4-Dichlorophenol	ND	20		µg/L	1	12/2/2014 5:06:02 PM	16584
2,4-Dimethylphenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	12/2/2014 5:06:02 PM	16584
2,4-Dinitrophenol	ND	20		µg/L	1	12/2/2014 5:06:02 PM	16584
2,4-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
2,6-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Fluoranthene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Fluorene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Hexachlorobenzene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Hexachlorobutadiene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Hexachlorocyclopentadiene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Hexachloroethane	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Isophorone	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
1-Methylnaphthalene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
2-Methylnaphthalene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
2-Methylphenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
3+4-Methylphenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
N-Nitrosodimethylamine	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
N-Nitrosodiphenylamine	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Naphthalene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
2-Nitroaniline	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
3-Nitroaniline	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
4-Nitroaniline	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Nitrobenzene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
2-Nitrophenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
4-Nitrophenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Pentachlorophenol	ND	20		µg/L	1	12/2/2014 5:06:02 PM	16584
Phenanthrene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Phenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Pyrene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Pyridine	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
1,2,4-Trichlorobenzene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
2,4,5-Trichlorophenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-40
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 9:30:00 AM
Lab ID: 1411984-002
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
2,4,6-Trichlorophenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Surr: 2-Fluorophenol	75.4	17.6-104		%REC	1	12/2/2014 5:06:02 PM	16584
Surr: Phenol-d5	65.5	17.7-89.9		%REC	1	12/2/2014 5:06:02 PM	16584
Surr: 2,4,6-Tribromophenol	79.3	16.3-122		%REC	1	12/2/2014 5:06:02 PM	16584
Surr: Nitrobenzene-d5	86.2	45.3-117		%REC	1	12/2/2014 5:06:02 PM	16584
Surr: 2-Fluorobiphenyl	90.6	43-113		%REC	1	12/2/2014 5:06:02 PM	16584
Surr: 4-Terphenyl-d14	97.1	47.6-122		%REC	1	12/2/2014 5:06:02 PM	16584
EPA METHOD 8260B: VOLATILES						Analyst:	**DJF**
Benzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Toluene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Ethylbenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Naphthalene	ND	2.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1-Methylnaphthalene	ND	4.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
2-Methylnaphthalene	ND	4.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Acetone	ND	10		µg/L	1	11/25/2014 4:23:31 PM	R22805
Bromobenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Bromodichloromethane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Bromoform	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Bromomethane	ND	3.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
2-Butanone	ND	10		µg/L	1	11/25/2014 4:23:31 PM	R22805
Carbon disulfide	ND	10		µg/L	1	11/25/2014 4:23:31 PM	R22805
Carbon Tetrachloride	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Chlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Chloroethane	ND	2.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Chloroform	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Chloromethane	ND	3.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
2-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
4-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
cis-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Dibromochloromethane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Dibromomethane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-40
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 9:30:00 AM
Lab ID: 1411984-002
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,1-Dichloroethane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,1-Dichloroethene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,2-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,3-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
2,2-Dichloropropane	ND	2.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,1-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Hexachlorobutadiene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
2-Hexanone	ND	10		µg/L	1	11/25/2014 4:23:31 PM	R22805
Isopropylbenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
4-Isopropyltoluene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
4-Methyl-2-pentanone	ND	10		µg/L	1	11/25/2014 4:23:31 PM	R22805
Methylene Chloride	ND	3.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
n-Butylbenzene	ND	3.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
n-Propylbenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
sec-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Styrene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
tert-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
trans-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Trichlorofluoromethane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Vinyl chloride	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Xylenes, Total	ND	1.5		µg/L	1	11/25/2014 4:23:31 PM	R22805
Surr: 1,2-Dichloroethane-d4	87.3	70-130		%REC	1	11/25/2014 4:23:31 PM	R22805
Surr: 4-Bromofluorobenzene	88.4	70-130		%REC	1	11/25/2014 4:23:31 PM	R22805
Surr: Dibromofluoromethane	99.3	70-130		%REC	1	11/25/2014 4:23:31 PM	R22805
Surr: Toluene-d8	91.3	70-130		%REC	1	11/25/2014 4:23:31 PM	R22805

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-38
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 10:40:00 AM
Lab ID: 1411984-003
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**JME**
Diesel Range Organics (DRO)	3.8	1.0		mg/L	1	11/25/2014 4:56:24 PM	16539
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/25/2014 4:56:24 PM	16539
Surr: DNOP	109	59-141		%REC	1	11/25/2014 4:56:24 PM	16539
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	0.12	0.050		mg/L	1	11/26/2014 4:20:16 PM	R22836
Surr: BFB	91.1	80-120		%REC	1	11/26/2014 4:20:16 PM	R22836
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
Acenaphthene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Acenaphthylene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Aniline	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Anthracene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Azobenzene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Benz(a)anthracene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Benzo(a)pyrene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Benzo(b)fluoranthene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Benzo(g,h,i)perylene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Benzo(k)fluoranthene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Benzoic acid	ND	20		µg/L	1	12/2/2014 5:33:35 PM	16584
Benzyl alcohol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Bis(2-chloroethyl)ether	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
4-Bromophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Butyl benzyl phthalate	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Carbazole	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
4-Chloro-3-methylphenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
4-Chloroaniline	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
2-Chloronaphthalene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
2-Chlorophenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Chrysene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Di-n-butyl phthalate	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Di-n-octyl phthalate	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Dibenz(a,h)anthracene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Dibenzofuran	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
1,2-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
1,3-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-38
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 10:40:00 AM
Lab ID: 1411984-003
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
1,4-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
3,3´-Dichlorobenzidine	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Diethyl phthalate	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Dimethyl phthalate	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
2,4-Dichlorophenol	ND	20		µg/L	1	12/2/2014 5:33:35 PM	16584
2,4-Dimethylphenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	12/2/2014 5:33:35 PM	16584
2,4-Dinitrophenol	ND	20		µg/L	1	12/2/2014 5:33:35 PM	16584
2,4-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
2,6-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Fluoranthene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Fluorene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Hexachlorobenzene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Hexachlorobutadiene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Hexachlorocyclopentadiene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Hexachloroethane	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Isophorone	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
1-Methylnaphthalene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
2-Methylnaphthalene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
2-Methylphenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
3+4-Methylphenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
N-Nitrosodimethylamine	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
N-Nitrosodiphenylamine	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Naphthalene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
2-Nitroaniline	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
3-Nitroaniline	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
4-Nitroaniline	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Nitrobenzene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
2-Nitrophenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
4-Nitrophenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Pentachlorophenol	ND	20		µg/L	1	12/2/2014 5:33:35 PM	16584
Phenanthrene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Phenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Pyrene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Pyridine	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
1,2,4-Trichlorobenzene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
2,4,5-Trichlorophenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-38
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 10:40:00 AM
Lab ID: 1411984-003
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
2,4,6-Trichlorophenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Surr: 2-Fluorophenol	79.5	17.6-104		%REC	1	12/2/2014 5:33:35 PM	16584
Surr: Phenol-d5	63.8	17.7-89.9		%REC	1	12/2/2014 5:33:35 PM	16584
Surr: 2,4,6-Tribromophenol	95.2	16.3-122		%REC	1	12/2/2014 5:33:35 PM	16584
Surr: Nitrobenzene-d5	83.4	45.3-117		%REC	1	12/2/2014 5:33:35 PM	16584
Surr: 2-Fluorobiphenyl	89.8	43-113		%REC	1	12/2/2014 5:33:35 PM	16584
Surr: 4-Terphenyl-d14	98.4	47.6-122		%REC	1	12/2/2014 5:33:35 PM	16584
EPA METHOD 8260B: VOLATILES						Analyst:	**DJF**
Benzene	2.8	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Toluene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Ethylbenzene	2.9	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Methyl tert-butyl ether (MTBE)	7.4	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,2,4-Trimethylbenzene	4.6	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,3,5-Trimethylbenzene	1.5	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Naphthalene	5.5	2.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1-Methylnaphthalene	8.8	4.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
2-Methylnaphthalene	9.8	4.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Acetone	ND	10		µg/L	1	11/25/2014 4:51:02 PM	R22805
Bromobenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Bromodichloromethane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Bromoform	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Bromomethane	ND	3.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
2-Butanone	ND	10		µg/L	1	11/25/2014 4:51:02 PM	R22805
Carbon disulfide	ND	10		µg/L	1	11/25/2014 4:51:02 PM	R22805
Carbon Tetrachloride	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Chlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Chloroethane	ND	2.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Chloroform	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Chloromethane	ND	3.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
2-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
4-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
cis-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Dibromochloromethane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Dibromomethane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-38
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 10:40:00 AM
Lab ID: 1411984-003
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,1-Dichloroethane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,1-Dichloroethene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,2-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,3-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
2,2-Dichloropropane	ND	2.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,1-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Hexachlorobutadiene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
2-Hexanone	ND	10		µg/L	1	11/25/2014 4:51:02 PM	R22805
Isopropylbenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
4-Isopropyltoluene	1.4	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
4-Methyl-2-pentanone	ND	10		µg/L	1	11/25/2014 4:51:02 PM	R22805
Methylene Chloride	ND	3.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
n-Butylbenzene	ND	3.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
n-Propylbenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
sec-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Styrene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
tert-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
trans-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Trichloroethene (TCE)	1.1	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Trichlorofluoromethane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Vinyl chloride	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Xylenes, Total	3.1	1.5		µg/L	1	11/25/2014 4:51:02 PM	R22805
Surr: 1,2-Dichloroethane-d4	78.5	70-130		%REC	1	11/25/2014 4:51:02 PM	R22805
Surr: 4-Bromofluorobenzene	87.7	70-130		%REC	1	11/25/2014 4:51:02 PM	R22805
Surr: Dibromofluoromethane	89.5	70-130		%REC	1	11/25/2014 4:51:02 PM	R22805
Surr: Toluene-d8	91.0	70-130		%REC	1	11/25/2014 4:51:02 PM	R22805

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-37
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 11:55:00 AM
Lab ID: 1411984-004
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**JME**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/25/2014 5:26:53 PM	16539
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/25/2014 5:26:53 PM	16539
Surr: DNOP	103	59-141		%REC	1	11/25/2014 5:26:53 PM	16539
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	8.7	0.50		mg/L	10	11/26/2014 5:14:34 PM	R22836
Surr: BFB	131	80-120	S	%REC	10	11/26/2014 5:14:34 PM	R22836
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
Acenaphthene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Acenaphthylene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Aniline	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Anthracene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Azobenzene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Benz(a)anthracene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Benzo(a)pyrene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Benzo(b)fluoranthene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Benzo(g,h,i)perylene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Benzo(k)fluoranthene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Benzoic acid	ND	20		µg/L	1	12/2/2014 6:01:08 PM	16584
Benzyl alcohol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Bis(2-chloroethyl)ether	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
4-Bromophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Butyl benzyl phthalate	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Carbazole	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
4-Chloro-3-methylphenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
4-Chloroaniline	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
2-Chloronaphthalene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
2-Chlorophenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Chrysene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Di-n-butyl phthalate	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Di-n-octyl phthalate	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Dibenz(a,h)anthracene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Dibenzofuran	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
1,2-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
1,3-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-37
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 11:55:00 AM
Lab ID: 1411984-004
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
1,4-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
3,3´-Dichlorobenzidine	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Diethyl phthalate	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Dimethyl phthalate	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
2,4-Dichlorophenol	ND	20		µg/L	1	12/2/2014 6:01:08 PM	16584
2,4-Dimethylphenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	12/2/2014 6:01:08 PM	16584
2,4-Dinitrophenol	ND	20		µg/L	1	12/2/2014 6:01:08 PM	16584
2,4-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
2,6-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Fluoranthene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Fluorene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Hexachlorobenzene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Hexachlorobutadiene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Hexachlorocyclopentadiene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Hexachloroethane	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Isophorone	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
1-Methylnaphthalene	50	10		µg/L	1	12/2/2014 6:01:08 PM	16584
2-Methylnaphthalene	56	10		µg/L	1	12/2/2014 6:01:08 PM	16584
2-Methylphenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
3+4-Methylphenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
N-Nitrosodimethylamine	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
N-Nitrosodiphenylamine	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Naphthalene	270	20		µg/L	2	12/3/2014 9:31:07 AM	16584
2-Nitroaniline	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
3-Nitroaniline	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
4-Nitroaniline	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Nitrobenzene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
2-Nitrophenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
4-Nitrophenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Pentachlorophenol	ND	20		µg/L	1	12/2/2014 6:01:08 PM	16584
Phenanthrene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Phenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Pyrene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Pyridine	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
1,2,4-Trichlorobenzene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
2,4,5-Trichlorophenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-37
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 11:55:00 AM
Lab ID: 1411984-004
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
2,4,6-Trichlorophenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Surr: 2-Fluorophenol	86.3	17.6-104		%REC	1	12/2/2014 6:01:08 PM	16584
Surr: Phenol-d5	59.5	17.7-89.9		%REC	1	12/2/2014 6:01:08 PM	16584
Surr: 2,4,6-Tribromophenol	102	16.3-122		%REC	1	12/2/2014 6:01:08 PM	16584
Surr: Nitrobenzene-d5	86.4	45.3-117		%REC	1	12/2/2014 6:01:08 PM	16584
Surr: 2-Fluorobiphenyl	98.0	43-113		%REC	1	12/2/2014 6:01:08 PM	16584
Surr: 4-Terphenyl-d14	108	47.6-122		%REC	1	12/2/2014 6:01:08 PM	16584
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	140	20		µg/L	20	11/26/2014 11:21:16 AM	R22841
Toluene	200	20		µg/L	20	11/26/2014 11:21:16 AM	R22841
Ethylbenzene	9.3	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Methyl tert-butyl ether (MTBE)	27	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,2,4-Trimethylbenzene	510	20		µg/L	20	11/26/2014 11:21:16 AM	R22841
1,3,5-Trimethylbenzene	140	20		µg/L	20	11/26/2014 11:21:16 AM	R22841
1,2-Dichloroethane (EDC)	17	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,2-Dibromoethane (EDB)	1.5	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Naphthalene	350	40		µg/L	20	11/26/2014 11:21:16 AM	R22841
1-Methylnaphthalene	47	4.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
2-Methylnaphthalene	84	4.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Acetone	ND	10		µg/L	1	11/25/2014 5:18:29 PM	R22805
Bromobenzene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Bromodichloromethane	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Bromoform	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Bromomethane	ND	3.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
2-Butanone	ND	10		µg/L	1	11/25/2014 5:18:29 PM	R22805
Carbon disulfide	ND	10		µg/L	1	11/25/2014 5:18:29 PM	R22805
Carbon Tetrachloride	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Chlorobenzene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Chloroethane	ND	2.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Chloroform	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Chloromethane	ND	3.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
2-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
4-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
cis-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Dibromochloromethane	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Dibromomethane	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-37
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 11:55:00 AM
Lab ID: 1411984-004
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,1-Dichloroethane	34	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,1-Dichloroethene	210	20		µg/L	20	11/26/2014 11:21:16 AM	R22841
1,2-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,3-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
2,2-Dichloropropane	ND	2.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,1-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Hexachlorobutadiene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
2-Hexanone	ND	10		µg/L	1	11/25/2014 5:18:29 PM	R22805
Isopropylbenzene	78	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
4-Isopropyltoluene	4.8	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
4-Methyl-2-pentanone	ND	10		µg/L	1	11/25/2014 5:18:29 PM	R22805
Methylene Chloride	ND	3.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
n-Butylbenzene	26	3.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
n-Propylbenzene	82	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
sec-Butylbenzene	11	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Styrene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
tert-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
trans-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,1,2-Trichloroethane	1.7	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Trichloroethene (TCE)	300	20		µg/L	20	11/26/2014 11:21:16 AM	R22841
Trichlorofluoromethane	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Vinyl chloride	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Xylenes, Total	1300	30		µg/L	20	11/26/2014 11:21:16 AM	R22841
Surr: 1,2-Dichloroethane-d4	98.1	70-130		%REC	1	11/25/2014 5:18:29 PM	R22805
Surr: 4-Bromofluorobenzene	92.2	70-130		%REC	1	11/25/2014 5:18:29 PM	R22805
Surr: Dibromofluoromethane	83.3	70-130		%REC	1	11/25/2014 5:18:29 PM	R22805
Surr: Toluene-d8	90.9	70-130		%REC	1	11/25/2014 5:18:29 PM	R22805

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-35
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 12:40:00 PM
Lab ID: 1411984-005
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**JME**
Diesel Range Organics (DRO)	3.3	1.0		mg/L	1	11/25/2014 5:57:22 PM	16539
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/25/2014 5:57:22 PM	16539
Surr: DNOP	104	59-141		%REC	1	11/25/2014 5:57:22 PM	16539
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	1.6	0.25		mg/L	5	11/26/2014 6:36:38 PM	R22836
Surr: BFB	91.3	80-120		%REC	5	11/26/2014 6:36:38 PM	R22836
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
Acenaphthene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Acenaphthylene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Aniline	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Anthracene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Azobenzene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Benz(a)anthracene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Benzo(a)pyrene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Benzo(b)fluoranthene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Benzo(g,h,i)perylene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Benzo(k)fluoranthene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Benzoic acid	ND	20		µg/L	1	12/2/2014 6:28:36 PM	16584
Benzyl alcohol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Bis(2-chloroethyl)ether	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
4-Bromophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Butyl benzyl phthalate	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Carbazole	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
4-Chloro-3-methylphenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
4-Chloroaniline	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
2-Chloronaphthalene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
2-Chlorophenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Chrysene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Di-n-butyl phthalate	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Di-n-octyl phthalate	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Dibenz(a,h)anthracene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Dibenzofuran	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
1,2-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
1,3-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-35
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 12:40:00 PM
Lab ID: 1411984-005
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
1,4-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
3,3´-Dichlorobenzidine	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Diethyl phthalate	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Dimethyl phthalate	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
2,4-Dichlorophenol	ND	20		µg/L	1	12/2/2014 6:28:36 PM	16584
2,4-Dimethylphenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	12/2/2014 6:28:36 PM	16584
2,4-Dinitrophenol	ND	20		µg/L	1	12/2/2014 6:28:36 PM	16584
2,4-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
2,6-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Fluoranthene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Fluorene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Hexachlorobenzene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Hexachlorobutadiene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Hexachlorocyclopentadiene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Hexachloroethane	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Isophorone	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
1-Methylnaphthalene	34	10		µg/L	1	12/2/2014 6:28:36 PM	16584
2-Methylnaphthalene	45	10		µg/L	1	12/2/2014 6:28:36 PM	16584
2-Methylphenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
3+4-Methylphenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
N-Nitrosodimethylamine	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
N-Nitrosodiphenylamine	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Naphthalene	36	10		µg/L	1	12/2/2014 6:28:36 PM	16584
2-Nitroaniline	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
3-Nitroaniline	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
4-Nitroaniline	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Nitrobenzene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
2-Nitrophenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
4-Nitrophenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Pentachlorophenol	ND	20		µg/L	1	12/2/2014 6:28:36 PM	16584
Phenanthrene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Phenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Pyrene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Pyridine	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
1,2,4-Trichlorobenzene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
2,4,5-Trichlorophenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-35
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 12:40:00 PM
Lab ID: 1411984-005
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
2,4,6-Trichlorophenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Surr: 2-Fluorophenol	72.7	17.6-104		%REC	1	12/2/2014 6:28:36 PM	16584
Surr: Phenol-d5	59.1	17.7-89.9		%REC	1	12/2/2014 6:28:36 PM	16584
Surr: 2,4,6-Tribromophenol	96.2	16.3-122		%REC	1	12/2/2014 6:28:36 PM	16584
Surr: Nitrobenzene-d5	83.0	45.3-117		%REC	1	12/2/2014 6:28:36 PM	16584
Surr: 2-Fluorobiphenyl	99.1	43-113		%REC	1	12/2/2014 6:28:36 PM	16584
Surr: 4-Terphenyl-d14	100	47.6-122		%REC	1	12/2/2014 6:28:36 PM	16584
EPA METHOD 8260B: VOLATILES						Analyst:	**DJF**
Benzene	39	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Toluene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Ethylbenzene	52	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Methyl tert-butyl ether (MTBE)	66	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,2,4-Trimethylbenzene	120	10		µg/L	10	11/26/2014 11:48:52 AM	R22841
1,3,5-Trimethylbenzene	50	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Naphthalene	40	2.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1-Methylnaphthalene	38	4.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
2-Methylnaphthalene	59	4.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Acetone	ND	10		µg/L	1	11/25/2014 6:13:36 PM	R22805
Bromobenzene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Bromodichloromethane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Bromoform	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Bromomethane	ND	3.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
2-Butanone	ND	10		µg/L	1	11/25/2014 6:13:36 PM	R22805
Carbon disulfide	ND	10		µg/L	1	11/25/2014 6:13:36 PM	R22805
Carbon Tetrachloride	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Chlorobenzene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Chloroethane	ND	2.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Chloroform	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Chloromethane	ND	3.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
2-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
4-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
cis-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Dibromochloromethane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Dibromomethane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-35
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 12:40:00 PM
Lab ID: 1411984-005
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,1-Dichloroethane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,1-Dichloroethene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,2-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,3-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
2,2-Dichloropropane	ND	2.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,1-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Hexachlorobutadiene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
2-Hexanone	ND	10		µg/L	1	11/25/2014 6:13:36 PM	R22805
Isopropylbenzene	5.1	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
4-Isopropyltoluene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
4-Methyl-2-pentanone	ND	10		µg/L	1	11/25/2014 6:13:36 PM	R22805
Methylene Chloride	ND	3.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
n-Butylbenzene	6.1	3.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
n-Propylbenzene	28	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
sec-Butylbenzene	2.7	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Styrene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
tert-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
trans-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Trichlorofluoromethane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Vinyl chloride	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Xylenes, Total	73	1.5		µg/L	1	11/25/2014 6:13:36 PM	R22805
Surr: 1,2-Dichloroethane-d4	77.7	70-130		%REC	1	11/25/2014 6:13:36 PM	R22805
Surr: 4-Bromofluorobenzene	84.2	70-130		%REC	1	11/25/2014 6:13:36 PM	R22805
Surr: Dibromofluoromethane	86.9	70-130		%REC	1	11/25/2014 6:13:36 PM	R22805
Surr: Toluene-d8	88.8	70-130		%REC	1	11/25/2014 6:13:36 PM	R22805

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-36
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 1:30:00 PM
Lab ID: 1411984-006
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**JME**
Diesel Range Organics (DRO)	6.8	1.0		mg/L	1	11/25/2014 6:27:26 PM	16539
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/25/2014 6:27:26 PM	16539
Surr: DNOP	92.2	59-141		%REC	1	11/25/2014 6:27:26 PM	16539
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	25	5.0		mg/L	100	11/26/2014 7:03:58 PM	R22836
Surr: BFB	91.6	80-120		%REC	100	11/26/2014 7:03:58 PM	R22836
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
Acenaphthene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Acenaphthylene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Aniline	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Anthracene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Azobenzene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Benz(a)anthracene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Benzo(a)pyrene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Benzo(b)fluoranthene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Benzo(g,h,i)perylene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Benzo(k)fluoranthene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Benzoic acid	ND	20		µg/L	1	12/2/2014 6:56:01 PM	16584
Benzyl alcohol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Bis(2-chloroethyl)ether	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
4-Bromophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Butyl benzyl phthalate	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Carbazole	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
4-Chloro-3-methylphenol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
4-Chloroaniline	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
2-Chloronaphthalene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
2-Chlorophenol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Chrysene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Di-n-butyl phthalate	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Di-n-octyl phthalate	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Dibenz(a,h)anthracene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Dibenzofuran	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
1,2-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
1,3-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-36
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 1:30:00 PM
Lab ID: 1411984-006
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
1,4-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
3,3´-Dichlorobenzidine	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Diethyl phthalate	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Dimethyl phthalate	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
2,4-Dichlorophenol	ND	20		µg/L	1	12/2/2014 6:56:01 PM	16584
2,4-Dimethylphenol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	12/2/2014 6:56:01 PM	16584
2,4-Dinitrophenol	ND	20		µg/L	1	12/2/2014 6:56:01 PM	16584
2,4-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
2,6-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Fluoranthene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Fluorene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Hexachlorobenzene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Hexachlorobutadiene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Hexachlorocyclopentadiene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Hexachloroethane	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Isophorone	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
1-Methylnaphthalene	160	10		µg/L	1	12/2/2014 6:56:01 PM	16584
2-Methylnaphthalene	230	10		µg/L	1	12/2/2014 6:56:01 PM	16584
2-Methylphenol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
3+4-Methylphenol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
N-Nitrosodimethylamine	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
N-Nitrosodiphenylamine	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Naphthalene	280	20		µg/L	2	12/3/2014 9:58:32 AM	16584
2-Nitroaniline	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
3-Nitroaniline	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
4-Nitroaniline	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Nitrobenzene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
2-Nitrophenol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
4-Nitrophenol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Pentachlorophenol	ND	20		µg/L	1	12/2/2014 6:56:01 PM	16584
Phenanthrene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Phenol	15	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Pyrene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Pyridine	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
1,2,4-Trichlorobenzene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
2,4,5-Trichlorophenol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-36
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 1:30:00 PM
Lab ID: 1411984-006
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
2,4,6-Trichlorophenol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Surr: 2-Fluorophenol	52.4	17.6-104		%REC	1	12/2/2014 6:56:01 PM	16584
Surr: Phenol-d5	50.2	17.7-89.9		%REC	1	12/2/2014 6:56:01 PM	16584
Surr: 2,4,6-Tribromophenol	73.8	16.3-122		%REC	1	12/2/2014 6:56:01 PM	16584
Surr: Nitrobenzene-d5	64.7	45.3-117		%REC	1	12/2/2014 6:56:01 PM	16584
Surr: 2-Fluorobiphenyl	68.9	43-113		%REC	1	12/2/2014 6:56:01 PM	16584
Surr: 4-Terphenyl-d14	75.2	47.6-122		%REC	1	12/2/2014 6:56:01 PM	16584
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	8400	200		µg/L	200	11/26/2014 12:16:34 PM	R22841
Toluene	32	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Ethylbenzene	1500	200		µg/L	200	11/26/2014 12:16:34 PM	R22841
Methyl tert-butyl ether (MTBE)	7200	200		µg/L	200	11/26/2014 12:16:34 PM	R22841
1,2,4-Trimethylbenzene	270	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,3,5-Trimethylbenzene	62	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Naphthalene	590	20		µg/L	10	11/25/2014 7:08:09 PM	R22805
1-Methylnaphthalene	340	40		µg/L	10	11/25/2014 7:08:09 PM	R22805
2-Methylnaphthalene	530	40		µg/L	10	11/25/2014 7:08:09 PM	R22805
Acetone	ND	100		µg/L	10	11/25/2014 7:08:09 PM	R22805
Bromobenzene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Bromodichloromethane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Bromoform	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Bromomethane	ND	30		µg/L	10	11/25/2014 7:08:09 PM	R22805
2-Butanone	ND	100		µg/L	10	11/25/2014 7:08:09 PM	R22805
Carbon disulfide	ND	100		µg/L	10	11/25/2014 7:08:09 PM	R22805
Carbon Tetrachloride	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Chlorobenzene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Chloroethane	ND	20		µg/L	10	11/25/2014 7:08:09 PM	R22805
Chloroform	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Chloromethane	ND	30		µg/L	10	11/25/2014 7:08:09 PM	R22805
2-Chlorotoluene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
4-Chlorotoluene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
cis-1,2-DCE	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/25/2014 7:08:09 PM	R22805
Dibromochloromethane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Dibromomethane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,2-Dichlorobenzene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-36
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 1:30:00 PM
Lab ID: 1411984-006
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,3-Dichlorobenzene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,4-Dichlorobenzene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Dichlorodifluoromethane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,1-Dichloroethane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,1-Dichloroethene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,2-Dichloropropane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,3-Dichloropropane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
2,2-Dichloropropane	ND	20		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,1-Dichloropropene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Hexachlorobutadiene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
2-Hexanone	ND	100		µg/L	10	11/25/2014 7:08:09 PM	R22805
Isopropylbenzene	41	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
4-Isopropyltoluene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
4-Methyl-2-pentanone	ND	100		µg/L	10	11/25/2014 7:08:09 PM	R22805
Methylene Chloride	ND	30		µg/L	10	11/25/2014 7:08:09 PM	R22805
n-Butylbenzene	ND	30		µg/L	10	11/25/2014 7:08:09 PM	R22805
n-Propylbenzene	99	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
sec-Butylbenzene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Styrene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
tert-Butylbenzene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	11/25/2014 7:08:09 PM	R22805
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
trans-1,2-DCE	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,1,1-Trichloroethane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,1,2-Trichloroethane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Trichloroethene (TCE)	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Trichlorofluoromethane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,2,3-Trichloropropane	ND	20		µg/L	10	11/25/2014 7:08:09 PM	R22805
Vinyl chloride	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Xylenes, Total	560	15		µg/L	10	11/25/2014 7:08:09 PM	R22805
Surr: 1,2-Dichloroethane-d4	84.3	70-130		%REC	10	11/25/2014 7:08:09 PM	R22805
Surr: 4-Bromofluorobenzene	87.9	70-130		%REC	10	11/25/2014 7:08:09 PM	R22805
Surr: Dibromofluoromethane	93.1	70-130		%REC	10	11/25/2014 7:08:09 PM	R22805
Surr: Toluene-d8	89.0	70-130		%REC	10	11/25/2014 7:08:09 PM	R22805

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
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S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Trip Blank
Project: Hydrocarbon Seep
Collection Date:
Lab ID: 1411984-007
Matrix: TRIP BLANK
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/26/2014 7:31:15 PM	R22836
Surr: BFB	89.8	80-120		%REC	1	11/26/2014 7:31:15 PM	R22836
EPA METHOD 8260B: VOLATILES						Analyst:	**DJF**
Benzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Toluene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Ethylbenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Naphthalene	ND	2.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1-Methylnaphthalene	ND	4.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
2-Methylnaphthalene	ND	4.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Acetone	ND	10		µg/L	1	11/25/2014 7:35:39 PM	R22805
Bromobenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Bromodichloromethane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Bromoform	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Bromomethane	ND	3.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
2-Butanone	ND	10		µg/L	1	11/25/2014 7:35:39 PM	R22805
Carbon disulfide	ND	10		µg/L	1	11/25/2014 7:35:39 PM	R22805
Carbon Tetrachloride	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Chlorobenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Chloroethane	ND	2.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Chloroform	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Chloromethane	ND	3.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
2-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
4-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
cis-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Dibromochloromethane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Dibromomethane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,1-Dichloroethane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,1-Dichloroethene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Trip Blank
Project: Hydrocarbon Seep
Collection Date:
Lab ID: 1411984-007
Matrix: TRIP BLANK
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,2-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,3-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
2,2-Dichloropropane	ND	2.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,1-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Hexachlorobutadiene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
2-Hexanone	ND	10		µg/L	1	11/25/2014 7:35:39 PM	R22805
Isopropylbenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
4-Isopropyltoluene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
4-Methyl-2-pentanone	ND	10		µg/L	1	11/25/2014 7:35:39 PM	R22805
Methylene Chloride	ND	3.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
n-Butylbenzene	ND	3.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
n-Propylbenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
sec-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Styrene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
tert-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
trans-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Trichlorofluoromethane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Vinyl chloride	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Xylenes, Total	ND	1.5		µg/L	1	11/25/2014 7:35:39 PM	R22805
Surr: 1,2-Dichloroethane-d4	82.3	70-130		%REC	1	11/25/2014 7:35:39 PM	R22805
Surr: 4-Bromofluorobenzene	85.7	70-130		%REC	1	11/25/2014 7:35:39 PM	R22805
Surr: Dibromofluoromethane	95.6	70-130		%REC	1	11/25/2014 7:35:39 PM	R22805
Surr: Toluene-d8	92.6	70-130		%REC	1	11/25/2014 7:35:39 PM	R22805

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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411984**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID	**MB-16539**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Diesel Range**					
Client ID:	**PBW**	Batch ID:	**16539**	RunNo:	**22772**					
Prep Date:	**11/24/2014**	Analysis Date:	**11/25/2014**	SeqNo:	**672635**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.0		1.000		101	59	141			

Sample ID	**LCS-16539**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Diesel Range**					
Client ID:	**LCSW**	Batch ID:	**16539**	RunNo:	**22764**					
Prep Date:	**11/24/2014**	Analysis Date:	**11/25/2014**	SeqNo:	**672636**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.9	1.0	5.000	0	117	69.7	142			
Surr: DNOP	0.62		0.5000		123	59	141			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411984**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW** Batch ID: **R22836** RunNo: **22836**
Prep Date: Analysis Date: **11/26/2014** SeqNo: **673913** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	17		20.00		86.5	80	120			

Sample ID **2.5UG GRO LCS** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW** Batch ID: **R22836** RunNo: **22836**
Prep Date: Analysis Date: **11/26/2014** SeqNo: **673914** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.45	0.050	0.5000	0	89.8	80	120			
Surr: BFB	18		20.00		92.4	80	120			

Sample ID **1411984-004BMS** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-37** Batch ID: **R22836** RunNo: **22836**
Prep Date: Analysis Date: **11/26/2014** SeqNo: **673928** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	14	0.50	5.000	8.746	103	70.4	127			
Surr: BFB	280		200.0		141	80	120			S

Sample ID **1411984-004BMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-37** Batch ID: **R22836** RunNo: **22836**
Prep Date: Analysis Date: **11/26/2014** SeqNo: **673929** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	14	0.50	5.000	8.746	98.4	70.4	127	1.71	20	
Surr: BFB	280		200.0		140	80	120	0	0	S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411984**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **5ml rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R22805**	RunNo: **22805**			
Prep Date:	Analysis Date: **11/25/2014**	SeqNo: **672998**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411984**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **5ml rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R22805**	RunNo: **22805**
Prep Date:	Analysis Date: **11/25/2014**	SeqNo: **672998** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.8		10.00		88.3	70	130			
Surr: 4-Bromofluorobenzene	8.8		10.00		87.9	70	130			
Surr: Dibromofluoromethane	9.4		10.00		94.4	70	130			
Surr: Toluene-d8	9.0		10.00		89.7	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R22805**	RunNo: **22805**
Prep Date:	Analysis Date: **11/25/2014**	SeqNo: **673000** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	22	1.0	20.00	0	108	80	120			
Chlorobenzene	22	1.0	20.00	0	109	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411984**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22805** RunNo: **22805**
Prep Date: Analysis Date: **11/25/2014** SeqNo: **673000** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	23	1.0	20.00	0	113	82.6	131			
Trichloroethene (TCE)	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	8.6		10.00		86.5	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		86.8	70	130			
Surr: Dibromofluoromethane	8.1		10.00		80.6	70	130			
Surr: Toluene-d8	8.8		10.00		88.5	70	130			

Sample ID **5ml rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22841** RunNo: **22841**
Prep Date: Analysis Date: **11/26/2014** SeqNo: **674028** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Naphthalene	ND	2.0								
1,1-Dichloroethene	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.6		10.00		86.5	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		92.7	70	130			
Surr: Dibromofluoromethane	9.5		10.00		95.1	70	130			
Surr: Toluene-d8	9.3		10.00		93.4	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22841** RunNo: **22841**
Prep Date: Analysis Date: **11/26/2014** SeqNo: **674030** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	70	130			
Toluene	22	1.0	20.00	0	108	80	120			
1,1-Dichloroethene	22	1.0	20.00	0	110	82.6	131			
Trichloroethene (TCE)	20	1.0	20.00	0	99.1	70	130			
Surr: 1,2-Dichloroethane-d4	8.5		10.00		84.7	70	130			
Surr: 4-Bromofluorobenzene	9.0		10.00		90.3	70	130			
Surr: Dibromofluoromethane	9.3		10.00		93.5	70	130			
Surr: Toluene-d8	9.2		10.00		91.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411984**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **mb-16584**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **16584**	RunNo: **22880**			
Prep Date: **11/26/2014**	Analysis Date: **12/2/2014**	SeqNo: **675850**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411984**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **mb-16584**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **16584**	RunNo: **22880**			
Prep Date: **11/26/2014**	Analysis Date: **12/2/2014**	SeqNo: **675850**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	160		200.0		80.0	17.6	104			
Surr: Phenol-d5	160		200.0		81.3	17.7	89.9			
Surr: 2,4,6-Tribromophenol	160		200.0		78.0	16.3	122			
Surr: Nitrobenzene-d5	77		100.0		76.6	45.3	117			
Surr: 2-Fluorobiphenyl	80		100.0		80.2	43	113			
Surr: 4-Terphenyl-d14	89		100.0		89.1	47.6	122			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411984**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **lcs-16584** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **16584** RunNo: **22880**
Prep Date: **11/26/2014** Analysis Date: **12/2/2014** SeqNo: **675851** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	74	10	100.0	0	73.5	47.9	114			
4-Chloro-3-methylphenol	160	10	200.0	0	82.2	51.7	122			
2-Chlorophenol	150	10	200.0	0	73.6	40.7	113			
1,4-Dichlorobenzene	72	10	100.0	0	72.5	39.6	99.9			
2,4-Dinitrotoluene	60	10	100.0	0	60.0	40.8	113			
N-Nitrosodi-n-propylamine	83	10	100.0	0	83.2	51.2	111			
4-Nitrophenol	150	10	200.0	0	73.4	15.7	86.9			
Pentachlorophenol	130	20	200.0	0	65.7	21.6	104			
Phenol	170	10	200.0	0	83.2	28.6	71.7			S
Pyrene	74	10	100.0	0	73.7	54.2	128			
1,2,4-Trichlorobenzene	68	10	100.0	0	67.6	40.9	101			
Surr: 2-Fluorophenol	150		200.0		75.4	17.6	104			
Surr: Phenol-d5	160		200.0		78.8	17.7	89.9			
Surr: 2,4,6-Tribromophenol	150		200.0		75.4	16.3	122			
Surr: Nitrobenzene-d5	70		100.0		70.3	45.3	117			
Surr: 2-Fluorobiphenyl	72		100.0		71.9	43	113			
Surr: 4-Terphenyl-d14	86		100.0		85.6	47.6	122			

Sample ID **lcsd-16584** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **16584** RunNo: **22880**
Prep Date: **11/26/2014** Analysis Date: **12/2/2014** SeqNo: **675852** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	74	10	100.0	0	73.7	47.9	114	0.163	27.2	
4-Chloro-3-methylphenol	160	10	200.0	0	80.6	51.7	122	1.93	25.9	
2-Chlorophenol	150	10	200.0	0	73.0	40.7	113	0.819	22.5	
1,4-Dichlorobenzene	69	10	100.0	0	68.7	39.6	99.9	5.30	24.6	
2,4-Dinitrotoluene	72	10	100.0	0	71.9	40.8	113	18.0	25.3	
N-Nitrosodi-n-propylamine	78	10	100.0	0	77.7	51.2	111	6.74	23.6	
4-Nitrophenol	170	10	200.0	0	85.8	15.7	86.9	15.7	34.7	
Pentachlorophenol	160	20	200.0	0	78.8	21.6	104	18.1	32.8	
Phenol	160	10	200.0	0	80.6	28.6	71.7	3.21	25.5	S
Pyrene	73	10	100.0	0	73.5	54.2	128	0.326	31.4	
1,2,4-Trichlorobenzene	62	10	100.0	0	61.6	40.9	101	9.35	25.9	
Surr: 2-Fluorophenol	130		200.0		67.0	17.6	104	0	0	
Surr: Phenol-d5	140		200.0		70.0	17.7	89.9	0	0	
Surr: 2,4,6-Tribromophenol	160		200.0		79.8	16.3	122	0	0	
Surr: Nitrobenzene-d5	64		100.0		64.2	45.3	117	0	0	
Surr: 2-Fluorobiphenyl	67		100.0		67.1	43	113	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411984**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID	**lcsd-16584**	SampType:	**LCSD**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**LCSS02**	Batch ID:	**16584**	RunNo:	**22880**
Prep Date:	**11/26/2014**	Analysis Date:	**12/2/2014**	SeqNo:	**675852** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	85		100.0		85.5	47.6	122	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Western Refining Gallup** Work Order Number: **1411984** RcptNo: **1**

Received by/date: 11/22/14

Logged By: **Lindsay Mangin** **11/22/2014 8:37:00 AM**

Completed By: **Lindsay Mangin** **11/22/2014 10:09:42 AM**

Reviewed By: AT 11/24/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: (<2 or >12 unless noted)
Adjusted?
Checked by:

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes			

Chain-of-Custody Record

Client: WNR - GALLUP REFINERY

Mailing Address: ROUTE 3 BOX 7
GALLUP NM 87301

Phone #: 505-722-0231

email or Fax#: CHERYL.JOHNSON@WNR.COM

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____
☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: HYDROCARBON SEEP

Project #:

Project Manager: CHERYL JOHNSON

Sampler: TRACY PAYNE

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.8

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1411984	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)				Air Bubbles (Y or N)
11/21/14	0830	GW	MKTF-44	7	HCL/NEAT	-001			✓							✓	✓				
	0930	GW	MKTF-40			-002			✓							✓	✓				
	1040	GW	MKTF-38			-003			✓							✓	✓				
	1155	GW	MKTF-37			-004			✓							✓	✓				
	1240	GW	MKTF-35			-005			✓							✓	✓				
	1330	GW	MKTF-36			-006			✓							✓	✓				
	—	W	TRIP BLANK	3	HCL	-007			✓							✓					

Date:	Time:	Relinquished by:	Received by:	Date	Time
11/22/14	0837	[illegible]	[illegible]	11/22/14	0837
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

MKTF-35
N: 1633204.45
E: 2546011.60 CENTER OF METAL LID
Z: 6951.90 TOP CENTER OF METAL LID
Z: 6951.65 N. TOP OF PVC PIPE
Z: 6951.25 N. TOP OF INSIDE GROUND LINE
Z: 6951.90 N. TOP OF OUTSIDE CONCRETE PAD

MKTF-36
N: 1633349.47
E: 2545982.58 CENTER OF METAL LID
Z: 6950.67 TOP CENTER OF METAL LID
Z: 6950.12 N. TOP OF PVC PIPE
Z: 6949.87 N. TOP OF INSIDE GROUND LINE
Z: 6950.67 N. TOP OF OUTSIDE CONCRETE PAD

MKTF-37
N: 1633291.89
E: 2546216.67 CENTER OF METAL LID
Z: 6959.07 TOP CENTER OF METAL LID
Z: 6958.87 N. TOP OF PVC PIPE
Z: 6958.62 N. TOP OF INSIDE GROUND LINE
Z: 6959.07 N. TOP OF OUTSIDE CONCRETE PAD

MKTF-38
N: 1633451.01
E: 2546222.09 CENTER OF METAL LID
Z: 6955.17 TOP CENTER OF METAL LID
Z: 6954.89 N. TOP OF PVC PIPE
Z: 6954.54 N. TOP OF INSIDE GROUND LINE
Z: 6955.17 N. TOP OF OUTSIDE CONCRETE PAD

MKTF-39
N: 1633729.23
E: 2546265.99 CENTER OF METAL LID
Z: 6953.97 TOP CENTER OF METAL LID
Z: 6953.75 N. TOP OF PVC PIPE
Z: 6953.12 N. TOP OF INSIDE GROUND LINE
Z: 6953.97 N. TOP OF OUTSIDE CONCRETE PAD

MKTF-40
N: 1634085.50
E: 2544637.81 CENTER OF METAL LID
Z: 6894.73 TOP CENTER OF METAL LID
Z: 6894.33 N. TOP OF PVC PIPE
Z: 6890.48 N. TOP OF INSIDE GROUND LINE
Z: 6891.35 N. TOP OF OUTSIDE CONCRETE PAD

MKTF-41
N: 1633499.80
E: 2544567.57 CENTER OF METAL LID
Z: 6894.13 TOP CENTER OF METAL LID
Z: 6893.64 N. TOP OF PVC PIPE
Z: 6889.80 N. TOP OF INSIDE GROUND LINE
Z: 6891.11 N. TOP OF OUTSIDE CONCRETE PAD

MKTF-42
N: 1633078.09
E: 2544678.55 CENTER OF METAL LID
Z: 6893.27 TOP CENTER OF METAL LID
Z: 6892.95 N. TOP OF PVC PIPE
Z: 6888.75 N. TOP OF INSIDE GROUND LINE
Z: 6890.42 N. TOP OF OUTSIDE CONCRETE PAD

MKTF-43
N: 1633490.97
E: 2544190.23 CENTER OF METAL LID
Z: 6877.40 TOP CENTER OF METAL LID
Z: 6876.90 N. TOP OF PVC PIPE
Z: 6873.22 N. TOP OF INSIDE GROUND LINE
Z: 6874.12 N. TOP OF OUTSIDE CONCRETE PAD

MKTF-44
N: 1633681.48
E: 2542981.45 CENTER OF METAL LID
Z: 6870.32 TOP CENTER OF METAL LID
Z: 6869.95 N. TOP OF PVC PIPE
Z: 6866.06 N. TOP OF INSIDE GROUND LINE
Z: 6867.41 N. TOP OF OUTSIDE CONCRETE PAD

MKTF-45
N: 1633308.57
E: 2545912.37 CENTER OF METAL LID
Z: 6951.33 TOP CENTER OF METAL LID
Z: 6949.59 N. TOP OF PVC PIPE
Z: 6948.27 N. TOP OF INSIDE GROUND LINE
Z: 6948.63 N. TOP OF OUTSIDE CONCRETE PAD

SYMBOLS LEGEND
Ⓦ MONITORING WELL

NOTES
1 FIELD SURVEY PERFORMED DECEMBER 16, 2014, 10:30 a.m. to 4:30 p.m. & JANUARY 12, 2015, 10:30 – a.m. to 11:00 a.m.

2 FIELD MEASUREMENTS PERFORMED UTILIZING THALES 'Z-MAX' BASE AND ROVER G.P.S. SYSTEM WHICH CAN NOT BE CALIBRATED. INSIDE AND OUTSIDE APPURTENANT MEASUREMENTS PERFORMED WITH STEEL TAPE.

3 STATE PLANE COORDINATES BASED ON THE BRASS CAP 1-040-105 USING DIFFERENTIAL G.P.S. DERIVED MEASUREMENTS.

4 THE COORDINATES SHOWN ARE N.M. STATE PLANE WEST ZONE GRID COORDINATES, ELEVATIONS ARE NGVD29 (ADD 3.37 TO REACH NAVD88 DATUM AND AN ADDITIONAL 1.14 TO REACH EXISTING WESTERN REFINING TOPOGRAPHC SURVEY DATUM WHICH IS SHOWN HEREON).

CLYDE J. KING
NEW MEXICO
13979
REGISTERED PROFESSIONAL SURVEYOR

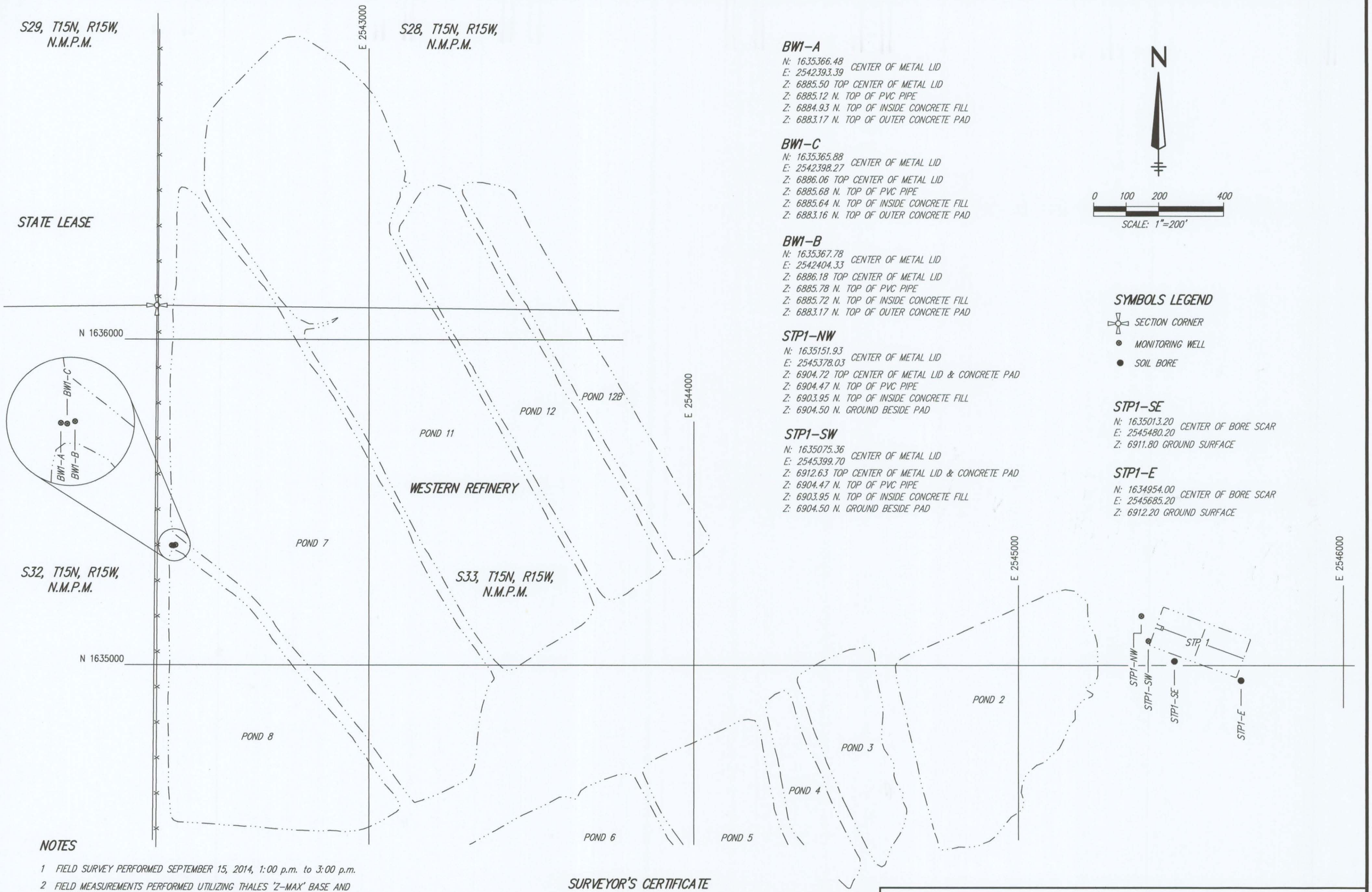
SURVEYOR'S CERTIFICATE
I, Clyde J. King, a New Mexico Professional Surveyor do hereby certify that this plat was prepared from a field survey performed by me or under my direct supervision, that I am responsible for this survey, that this survey is true and correct to the best of my knowledge and belief, that this plat and the field survey upon which it is based meet the Minimum Standards for Surveying in New Mexico and that this survey is not a land division or subdivision as defined by the New Mexico Subdivision Act.

Clyde J. King, PS13979 — 1-16-15 Date

MONITORING WELL SURVEY
in Section 33, T15N, R15W, N.M.P.M., Western Refining, Jamestown, McKinley County, New Mexico, U.S.A.

H.E.I. HAMMON ENTERPRISES, INC.
PROFESSIONAL LAND SURVEYING SERVICES
P. O. Box 770 ■ Ramah, NM 87321 ■ Tel: (505) 870-6901 ■ HEISurveys Yahoo.com

141216 MW DATA.DWG DRAWN BY: AH CHECKED BY: CK DATE: 1-16-15 REV. DATE: xxx



BW1-A
N: 1635366.48
E: 2542393.39 CENTER OF METAL LID
Z: 6885.50 TOP CENTER OF METAL LID
Z: 6885.12 N. TOP OF PVC PIPE
Z: 6884.93 N. TOP OF INSIDE CONCRETE FILL
Z: 6883.17 N. TOP OF OUTER CONCRETE PAD

BW1-C
N: 1635365.88
E: 2542398.27 CENTER OF METAL LID
Z: 6886.06 TOP CENTER OF METAL LID
Z: 6885.68 N. TOP OF PVC PIPE
Z: 6885.64 N. TOP OF INSIDE CONCRETE FILL
Z: 6883.16 N. TOP OF OUTER CONCRETE PAD

BW1-B
N: 1635367.78
E: 2542404.33 CENTER OF METAL LID
Z: 6886.18 TOP CENTER OF METAL LID
Z: 6885.78 N. TOP OF PVC PIPE
Z: 6885.72 N. TOP OF INSIDE CONCRETE FILL
Z: 6883.17 N. TOP OF OUTER CONCRETE PAD

STP1-NW
N: 1635151.93
E: 2545378.03 CENTER OF METAL LID
Z: 6904.72 TOP CENTER OF METAL LID & CONCRETE PAD
Z: 6904.47 N. TOP OF PVC PIPE
Z: 6903.95 N. TOP OF INSIDE CONCRETE FILL
Z: 6904.50 N. GROUND BESIDE PAD

STP1-SW
N: 1635075.36
E: 2545399.70 CENTER OF METAL LID
Z: 6912.63 TOP CENTER OF METAL LID & CONCRETE PAD
Z: 6904.47 N. TOP OF PVC PIPE
Z: 6903.95 N. TOP OF INSIDE CONCRETE FILL
Z: 6904.50 N. GROUND BESIDE PAD

SYMBOLS LEGEND
- SECTION CORNER
- MONITORING WELL
- SOIL BORE

STP1-SE
N: 1635013.20
E: 2545480.20 CENTER OF BORE SCAR
Z: 6911.80 GROUND SURFACE

STP1-E
N: 1634954.00
E: 2545685.20 CENTER OF BORE SCAR
Z: 6912.20 GROUND SURFACE

NOTES

1. FIELD SURVEY PERFORMED SEPTEMBER 15, 2014, 1:00 p.m. to 3:00 p.m.
2. FIELD MEASUREMENTS PERFORMED UTILIZING THALES 'Z-MAX' BASE AND ROVER G.P.S. SYSTEM WHICH CAN NOT BE CALIBRATED. INSIDE AND OUTSIDE APPURTENANT MEASUREMENTS PERFORMED WITH STEEL TAPE.
3. THE BORE SITES WERE IDENTIFIED BY REFINERY PERSONNEL AND WERE VISIBLE AS EVIDENCE OF A BORE HOLE.
4. STATE PLANE COORDINATES BASED ON THE BRASS CAP I-040-105 USING DIFFERENTIAL G.P.S. DERIVED MEASUREMENTS.
5. THE COORDINATE LIST SHOWN ARE N.M. STATE PLANE WEST ZONE GRID COORDINATES, ELEVATIONS ARE NGVD29 (ADD 3.37 TO REACH NAVD88).
6. REFERENCE THE 1881 G.L.O. TOWNSHIP PLAT OF T15N, R15W, N.M.P.M.

CLYDE J. KING NEW MEXICO 13979 REGISTERED PROFESSIONAL SURVEYOR

SURVEYOR'S CERTIFICATE

I, Clyde J. King, a New Mexico Professional Surveyor do hereby certify that this plat was prepared from a field survey performed by me or under my direct supervision, that I am responsible for this survey, that this survey is true and correct to the best of my knowledge and belief, that this plat and the field survey upon which it is based meet the Minimum Standards for Surveying in New Mexico and that this survey is not a land division or subdivision as defined by the New Mexico Subdivision Act.

Clyde J. King, PS13979 — Date: 9-27-14

MONITORING WELL and BORE SITE SURVEY in Section 33, T15N, R15W, N.M.P.M., Western Refining, Jamestown, McKinley County, New Mexico, U.S.A.

H.E.I. HAMMON ENTERPRISES, INC. PROFESSIONAL LAND SURVEYING SERVICES
P. O. Box 770 Ramah, NM 87321 Tel: (505) 870-6901 HEISurveys@Yahoo.com

140915 MW DATA.DWG DRAWN BY: AH CHECKED BY: CK DATE: 9-27-14

WELL INSTALLATION

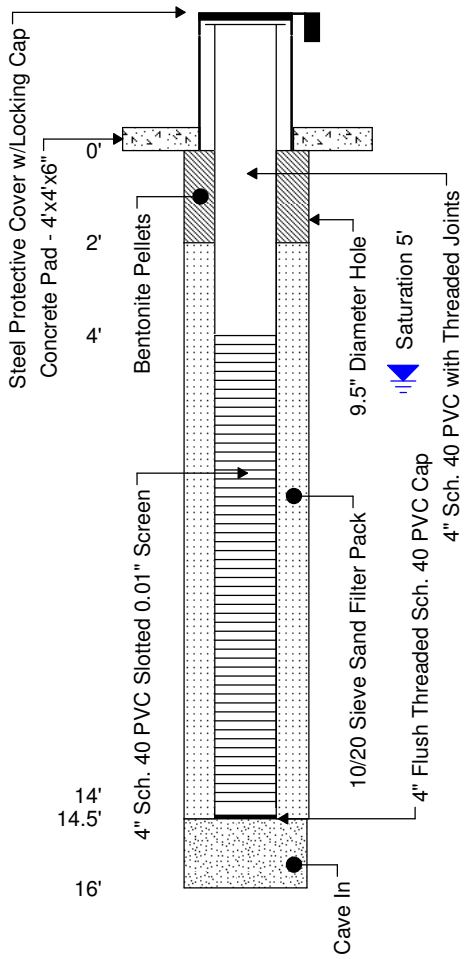
Well No.: MKTF-01
Start Date: 11/14/2013
Finish Date: 11/14/2013

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.346' W 108°25.782'; Boring ID - HA1

Total Depth: 16' bgl
Ground Water: Saturated @ 5' bgl
Elev., TOC (ft. msl): 6920.67
Elev., PAD (ft. msl): 6918.28
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,864.41 **E** 2,545,561.73

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
					Ground Surface
				100	**Silty Clay (CL)** Low plasticity, soft, damp, reddish brown to brown, no odor
		5'		100	**Silty Clay/Clayey Silt (CL/ML)** Low plasticity, very soft, moist to saturated, brown grading to black, gravelly, bio odor, no phase-separated hydrocarbon
					Total Depth = 16' BGL

Completion Results



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Austin, Texas 78746

512/347-7588
512/347-8243

WELL INSTALLATION

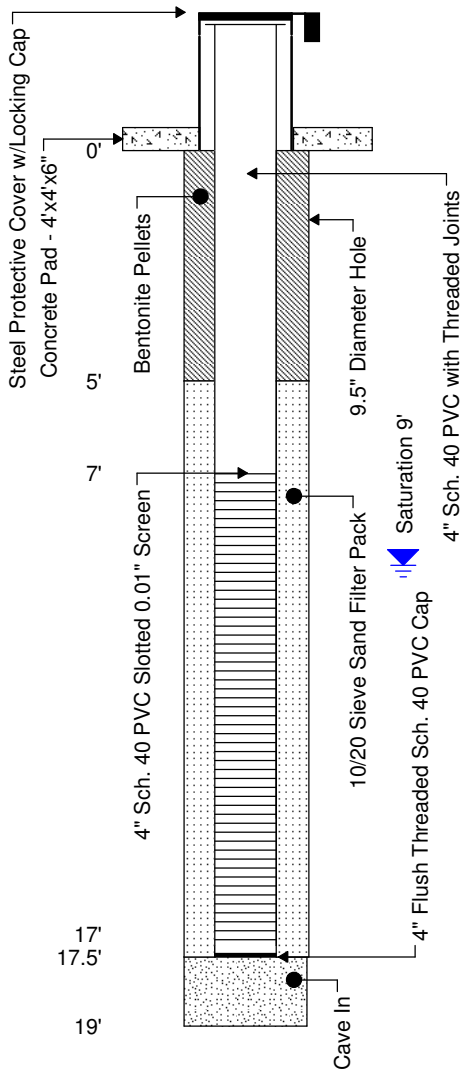
Well No.: MKTF-02
Start Date: 11/14/2013
Finish Date: 11/14/2013

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.360' W 108°25.789'; Boring ID HA3

Total Depth: 19' bgl
Ground Water: Saturated @ 9' bgl
Elev., TOC (ft. msl): 6917.45
Elev., PAD (ft. msl): 6915.00
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,946.93 **E** 2,545,530.46

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
					Ground Surface
1	24.6			100	**Silty Clay (CL)** Low plasticity, firm, damp, brown-reddish brown, no odor
5	20.1			100	**Silty Clay (CL)** Similar to above, odor at 6' bgl with black discoloration
7	400				
9	933, 800	9'		100	**Sandy Clay (CL)** Low plasticity, soft, moist to saturated at 9' bgl, hydrocarbon odor, no phase-separated hydrocarbon
13				100	**Sandy Clay/Clayey Sand (SC/CL)** Fine grain, compact, saturated, dark brown, hydrocarbon odor, no phase-separated hydrocarbon
19					Total Depth = 19' BGL

Completion Results



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Sheet: **1 of 1**

512/347-7588
512/347-8243

WELL INSTALLATION

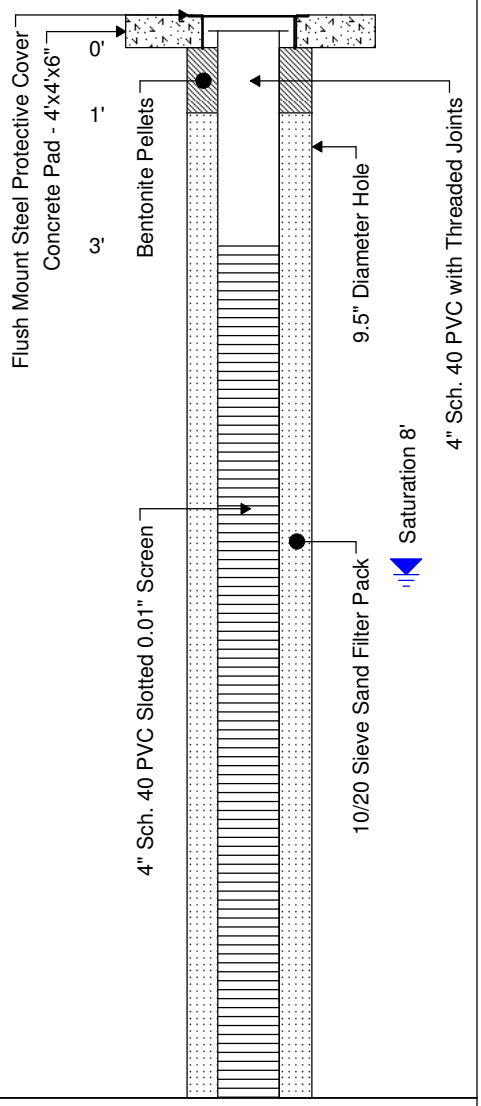
Well No.: MKTF-03
Start Date: 11/7/2013
Finish Date: 11/7/2013

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.328' W108°25.743'; Boring ID - SB01

Total Depth: 19' bgl
Ground Water: Saturated @ 8' bgl
Elev., TOC (ft. msl): 6931.31
Elev., PAD (ft. msl): 6931.73
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,746.53 **E** 2,545,756.87

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-1					Ground Surface
1	164			60	**Fill (Silt/Sand)** Fine grain, loose, dry to damp, brown, no odor
3	423			40	**Silty Clay (CL)** Low plasticity, firm, damp, brown/reddish brown, no odor
5	330			70	**Silty Clay (CL)** Similar to above, no odor
7	75	8'		90	**Silty Clay (CL)** Similar to above, sandy at base from 7.75-8.0' bgl, no odor
9	326			90	**Silty Clay (CL)** Fine grain sand seams throughout, saturated, phase-separated hydrocarbon, hydrocarbon odor, clear phase-separated hydrocarbon poured out of split spoon
11	312			90	**Silty Clay (CL)** Similar to above with sand seams, saturated with phase-separated hydrocarbon, hydrocarbon odor, dark brown
13	368			80	**Gravelly Sand (SW)** Fine to medium to coarse grain, loose, saturated with phase-separated hydrocarbon, black, hydrocarbon odor
15	700			60	**Gravelly Sand (SW)** Similar to above

Completion Results



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Austin, Texas 78746

512/347-7588
512/347-8243

WELL INSTALLATION

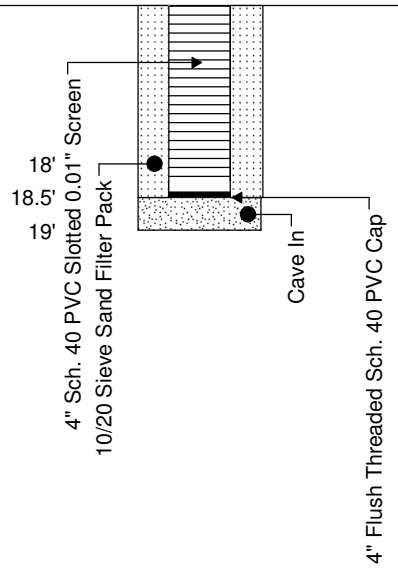
Well No.: MKTF-03
Start Date: 11/7/2013
Finish Date: 11/7/2013

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.328' W108°25.743'; Boring ID - SB01

Total Depth: 19' bgl
Ground Water: Saturated @ 8' bgl
Elev., TOC (ft. msl): 6931.31
Elev., PAD (ft. msl): 6931.73
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,746.53 **E** 2,545,756.87

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
					Silty Sand/Silty Clay (SM/CL) Low plasticity, firm, moist, brown, faint odor, no phase-separated hydrocarbon
17				10	**Silty Clay (CL)** Poor recovery
19	225			80	**Clay (CH)** High plasticity, very dense, damp, light reddish brown, faint odor
					Total Depth = 19' BGL

Completion Results



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Austin, Texas 78746

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512/347-8243

WELL INSTALLATION

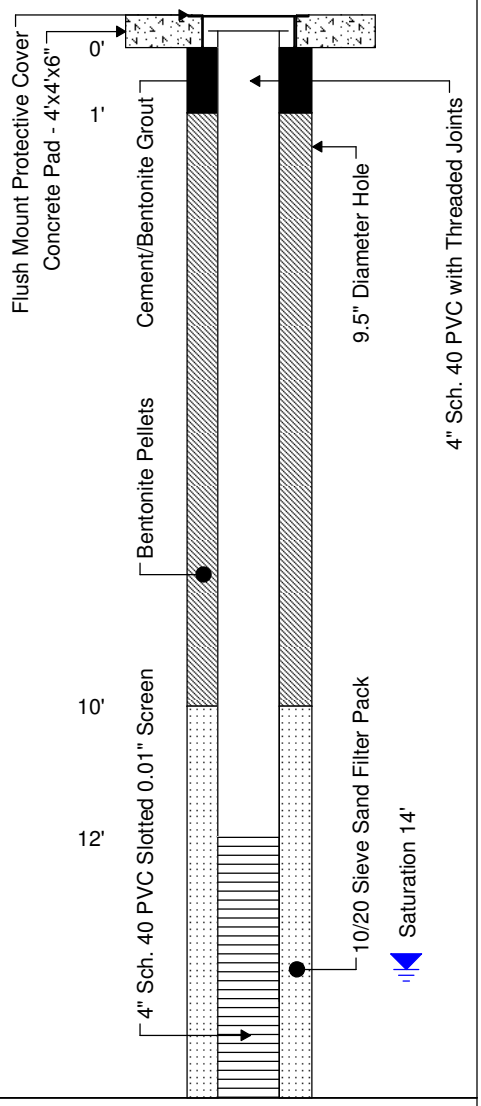
Well No.: MKTF-04
Start Date: 11/12/2013
Finish Date: 11/12/2013

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.310' W 108°25.742'; Boring ID SB03

Total Depth: 24' bgl
Ground Water: Saturated @ 14' bgl
Elev., TOC (ft. msl): 6933.57
Elev., PAD (ft. msl): 6933.90
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,649.46 **E** 2,545,752.83

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-1					Ground Surface
1	10.2			90	**Fill (Silt/Gravel)** Low plasticity, very dense, dry, light brown, no odor
3	11.7			80	**Fill (Silt/Gravel)** Similar to above, black, dense at base, no odor
5	16			90	**Silty Clay (CL)** Low plasticity, stiff, damp, reddish brown, no odor, calcareous
7	26			90	**Gravelly Sandy Clay (CL)** Low plasticity, loose to firm, damp, brown, no odor
9	708			70	**Silty Clay (CL)** Low plasticity, very soft, damp, reddish brown, hydrocarbon odor
11	369			80	**Clay (CH)** High plasticity, firm, damp, reddish brown, hydrocarbon odor
13	660	14'		90	**Sandy Clay/Clayey Sand (SC/CL)** Low plasticity, fine grain, soft, damp, reddish brown, hydrocarbon odor
15	85			90	**Sandy Clay (SC)** Similar to above, saturated sand seams, hydrocarbon odor, brown

Completion Results



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Austin, Texas 78746

512/347-7588
512/347-8243

WELL INSTALLATION

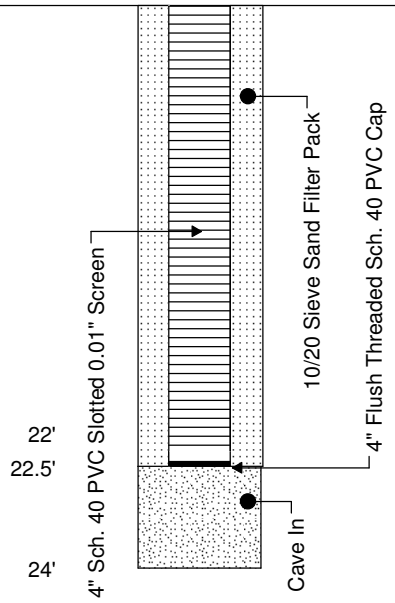
Well No.: MKTF-04
Start Date: 11/12/2013
Finish Date: 11/12/2013

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.310' W 108°25.742'; Boring ID SB03

Total Depth: 24' bgl
Ground Water: Saturated @ 14' bgl
Elev., TOC (ft. msl): 6933.57
Elev., PAD (ft. msl): 6933.90
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,649.46 **E** 2,545,752.83

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
17	64			70	**Sandy Clay (SC)** Similar to above, moist to saturated, hydrocarbon odor, brown
19	33			90	**Sandy Clay (SC)** Low plasticity, fine grain, soft, moist to saturated, light reddish brown, hydrocarbon odor, gravelly at base **Silty Clay (CL)** Low plasticity, stiff, damp, light reddish brown grading to yellowish/greenish gray, becomes more silty at base
21					
23					Total Depth = 24' BGL
25					
27					
29					
31					

Completion Results



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512/347-7588
512/347-8243

WELL INSTALLATION

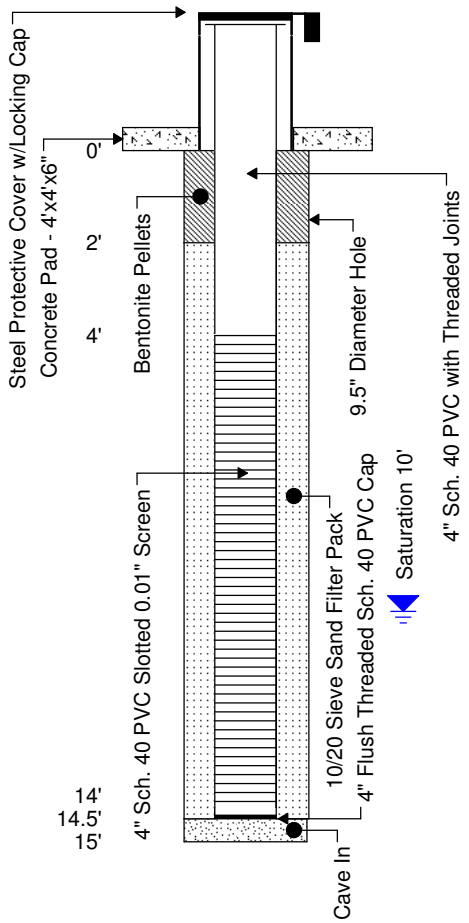
Well No.: MKTF-05
Start Date: 11/12/2013
Finish Date: 11/12/2013

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.282' W 108°25.739'; Boring ID - SB06

Total Depth: 15' bgl
Ground Water: Saturated @ 10' bgl
Elev., TOC (ft. msl): 6942.22
Elev., PAD (ft. msl): 6939.49
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,472.30 **E** 2,545,769.95

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
					Ground Surface
1	52.6			60	**Fill (Silty Clay/Gravel)** Low plasticity, firm, damp, brown, faint odor
3	180			100	**Silty Clay (CL)** Low plasticity, firm, damp, reddish brown, odor, calcareous
5	224			90	**Sandy Clay/Clayey Sand (CL/SC)** Low plasticity, fine grain, damp, dark brown, hydrocarbon odor, sand seams present
7	1202			90	**Sandy Clay/Clayey Sand (CL)** Similar to above
9	1228	10'		90	**Sandy Silty Clay (CL)** Low plasticity, soft, damp, dark brown, hydrocarbon odor
11	1525			90	**Sandy Clay (CL)** Similar to above, with moist to saturated sand seams, hydrocarbon odor
13	377			90	**Clayey Sand (SC)** Fine grain, loose to compact, saturated, hydrocarbon odor, dark brown
15					**Sandy Clay (CL)** Low plasticity, soft to firm, moist, dark brown, hydrocarbon odor
					Total Depth = 15' BGL

Completion Results



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512/347-8243

WELL INSTALLATION

Well No.: MKTF-06
Start Date: 11/11/2013
Finish Date: 11/11/2013

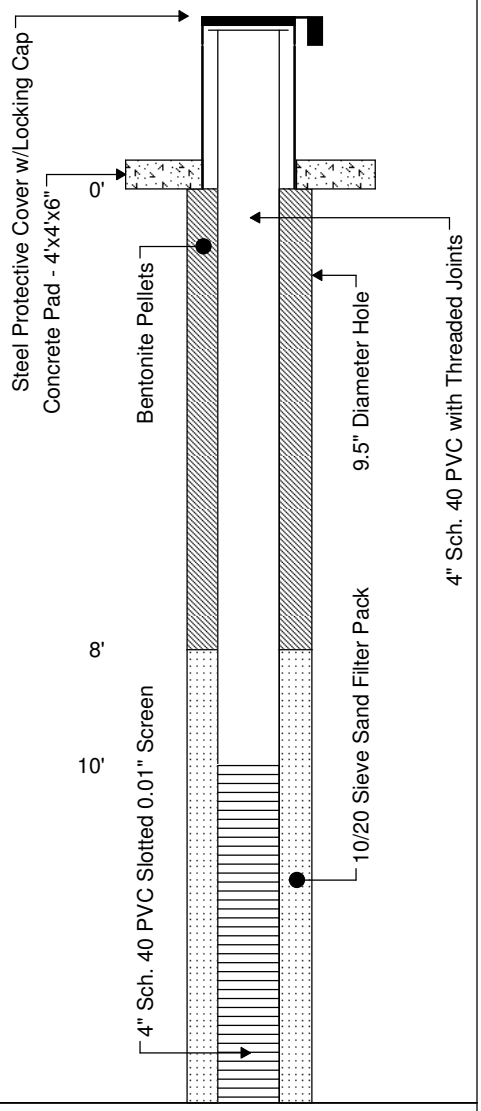
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon

Total Depth: 21' bgl
Ground Water: Saturated @ 17.5' bgl
Elev., TOC (ft. msl): 6946.81
Elev., PAD (ft. msl): 6944.24
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,556.28 **E** 2,545,811.85

Comments: N 35°29.295' W 108°25.732'; Boring ID - SB08

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
					Ground Surface
1	15.9			70	**Fill (Silt/Silty Clay)** Low plasticity, stiff, dry, light brown, no odor
3	228			60	**Fill (Silty Clay/Gravel)** Similar to above, dry, no odor
5	177			60	**Fill (Silty Clay)** Similar to above, damp, no odor
7	264			40	**Fill (Silty Clay)** Low plasticity, soft, damp, brown, gravel and wood debris
9				--	No recovery
11	90			10	**Fill (Silty Clay/Gravel)** Similar to above
13	660			100	**Sandy Silty Clay (CL)** Low plasticity, soft, damp to moist at base, brown, hydrocarbon odor
15					

Completion Results



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1250 S. Capital of Texas Hwy., Bldg. 3, Suite 200
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512/347-8243

WELL INSTALLATION

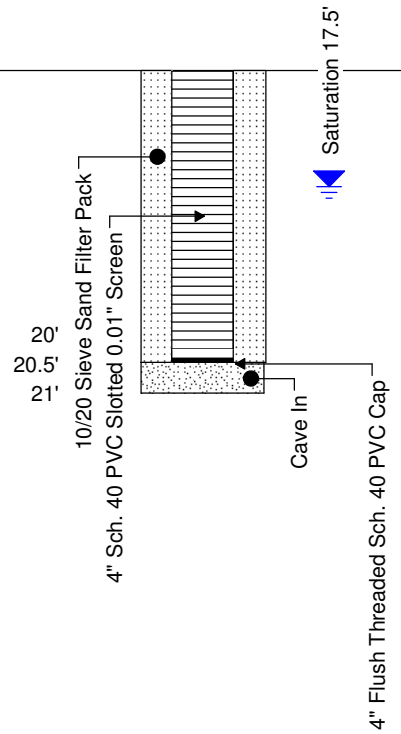
Well No.: MKTF-06
Start Date: 11/11/2013
Finish Date: 11/11/2013

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.295' W 108°25.732'; Boring ID - SB08

Total Depth: 21' bgl
Ground Water: Saturated @ 17.5' bgl
Elev., TOC (ft. msl): 6946.81
Elev., PAD (ft. msl): 6944.24
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,556.28 **E** 2,545,811.85

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
	1115	17.5'		100	**Sandy Silty Clay (CL)** Similar to above, moist, oily, hydrocarbon odor
17				100	**Gravelly Sandy Clay (CL)** Low plasticity, firm, moist, oily, 1" gravel, strong hydrocarbon odor
19	225			100	**Clayey Gravel Sand (SC)** Fine to medium grain, loose, saturated, phase-separated hydrocarbon present, black, hydrocarbon odor
21					**Sandy Clay (CL)** Low plasticity, firm, moist, black hydrocarbon odor
23					Total Depth = 21' BGL
25					
27					
29					
31					
33					

Completion Results



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512/347-8243

WELL INSTALLATION

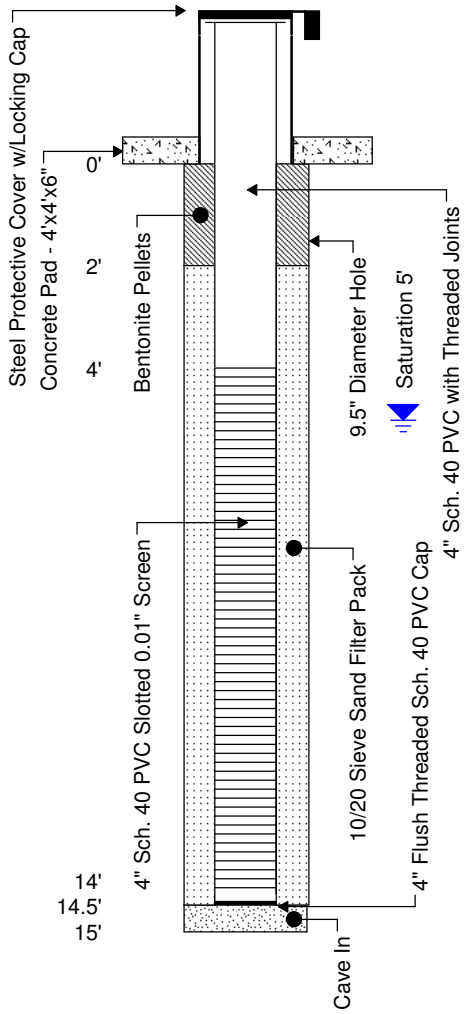
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.295' W 108°25.710'; Boring ID - SB10

Total Depth: 15' bgl
Ground Water: Saturated @ 5' bgl
Elev., TOC (ft. msl): 6947.18
Elev., PAD (ft. msl): 6944.40
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,555.11 **E** 2,545,885.42

Well No.: MKTF-07
Start Date: 11/11/2013
Finish Date: 11/11/2013

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
					Ground Surface
1	132			90	**Fill (Silty Clay)** Low plasticity, firm, dry to damp, brown, faint odor
3	235			90	**Fill (Clay/Sand/Gravel)** Damp, hydrocarbon odor
5	1202	5'		50	**Fill (Clay/Caliche Rock)** Odor
7	372			90	**Silty Sand (SM)** Fine grain, loose, saturated, phase-separated hydrocarbon, oily, brown to dark brown, hydrocarbon odor
					Silty Sand (SM) Similar to above, saturated
					Silty Clay (CL) Low plasticity, firm, damp, brown, hydrocarbon odor
11				--	No recovery
15					Total Depth = 15' BGL

Completion Results



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WELL INSTALLATION

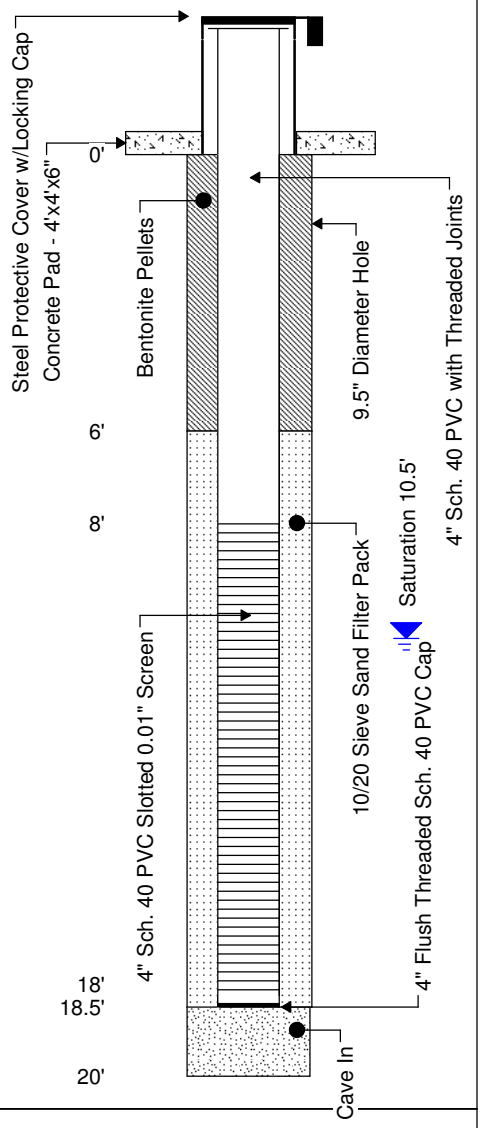
Well No.: MKTF-08
Start Date: 11/11/2013
Finish Date: 11/11/2013

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.302' W 108°25.716'; Boring ID - SB11

Total Depth: 20' bgl
Ground Water: Saturated @ 10.5' bgl
Elev., TOC (ft. msl): 6947.09
Elev., PAD (ft. msl): 6944.02
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,598.94 **E** 2,545,885.02

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-3					
-1					Ground Surface
1	85			90	**Fill (Silty Clay/Gravel)** Low plasticity, firm, dry to damp, odor
3	273			80	**Fill (Silty Clay/Gravel)** Similar to above
5	86			90	**Clay (CH)** High plasticity, stiff, damp, brown with light brown pockets of silt, odor
7	308			90	**Silty Clay (CL)** Low plasticity, soft/crumbly, dry to damp, brown, hydrocarbon odor
9	1126			80	**Silty Clay (CL)** Low plasticity, soft, damp, brown, hydrocarbon odor
11	789	10.5'		80	**Silty Clay (CL)** Similar to above, moist
13	558			90	**Silty Clay (CL)** Medium grain, loose, saturated, phase-separated hydrocarbon, hydrocarbon odor, brown
					Sandy Silty Clay (CL) Low plasticity, soft to firm, moist, hydrocarbon odor
15					**Sandy Clay (CL)** Low plasticity, soft to compact, saturated, phase-separated hydrocarbon, hydrocarbon odor
17					
19					
					Total Depth = 20' BGL

Completion Results



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WELL INSTALLATION

Well No.: MKTF-09
Start Date: 11/11/2013
Finish Date: 11/11/2013

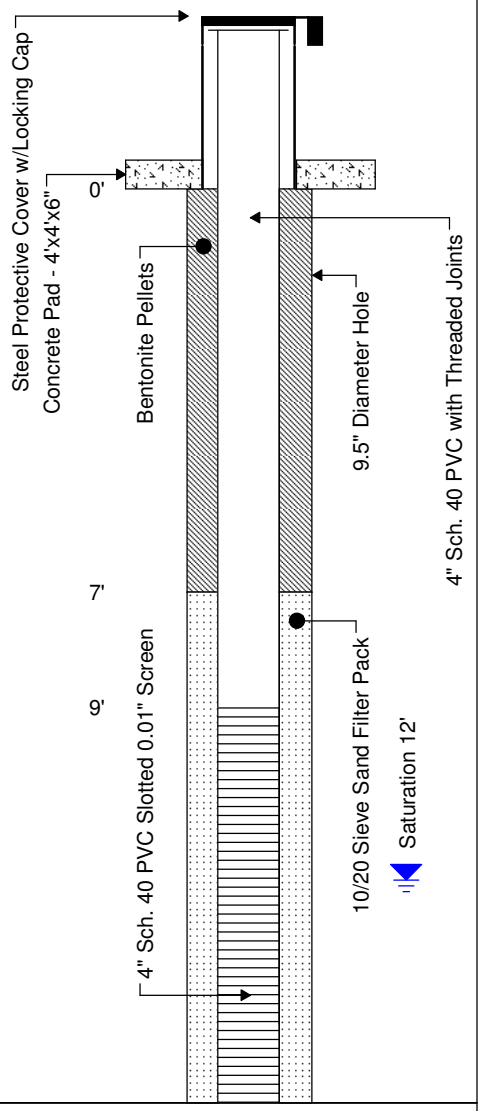
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon

Total Depth: 22' bgl
Ground Water: Saturated @ 12' bgl
Elev., TOC (ft. msl): 6946.50
Elev., PAD (ft. msl): 6943.57
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,681.33 **E** 2,545,895.93

Comments: N 35°29.316' W 108°25.715'; Boring ID - SB13

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-3					
-1					Ground Surface
1	21.9			90	**Fill (Silty Clay)** Low plasticity, stiff, dry to damp, no odor, brown
3	32.7			90	**Fill (Silty Clay)** Similar to above, gravel
5	36.1			90	**Silty Clay (CL)** Low plasticity, soft, damp, brown, faint odor
7	37			90	**Silty Clay (CL)** Similar to above
9	533			90	**Silty Clay (CL)** Similar to above **Sandy Clay (CL)** Similar to above, increase in sand and moisture
11	314	12'		90	**Sandy Clay (CL)** Similar to above, moist, hydrocarbon odor, dark brown
13	651			90	**Sandy Clay/Clayey Sand (CL/SC)** Fine to medium grain, compact, moist to saturated, hydrocarbon odor
15	587				**Sandy Clay/Clayey Sand (CL/SC)** Similar to above, saturated, sheen observed on split spoon, black, hydrocarbon odor

Completion Results



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512/347-7588
512/347-8243

WELL INSTALLATION

Well No.: MKTF-09
Start Date: 11/11/2013
Finish Date: 11/11/2013

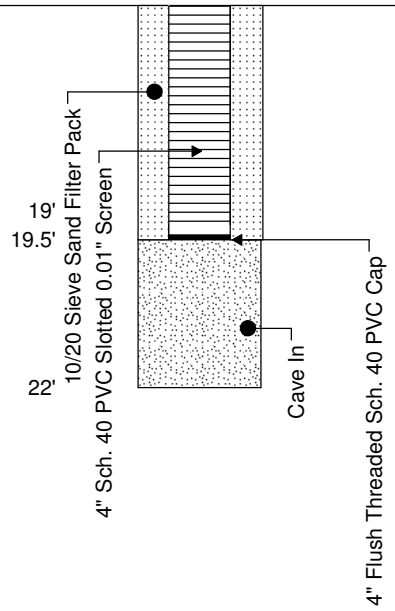
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon

Total Depth: 22' bgl
Ground Water: Saturated @ 12' bgl
Elev., TOC (ft. msl): 6946.50
Elev., PAD (ft. msl): 6943.57
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,681.33 **E** 2,545,895.93

Comments: N 35°29.316' W 108°25.715'; Boring ID - SB13

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
17, 19, 21, 23, 25, 27, 29, 31, 33				90	**Sandy Clay/Clayey Sand (CL/SC)** Fine to medium grain, compact, saturated, sheen observed on split spoon, black, hydrocarbon odor
					Total Depth = 22' BGL

Completion Results



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512/347-8243

WELL INSTALLATION

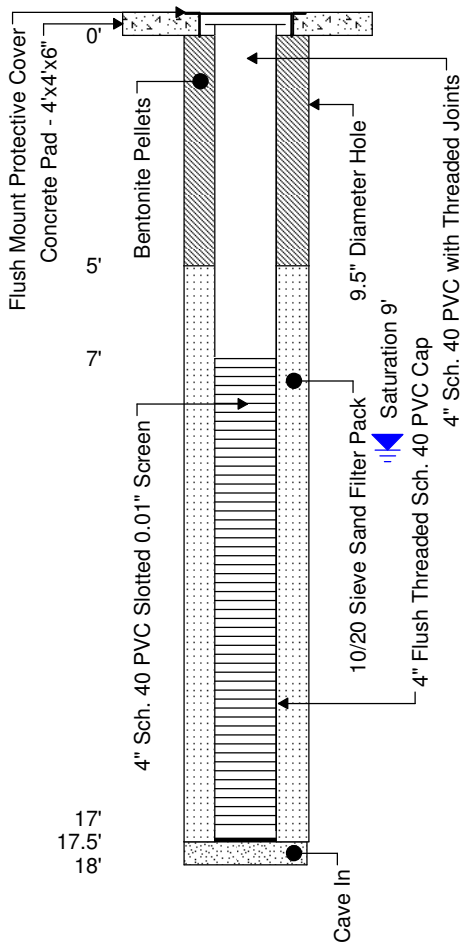
Well No.: MKTF-10
Start Date: 10/31/2013
Finish Date: 10/31/2013

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.336' W 108°25.724'; Boring ID SB16

Total Depth: 18' bgl
Ground Water: Saturated @ 9' bgl
Elev., TOC (ft. msl): 6937.16
Elev., PAD (ft. msl): 6937.51
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,807.47 **E** 2,545,853.54

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
					Ground Surface
1	90			90	**Fill (Silt/Gravel)** Low plasticity, loose, dry, light brown
3	14			90	**Fill (Silty Clay/Gravel)** Similar to above
5	431			90	**Silty Clay (CL)** Low plasticity, stiff, dry, reddish brown, odor, calcareous
7	448			60	**Sand (SP)** Fine grain, loose, dry, reddish brown, odor
9	654	9'		60	**Sand (SP)** Similar to above, saturated at 9' bgl, phase-separated hydrocarbon, hydrocarbon odor
11	1559			90	**Clayey Sand (SC)** Fine grain, soft, saturated, phase-separated hydrocarbon, brown to black, hydrocarbon odor
13	713			90	**Clayey Sand/Sandy Clay (SC/CL)** Low plasticity, firm to stiff, moist to saturated, hydrocarbon odor, dark brown
					Total Depth = 18' BGL

Completion Results



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WELL INSTALLATION

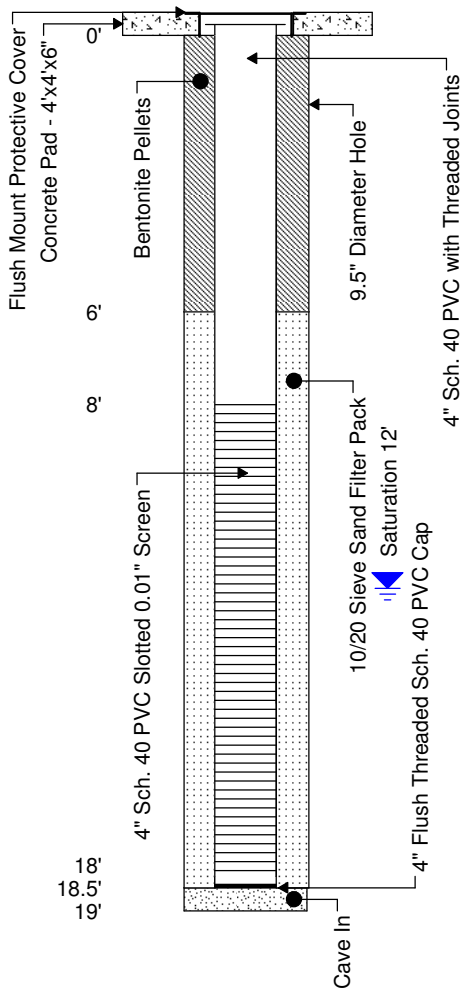
Well No.: MKTF-11
Start Date: 10/31/2013
Finish Date: 10/31/2013

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.336' W 108°25.739'; Boring ID - SB17

Total Depth: 19' bgl
Ground Water: Saturated @ 12' bgl
Elev., TOC (ft. msl): 6931.34
Elev., PAD (ft. msl): 6931.61
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,806.93 **E** 2,545,754.77

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-1					Ground Surface
1	14			60	**Fill (Silty Clay/Gravel)** Low plasticity, stiff, dry, light brown
3	36			70	**Fill (Silty Clay)** Similar to above
5	80			90	**Silty Clay (CL)** Low plasticity, firm, damp, brown, calcareous
7	125			80	**Silty Clay (CL)** Similar to above
9	1259			80	**Silty Clay (CL)** Low plasticity, firm, damp, oily, hydrocarbon odor, dark brown
11	860	12'		70	**Silty Clay (CL)** Similar to above, moist, hydrocarbon odor, oily, phase-separated hydrocarbon
13	1716			60	**Sandy Clay (CL)** Low plasticity, soft, moist to saturated, hydrocarbon odor, dark brown
15	1050			70	**Silty Sand (SM)** Medium grain, loose, saturated, hydrocarbon odor, dark brown to black
17					**Sandy/Silty Clay (CL)** Low plasticity, firm, saturated, dark brown to black, hydrocarbon odor
19					Total Depth = 19' BGL
21					

Completion Results



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Austin, Texas 78746

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512/347-8243

WELL INSTALLATION

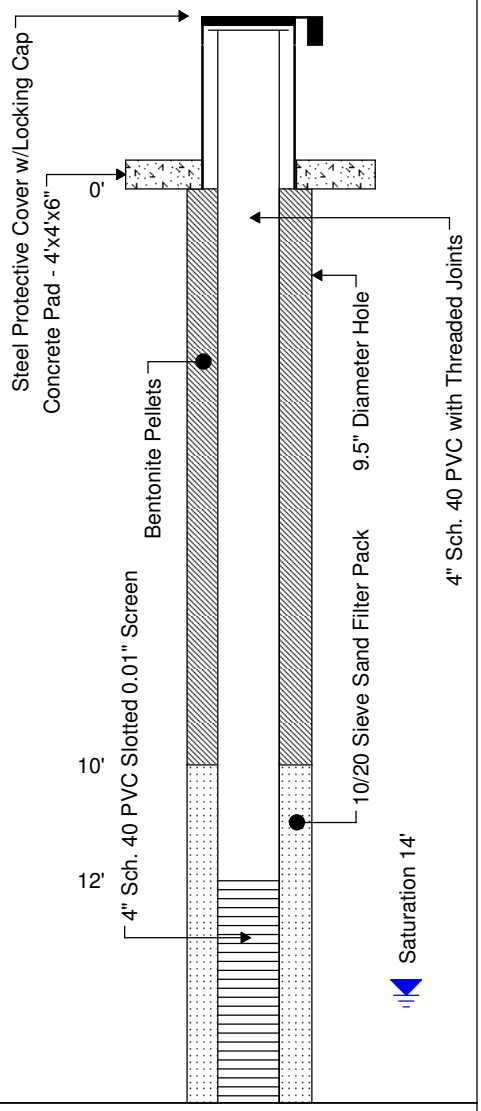
Well No.: MKTF-12
Start Date: 11/7/2013
Finish Date: 11/7/2013

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.294' W 108°25.754'; Boring ID - SB19

Total Depth: 23' bgl
Ground Water: Saturated @ 14' bgl
Elev., TOC (ft. msl): 6942.11
Elev., PAD (ft. msl): 6939.70
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,542.07 **E** 2,545,688.29

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-3					
-1					Ground Surface
1	8.7			90	**Silt/Gravel (ML)** Low plasticity, soft, dry/damp, no odor, brown
3	54			80	**Silt/Gravel (ML)** Similar to above
5	7			70	**Gravel/Silt (GW)** 1/2 to 1" gravel, loose, compact, dry, no odor
7	7.5			70	**Clayey Sandy Silt (ML)** Very fine grain, compact, dry to damp, brown, no odor
9	5.5			60	**Sandy Clay (CL)** Low plasticity, firm, damp, light brown, no odor
11	5.8			70	**Sandy Clay (CL)** Similar to above, brown, no odor
13	10	14'		70	**Sandy Clay (CL)** Similar to above
					Silty Sand (SM) Fine to medium grain, loose, damp, brown, no odor
15	225			50	**Sandy Clay (CL)** Low plasticity, firm, moist to saturated in sand seams, hydrocarbon odor, dark brown

Completion Results



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512/347-7588
512/347-8243

WELL INSTALLATION

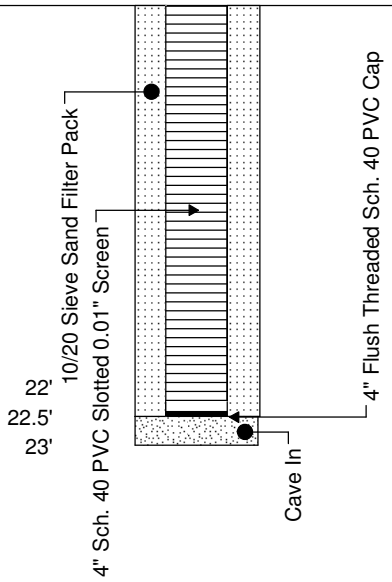
Well No.: MKTF-12
Start Date: 11/7/2013
Finish Date: 11/7/2013

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.294' W 108°25.754'; Boring ID - SB19

Total Depth: 23' bgl
Ground Water: Saturated @ 14' bgl
Elev., TOC (ft. msl): 6942.11
Elev., PAD (ft. msl): 6939.70
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,542.07 **E** 2,545,688.29

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
17	319			70	**Sandy Clay (CL)** Similar to above, moist, hydrocarbon odor
19	400			--	**Sandy Clay (CL)** Similar to above, moist, hydrocarbon odor
21	532			--	**Sandy Clay/Clayey Sand (CL)** Very fine grain, compact, moist to saturated, sheen observed in split spoon, hydrocarbon odor
23					Total Depth = 23' BGL
25					
27					
29					
31					
33					

Completion Results



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512/347-8243

WELL INSTALLATION

Well No.: MKTF-13
Start Date: 11/12/2013
Finish Date: 11/12/2013

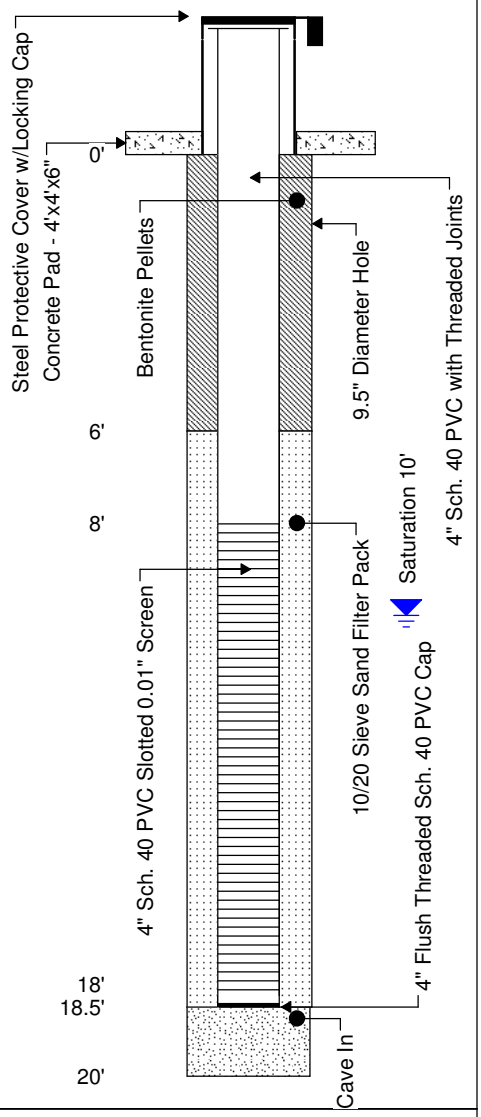
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon

Total Depth: 20' bgl
Ground Water: Saturated @ 10' bgl
Elev., TOC (ft. msl): 6935.18
Elev., PAD (ft. msl): 6933.67
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,625.25 **E** 2,545,697.39

Comments: N 35°29.307' W 108°25.755'; Boring ID - SB20

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
					Ground Surface
1	8			90	**Silt (ML)** Low plasticity, soft, damp, brown, no odor
3	12.7			90	**Silt (ML)** Similar to above, trace gravel
5	13			80	**Sandy Clay (CL)** Low plasticity, stiff, dry, brown, calcareous
7	17			90	**Silty Sand/Sandy Silt (SM/ML)** Very fine grain, loose to compact, dry, calcareous, brown
9	59	10'		90	**Sandy Silt (ML)** Similar to above, no odor
11	1165			90	**Sandy Clay/Clayey Sand (SC/CL)** Medium grain, compact, moist to saturated, hydrocarbon odor, brown
13	1200			90	**Clayey Sand (SC)** Similar to above, saturated, hydrocarbon odor
					Total Depth = 20' BGL

Completion Results



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512/347-7588
512/347-8243

WELL INSTALLATION

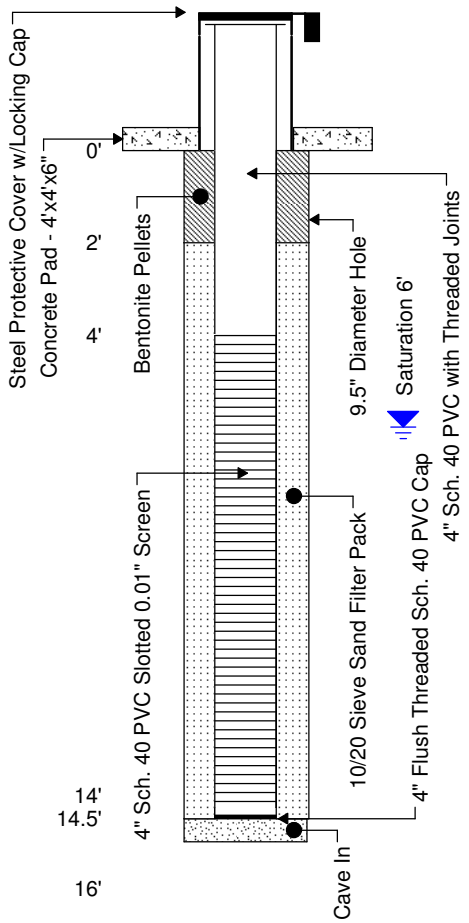
Well No.: MKTF-14
Start Date: 11/12/2013
Finish Date: 11/12/2013

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.323' W 108°25.769'; Boring ID SB22

Total Depth: 15' bgl
Ground Water: Saturated @ 6' bgl
Elev., TOC (ft. msl): 6928.02
Elev., PAD (ft. msl): 6925.65
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,719.43 **E** 2,545,625.96

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-3					
-1					Ground Surface
1	18			20	**Silty Clay (CL)** Low plasticity, soft, damp, brown
3	308			90	**Silty Clay (CL)** Similar to above, odor
5	793	6'		90	**Sandy Clay (CL)** Low plasticity, firm, moist, oily, brown, trace gravel
7	504			90	**Clayey Sand (SC)** Medium grain, loose to compact, saturated, phase-separated hydrocarbon, hydrocarbon odor, black
9	760			90	**Clayey Sand (SC)** Similar to above
11					
13					
15					Total Depth = 15' BGL
17					
19					

Completion Results



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Sheet: **1 of 1**

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512/347-8243

WELL INSTALLATION

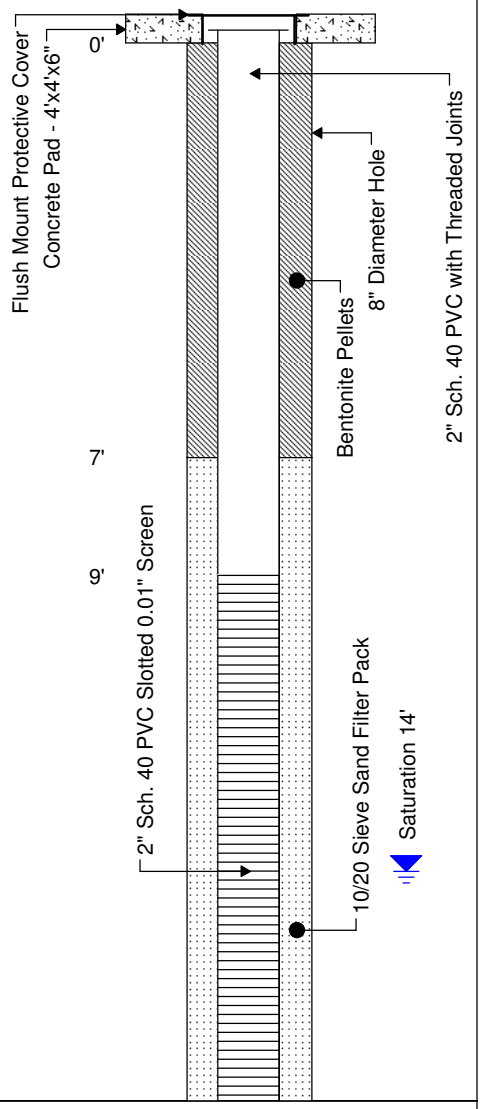
Well No.: MKTF-15
Start Date: 10/29/2013 09:30
Finish Date: 10/29/2013 12:15

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Five-Foot Core Barrel
Comments: N 35°29.343' W 108°25.708'; Boring ID - SB31

Total Depth: 22' bgl
Ground Water: Saturated @ 14' bgl
Elev., TOC (ft. msl): 6943.48
Elev., PAD (ft. msl): 6943.74
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,845.57 **E** 2,545,934.58

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-1					Ground Surface
1	6.7			0	**Fill (Clay and Gravel)** No recovery
3	14.6			90	**Fill (Clay and Gravel)** Reddish brown
5				90	**Fill (Clay and Gravel)** Similar to above, no odor
7	823			90	**Fill (Silty Clay)** Reddish brown, hydrocarbon odor
9	1004			90	**Silty Sandy Clay (CL)** Low plasticity, firm to soft, damp, reddish brown, hydrocarbon odor
11	293			70	**Silty Sand (SM)** Fine grain, compact, damp, light reddish brown, no odor
13	221	14'		80	**Sand (SP)** Similar to above, odor, moist to very moist
15				80	**Sand (SP)** Fine to medium grain, loose, saturated, brown, hydrocarbon odor, phase-separated hydrocarbon present
17				60	**Sandy Silt (ML)** Low plasticity, very soft, damp to moist, brown, hydrocarbon odor

Completion Results



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1250 S. Capital of Texas Hwy., Bldg. 3, Suite 200
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512/347-8243

WELL INSTALLATION

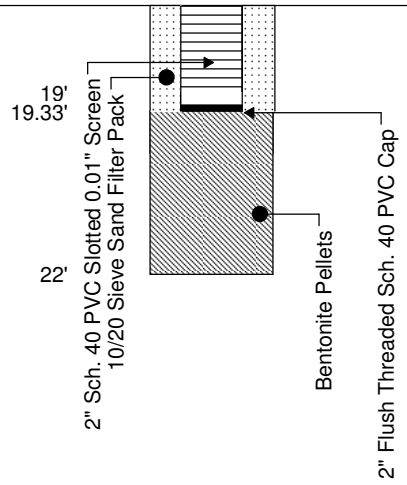
Well No.: MKTF-15
Start Date: 10/29/2013 09:30
Finish Date: 10/29/2013 12:15

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Five-Foot Core Barrel
Comments: N 35°29.343' W 108°25.708'; Boring ID - SB31

Total Depth: 22' bgl
Ground Water: Saturated @ 14' bgl
Elev., TOC (ft. msl): 6943.48
Elev., PAD (ft. msl): 6943.74
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,845.57 **E** 2,545,934.58

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
					Sandy Silt/Silty Sand (ML/SM) Fine grain, loose to compact, moist to saturated, hydrocarbon odor, dark brown to black
19				90	**Sandy Silt/Silty Sand (ML/SM)** Similar to above, saturated in silty sand lenses, hydrocarbon odor
21				90	**Silty Clay (CL)** Low plasticity, firm, damp, brown, faint odor
					Silty Clay (CL) Similar to above, odor
23					Total Depth = 22' BGL
25					
27					
29					
31					
33					
35					

Completion Results



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WELL INSTALLATION

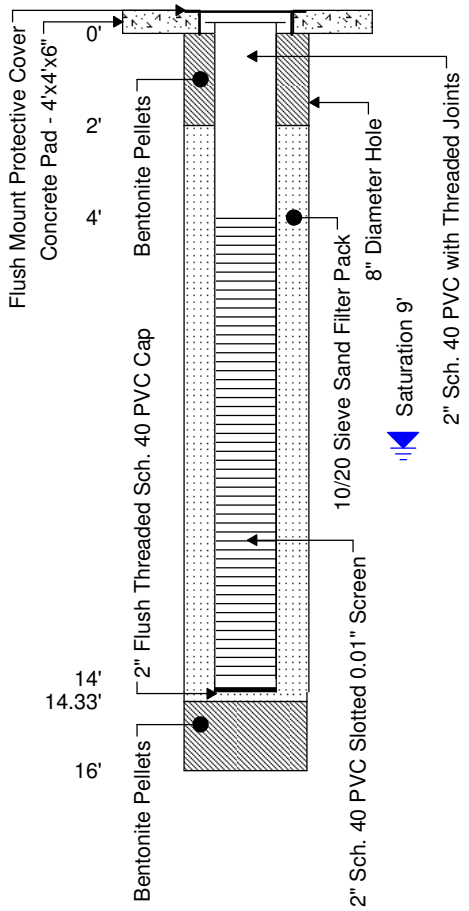
Well No.: MKTF-16
Start Date: 11/7/2013 08:40
Finish Date: 11/7/2013 11:00

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.323' W 108°25.680'; Boring ID - SB32

Total Depth: 16' bgl
Ground Water: Saturated @ 9' bgl
Elev., TOC (ft. msl): 6950.58
Elev., PAD (ft. msl): 6951.00
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,718.14 **E** 2,546,068.55

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
					Ground Surface
1				0	**Fill (Clay/Gravel)** No recovery
3	469			10	**Fill (Clay/Gravel)** Similar to above
5				0	**Fill (Clay/Gravel)** Similar to baove
7				0	**Fill (Clay/Gravel)** Similar to above
9	1445	9'		90	**Fill (Clay/Gravel)** Saturated at 9' bgl, black discoloration, hydrocarbon odor
11	1255			90	**Gravelly Sand (SW)** High plasticity, firm, damp, dark brown, hydrocarbon odor
13	1412			40	**Clayey Sand (SC)** Similar to above, hydrocarbon odor
15	439			80	**Clayey Sand (SC)** Moderate plasticity, firm, damp, brown, hydrocarbon odor
					Total Depth = 16' BGL

Completion Results



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512/347-8243

WELL INSTALLATION

Well No.: MKTF-17
Start Date: 11/14/2013 13:00
Finish Date: 11/14/2013 15:00

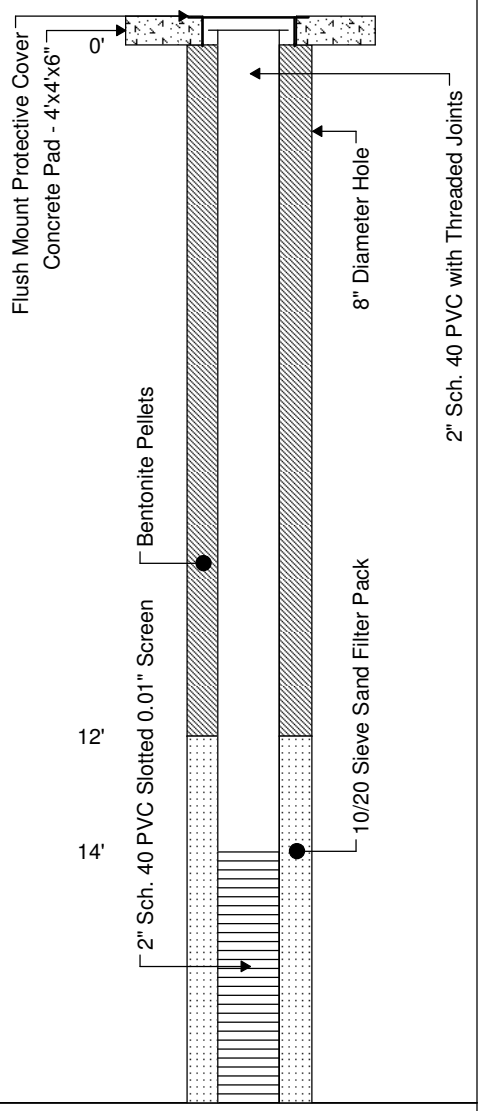
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon

Total Depth: 25' bgl
Ground Water: Saturated @ 20' bgl
Elev., TOC (ft. msl): 6945.76
Elev., PAD (ft. msl): 6945.79
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,268.93 **E** 2,545,850.73

Comments: N 35°29.248' W 108°25.724'; Boring ID - SB33

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-1					Ground Surface
1				10	**Fill (Asphalt/Base/Clay)** Low plasticity, soft, damp, brown
3	150			10	**Fill (Clay)** Similar to above
5	157			90	**Fill (Sand/Gravel/Clay)** Moist to very moist, reddish brown, no odor
7	92.1			20	**Fill (Sand/Gravel/Clay)** Similar to above, saturated, odor
9	65.9			90	**Clay (CH)** High plasticity, firm, damp, faint odor, brown
11	17			60	**Clay (CH)** Similar to above
13	55			70	**Clay (CH)** High plasticity, soft, damp, dark brown and black, odor
15	17.5			60	**Clay (CH)** Similar to above, faint odor
17	11.3			10	**Clay (CH)** Similar to above, trace fine grain sand

Completion Results



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512/347-8243

WELL INSTALLATION

Well No.: MKTF-17
Start Date: 11/14/2013 13:00
Finish Date: 11/14/2013 15:00

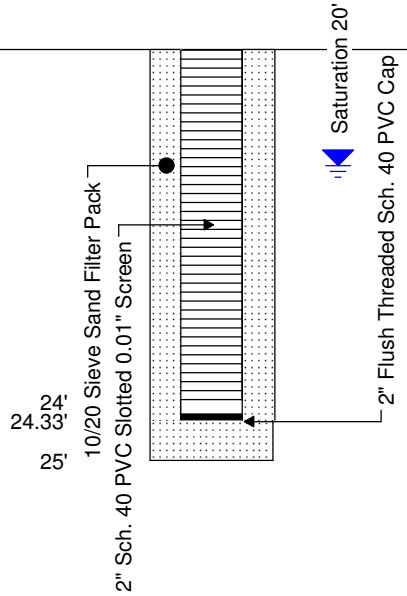
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon

Total Depth: 25' bgl
Ground Water: Saturated @ 20' bgl
Elev., TOC (ft. msl): 6945.76
Elev., PAD (ft. msl): 6945.79
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,268.93 **E** 2,545,850.73

Comments: N 35°29.248' W 108°25.724'; Boring ID - SB33

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
	17.2	20'		10	**Clay (CH)** High plasticity, soft, damp, brown
20	17.5			70	**Sandy Clay (CH)** Moderate plasticity, soft, very moist to saturated in sand seams
22				80	**Silty Clayey Gravel (GM)** Compact to loose, medium grain sand to 1/4" gravel - angular, saturated, brown
24				90	**Clay (CH)** Moderate plasticity, firm to stiff, damp, greenish gray
26					Total Depth = 25' BGL
28					
30					
32					
34					
36					

Completion Results



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WELL INSTALLATION

Well No.: MKTF-18
Start Date: 11/15/2013 10:00
Finish Date: 11/15/2013 15:00

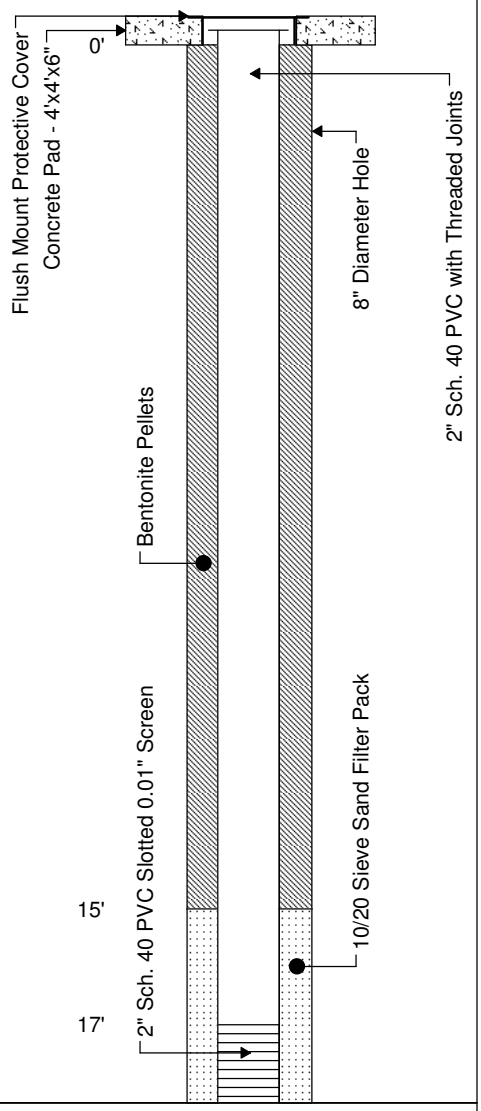
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon

Total Depth: 27' bgl
Ground Water: Saturated @ 23' bgl
Elev., TOC (ft. msl): 6950.65
Elev., PAD (ft. msl): 6950.97
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,497.53 **E** 2,546,006.29

Comments: N 35°29.288' W 108°25.692'; Boring ID - SB34

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-1					Ground Surface
1				--	**Fill (Gravel and Silty Clay)**
3	1009			20	**Fill (Gravel and Silty Clay)** Similar to above, strong hydrocarbon odor, damp
5	693			60	**Fill (Gravel and Silty Clay)** Similar to above
7	1108			70	**Fill (Silty Clay)** Low plasticity, firm, damp, brown, gravel present, strong hydrocarbon odor
9	901			90	**Fill (Clay/Sand/Gravel)** Similar to above, saturated, odor, sheen observed
11	803			60	**Clay (CH)** High plasticity, stiff, damp, brown, hydrocarbon odor
13	254			70	**Clay (CH)** Similar to above, very fine grain, sand in partings
15	200			30	**Clay (CH)** Similar to above
17				--	No recovery

Completion Results



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1250 S. Capital of Texas Hwy., Bldg. 3, Suite 200
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512/347-8243

WELL INSTALLATION

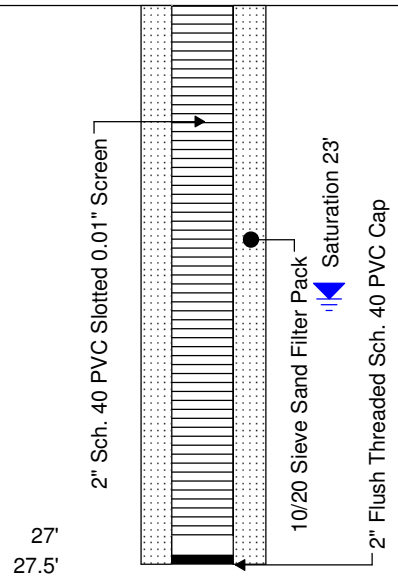
Well No.: MKTF-18
Start Date: 11/15/2013 10:00
Finish Date: 11/15/2013 15:00

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.288' W 108°25.692'; Boring ID - SB34

Total Depth: 27' bgl
Ground Water: Saturated @ 23' bgl
Elev., TOC (ft. msl): 6950.65
Elev., PAD (ft. msl): 6950.97
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,497.53 **E** 2,546,006.29

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
	112			30	**Clay (CH)** High plasticity, firm, damp, brown, faint odor
20	55			20	**Clay (CH)** Similar to above
22	323	23'		80	**Clay (CH)** Similar to above
					Sandy Clay/Clayey Sand (SC/CL) Fine grain, compact, very moist to saturated, brown, hydrocarbon present
24				90	**Clayey Sand (SC)** Similar to above, saturated
26					**Sandy Clay (CL)** Low plasticity, firm, damp, hydrocarbon odor, greenish gray
					Total Depth = 27' BGL
28					
30					
32					
34					
36					

Completion Results



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512/347-8243

WELL INSTALLATION

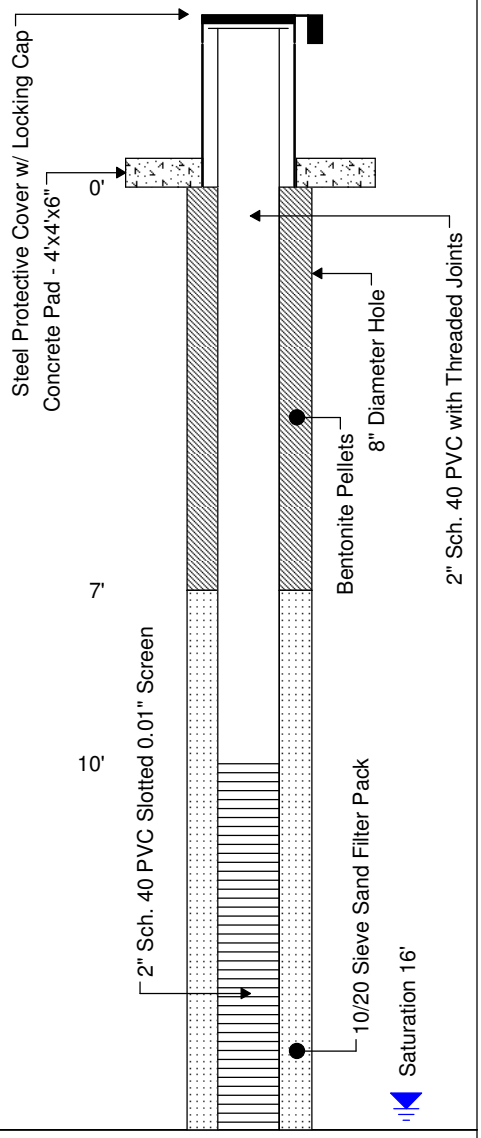
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Five-Foot Core Barrel
Comments: N 35°29.268' W 108°25.726'; Boring ID - SB35

Total Depth: 20' bgl
Ground Water: Saturated @ 16' bgl
Elev., TOC (ft. msl): --
Elev., PAD (ft. msl): --
Elev., GL (ft. msl): --
Site Coordinates:
N **W**

Well No.: MKTF-19
Start Date: 11/5/2013 08:50
Finish Date: 11/5/2013 11:20

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-3					
-1					Ground Surface
1				--	**Fill (Asphate/Base/Clay)** Odor
3	1178			50	**Fill (Silty Clay/Sandy Gravel)** Brown, strong hydrocarbon odor
5	1232			90	**Fill (Silty Clay/Sandy Gravel)** Similar to above, gray discoloration, strong hydrocarbon odor
7	120			80	**Clay (CH)** High plasticity, stiff, damp, brown, odor, calcareous, sampling tube is oily
9	375			70	**Clay (CH)** Similar to above, odor, oily
11	601			70	**Silty Sandy Clay (CL)** Moderate plasticity, firm, damp, brown, hydrocarbon odor, sampling tube is oily
13	1279			70	**Sandy Clay (CL)** Low plasticity, soft, damp to moist in sand seams, brown, strong hydrocarbon odor
15	249	16'		90	**Sandy Clay (CL)** Similar to above, hydrocarbon odor, tube is oily

Completion Results



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512/347-8243

WELL INSTALLATION

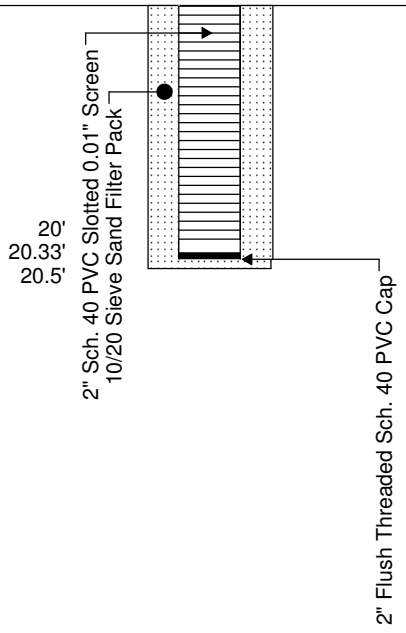
Well No.: MKTF-19
Start Date: 11/5/2013 08:50
Finish Date: 11/5/2013 11:20

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Five-Foot Core Barrel
Comments: N 35°29.268' W 108°25.726'; Boring ID - SB35

Total Depth: 20' bgl
Ground Water: Saturated @ 16' bgl
Elev., TOC (ft. msl): --
Elev., PAD (ft. msl): --
Elev., GL (ft. msl): --
Site Coordinates:
N **W**

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
				90	**Silty Sand (SM)** Fine grain, loose, saturated, oily/phase-separated hydrocarbon, hydrocarbon odor, clay at base
18				90	**Silty Sand (SM)** Similar to above
20					Total Depth = 20' BGL
22					
24					
26					
28					
30					
32					
34					

Completion Results



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512/347-7588
512/347-8243

WELL INSTALLATION

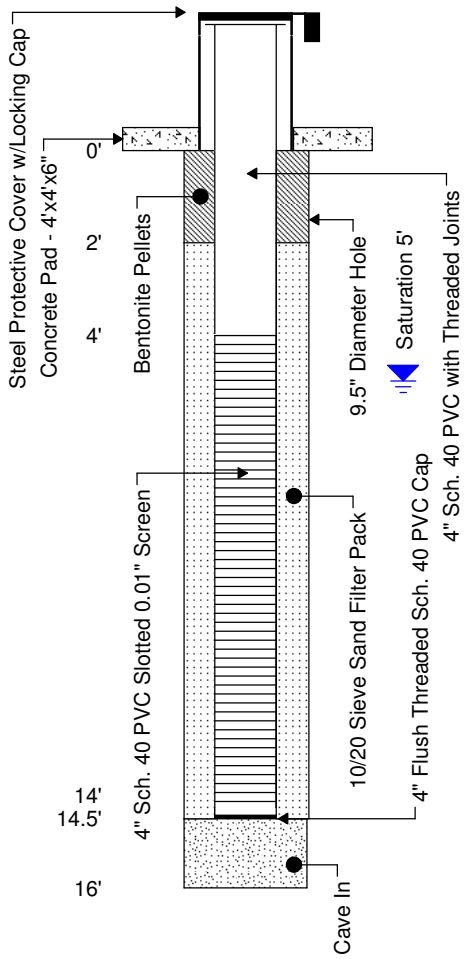
Well No.: MKTF-01
Start Date: 11/14/2013
Finish Date: 11/14/2013

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.346' W 108°25.782'; Boring ID - HA1

Total Depth: 16' bgl
Ground Water: Saturated @ 5' bgl
Elev., TOC (ft. msl): 6920.67
Elev., PAD (ft. msl): 6918.28
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,864.41 **E** 2,545,561.73

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
					Ground Surface
				100	**Silty Clay (CL)** Low plasticity, soft, damp, reddish brown to brown, no odor
		5'		100	**Silty Clay/Clayey Silt (CL/ML)** Low plasticity, very soft, moist to saturated, brown grading to black, gravelly, bio odor, no phase-separated hydrocarbon
					Total Depth = 16' BGL

Completion Results



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512/347-8243

WELL INSTALLATION

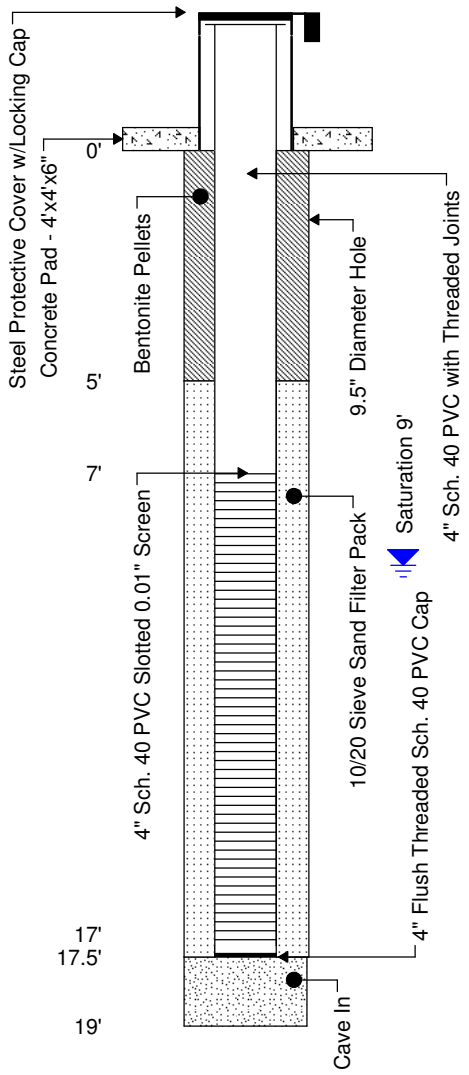
Well No.: MKTF-02
Start Date: 11/14/2013
Finish Date: 11/14/2013

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.360' W 108°25.789'; Boring ID HA3

Total Depth: 19' bgl
Ground Water: Saturated @ 9' bgl
Elev., TOC (ft. msl): 6917.45
Elev., PAD (ft. msl): 6915.00
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,946.93 **E** 2,545,530.46

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
					Ground Surface
1	24.6			100	**Silty Clay (CL)** Low plasticity, firm, damp, brown-reddish brown, no odor
5	20.1			100	**Silty Clay (CL)** Similar to above, odor at 6' bgl with black discoloration
7	400				
9	933, 800	9'		100	**Sandy Clay (CL)** Low plasticity, soft, moist to saturated at 9' bgl, hydrocarbon odor, no phase-separated hydrocarbon
13				100	**Sandy Clay/Clayey Sand (SC/CL)** Fine grain, compact, saturated, dark brown, hydrocarbon odor, no phase-separated hydrocarbon
19					Total Depth = 19' BGL

Completion Results



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Austin, Texas 78746

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512/347-7588
512/347-8243

WELL INSTALLATION

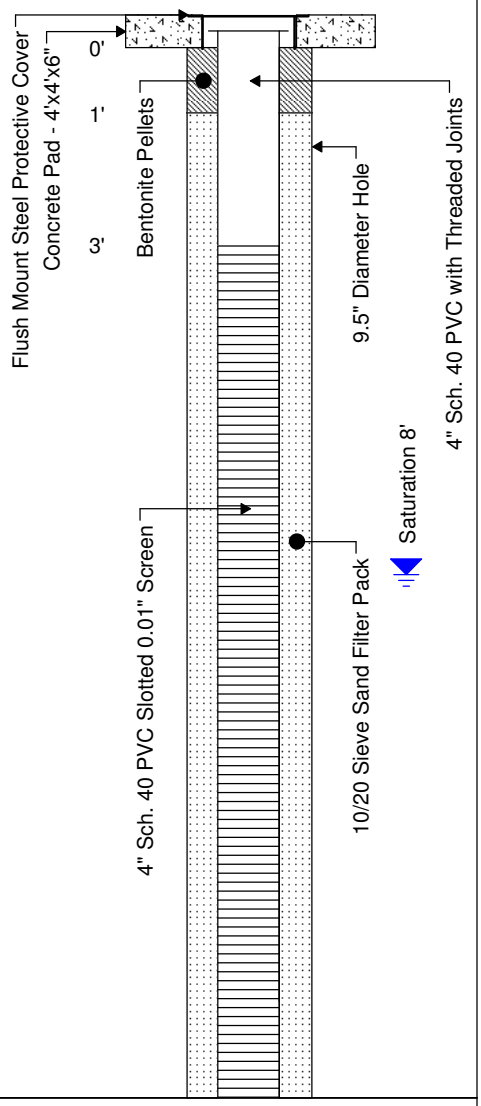
Well No.: MKTF-03
Start Date: 11/7/2013
Finish Date: 11/7/2013

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.328' W108°25.743'; Boring ID - SB01

Total Depth: 19' bgl
Ground Water: Saturated @ 8' bgl
Elev., TOC (ft. msl): 6931.31
Elev., PAD (ft. msl): 6931.73
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,746.53 **E** 2,545,756.87

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-1					Ground Surface
1	164			60	**Fill (Silt/Sand)** Fine grain, loose, dry to damp, brown, no odor
3	423			40	**Silty Clay (CL)** Low plasticity, firm, damp, brown/reddish brown, no odor
5	330			70	**Silty Clay (CL)** Similar to above, no odor
7	75	8'		90	**Silty Clay (CL)** Similar to above, sandy at base from 7.75-8.0' bgl, no odor
9	326			90	**Silty Clay (CL)** Fine grain sand seams throughout, saturated, phase-separated hydrocarbon, hydrocarbon odor, clear phase-separated hydrocarbon poured out of split spoon
11	312			90	**Silty Clay (CL)** Similar to above with sand seams, saturated with phase-separated hydrocarbon, hydrocarbon odor, dark brown
13	368			80	**Gravelly Sand (SW)** Fine to medium to coarse grain, loose, saturated with phase-separated hydrocarbon, black, hydrocarbon odor
15	700			60	**Gravelly Sand (SW)** Similar to above

Completion Results



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512/347-8243

WELL INSTALLATION

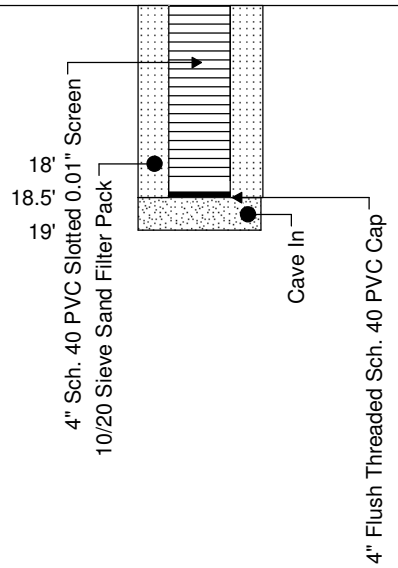
Well No.: MKTF-03
Start Date: 11/7/2013
Finish Date: 11/7/2013

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.328' W108°25.743'; Boring ID - SB01

Total Depth: 19' bgl
Ground Water: Saturated @ 8' bgl
Elev., TOC (ft. msl): 6931.31
Elev., PAD (ft. msl): 6931.73
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,746.53 **E** 2,545,756.87

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
					Silty Sand/Silty Clay (SM/CL) Low plasticity, firm, moist, brown, faint odor, no phase-separated hydrocarbon
17				10	**Silty Clay (CL)** Poor recovery
19	225			80	**Clay (CH)** High plasticity, very dense, damp, light reddish brown, faint odor
					Total Depth = 19' BGL

Completion Results



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512/347-8243

WELL INSTALLATION

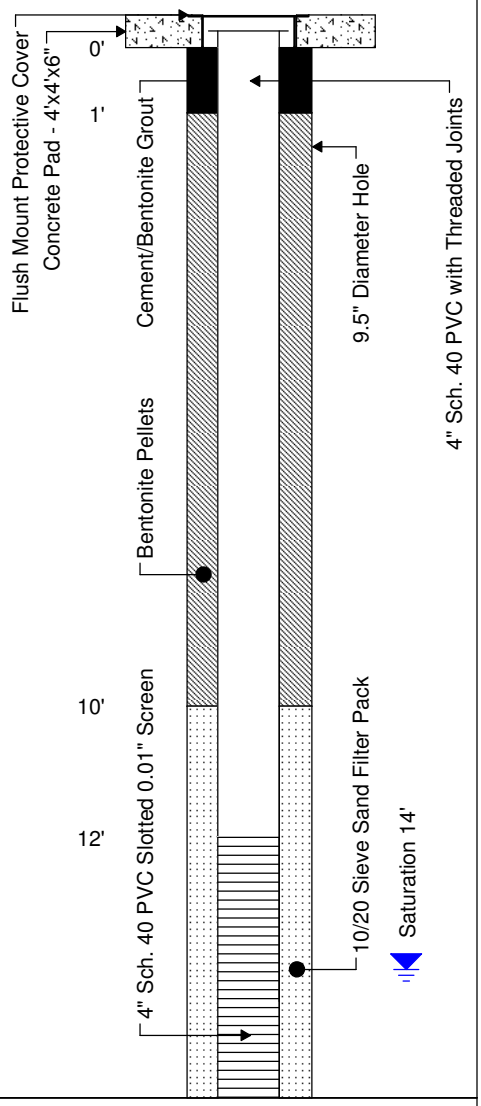
Well No.: MKTF-04
Start Date: 11/12/2013
Finish Date: 11/12/2013

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.310' W 108°25.742'; Boring ID SB03

Total Depth: 24' bgl
Ground Water: Saturated @ 14' bgl
Elev., TOC (ft. msl): 6933.57
Elev., PAD (ft. msl): 6933.90
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,649.46 **E** 2,545,752.83

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-1					Ground Surface
1	10.2			90	**Fill (Silt/Gravel)** Low plasticity, very dense, dry, light brown, no odor
3	11.7			80	**Fill (Silt/Gravel)** Similar to above, black, dense at base, no odor
5	16			90	**Silty Clay (CL)** Low plasticity, stiff, damp, reddish brown, no odor, calcareous
7	26			90	**Gravelly Sandy Clay (CL)** Low plasticity, loose to firm, damp, brown, no odor
9	708			70	**Silty Clay (CL)** Low plasticity, very soft, damp, reddish brown, hydrocarbon odor
11	369			80	**Clay (CH)** High plasticity, firm, damp, reddish brown, hydrocarbon odor
13	660	14'		90	**Sandy Clay/Clayey Sand (SC/CL)** Low plasticity, fine grain, soft, damp, reddish brown, hydrocarbon odor
15	85			90	**Sandy Clay (SC)** Similar to above, saturated sand seams, hydrocarbon odor, brown

Completion Results



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512/347-8243

WELL INSTALLATION

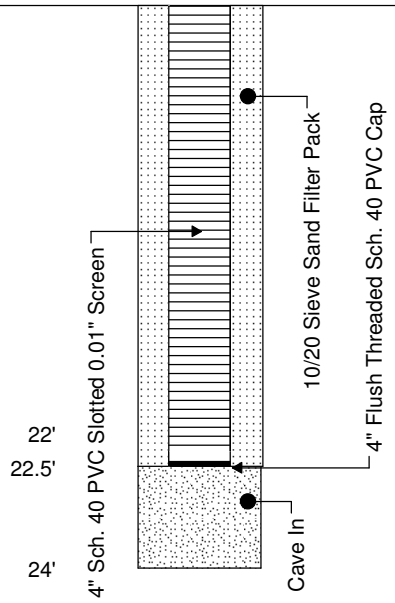
Well No.: MKTF-04
Start Date: 11/12/2013
Finish Date: 11/12/2013

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.310' W 108°25.742'; Boring ID SB03

Total Depth: 24' bgl
Ground Water: Saturated @ 14' bgl
Elev., TOC (ft. msl): 6933.57
Elev., PAD (ft. msl): 6933.90
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,649.46 **E** 2,545,752.83

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
17	64			70	**Sandy Clay (SC)** Similar to above, moist to saturated, hydrocarbon odor, brown
19	33			90	**Sandy Clay (SC)** Low plasticity, fine grain, soft, moist to saturated, light reddish brown, hydrocarbon odor, gravelly at base **Silty Clay (CL)** Low plasticity, stiff, damp, light reddish brown grading to yellowish/greenish gray, becomes more silty at base
21					
23					Total Depth = 24' BGL
25					
27					
29					
31					

Completion Results



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WELL INSTALLATION

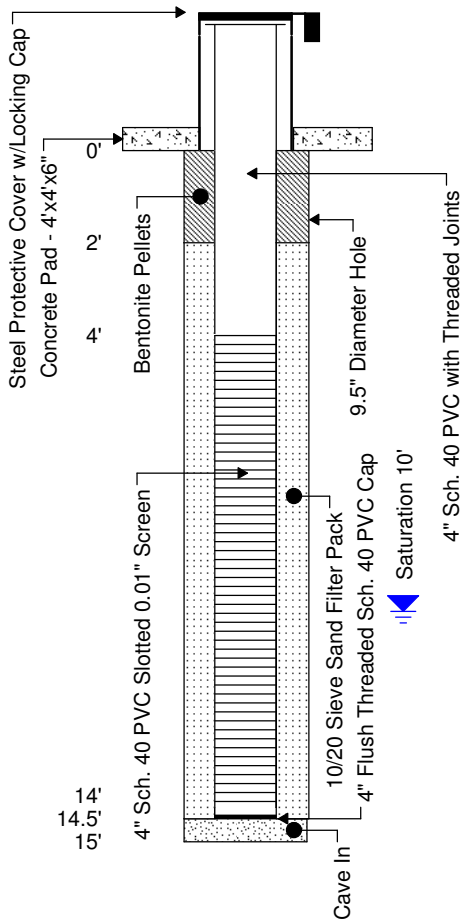
Well No.: MKTF-05
Start Date: 11/12/2013
Finish Date: 11/12/2013

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.282' W 108°25.739'; Boring ID - SB06

Total Depth: 15' bgl
Ground Water: Saturated @ 10' bgl
Elev., TOC (ft. msl): 6942.22
Elev., PAD (ft. msl): 6939.49
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,472.30 **E** 2,545,769.95

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
					Ground Surface
1	52.6			60	**Fill (Silty Clay/Gravel)** Low plasticity, firm, damp, brown, faint odor
3	180			100	**Silty Clay (CL)** Low plasticity, firm, damp, reddish brown, odor, calcareous
5	224			90	**Sandy Clay/Clayey Sand (CL/SC)** Low plasticity, fine grain, damp, dark brown, hydrocarbon odor, sand seams present
7	1202			90	**Sandy Clay/Clayey Sand (CL)** Similar to above
9	1228	10'		90	**Sandy Silty Clay (CL)** Low plasticity, soft, damp, dark brown, hydrocarbon odor
11	1525			90	**Sandy Clay (CL)** Similar to above, with moist to saturated sand seams, hydrocarbon odor
13	377			90	**Clayey Sand (SC)** Fine grain, loose to compact, saturated, hydrocarbon odor, dark brown
15					**Sandy Clay (CL)** Low plasticity, soft to firm, moist, dark brown, hydrocarbon odor
					Total Depth = 15' BGL

Completion Results



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WELL INSTALLATION

Well No.: MKTF-06
Start Date: 11/11/2013
Finish Date: 11/11/2013

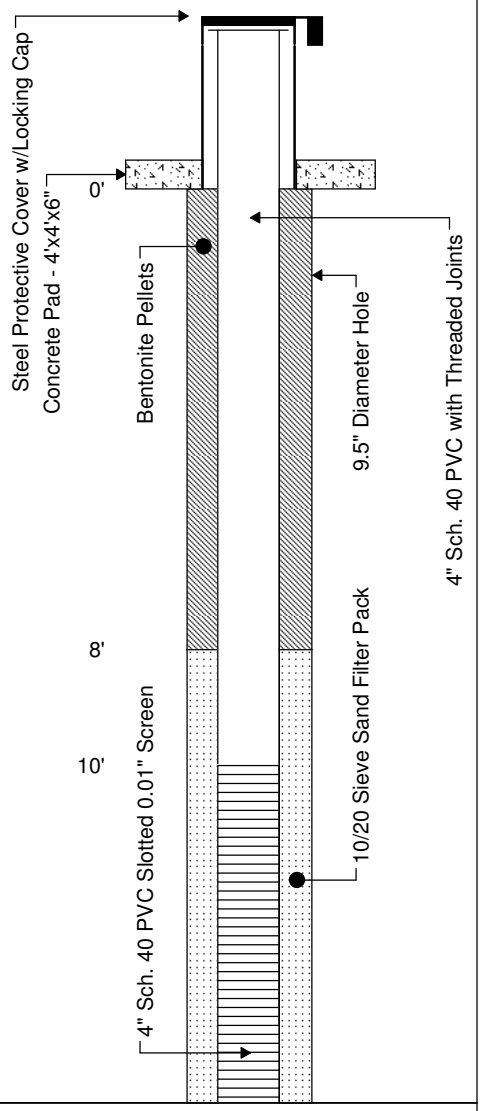
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon

Total Depth: 21' bgl
Ground Water: Saturated @ 17.5' bgl
Elev., TOC (ft. msl): 6946.81
Elev., PAD (ft. msl): 6944.24
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,556.28 **E** 2,545,811.85

Comments: N 35°29.295' W 108°25.732'; Boring ID - SB08

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
					Ground Surface
1	15.9			70	**Fill (Silt/Silty Clay)** Low plasticity, stiff, dry, light brown, no odor
3	228			60	**Fill (Silty Clay/Gravel)** Similar to above, dry, no odor
5	177			60	**Fill (Silty Clay)** Similar to above, damp, no odor
7	264			40	**Fill (Silty Clay)** Low plasticity, soft, damp, brown, gravel and wood debris
9				--	No recovery
11	90			10	**Fill (Silty Clay/Gravel)** Similar to above
13	660			100	**Sandy Silty Clay (CL)** Low plasticity, soft, damp to moist at base, brown, hydrocarbon odor
15					

Completion Results



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WELL INSTALLATION

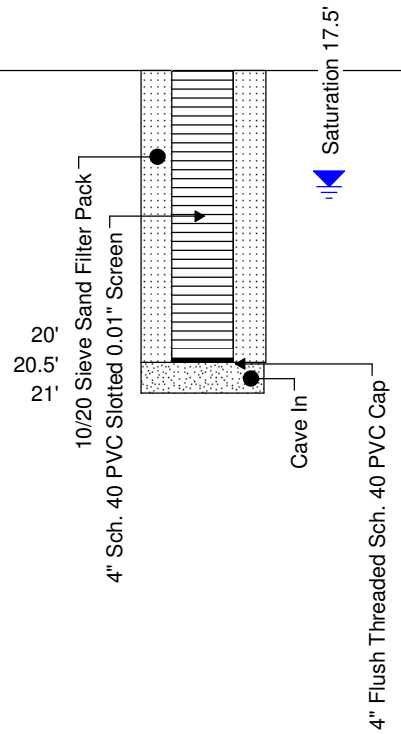
Well No.: MKTF-06
Start Date: 11/11/2013
Finish Date: 11/11/2013

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.295' W 108°25.732'; Boring ID - SB08

Total Depth: 21' bgl
Ground Water: Saturated @ 17.5' bgl
Elev., TOC (ft. msl): 6946.81
Elev., PAD (ft. msl): 6944.24
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,556.28 **E** 2,545,811.85

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
	1115	17.5'		100	**Sandy Silty Clay (CL)** Similar to above, moist, oily, hydrocarbon odor
17				100	**Gravelly Sandy Clay (CL)** Low plasticity, firm, moist, oily, 1" gravel, strong hydrocarbon odor
19	225			100	**Clayey Gravel Sand (SC)** Fine to medium grain, loose, saturated, phase-separated hydrocarbon present, black, hydrocarbon odor
21					**Sandy Clay (CL)** Low plasticity, firm, moist, black hydrocarbon odor
23					Total Depth = 21' BGL
25					
27					
29					
31					
33					

Completion Results



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WELL INSTALLATION

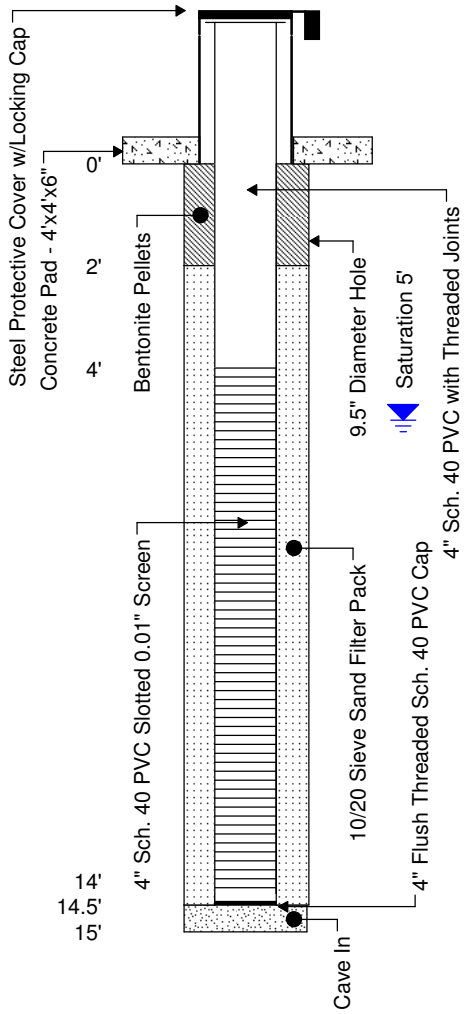
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.295' W 108°25.710'; Boring ID - SB10

Total Depth: 15' bgl
Ground Water: Saturated @ 5' bgl
Elev., TOC (ft. msl): 6947.18
Elev., PAD (ft. msl): 6944.40
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,555.11 **E** 2,545,885.42

Well No.: MKTF-07
Start Date: 11/11/2013
Finish Date: 11/11/2013

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
					Ground Surface
1	132			90	**Fill (Silty Clay)** Low plasticity, firm, dry to damp, brown, faint odor
3	235			90	**Fill (Clay/Sand/Gravel)** Damp, hydrocarbon odor
5	1202	5'		50	**Fill (Clay/Caliche Rock)** Odor
7	372			90	**Silty Sand (SM)** Fine grain, loose, saturated, phase-separated hydrocarbon, oily, brown to dark brown, hydrocarbon odor
					Silty Sand (SM) Similar to above, saturated
					Silty Clay (CL) Low plasticity, firm, damp, brown, hydrocarbon odor
11				--	No recovery
15					Total Depth = 15' BGL

Completion Results



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512/347-8243

WELL INSTALLATION

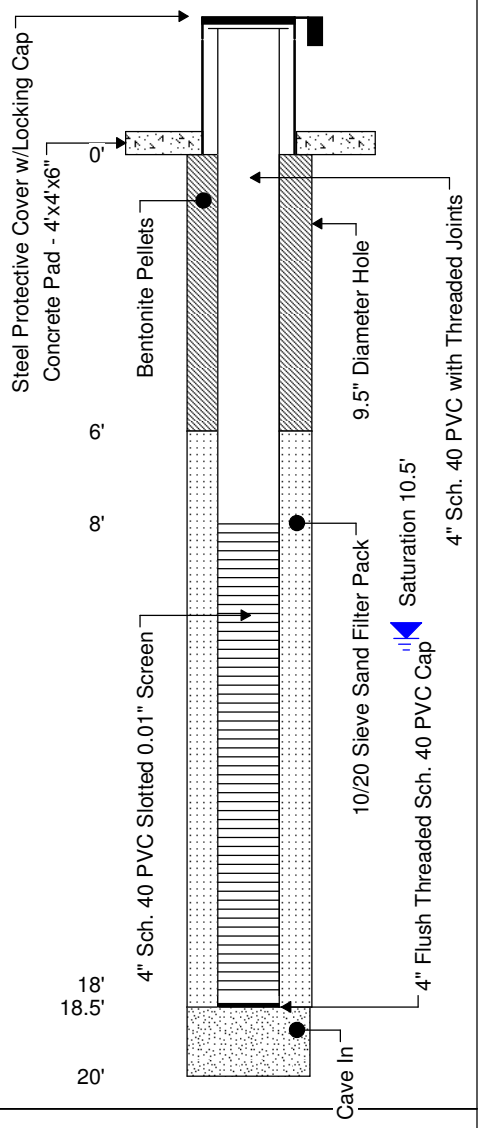
Well No.: MKTF-08
Start Date: 11/11/2013
Finish Date: 11/11/2013

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.302' W 108°25.716'; Boring ID - SB11

Total Depth: 20' bgl
Ground Water: Saturated @ 10.5' bgl
Elev., TOC (ft. msl): 6947.09
Elev., PAD (ft. msl): 6944.02
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,598.94 **E** 2,545,885.02

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-3					
-1					Ground Surface
1	85			90	**Fill (Silty Clay/Gravel)** Low plasticity, firm, dry to damp, odor
3	273			80	**Fill (Silty Clay/Gravel)** Similar to above
5	86			90	**Clay (CH)** High plasticity, stiff, damp, brown with light brown pockets of silt, odor
7	308			90	**Silty Clay (CL)** Low plasticity, soft/crumbly, dry to damp, brown, hydrocarbon odor
9	1126			80	**Silty Clay (CL)** Low plasticity, soft, damp, brown, hydrocarbon odor
11	789	10.5'		80	**Silty Clay (CL)** Similar to above, moist
13	558			90	**Silty Clay (CL)** Medium grain, loose, saturated, phase-separated hydrocarbon, hydrocarbon odor, brown
					Sandy Silty Clay (CL) Low plasticity, soft to firm, moist, hydrocarbon odor
15					**Sandy Clay (CL)** Low plasticity, soft to compact, saturated, phase-separated hydrocarbon, hydrocarbon odor
17					
19					
					Total Depth = 20' BGL

Completion Results



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512/347-8243

WELL INSTALLATION

Well No.: MKTF-09
Start Date: 11/11/2013
Finish Date: 11/11/2013

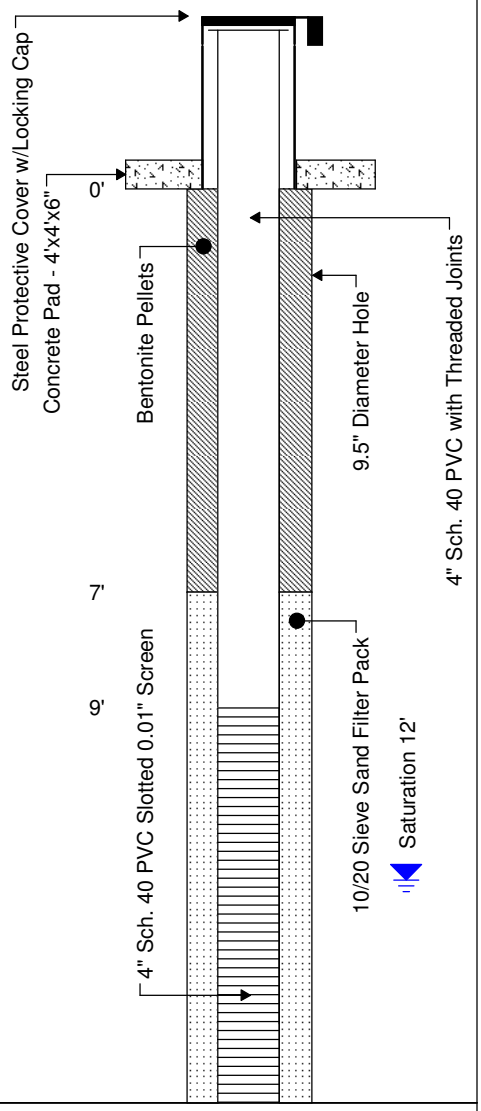
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon

Total Depth: 22' bgl
Ground Water: Saturated @ 12' bgl
Elev., TOC (ft. msl): 6946.50
Elev., PAD (ft. msl): 6943.57
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,681.33 **E** 2,545,895.93

Comments: N 35°29.316' W 108°25.715'; Boring ID - SB13

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-3					
-1					Ground Surface
1	21.9			90	**Fill (Silty Clay)** Low plasticity, stiff, dry to damp, no odor, brown
3	32.7			90	**Fill (Silty Clay)** Similar to above, gravel
5	36.1			90	**Silty Clay (CL)** Low plasticity, soft, damp, brown, faint odor
7	37			90	**Silty Clay (CL)** Similar to above
9	533			90	**Silty Clay (CL)** Similar to above **Sandy Clay (CL)** Similar to above, increase in sand and moisture
11	314	12'		90	**Sandy Clay (CL)** Similar to above, moist, hydrocarbon odor, dark brown
13	651			90	**Sandy Clay/Clayey Sand (CL/SC)** Fine to medium grain, compact, moist to saturated, hydrocarbon odor
15	587				**Sandy Clay/Clayey Sand (CL/SC)** Similar to above, saturated, sheen observed on split spoon, black, hydrocarbon odor

Completion Results



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512/347-8243

WELL INSTALLATION

Well No.: MKTF-09
Start Date: 11/11/2013
Finish Date: 11/11/2013

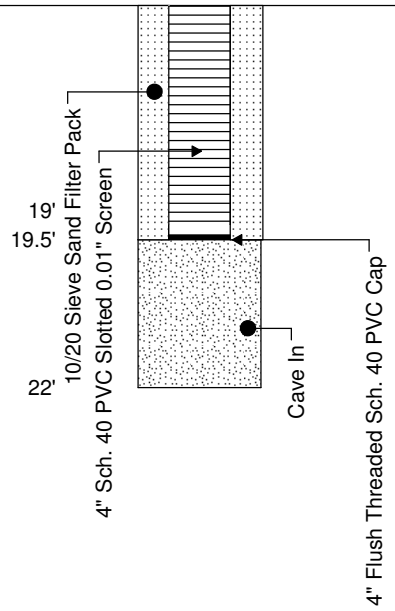
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon

Total Depth: 22' bgl
Ground Water: Saturated @ 12' bgl
Elev., TOC (ft. msl): 6946.50
Elev., PAD (ft. msl): 6943.57
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,681.33 **E** 2,545,895.93

Comments: N 35°29.316' W 108°25.715'; Boring ID - SB13

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
17, 19, 21, 23, 25, 27, 29, 31, 33				90	**Sandy Clay/Clayey Sand (CL/SC)** Fine to medium grain, compact, saturated, sheen observed on split spoon, black, hydrocarbon odor
					Total Depth = 22' BGL

Completion Results



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512/347-8243

WELL INSTALLATION

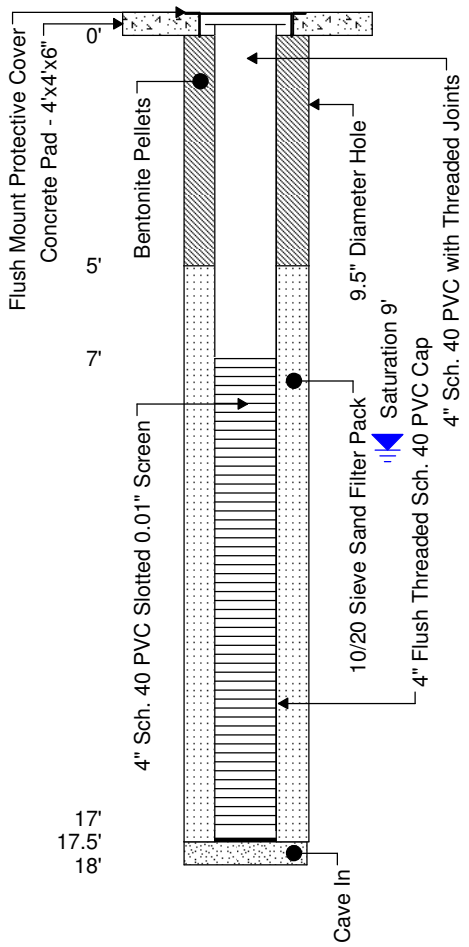
Well No.: MKTF-10
Start Date: 10/31/2013
Finish Date: 10/31/2013

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.336' W 108°25.724'; Boring ID SB16

Total Depth: 18' bgl
Ground Water: Saturated @ 9' bgl
Elev., TOC (ft. msl): 6937.16
Elev., PAD (ft. msl): 6937.51
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,807.47 **E** 2,545,853.54

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
					Ground Surface
1	90			90	**Fill (Silt/Gravel)** Low plasticity, loose, dry, light brown
3	14			90	**Fill (Silty Clay/Gravel)** Similar to above
5	431			90	**Silty Clay (CL)** Low plasticity, stiff, dry, reddish brown, odor, calcareous
7	448			60	**Sand (SP)** Fine grain, loose, dry, reddish brown, odor
9	654	9'		60	**Sand (SP)** Similar to above, saturated at 9' bgl, phase-separated hydrocarbon, hydrocarbon odor
11	1559			90	**Clayey Sand (SC)** Fine grain, soft, saturated, phase-separated hydrocarbon, brown to black, hydrocarbon odor
13	713			90	**Clayey Sand/Sandy Clay (SC/CL)** Low plasticity, firm to stiff, moist to saturated, hydrocarbon odor, dark brown
					Total Depth = 18' BGL

Completion Results



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512/347-8243

WELL INSTALLATION

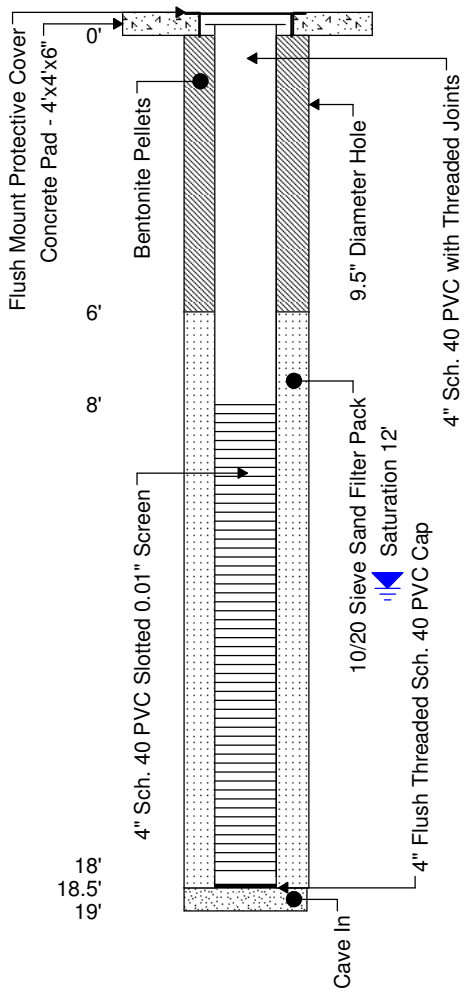
Well No.: MKTF-11
Start Date: 10/31/2013
Finish Date: 10/31/2013

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.336' W 108°25.739'; Boring ID - SB17

Total Depth: 19' bgl
Ground Water: Saturated @ 12' bgl
Elev., TOC (ft. msl): 6931.34
Elev., PAD (ft. msl): 6931.61
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,806.93 **E** 2,545,754.77

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-1					Ground Surface
1	14			60	**Fill (Silty Clay/Gravel)** Low plasticity, stiff, dry, light brown
3	36			70	**Fill (Silty Clay)** Similar to above
5	80			90	**Silty Clay (CL)** Low plasticity, firm, damp, brown, calcareous
7	125			80	**Silty Clay (CL)** Similar to above
9	1259			80	**Silty Clay (CL)** Low plasticity, firm, damp, oily, hydrocarbon odor, dark brown
11	860	12'		70	**Silty Clay (CL)** Similar to above, moist, hydrocarbon odor, oily, phase-separated hydrocarbon
13	1716			60	**Sandy Clay (CL)** Low plasticity, soft, moist to saturated, hydrocarbon odor, dark brown
15	1050			70	**Silty Sand (SM)** Medium grain, loose, saturated, hydrocarbon odor, dark brown to black
17					**Sandy/Silty Clay (CL)** Low plasticity, firm, saturated, dark brown to black, hydrocarbon odor
19					Total Depth = 19' BGL
21					

Completion Results



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512/347-8243

WELL INSTALLATION

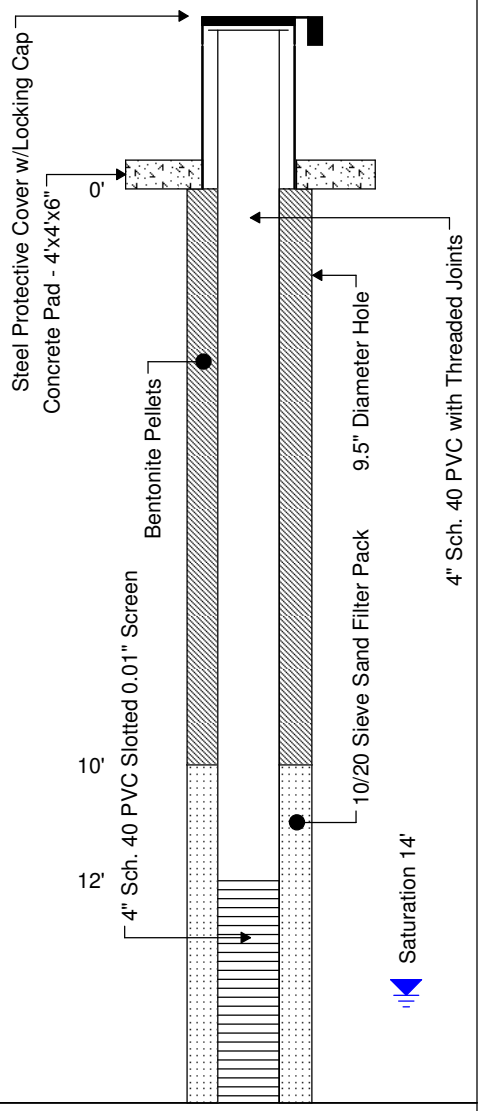
Well No.: MKTF-12
Start Date: 11/7/2013
Finish Date: 11/7/2013

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.294' W 108°25.754'; Boring ID - SB19

Total Depth: 23' bgl
Ground Water: Saturated @ 14' bgl
Elev., TOC (ft. msl): 6942.11
Elev., PAD (ft. msl): 6939.70
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,542.07 **E** 2,545,688.29

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-3					
-1					Ground Surface
1	8.7			90	**Silt/Gravel (ML)** Low plasticity, soft, dry/damp, no odor, brown
3	54			80	**Silt/Gravel (ML)** Similar to above
5	7			70	**Gravel/Silt (GW)** 1/2 to 1" gravel, loose, compact, dry, no odor
7	7.5			70	**Clayey Sandy Silt (ML)** Very fine grain, compact, dry to damp, brown, no odor
9	5.5			60	**Sandy Clay (CL)** Low plasticity, firm, damp, light brown, no odor
11	5.8			70	**Sandy Clay (CL)** Similar to above, brown, no odor
13	10	14'		70	**Sandy Clay (CL)** Similar to above
					Silty Sand (SM) Fine to medium grain, loose, damp, brown, no odor
15	225			50	**Sandy Clay (CL)** Low plasticity, firm, moist to saturated in sand seams, hydrocarbon odor, dark brown

Completion Results



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512/347-8243

WELL INSTALLATION

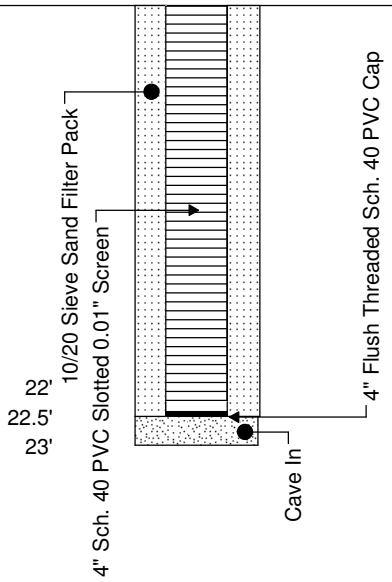
Well No.: MKTF-12
Start Date: 11/7/2013
Finish Date: 11/7/2013

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.294' W 108°25.754'; Boring ID - SB19

Total Depth: 23' bgl
Ground Water: Saturated @ 14' bgl
Elev., TOC (ft. msl): 6942.11
Elev., PAD (ft. msl): 6939.70
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,542.07 **E** 2,545,688.29

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
17	319			70	**Sandy Clay (CL)** Similar to above, moist, hydrocarbon odor
19	400			--	**Sandy Clay (CL)** Similar to above, moist, hydrocarbon odor
21	532			--	**Sandy Clay/Clayey Sand (CL)** Very fine grain, compact, moist to saturated, sheen observed in split spoon, hydrocarbon odor
23					Total Depth = 23' BGL
25					
27					
29					
31					
33					

Completion Results



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512/347-8243

WELL INSTALLATION

Well No.: MKTF-13
Start Date: 11/12/2013
Finish Date: 11/12/2013

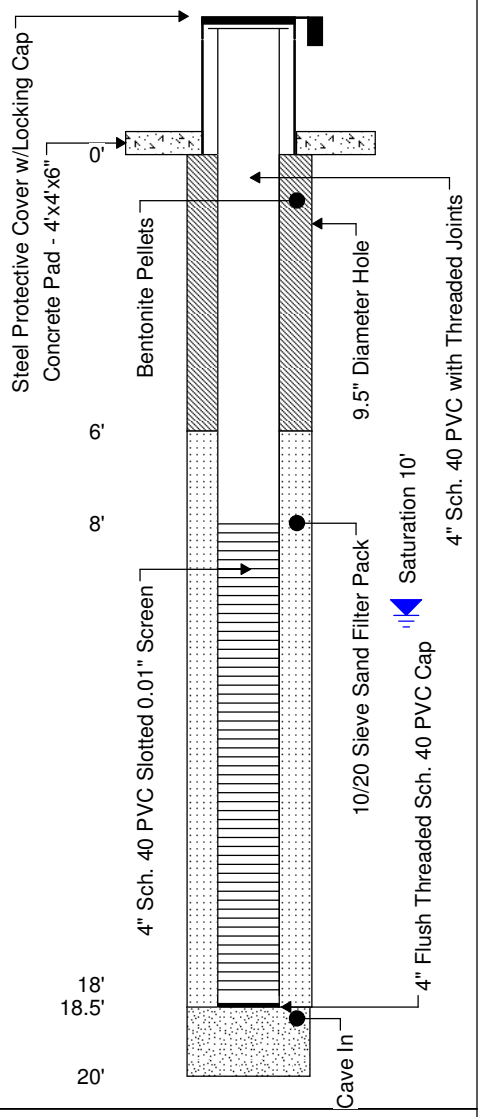
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon

Total Depth: 20' bgl
Ground Water: Saturated @ 10' bgl
Elev., TOC (ft. msl): 6935.18
Elev., PAD (ft. msl): 6933.67
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,625.25 **E** 2,545,697.39

Comments: N 35°29.307' W 108°25.755'; Boring ID - SB20

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
					Ground Surface
1	8			90	**Silt (ML)** Low plasticity, soft, damp, brown, no odor
3	12.7			90	**Silt (ML)** Similar to above, trace gravel
5	13			80	**Sandy Clay (CL)** Low plasticity, stiff, dry, brown, calcareous
7	17			90	**Silty Sand/Sandy Silt (SM/ML)** Very fine grain, loose to compact, dry, calcareous, brown
9	59	10'		90	**Sandy Silt (ML)** Similar to above, no odor
11	1165			90	**Sandy Clay/Clayey Sand (SC/CL)** Medium grain, compact, moist to saturated, hydrocarbon odor, brown
13	1200			90	**Clayey Sand (SC)** Similar to above, saturated, hydrocarbon odor
					Total Depth = 20' BGL

Completion Results



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WELL INSTALLATION

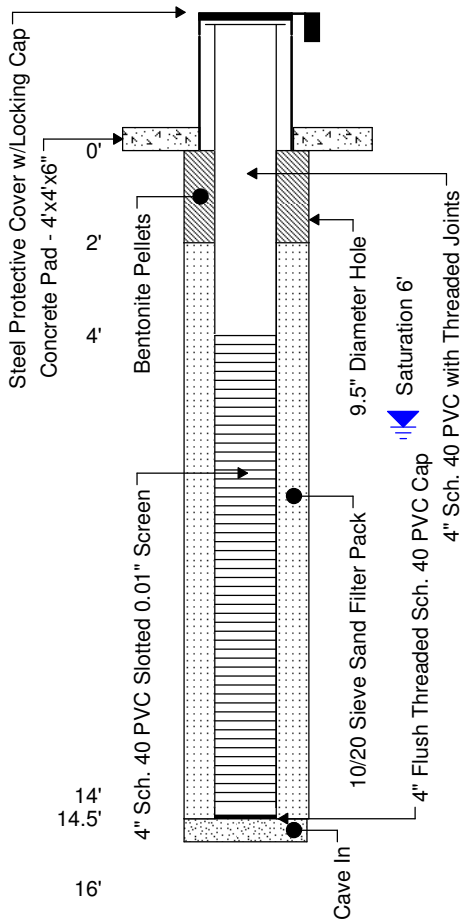
Well No.: MKTF-14
Start Date: 11/12/2013
Finish Date: 11/12/2013

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.323' W 108°25.769'; Boring ID SB22

Total Depth: 15' bgl
Ground Water: Saturated @ 6' bgl
Elev., TOC (ft. msl): 6928.02
Elev., PAD (ft. msl): 6925.65
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,719.43 **E** 2,545,625.96

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-3					
-1					Ground Surface
1	18			20	**Silty Clay (CL)** Low plasticity, soft, damp, brown
3	308			90	**Silty Clay (CL)** Similar to above, odor
5	793	6'		90	**Sandy Clay (CL)** Low plasticity, firm, moist, oily, brown, trace gravel
7	504			90	**Clayey Sand (SC)** Medium grain, loose to compact, saturated, phase-separated hydrocarbon, hydrocarbon odor, black
9	760			90	**Clayey Sand (SC)** Similar to above
11					
13					
15					Total Depth = 15' BGL
17					
19					

Completion Results



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WELL INSTALLATION

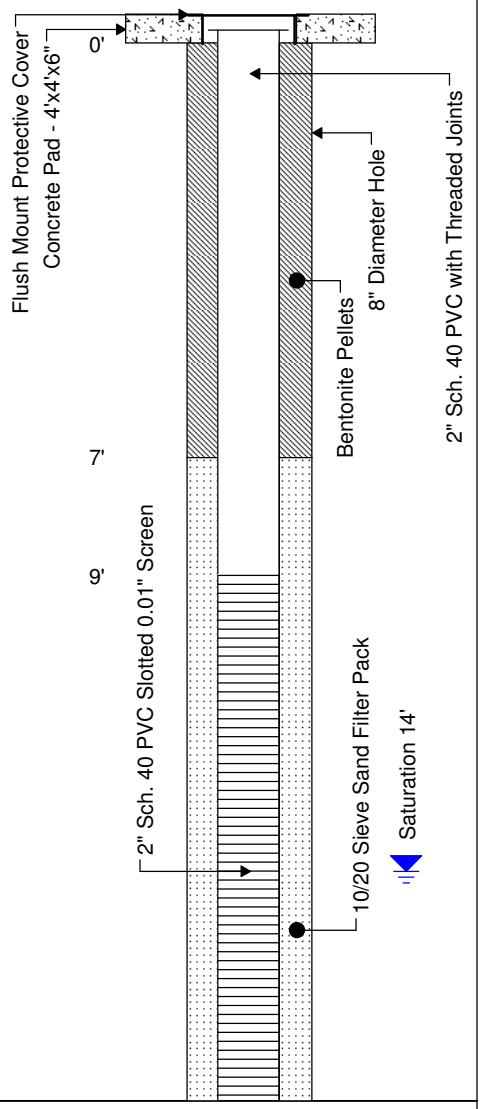
Well No.: MKTF-15
Start Date: 10/29/2013 09:30
Finish Date: 10/29/2013 12:15

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Five-Foot Core Barrel
Comments: N 35°29.343' W 108°25.708'; Boring ID - SB31

Total Depth: 22' bgl
Ground Water: Saturated @ 14' bgl
Elev., TOC (ft. msl): 6943.48
Elev., PAD (ft. msl): 6943.74
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,845.57 **E** 2,545,934.58

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-1					Ground Surface
1	6.7			0	**Fill (Clay and Gravel)** No recovery
3	14.6			90	**Fill (Clay and Gravel)** Reddish brown
5				90	**Fill (Clay and Gravel)** Similar to above, no odor
7	823			90	**Fill (Silty Clay)** Reddish brown, hydrocarbon odor
9	1004			90	**Silty Sandy Clay (CL)** Low plasticity, firm to soft, damp, reddish brown, hydrocarbon odor
11	293			70	**Silty Sand (SM)** Fine grain, compact, damp, light reddish brown, no odor
13	221	14'		80	**Sand (SP)** Similar to above, odor, moist to very moist
15				80	**Sand (SP)** Fine to medium grain, loose, saturated, brown, hydrocarbon odor, phase-separated hydrocarbon present
17				60	**Sandy Silt (ML)** Low plasticity, very soft, damp to moist, brown, hydrocarbon odor

Completion Results



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WELL INSTALLATION

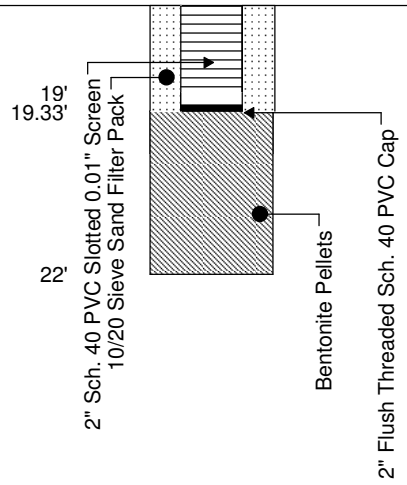
Well No.: MKTF-15
Start Date: 10/29/2013 09:30
Finish Date: 10/29/2013 12:15

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Five-Foot Core Barrel
Comments: N 35°29.343' W 108°25.708'; Boring ID - SB31

Total Depth: 22' bgl
Ground Water: Saturated @ 14' bgl
Elev., TOC (ft. msl): 6943.48
Elev., PAD (ft. msl): 6943.74
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,845.57 **E** 2,545,934.58

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
					Sandy Silt/Silty Sand (ML/SM) Fine grain, loose to compact, moist to saturated, hydrocarbon odor, dark brown to black
19				90	**Sandy Silt/Silty Sand (ML/SM)** Similar to above, saturated in silty sand lenses, hydrocarbon odor
21				90	**Silty Clay (CL)** Low plasticity, firm, damp, brown, faint odor
					Silty Clay (CL) Similar to above, odor
23					Total Depth = 22' BGL
25					
27					
29					
31					
33					
35					

Completion Results



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WELL INSTALLATION

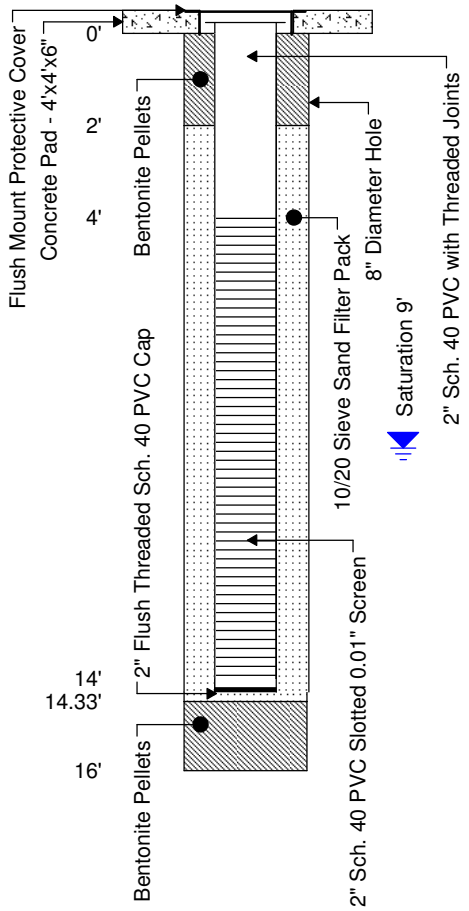
Well No.: MKTF-16
Start Date: 11/7/2013 08:40
Finish Date: 11/7/2013 11:00

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.323' W 108°25.680'; Boring ID - SB32

Total Depth: 16' bgl
Ground Water: Saturated @ 9' bgl
Elev., TOC (ft. msl): 6950.58
Elev., PAD (ft. msl): 6951.00
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,718.14 **E** 2,546,068.55

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
					Ground Surface
1				0	**Fill (Clay/Gravel)** No recovery
3	469			10	**Fill (Clay/Gravel)** Similar to above
5				0	**Fill (Clay/Gravel)** Similar to baove
7				0	**Fill (Clay/Gravel)** Similar to above
9	1445	9'		90	**Fill (Clay/Gravel)** Saturated at 9' bgl, black discoloration, hydrocarbon odor
11	1255			90	**Gravelly Sand (SW)** High plasticity, firm, damp, dark brown, hydrocarbon odor
13	1412			40	**Clayey Sand (SC)** Similar to above, hydrocarbon odor
15	439			80	**Clayey Sand (SC)** Moderate plasticity, firm, damp, brown, hydrocarbon odor
					Total Depth = 16' BGL

Completion Results



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512/347-8243

WELL INSTALLATION

Well No.: MKTF-17
Start Date: 11/14/2013 13:00
Finish Date: 11/14/2013 15:00

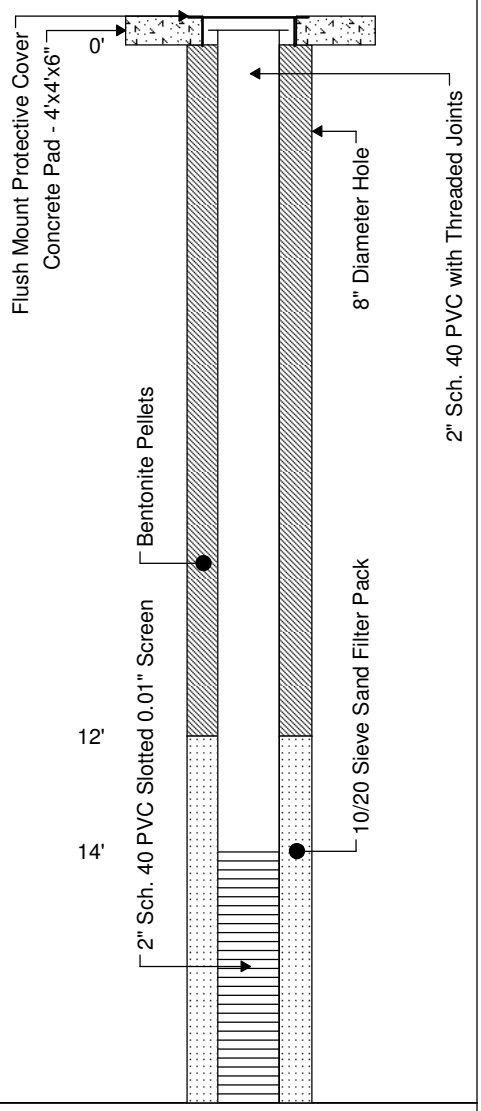
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon

Total Depth: 25' bgl
Ground Water: Saturated @ 20' bgl
Elev., TOC (ft. msl): 6945.76
Elev., PAD (ft. msl): 6945.79
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,268.93 **E** 2,545,850.73

Comments: N 35°29.248' W 108°25.724'; Boring ID - SB33

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-1					Ground Surface
1				10	**Fill (Asphalt/Base/Clay)** Low plasticity, soft, damp, brown
3	150			10	**Fill (Clay)** Similar to above
5	157			90	**Fill (Sand/Gravel/Clay)** Moist to very moist, reddish brown, no odor
7	92.1			20	**Fill (Sand/Gravel/Clay)** Similar to above, saturated, odor
9	65.9			90	**Clay (CH)** High plasticity, firm, damp, faint odor, brown
11	17			60	**Clay (CH)** Similar to above
13	55			70	**Clay (CH)** High plasticity, soft, damp, dark brown and black, odor
15	17.5			60	**Clay (CH)** Similar to above, faint odor
17	11.3			10	**Clay (CH)** Similar to above, trace fine grain sand

Completion Results



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512/347-8243

WELL INSTALLATION

Well No.: MKTF-17
Start Date: 11/14/2013 13:00
Finish Date: 11/14/2013 15:00

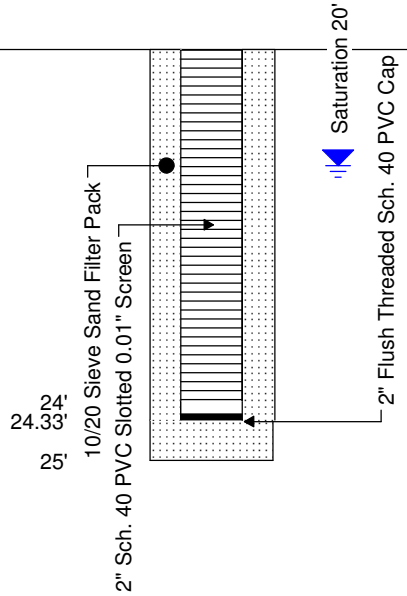
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon

Total Depth: 25' bgl
Ground Water: Saturated @ 20' bgl
Elev., TOC (ft. msl): 6945.76
Elev., PAD (ft. msl): 6945.79
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,268.93 **E** 2,545,850.73

Comments: N 35°29.248' W 108°25.724'; Boring ID - SB33

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
	17.2	20'		10	**Clay (CH)** High plasticity, soft, damp, brown
20	17.5			70	**Sandy Clay (CH)** Moderate plasticity, soft, very moist to saturated in sand seams
22				80	**Silty Clayey Gravel (GM)** Compact to loose, medium grain sand to 1/4" gravel - angular, saturated, brown
24				90	**Clay (CH)** Moderate plasticity, firm to stiff, damp, greenish gray
26					Total Depth = 25' BGL
28					
30					
32					
34					
36					

Completion Results



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512/347-8243

WELL INSTALLATION

Well No.: MKTF-18
Start Date: 11/15/2013 10:00
Finish Date: 11/15/2013 15:00

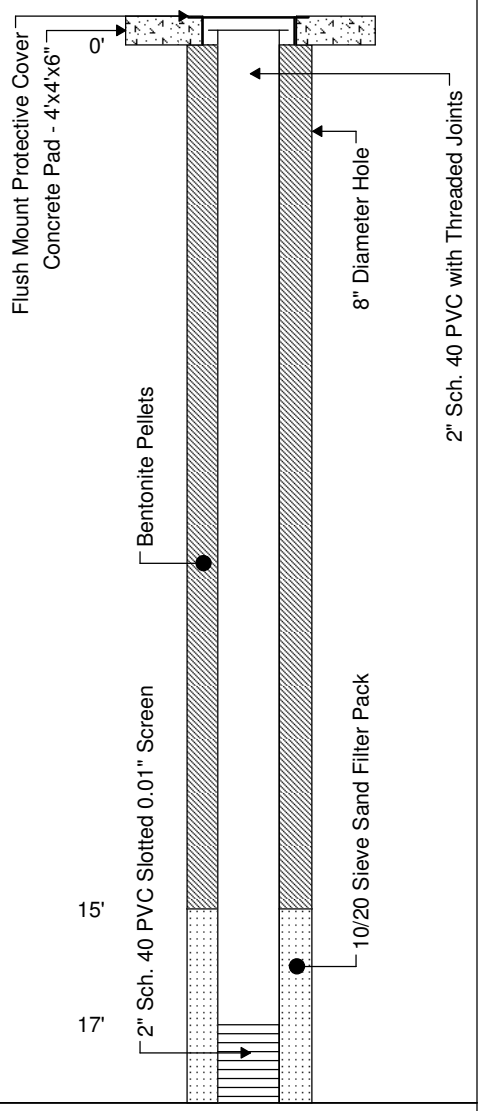
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon

Total Depth: 27' bgl
Ground Water: Saturated @ 23' bgl
Elev., TOC (ft. msl): 6950.65
Elev., PAD (ft. msl): 6950.97
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,497.53 **E** 2,546,006.29

Comments: N 35°29.288' W 108°25.692'; Boring ID - SB34

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-1					Ground Surface
1				--	**Fill (Gravel and Silty Clay)**
3	1009			20	**Fill (Gravel and Silty Clay)** Similar to above, strong hydrocarbon odor, damp
5	693			60	**Fill (Gravel and Silty Clay)** Similar to above
7	1108			70	**Fill (Silty Clay)** Low plasticity, firm, damp, brown, gravel present, strong hydrocarbon odor
9	901			90	**Fill (Clay/Sand/Gravel)** Similar to above, saturated, odor, sheen observed
11	803			60	**Clay (CH)** High plasticity, stiff, damp, brown, hydrocarbon odor
13	254			70	**Clay (CH)** Similar to above, very fine grain, sand in partings
15	200			30	**Clay (CH)** Similar to above
17				--	No recovery

Completion Results



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512/347-7588
512/347-8243

WELL INSTALLATION

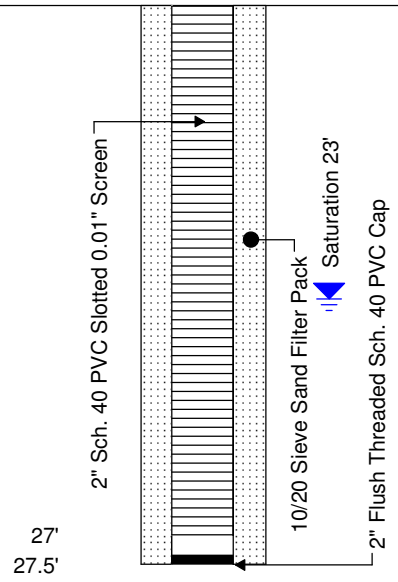
Well No.: MKTF-18
Start Date: 11/15/2013 10:00
Finish Date: 11/15/2013 15:00

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.288' W 108°25.692'; Boring ID - SB34

Total Depth: 27' bgl
Ground Water: Saturated @ 23' bgl
Elev., TOC (ft. msl): 6950.65
Elev., PAD (ft. msl): 6950.97
Elev., GL (ft. msl): --
Site Coordinates:
N 1,633,497.53 **E** 2,546,006.29

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
	112			30	**Clay (CH)** High plasticity, firm, damp, brown, faint odor
20	55			20	**Clay (CH)** Similar to above
22	323	23'		80	**Clay (CH)** Similar to above
					Sandy Clay/Clayey Sand (SC/CL) Fine grain, compact, very moist to saturated, brown, hydrocarbon present
24				90	**Clayey Sand (SC)** Similar to above, saturated
26					**Sandy Clay (CL)** Low plasticity, firm, damp, hydrocarbon odor, greenish gray
					Total Depth = 27' BGL
28					
30					
32					
34					
36					

Completion Results



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512/347-8243

WELL INSTALLATION

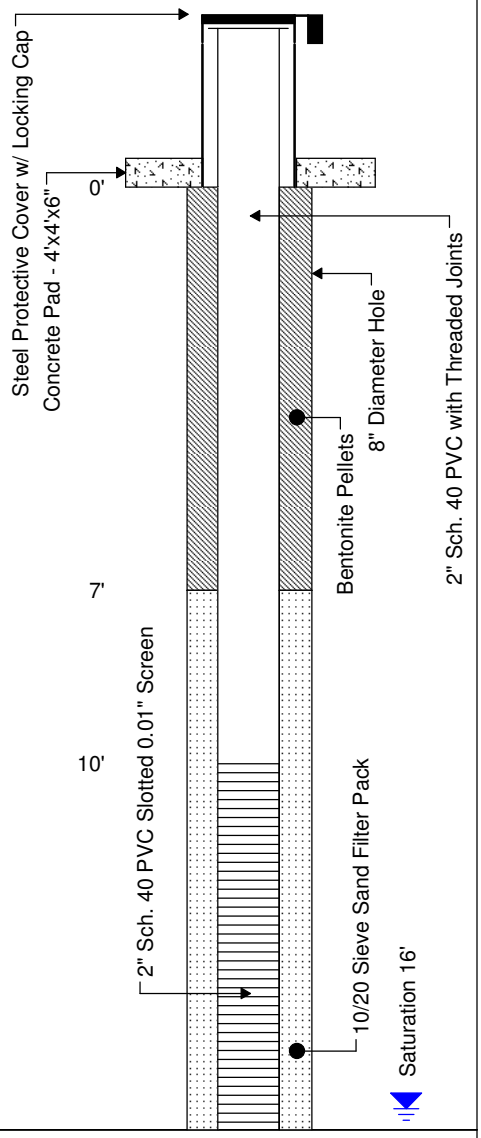
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Five-Foot Core Barrel
Comments: N 35°29.268' W 108°25.726'; Boring ID - SB35

Total Depth: 20' bgl
Ground Water: Saturated @ 16' bgl
Elev., TOC (ft. msl): --
Elev., PAD (ft. msl): --
Elev., GL (ft. msl): --
Site Coordinates:
N **W**

Well No.: MKTF-19
Start Date: 11/5/2013 08:50
Finish Date: 11/5/2013 11:20

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-3					
-1					Ground Surface
1				--	**Fill (Asphate/Base/Clay)** Odor
3	1178			50	**Fill (Silty Clay/Sandy Gravel)** Brown, strong hydrocarbon odor
5	1232			90	**Fill (Silty Clay/Sandy Gravel)** Similar to above, gray discoloration, strong hydrocarbon odor
7	120			80	**Clay (CH)** High plasticity, stiff, damp, brown, odor, calcareous, sampling tube is oily
9	375			70	**Clay (CH)** Similar to above, odor, oily
11	601			70	**Silty Sandy Clay (CL)** Moderate plasticity, firm, damp, brown, hydrocarbon odor, sampling tube is oily
13	1279			70	**Sandy Clay (CL)** Low plasticity, soft, damp to moist in sand seams, brown, strong hydrocarbon odor
15	249	16'		90	**Sandy Clay (CL)** Similar to above, hydrocarbon odor, tube is oily

Completion Results



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Austin, Texas 78746

512/347-7588
512/347-8243

WELL INSTALLATION

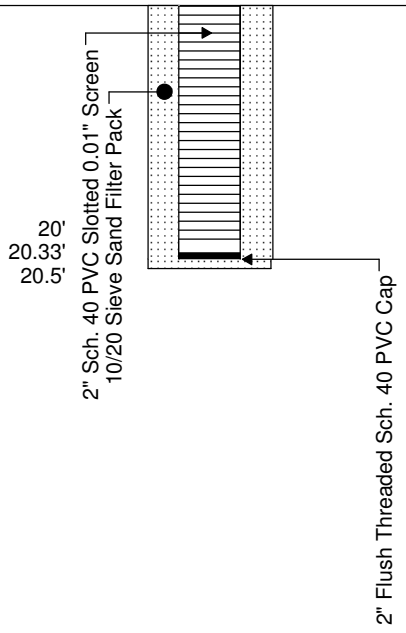
Well No.: MKTF-19
Start Date: 11/5/2013 08:50
Finish Date: 11/5/2013 11:20

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Five-Foot Core Barrel
Comments: N 35°29.268' W 108°25.726'; Boring ID - SB35

Total Depth: 20' bgl
Ground Water: Saturated @ 16' bgl
Elev., TOC (ft. msl): --
Elev., PAD (ft. msl): --
Elev., GL (ft. msl): --
Site Coordinates:
N **W**

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
				90	**Silty Sand (SM)** Fine grain, loose, saturated, oily/phase-separated hydrocarbon, hydrocarbon odor, clay at base
18				90	**Silty Sand (SM)** Similar to above
20					Total Depth = 20' BGL
22					
24					
26					
28					
30					
32					
34					

Completion Results



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512/347-7588
512/347-8243

WELL INSTALLATION

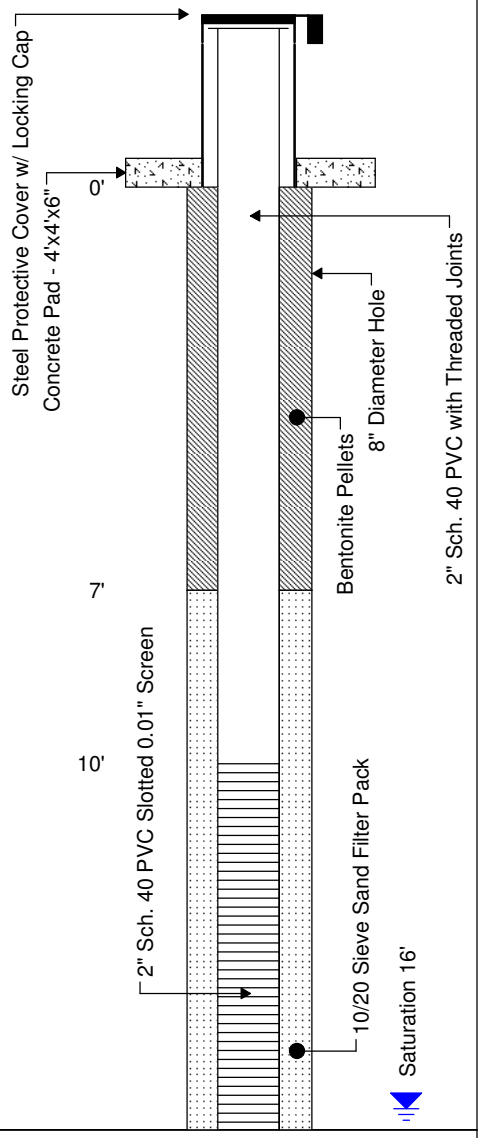
Well No.: MKTF-19
Start Date: 11/5/2013 08:50
Finish Date: 11/5/2013 11:20

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Five-Foot Core Barrel
Comments: N 35°29.268' W 108°25.726'; Boring ID - SB35

Total Depth: 20' bgl
Ground Water: Saturated @ 16' bgl
Elev., TOC (ft. msl): 6944.67
Elev., PAD (ft. msl): 6944.89
Elev., GL (ft. msl): 6944.34
Site Coordinates:
N 1633381.19 **E** 2545842.82

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-3					
-1					Ground Surface
1				--	**Fill (Asphalt/Base/Clay)** Odor
3	1178			50	**Fill (Silty Clay/Sandy Gravel)** Brown, strong hydrocarbon odor
5	1232			90	**Fill (Silty Clay/Sandy Gravel)** Similar to above, gray discoloration, strong hydrocarbon odor
7	120			80	**Clay (CH)** High plasticity, stiff, damp, brown, odor, calcareous, sampling tube is oily
9	375			70	**Clay (CH)** Similar to above, odor, oily
11	601			70	**Silty Sandy Clay (CL)** Moderate plasticity, firm, damp, brown, hydrocarbon odor, sampling tube is oily
13	1279			70	**Sandy Clay (CL)** Low plasticity, soft, damp to moist in sand seams, brown, strong hydrocarbon odor
15	249	16'		90	**Sandy Clay (CL)** Similar to above, hydrocarbon odor, tube is oily

Completion Results



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512/347-8243

WELL INSTALLATION

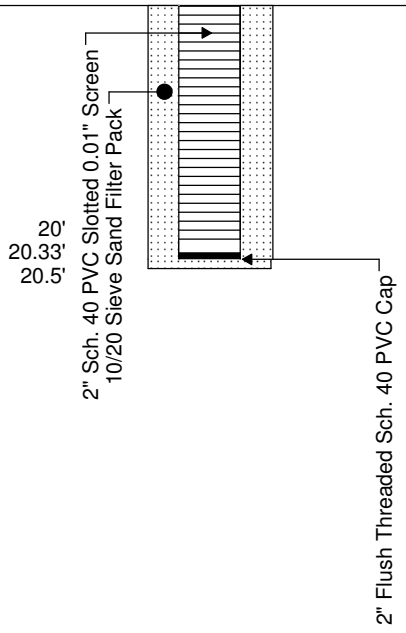
Well No.: MKTF-19
Start Date: 11/5/2013 08:50
Finish Date: 11/5/2013 11:20

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Five-Foot Core Barrel
Comments: N 35°29.268' W 108°25.726'; Boring ID - SB35

Total Depth: 20' bgl
Ground Water: Saturated @ 16' bgl
Elev., TOC (ft. msl): 6944.67
Elev., PAD (ft. msl): 6944.89
Elev., GL (ft. msl): 6944.34
Site Coordinates:
N 1633381.19 **E** 2545842.82

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
				90	**Silty Sand (SM)** Fine grain, loose, saturated, oily/phase-separated hydrocarbon, hydrocarbon odor, clay at base
18				90	**Silty Sand (SM)** Similar to above
20					Total Depth = 20' BGL
22					
24					
26					
28					
30					
32					
34					

Completion Results



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WELL INSTALLATION

Well No.: MKTF-20
Start Date: 2/10/2014
Finish Date: 2/10/2014

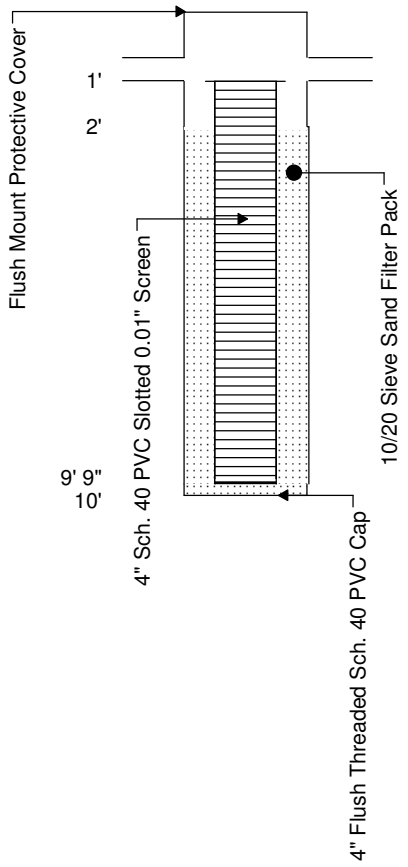
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Not Applicable
Driller: Western Refining Southwest, Inc.
Drilling Rig: Not Applicable
Drilling Method: Not Applicable
Sampling Method: Not Applicable

Total Depth: 10' bgl
Ground Water: 7.86' ft. BTOC
Elev., TOC (ft. msl): 6951.78
Elev., PAD (ft. msl): 6951.89
Elev., GL (ft. msl): 6951.17
Site Coordinates:
N 1633698.28 **E** 2546111.23

Comments: N 35°29.319' W 108°25.674'; Boring ID: Sump-N

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-3					
-1					Ground Surface
1					**Fill Material**
3					
5				--	
7					
9					
					Total Depth = 10' BGL
11					
13					
15					
17					
19					

Completion Results



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512/347-8243

WELL INSTALLATION

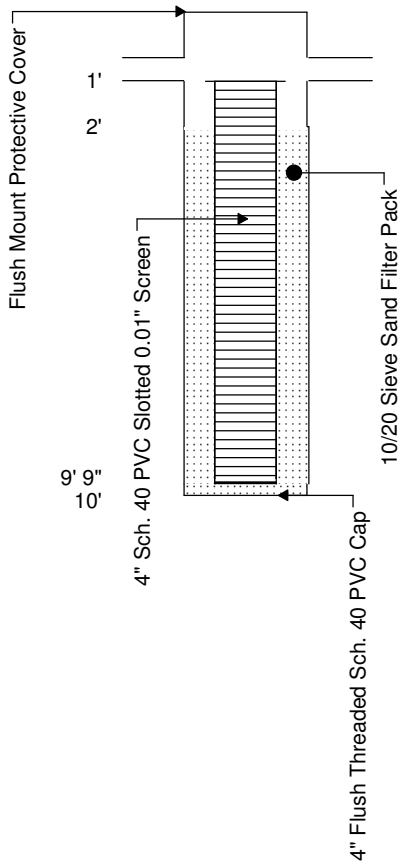
Well No.: MKTF-21
Start Date: 2/10/2014
Finish Date: 2/10/2014

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Not Applicable
Driller: Western Refining Southwest, Inc.
Drilling Rig: Not Applicable
Drilling Method: Not Applicable
Sampling Method: Not Applicable

Total Depth: 10' bgl
Ground Water: 7.60' ft. BTOC
Elev., TOC (ft. msl): 6952.57
Elev., PAD (ft. msl): 6952.68
Elev., GL (ft. msl): 6952.00
Site Coordinates:
N 1633570.30 **E** 2546110.00

Comments: N 35°29.295' W 108°25.675'; Boring ID: Sump-S

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description	Completion Results
-3, -1, 1, 3, 5, 7, 9, 11, 13, 15, 17, 19					Ground Surface **Fill Material** Total Depth = 10' BGL	



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512/347-7588
512/347-8243

WELL INSTALLATION

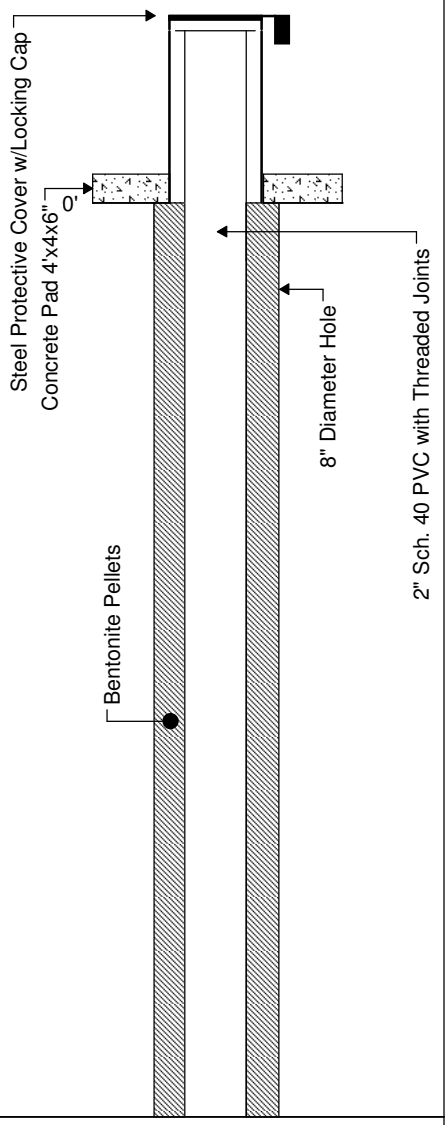
Well No.: MKTF-22
Start Date: 11/8/2013 12:15
Finish Date: 11/8/2013 15:30

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.288' W 108°25.802'; Boring ID - SB23

Total Depth: 32' bgl
Ground Water: Saturated @ 26' bgl
Elev., TOC (ft. msl): 6942.31
Elev., PAD (ft. msl): 6939.76
Elev., GL (ft. msl): 6938.57
Site Coordinates:
N 1633501.64 **E** 2545478.20

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-3					
-1					Ground Surface
1	3.4			10	**Clayey Silt (ML)** Low plasticity, very fine grain, compact to loose, damp, tan, no odor
3	8.9			20	**Clayey Silt (ML)** Similar to above
5	7.0			20	**Clayey Silt (ML)** Similar to above
7	7.9			50	**Clayey Silt (ML)** Similar to above, light brown, no odor
9	6.4			40	**Clayey Silt (ML)** Low plasticity, stiff, damp, light brown, no odor
11	13.7			50	**Clayey Silt (ML)** Similar to above
13	12.7			10	**Clayey Silt (ML)** Similar to above, very stiff
15	10.1			70	**Clayey Silt (ML)** Very fine grain, stiff, damp, brown, no odor, becomes sandy at base

Completion Results



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512/347-7588
512/347-8243

WELL INSTALLATION

Well No.: MKTF-22
Start Date: 11/8/2013 12:15
Finish Date: 11/8/2013 15:30

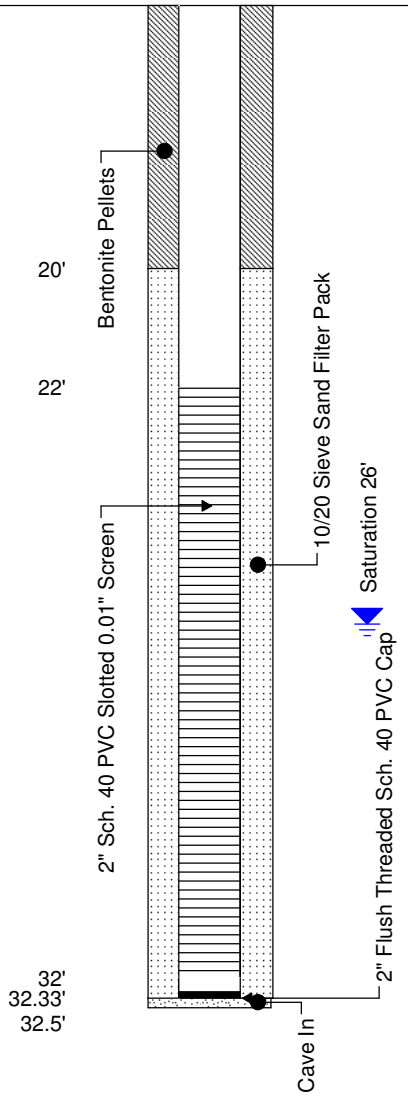
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.288' W 108°25.802'; Boring ID - SB23

Total Depth: 32' bgl
Ground Water: Saturated @ 26' bgl
Elev., TOC (ft. msl): 6942.31
Elev., PAD (ft. msl): 6939.76
Elev., GL (ft. msl): 6938.57
Site Coordinates:
N 1633501.64 **E** 2545478.20

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
17	13.2			10	**Silty Clay/Clayey Silt (CL)** Similar to above, increase in clay, damper, no odor
19	17.2			90	**Silty Clay (CL)** Low plasticity, firm, damp, brown, no odor
21	14.1			90	**Sandy Clay (CL)** Low plasticity, soft, damp, brown, no odor
23	43.1			90	**Sandy Clay (CL)** Similar to above, damp, faint odor
25	73.1	26'		90	**Sandy Clay (CL)** Similar to above, very moist in sand seams, hydrocarbon odor
27				90	**Silty Sand (SM)** Fine to medium grain, loose, saturated, brownish gray, hydrocarbon odor
29				90	**Clayey Silt (ML)** Very fine grain, soft, moist, dark brown, hydrocarbon odor
					Sand (SP) Fine to medium grain, loose, saturated, brown, odor
31				90	**Silty Clay (CL)** Low to moderate plasticity, firm, damp, brown and light olive/gray, no odor at base
33					**Silty Clay (CL)** Low plasticity, firm, damp, greenish gray, no odor

Total Depth = 32' BGL

Completion Results



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512/347-7588
512/347-8243

WELL INSTALLATION

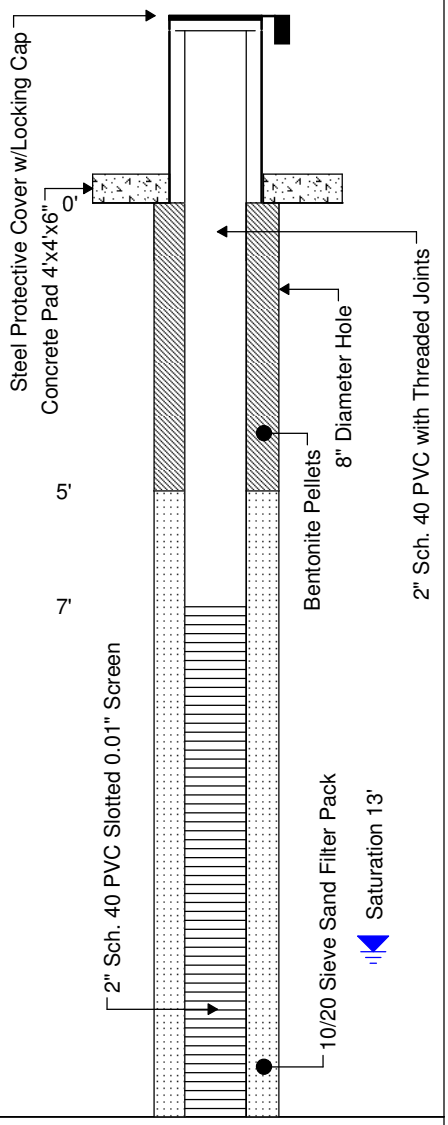
Well No.: MKTF-23
Start Date: 11/4/2013 14:00
Finish Date: 11/4/2013 16:00

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Five-Foot Core Barrel
Comments: N 35°29.327' W 108°25.795'; Boring ID - SB25

Total Depth: 20' bgl
Ground Water: Saturated @ 13' bgl
Elev., TOC (ft. msl): 6929.98
Elev., PAD (ft. msl): 6927.23
Elev., GL (ft. msl): 6925.79
Site Coordinates:
N 1633750.93 **E** 2545503.70

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-3					
-1					Ground Surface
1	10.3				**Silty Clay/Clayey Silt (ML/CL)** Low plasticity, firm, damp, brown, no odor
3	9.7			90	**Silty Clay/Clayey Silt (ML/CL)** Similar to above
5	13.4				**Silty Clay/Clayey Silt (ML/CL)** Similar to above
	21.9				**Clayey Silt (ML)** Low plasticity, soft, damp, brown, no odor
7	22			90	**Clayey Silt (ML)** Similar to above
9	29.1				**Clayey Sand (SC)** Very fine grain, compact, damp, brown, no odor
11	211	13'		80	**Clayey Sand (SC)** Similar to above, odor, moist
13	1022				**Clayey Sand (SC)** Fine grain, compact, moist to saturated in sand seam, hydrocarbon odor, phase-separated hydrocarbon present
15					

Completion Results



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512/347-8243

WELL INSTALLATION

Well No.: MKTF-23
Start Date: 11/4/2013 14:00
Finish Date: 11/4/2013 16:00

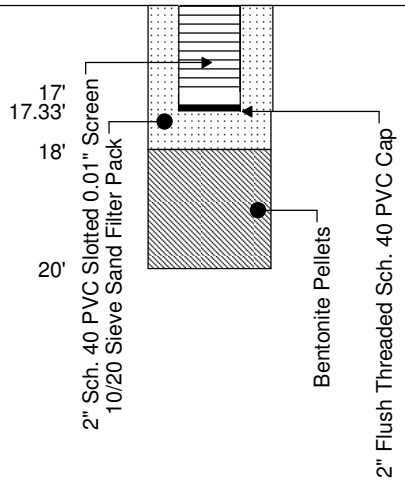
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Five-Foot Core Barrel

Total Depth: 20' bgl
Ground Water: Saturated @ 13' bgl
Elev., TOC (ft. msl): 6929.98
Elev., PAD (ft. msl): 6927.23
Elev., GL (ft. msl): 6925.79
Site Coordinates:
N 1633750.93 **E** 2545503.70

Comments: N 35°29.327' W 108°25.795'; Boring ID - SB25

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
	32.6				**Clay (CH)** High plasticity, stiff, damp, brown, no odor
17				90	
	28.9				
19					**Sandy Clay (CL)** Moderate plasticity, firm, damp, brown and gray, no odor
	22.7				
21					Total Depth = 20' BGL
23					
25					
27					
29					
31					
33					

Completion Results



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512/347-7588
512/347-8243

WELL INSTALLATION

Well No.: MKTF-24
Start Date: 10/29/2013 13:15
Finish Date: 10/29/2013 16:15

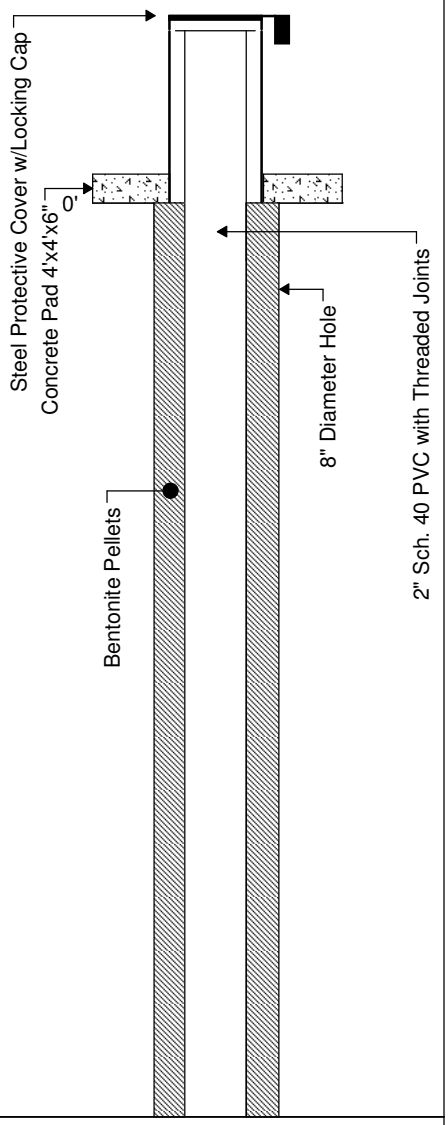
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon

Total Depth: 30' bgl
Ground Water: Saturated @ 20' bgl
Elev., TOC (ft. msl): 6928.72
Elev., PAD (ft. msl): 6926.07
Elev., GL (ft. msl): 6924.62
Site Coordinates:
N 1633853.19 **E** 2545468.48

Comments: N 35°29.342' W 108°25.800'; Boring ID - SB26

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-3					
-1					Ground Surface
1	14.1			90	**Silt/Silty Sand (ML/SM)** Very fine to fine grain, loose, dry, brown
3	11.2			10	**Silty Sand (SM)** Fine grain, compact/very dense, damp, brown
5	12.5			90	**Silty Sandy Clay (CL)** Low plasticity, very dense, damp, brown
7	11.8			90	**Silty Sandy Clay (CL)** Similar to above
9	14.8			60	**Silty Sandy Clay (CL)** Similar to above
11	12.5			90	**Silty Sandy Clay (CL)** Similar to above
13	12.8			90	**Silty Sandy Clay (CL)** Similar to above
15	13.4			90	**Clay (CH)** High plasticity, firm, damp, brown, trace silt, no odor

Completion Results



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1250 S. Capital of Texas Hwy., Bldg. 3, Suite 200
Austin, Texas 78746

512/347-7588
512/347-8243

WELL INSTALLATION

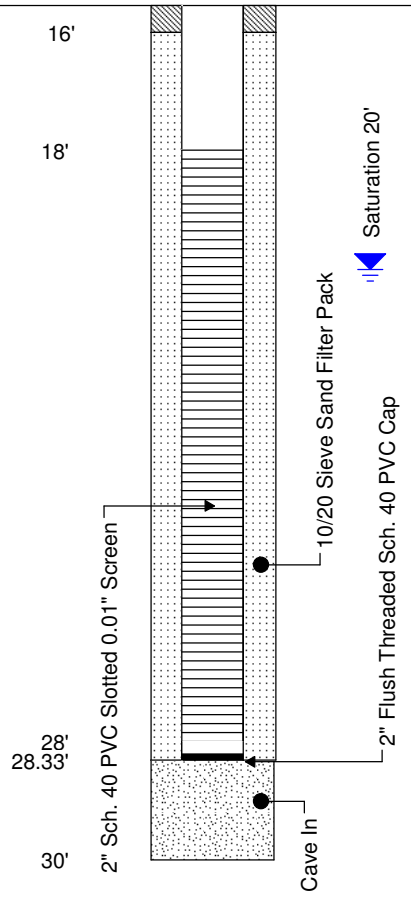
Well No.: MKTF-24
Start Date: 10/29/2013 13:15
Finish Date: 10/29/2013 16:15

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.342' W 108°25.800'; Boring ID - SB26

Total Depth: 30' bgl
Ground Water: Saturated @ 20' bgl
Elev., TOC (ft. msl): 6928.72
Elev., PAD (ft. msl): 6926.07
Elev., GL (ft. msl): 6924.62
Site Coordinates:
N 1633853.19 **E** 2545468.48

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
17	16.8			70	**Silty Sandy Clay (CL)** Low plasticity, firm, damp, brown, no odor
19	33.7	20'		90	**Sandy Clay (CL)** Low plasticity, soft, damp, brown, no odor
21	40.8			90	**Sandy Clay/Clayey Sand (CL/SC)** Fine grain, compact to soft, moist to saturated, brown, no odor
23				90	**Sandy Clay/Clayey Sand (CL/SC)** Similar to above, moist to saturated, no odor
25				90	**Sandy Clay/Clayey Sand (CL/SC)** Similar to above, moist to saturated, no odor
27				90	**Sandy Clay/Clayey Sand (CL/SC)** Similar to above, moist to saturated, greenish gray sand at base
29				90	**Silt/Siltstone (ML)** Low plasticity, very dense, dry, crumbly, brown/reddish brown, no odor
31					Total Depth = 30' BGL
33					

Completion Results



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512/347-7588
512/347-8243

WELL INSTALLATION

Well No.: MKTF-25
Start Date: 10/30/2013 14:45
Finish Date: 10/30/2013 16:30

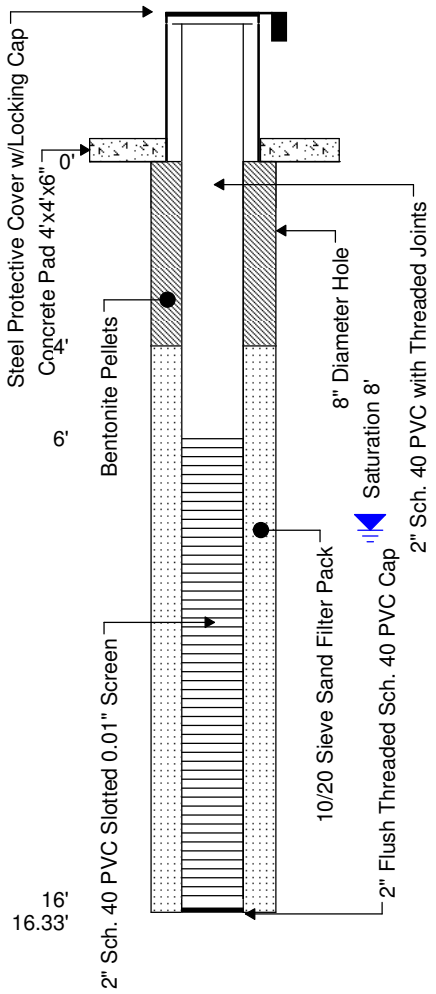
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon

Total Depth: 16' bgl
Ground Water: Saturated @ 8' bgl
Elev., TOC (ft. msl): 6916.19
Elev., PAD (ft. msl): 6913.35
Elev., GL (ft. msl): 6911.79
Site Coordinates:
N 1634015.86 **E** 2545275.68

Comments: N 35°29.372' W 108°25.840'; Boring ID - SB28

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
					Ground Surface
1	10.9			60	**Fill (Silty Clay/Gravel)** Low plasticity, stiff, damp, brown, no odor
3	14.5			70	**Fill (Silty Clay/Gravel)** Similar to above
5	12.9			20	**Silty Clay (CL)** Low plasticity, stiff, damp, brown
7	14.5	8'		70	**Silty Clay (CL)** Similar to above
9	21.1			60	**Gravelly Sand (SW)** Fine to medium grain, loose, brown, saturated, odor
11				80	**Gravelly Sand (SW)** Fine to medium grain, compact, brown, very moist to saturated, odor
13				70	**Clayey Sand (SC)** Fine grain, compact, brown, moist to saturated in sand seams, odor
15				80	**Clayey Sand (SC)** Similar to above, odor
					Total Depth = 16' BGL

Completion Results



RPS
1250 S. Capital of Texas Hwy., Bldg. 3, Suite 200
Austin, Texas 78746

512/347-7588
512/347-8243

WELL INSTALLATION

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.373' W 108°25.796'; Boring ID - SB29

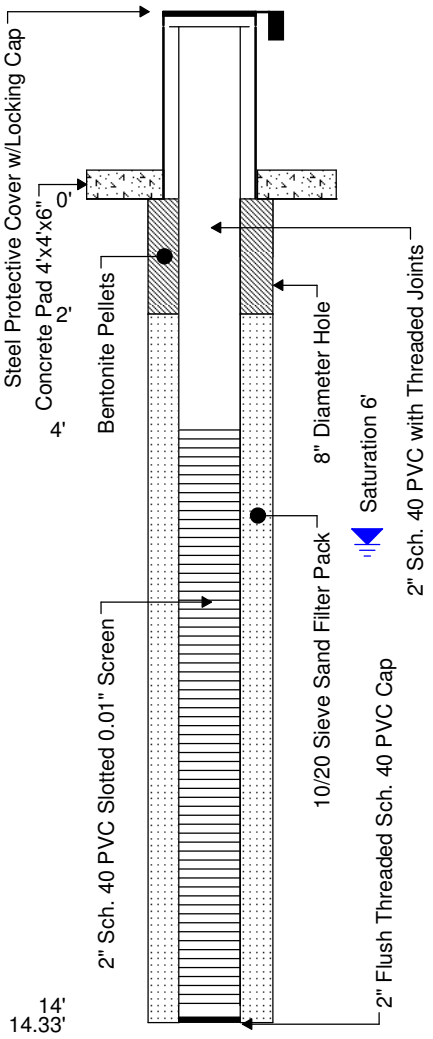
Total Depth: 14' bgl
Ground Water: Saturated @ 6' bgl
Elev., TOC (ft. msl): 6915.31
Elev., PAD (ft. msl): 6912.55
Elev., GL (ft. msl): 6911.35
Site Coordinates:
N 1634033.63 **E** 2545492.39

Well No.: MKTF-26
Start Date: 10/30/2013 10:40
Finish Date: 10/30/2013 12:00

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
					Ground Surface
1	17.5			80	**Silty Clay (CL)** Low plasticity, soft, damp, brown, no odor, trace small gravel
3	9.4			60	**Silty Clay (CL)** Similar to above
5	4.8			60	**Silty Clay (CL)** Similar to above
7	34.8	6'		90	**Sandy Clay/Clayey Sand (SC/CL)** Very fine grain, compact/soft, brown, moist, faint odor, saturated at base
9				70	**Sandy Clay (SC)** Low plasticity, stiff, damp, brown, no odor
11				60	**Silt/Siltstone (ML)** Low plasticity, very dense, dry, reddish brown, very fine grain sand in fissures, no odor
13				60	**Silt/Siltstone (ML)** Similar to above
					Total Depth = 14' BGL

-3
-1
15

Completion Results



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512/347-8243

WELL INSTALLATION

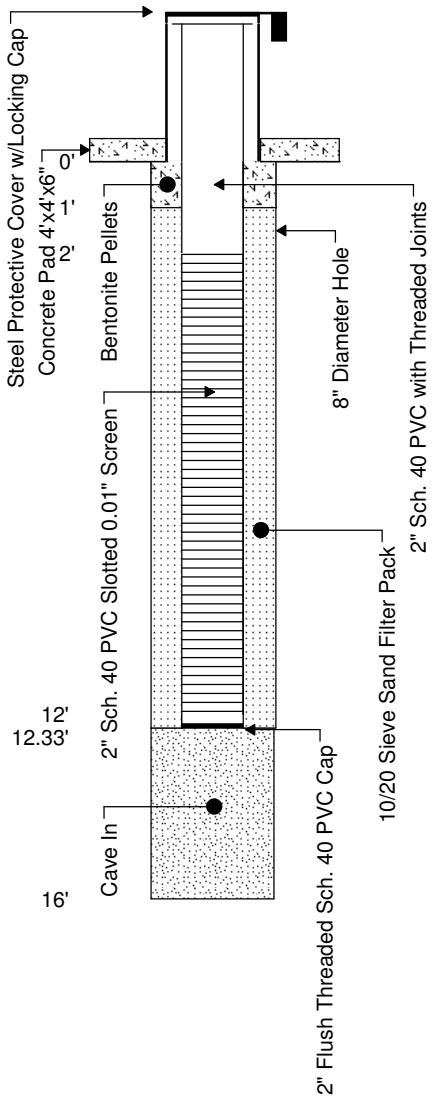
Well No.: MKTF-27
Start Date: 10/30/2013 09:00
Finish Date: 10/30/2013 10:20

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01809
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: Split Spoon
Comments: N 35°29.387' W 108°25.771'; Boring ID - SB30

Total Depth: 16' bgl
Ground Water: Not Encountered
Elev., TOC (ft. msl): 6917.90
Elev., PAD (ft. msl): 6915.36
Elev., GL (ft. msl): 6914.18
Site Coordinates:
N 1634115.56 **E** 2545620.98

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-3					
-1					Ground Surface
1	3.3			90	**Silty Clay (CL)** Low plasticity, firm, damp, brown, occasional gravel
3	4.1			80	**Silty Clay (CL)** Similar to above
5	2.4			90	**Silty Clay (CL)** Similar to above
7	4.1			90	**Silty Clay (CL)** Low to moderate plasticity, firm to soft, damp, brown, no odor, calcareous organics present
9	3.3			80	**Silt/Siltstone (ML)** Low plasticity, very dense, dry, reddish brown with greenish gray very fine grain sand in fissures, no odor
11	3.7			80	**Silt/Siltstone (ML)** Similar to above
13	4.5			80	**Silt/Siltstone (ML)** Similar to above
15	3.9			80	**Silt/Siltstone (ML)** Similar to above
17					Total Depth = 16' BGL
19					

Completion Results



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Austin, Texas 78746

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512/347-7588
512/347-8243

WELL INSTALLATION

Well No.: MKTF-28
Start Date: 4/2/2014 11:30
Finish Date: 4/2/2014 14:25

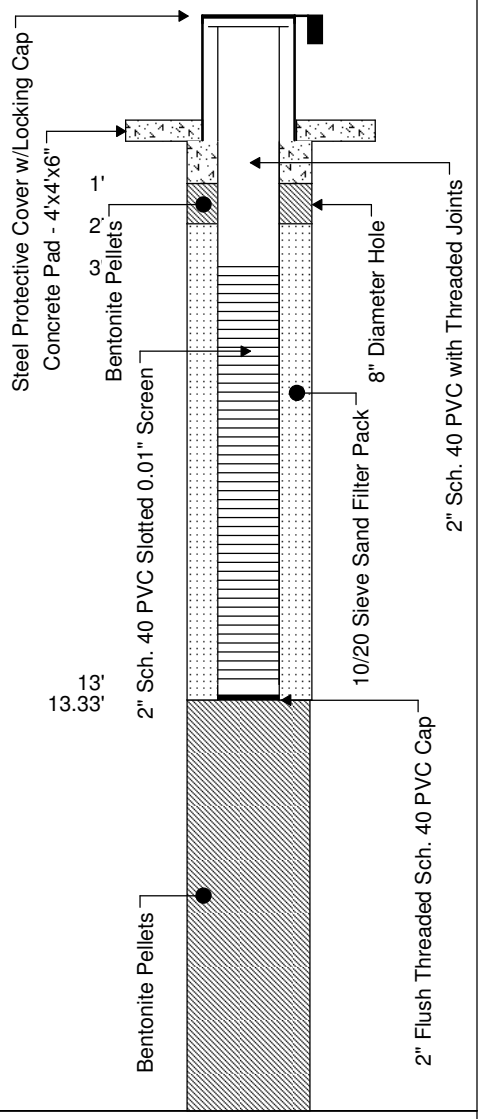
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon

Total Depth: 30' bgl
Ground Water: Not Encountered
Elev., TOC (ft. msl): 6921.52
Elev., PAD (ft. msl): 6918.67
Elev., GL (ft. msl): 6917.51
Site Coordinates:
N 1634263.44 **E** 2545650.04

Comments: N 35°29.412' W 108°25.763', Air Temp: 48°F

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-3					
-1					Ground Surface
1	2.6			90	**Fill (Silty Clay)** Low plasticity, soft, damp, brown, no odor, sandy at base, moist
3	5.0				
5	3.6				
7	7.6			60	**Silty Clay (CL)** Similar to above, damp to moist at 7.5' bgl
9	8.2				
11	8.1			60	**Silty Clay (CL)** Low plasticity, stiff, damp to dry, crumbly, brown, no odor
13	7.5				
15	9.1			60	**Silty Clay (CL)** Similar to above
17	5.5				
19	7.8				
21	3.5			60	**Silty Clay (CL)** Similar to above

Completion Results



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Austin, Texas 78746

512/347-7588
512/347-8243

WELL INSTALLATION

Well No.: MKTF-28
Start Date: 4/2/2014 11:30
Finish Date: 4/2/2014 14:25

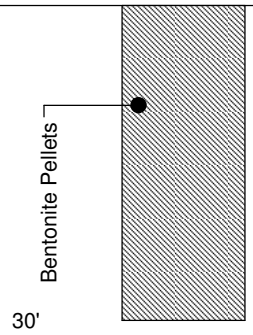
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon

Total Depth: 30' bgl
Ground Water: Not Encountered
Elev., TOC (ft. msl): 6921.52
Elev., PAD (ft. msl): 6918.67
Elev., GL (ft. msl): 6917.51
Site Coordinates:
N 1634263.44 **E** 2545650.04

Comments: N 35°29.412' W 108°25.763', Air Temp: 48°F

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
24	4.3				**Clay (CH)** High plasticity, very stiff, reddish brown and gray, no odor, crumbly
26	4.1				**Clay (CH)** Similar to above
28	3.3			60	
30					Total Depth = 30' BGL
32					
34					
36					
38					
40					
42					
44					
46					
48					

Completion Results



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WELL INSTALLATION

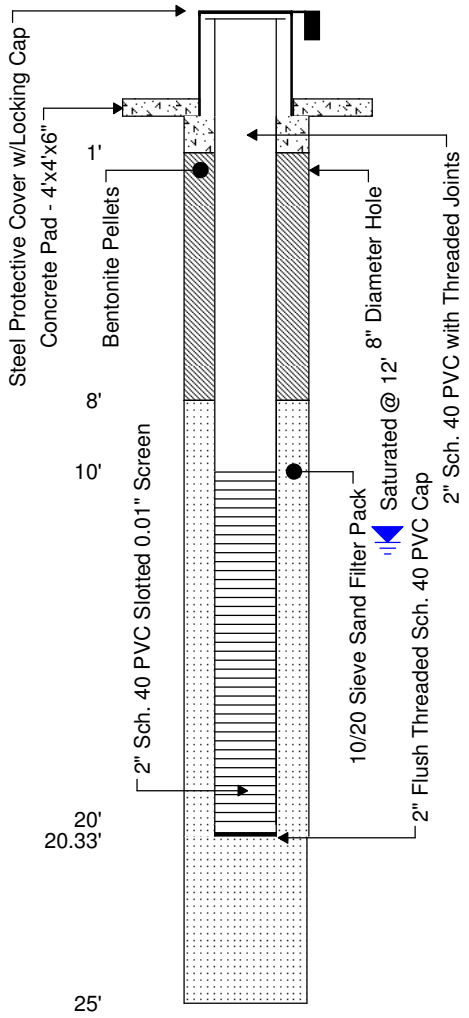
Well No.: MKTF-29
Start Date: 4/2/2014 08:30
Finish Date: 4/2/2014 11:15

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon
Comments: N 35°29.406' W 108°25.846', Air Temp: 41°F

Total Depth: 25' bgl
Ground Water: Saturated @ 12' bgl
Elev., TOC (ft. msl): 6901.62
Elev., PAD (ft. msl): 6898.83
Elev., GL (ft. msl): 6897.67
Site Coordinates:
N 1634249.76 **E** 2545258.34

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-3, -1					Ground Surface
1	2.2			95	**Silty Clay (CL)** Low plasticity, firm, damp, brown, no odor
3	3.9				
5	3.1				
7	1.3			95	**Silty Clay (CL)** Similar to above, no odor
9	4.4				
11	2.4				**Silty Clay (CL)** Similar to above, no odor
13	2.9	12'		60	**Clayey Sand (SC)** Fine grain, compact, saturated, brown, no odor
15	2.8				**Clayey Sand (SC)** Similar to above, saturated
17	2.7			60	
19	1.0				**Clay (CH)** High plasticity, very stiff, dry, damp, reddish brown/gray, no odor
21	1.0			90	**Clay (CH)** Similar to above, no odor
23	1.2				
25					Total Depth = 25' BGL
27					

Completion Results



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WELL INSTALLATION

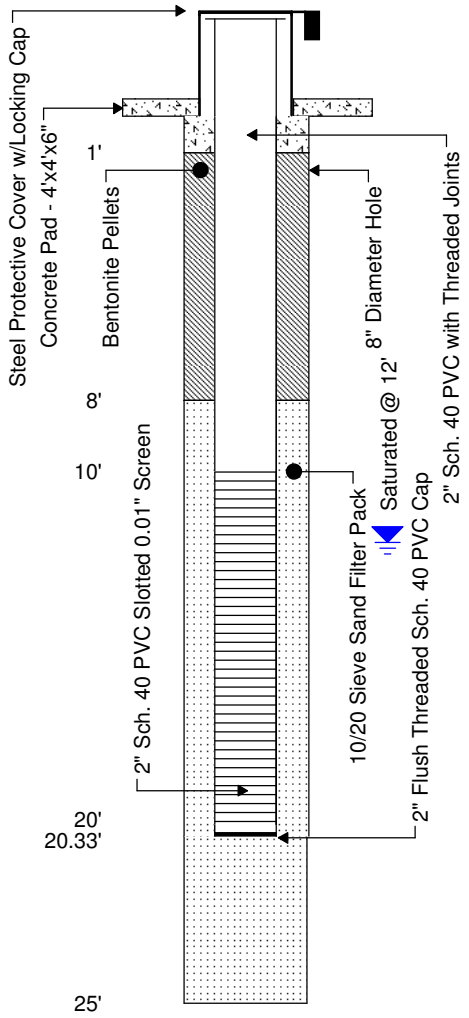
Well No.: MKTF-30
Start Date: 4/1/2014 13:00
Finish Date: 4/1/2014 15:00

Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon
Comments: N 35°29.405' W 108°25.910', Air Temp: 58°F

Total Depth: 25' bgl
Ground Water: Saturated @ 12' bgl
Elev., TOC (ft. msl): 6900.80
Elev., PAD (ft. msl): 6898.10
Elev., GL (ft. msl): 6896.68
Site Coordinates:
N 1634225.67 **E** 2544937.91

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-3, -1					Ground Surface
1, 3	12.3			30	**Fill (Silty Clay)** Low plasticity, firm, dry, brown, no odor
5, 7, 9	12.3, 13.2, 17.1			90	**Fill (Silty Clay)** Similar to above, dry, crumbly, no odor, sand at base
11, 13	18.5, 17.2	12'		80	**Silty Sand (SM)** Fine grain, compact to loose, moist to saturated at 12' bgl, brown, no odor, clayey at 14' bgl
15, 17, 19	13.1, 13.8			90	**Sandy Clay (CL)** Low plasticity, firm, damp, brown, no odor; **Clayey Sand (SC)** Very fine grain, compact, saturated, brown, no odor; **Sandy Clay (CL)** Low plasticity, firm, damp, brown, no odor
21, 23, 25, 27	9.1, 6.2			95	**Clay (CH)** Moderate to high plasticity, stiff, damp to dry, crumbly, brown/gray, no odor
					Total Depth = 25' BGL

Completion Results



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WELL INSTALLATION

Well No.: MKTF-31
Start Date: 4/1/2014 08:20
Finish Date: 4/1/2014 12:00

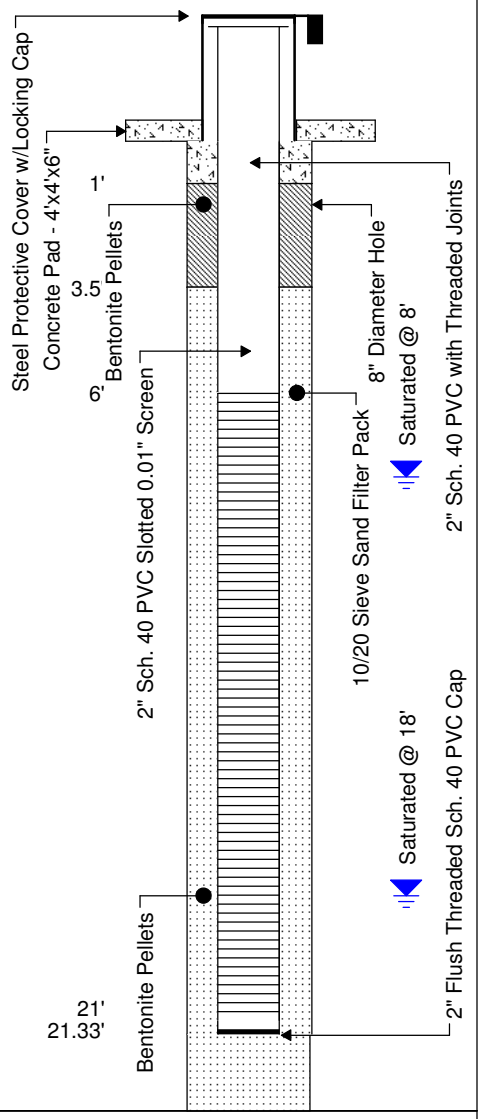
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon

Total Depth: 30' bgl
Ground Water: Saturated @ 8' bgl
Elev., TOC (ft. msl): 6906.87
Elev., PAD (ft. msl): 6904.26
Elev., GL (ft. msl): 6903.11
Site Coordinates:
N 1633898.83 **E** 2544938.99

Comments: N 35°29.350' W 108°25.909', Air Temp: 48°F; Boring ID - SB20

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-3					
-1					Ground Surface
1	2.0			90	**Fill (Silty Clay)** Low plasticity, firm, damp, brown, no odor, gravel throughout
3	2.7				
5	6.5				**Silty Clay (CL)** Low plasticity, firm, damp, brown, no odor
7	5.2	8'		70	**Clayey Sand (SC)** Very fine grain, compact, very moist at 6' bgl to saturated at 8' bgl, brown, no odor
9	4.8				
11				95	**Clayey Sand/Silty Sand (SC/SM)** Similar to above, saturated, brown, no odor
13	5.8				**Clay (CH)** High plasticity, stiff, damp, brown, no odor
15					
17	3.3	18'		95	**Sandy Clay (CL)** Low to moderate plasticity, firm, damp in sand seams, brown, no odor
19	4.6				**Clayey Sand (SC)** Very fine grain, compact, moist to saturated, brown, no odor
21	5.2			90	**Sandy Clay (CL)** Low to moderate plasticity, firm, damp in sand seams, brown, no odor

Completion Results



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1250 S. Capital of Texas Hwy., Bldg. 3, Suite 200
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512/347-7588
512/347-8243

WELL INSTALLATION

Well No.: MKTF-31
Start Date: 4/1/2014 08:20
Finish Date: 4/1/2014 12:00

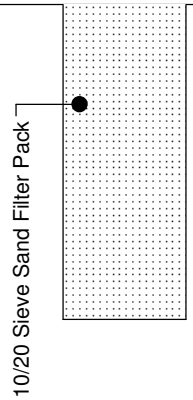
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon

Total Depth: 30' bgl
Ground Water: Saturated @ 8' bgl
Elev., TOC (ft. msl): 6906.87
Elev., PAD (ft. msl): 6904.26
Elev., GL (ft. msl): 6903.11
Site Coordinates:
N 1633898.83 **E** 2544938.99

Comments: N 35°29.350' W 108°25.909', Air Temp: 48°F; Boring ID - SB20

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
24	7.2				
26	2.5			90	**Clay (CH)** Moderate plasticity, firm, dry to damp, crumbly, reddish brown, no odor
28	2.3				
30					Total Depth = 30' BGL
32					
34					
36					
38					
40					
42					
44					
46					
48					

Completion Results



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512/347-8243

WELL INSTALLATION

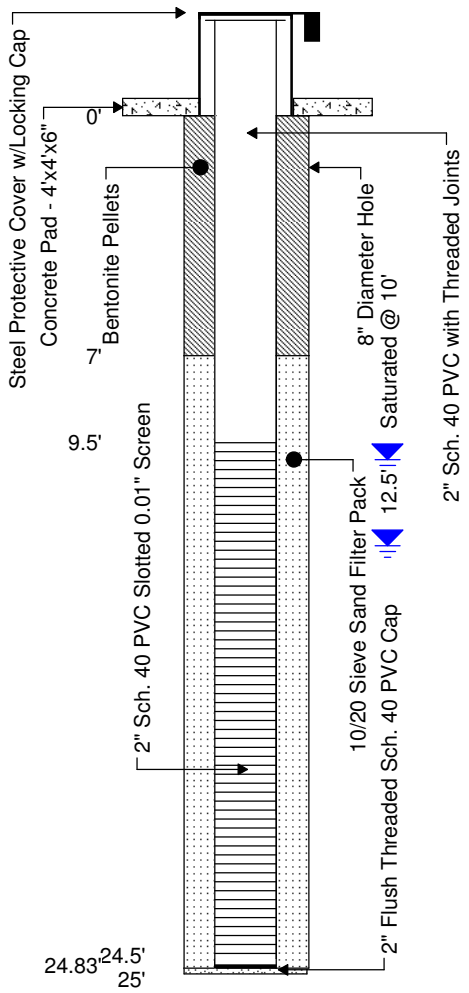
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon
Comments: N 35°29.275' W 108°25.928', Air Temp: 58°F

Total Depth: 25' bgl
Ground Water: Saturated @ 10' bgl
Elev., TOC (ft. msl): 6911.11
Elev., PAD (ft. msl): 6908.44
Elev., GL (ft. msl): 6907.16
Site Coordinates:
N 1633443.56 **E** 2544840.32

Well No.: MKTF-32
Start Date: 3/31/2014 14:40
Finish Date: 3/31/2014 16:30

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-3, -1					Ground Surface
1, 3	16.3, 10.0			95	**Clayey Silt (ML)** Low plasticity, firm, dry, brown, no odor
5, 7	8.7, 10.1			100	**Clayey Silt/Silty Clay (ML/CL)** Low plasticity, firm, dry, brown, no odor
9	9.1, 13.6	10'			**Silty Clay (CL)** Similar to above, damp, no odor
11, 13	9.3, 10.9	12.5'		90	**Sandy Clay/Clayey Sand (SC/CL)** Low plasticity, very fine grain, brown, moist, saturated at 10-11', bgl and 12.5-13.5' bgl, no odor
15, 17, 19	10.6, 14.1			80	**Silty Clay/Clay (CH)** Moderate to high plasticity, firm to stiff, damp, brown, no odor
21, 23	12.6, 10.4			80	**Clay (CH)** Similar to above
25					**Sandy Clay (SC)** Moderate plasticity, firm, moist in sand seams, brown, no odor
27					**Silty Clay (CL)** Low plastiicty, stiff gray to greenish gray, gravelly at base, damp, no odor
					Total Depth = 25' BGL

Completion Results



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512/347-8243

WELL INSTALLATION

Well No.: MKTF-33
Start Date: 4/3/2014 08:40
Finish Date: 4/3/2014 12:00

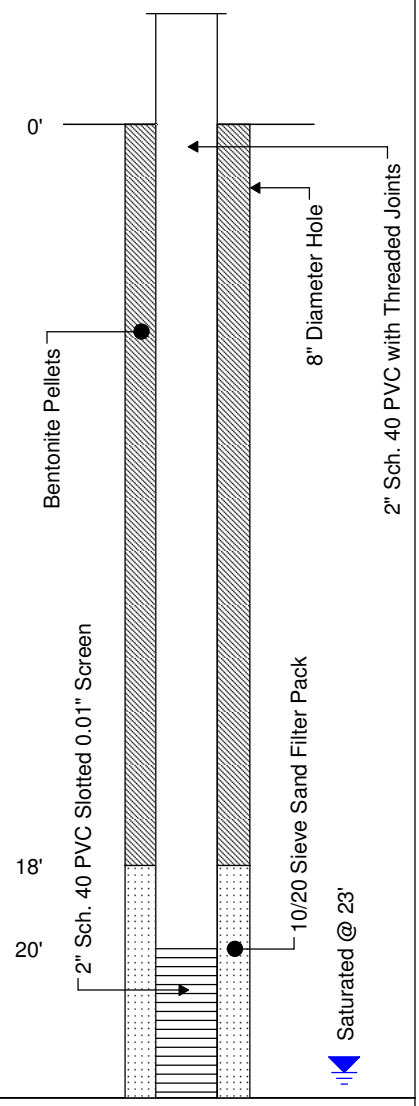
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon

Total Depth: 35' bgl
Ground Water: Saturated @ 23' bgl
Elev., TOC (ft. msl): 6939.75
Elev., PAD (ft. msl): --
Elev., GL (ft. msl): 6936.59
Site Coordinates:
N 1633261.99 **E** 2545318.27

Comments: N 35°29.246' W 108°25.830', Air Temp: 30°F

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-3, -1					Ground Surface
1	0.9				**Silty Clay (CL)** Low plasticity, firm, damp, brown, no odor
3	1.1			95	**Clayey Silt (ML)** Low plasticity, dense, dry, light brown, no odor, calcareous
5	2.1				
7	2.2			95	**Clayey Silt (ML)** Similar to above
9	2.8				
11	3.8				**Clayey Sand (SC)** Fine grain, loose to compact, dry, brown, no odor
13	3.7			60	
15	4.5				**Clay (CH)** High plasticity, very stiff, dry, brown, no odor
17	2.9			50	**Sand/Clayey Sand (SP/SC)** Fine grain, loose to compact, dry, brown, no odor
19					
21	2.5			90	**Sandy Clay/Clay (CL/CH)** High to moderate plasticity, stiff, damp, brown, no odor, sand seam at 21' bgl, saturated sand lense at 23' bgl
23	2.9	23'			

Completion Results



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WELL INSTALLATION

Well No.: MKTF-33
Start Date: 4/3/2014 08:40
Finish Date: 4/3/2014 12:00

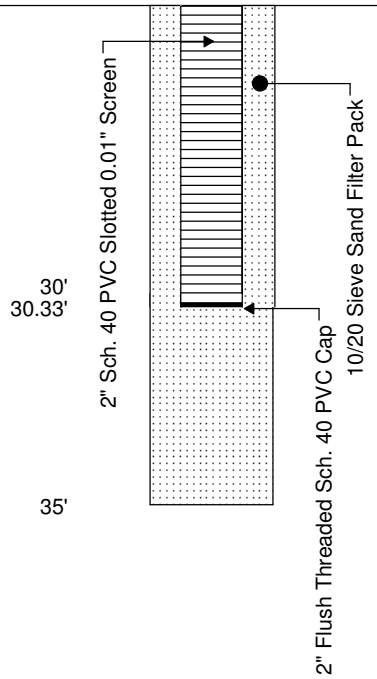
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon

Total Depth: 35' bgl
Ground Water: Saturated @ 23' bgl
Elev., TOC (ft. msl): 6939.75
Elev., PAD (ft. msl): --
Elev., GL (ft. msl): 6936.59
Site Coordinates:
N 1633261.99 **E** 2545318.27

Comments: N 35°29.246' W 108°25.830', Air Temp: 30°F

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
25	3.4				
27	1.6			90	**Clayey Sand/Sandy Clay (SC/CL)** Moderate plasticity, firm, moist to saturated throughout interval, brown, interbedded sand/clay, no odor
29	2.5				
31				95	**Clay (CH)** High plasticity, very stiff, brown, damp, no odor
35					Total Depth = 35' BGL

Completion Results



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Austin, Texas 78746

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512/347-8243

WELL INSTALLATION

Well No.: MKTF-34
Start Date: 3/31/2014 11:00
Finish Date: 3/31/2014 13:45

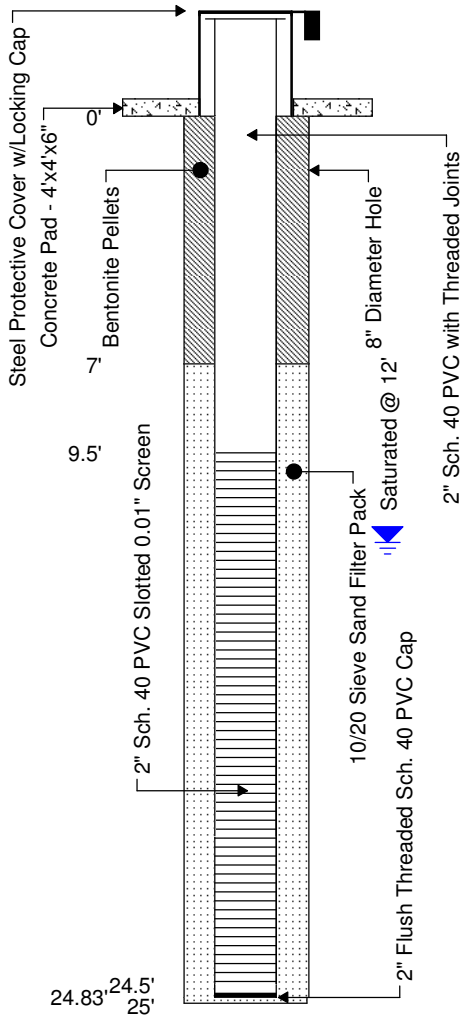
Client: Western Refining Southwest, Inc.
Site: Gallup Refinery - Seep West of Tank 102
Job No.: UEC01867
Geologist: Tracy Payne
Driller: Enviro-Drill, Inc.
Drilling Rig: CME 75
Drilling Method: Hollow Stem Augers
Sampling Method: 5-Foot Split Spoon

Total Depth: 25' bgl
Ground Water: Saturated @ 12' bgl
Elev., TOC (ft. msl): 6945.35
Elev., PAD (ft. msl): 6942.42
Elev., GL (ft. msl): 6943.52
Site Coordinates:
N 1633118.42 **E** 2545681.30

Comments: N 35°29.224' W 108°25.757', Air Temp: 49-51°F

Depth (ft.)	PID (ppm)	Saturation	USCS Class	Recovery (%)	Sample Description
-3					
-1					Ground Surface
1	13.6			95	**Silty Clay/Clayey Silt (CL/SM)** Low plasticity, soft, damp, brown, no odor, calcareous
3	7.8				
5	15.6				
7	12.1			60	**Clay (CH)** High plasticity, stiff, damp, brown, no odor
9	10.7				
11	12.3				**Sandy Clay (CL)** Moderate plasticity, firm, moist, brown, no odor
13	11.9	12'		60	**Clayey Sand (SC)** Similar to above, saturated, no odor
15	9.0				**Sandy Clay (CL)** Moderate plasticity, firm, moist, brown, no odor
17	8.1			90	**Silty Sandy Clay (CL)** Low to moderate plasticity, firm, damp, no odor
19	16.3				
21	13.4				
23	13.6			95	**Silty Clay (CL)** Similar to above, damp, no odor
25	15.8				
27	11.5				**Gravelly Clay (CL)** Low plasticity, firm, crumbly, damp, no odor, greenish gray
	11.7				
					Total Depth = 25' BGL

Completion Results



RPS
1250 S. Capital of Texas Hwy., Bldg. 3, Suite 200
Austin, Texas 78746

Sheet: **1 of 1**

512/347-7588
512/347-8243

APPENDIX G

SUMMARY OF EPA/NMED/RCRA ACTIVITY

2014 Major Refinery Activities and Events

February

- The Facility Response Plan was revised.
- Completed biennial hazardous waste report for 2013 and sent to NMED HWB.

August

- The EPA conducted a hazardous waste compliance assurance inspection. Part of the inspection focused on the SWMUs and AOCs.
- 2013 Groundwater Discharge report completed and sent to NMED/OCD.
- An energy assessment was conducted of the majority of the refineries fuel burning heaters and boilers.

September

- The annual groundwater sampling was conducted.
- Conducted annual SWPPP inspection.

December

- During the later part of December the WWTP switched from MPPE technology to carbon canisters as the primary benzene removal before flow to STP-1.
- The tank farm earthen berms were surveyed. A few berms showed signs of erosion since the last survey done in 1999. Repairs of .5 inch to 10 inches of berm height will take place in 2015.

Year 2014

- During numerous months of 2014, contractors performed repair/improvements to the evaporation pond earthen berms improving slope and stability.

APPENDIX H

SUMMARY OF ALL LEAKS, SPILLS, AND RELEASES

SPILL SUMMARY REPORT – 2014

DATE	INCIDENT
3/19/2014	An estimated 17.4 barrels of evaporation pond water was released from a breach in the pond dike at 1515 hours. The breach was discovered on the northwest area of Pond 7 earthen dike. Dike was immediately repaired using earth moving equipment that was in the area. The release did not reach a watercourse or waters of the U.S. Spill was reported to appropriate agencies and Form C-141 was filed. A Right of Entry Permit was obtained through the State of New Mexico Commissioner of Public Lands to commence cleanup of spill site which occurred on state lands directly west of the pond. Spill site has been cleaned up and confirmation soil samples were collected.
6/22/2014	At 2030 hours, an underground PVC line containing sewage from the lift station started leaking east of Pond 9. All flow was diverted from the Pilot Travel Center and the lift station to Pond 9. Line from the lift station was blocked in. Chlorine tablets were used to sanitize the affected area from potential biological activity. PVC line was repaired and area cleaned using vacuum truck and sanitized using chlorine tablets. Leak was estimated to be less than 10 barrels. Spill was reported to appropriate agencies and Form C-141 was filed.
8/5/2014	At approximately 1405 hours, oily sewer water from a secondary baker frac tank at the WWTP overflowed to the ground and along a conveyance ditch. It is estimated that 14 barrels of oily sewer water was spilled. Area was cleaned up using a vacuum truck and contaminated soil removed. Spill was reported to appropriate agencies and a Form C-141 was filed.
11/30/2014	At approximately 1715 hours, a 1/8 inch pinhole was discovered in the inlet piping to the NHT fin fan. Line was isolated at 1740 hours. Release was estimated to be 10 barrels of NHT feed stream containing naphtha and hydrogen which occurred for approximately 45 minutes. Spill occurred on a concrete containment pad and no soil was impacted with the leak. Spill was reported to appropriate agencies and a Form C-141 was filed.

Attached are copies of all the Form C-141 filed for 2014.

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Western Refining Southwest, Incorporated	Contact Ed Riege
Address 92 Giant Crossing Road Gallup NM 87301	Telephone No. 505-722-0217
Facility Name Western Refining Southwest Gallup Refinery	Facility Type Petroleum Refinery

Surface Owner	Mineral Owner	API No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	23 and 33	15N	15W					Mckinley

Latitude 35° 29′ 22″ **Longitude** 108° 25′ 24″

NATURE OF RELEASE

Type of Release Pond Water	Volume of Release 17.4 bbls	Volume Recovered None
Source of Release Evaporation Pond #7	Date and Hour of Occurrence 03-19-2014 1500 hr	Date and Hour of Discovery 03-19-2014 1515 hr
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Message Brandon Powell phone / email Carl Chavez phone / email Kristen Van Horn phone / email	
By Whom? Ed Riege	Date and Hour 03-19-2014 1805 hr 03-19-2014 1810 hr 03-19-2014 1815 hr	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

A Western employee observed a breach in the pond 7 dike. Western was in the process of improving the pond dikes and earth moving equipment, which was operating nearby, immediately responded to make repairs and stopped the release at 1630Hr.

Western has collected a sample of the water, which flowed through the breach, and soil samples from the impacted area. These samples are being analyzed for volatile organic compounds (VOCs), SVOCs, Diesel Range Organics (extended), New Mexico Water Quality Control Criteria metals, and major cation/anions. The results of the above listed analyses will help to direct any subsequent corrective action steps. The NM State land map indicates the owner of the property west of Pond 7 belongs to the state of New Mexico.

To address any concerns about seepage through the dikes or failure of the perimeter dikes, Western contracted Franklin Earthmoving Inc. to improve approximately 80% of the existing pond dikes. This work began in late January 2014 and is expected to continue through mid to late April. This work consists of widening the dikes and improving the outside slope of the berms, and repairing water and wind erosion to the top of the dikes (see enclosed pictures). The area of the breach at pond 7 was the original dike that had not yet been improved by Franklin as they were working approximately 150 yards northeast of the breach. The area impacted by the breach will be rebuilt to prevent any future breaches/seeps.

In addition to the physical improvement of the pond perimeter dikes, Western is pursuing the installation of a more aggressive evaporation system and water conservation measures. These measures should control free board levels and help prevent future seepage through the dikes and breaching of the dikes. Shallow groundwater is routinely monitored in the area and there is no indication of impacts to groundwater from the evaporation ponds.

Describe Area Affected and Cleanup Action Taken.*

It is estimated that 17.4 bbls of wastewater left the pond with possibly half crossing the fence line west of the dike. The small volume of water was absorbed by the dry soil and the release did not reach a watercourse or waters of the U.S. The results of the above listed analyses will help to direct any subsequent corrective action steps

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Ed Riege	Approved by Environmental Specialist:	
Title: Environmental Manager	Approval Date:	Expiration Date:
E-mail Address: ed.riege@WNR.com	Conditions of Approval:	Attached ☐
Date: 4-1-14 Phone: 505-722-0217		

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
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1000 Rio Brazos Road, Aztec, NM 87410
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1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: WESTERN REFINING	Contact: Beck Larsen
Address: I-40 / EXIT 39, JAMESTOWN,NM 87347	Telephone No.(505) 722-0258
Facility Name: WESTERN RENINING (GALLUP REFINERY)	Facility Type: Petroleum Refinery

Surface Owner	Mineral Owner	API No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	28	15 N	15 W					MCKINLEY

Latitude__35° 029' 024"__ **Longitude**__108° 024' 024"__

NATURE OF RELEASE

Type of Release: Sewage	Volume of Release < 10 bbls	Volume Recovered: N/A
Source of Release: Sanitary Line Rupture from Lift Station	Date and Hour of Occurrence 6/22/14 – 2030 hrs	Date and Hour of Discovery 6/22/14 - 2030
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? OCD (Carl Chavez, Msg) / (6/23/14 Brandon Powell, Msg)	
By Whom? Beck Larsen	Date and Hour: (6/23/14- 1330 hrs, Msg) / (6/23/14- 1340 hrs, Msg)	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.* N/A

Describe Cause of Problem and Remedial Action Taken.*
The pvc (underground) line from the lift station started leaking east of Pond 9. Diverted all flow from the Pilot Travel Cent and the Lift Station to Pond 9. Line from Lift Station was blocked in. Chlorine tables were used to sanitize the affected area from potential biological activity.

Describe Area Affected and Cleanup Action Taken.*
Pooling of sanitary wastewater near pipe rupture, east of road near Pond 9. Excess water crossed roadway toward Pond 9. Chlorine tables were used to sanitize the affected area from potential biological activity. A Work Request has been submitted to clean up area and reaping piping.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Beck Larsen:	Approved by Environmental Specialist:	
Title: Environmental Engineer	Approval Date:	Expiration Date:
E-mail Address: Thurman.larsen@wnr.com	Conditions of Approval:	Attached ☐
Date: 6/23/2014 Phone: (505) 722-0258		

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
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1000 Rio Brazos Road, Aztec, NM 87410
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State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company: WESTERN REFINING	Contact: Beck Larsen
Address: I-40 / EXIT 39, JAMESTOWN,NM 87347	Telephone No.(505) 722-0258
Facility Name: WESTERN REFINING (GALLUP REFINERY)	Facility Type: Petroleum Refinery

Surface Owner	Mineral Owner	API No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	28	15 N	15 W					MCKINLEY

Latitude__35° 029' 024"__ **Longitude**__108° 024' 024"__

NATURE OF RELEASE

Type of Release: Dirty Sewer Water	Volume of Release- Oil-14 bbls	Volume Recovered: Oil- 14 bbls
Source of Release: Secondary Baker Frac Tanks at WWTP	Date and Hour of Occurrence 8/5/14 @ 1405 hrs	Date and Hour of Discovery 8/5/14 @ 1405 hrs
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? OCD (C. Chavez) / NMED HWB (Kristen Van Horn)	
By Whom? Beck Larsen	Date and Hour: 8/6/14 C. Chavez @1335 hrs / K. Van Horn @ 1345 hrs	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.* N/A

Describe Cause of Problem and Remedial Action Taken.* Oily Sewer Water from the Secondary Baker Frac Tank at the WWTP overflowed to the ground and along a conveyance ditch. Cleanup operations started promptly using a vacuum truck to remove standing liquids from the soil and conveyance ditch. Initial soil samples were collected and submitted to the laboratory for analysis in order to make a proper determination of the extent of penetration of the oil and to determine the amount of cleanup that is required. Analytical results indicated that this material was TPH soil and it was characteristically RCRA non-hazardous.

Describe Area Affected and Cleanup Action Taken.* Approximately18 cubic yards of soil was excavated from the contaminated area. Five (5) initial soil samples (B-1, B-2, B-3, B-4, and B-5) (lab# 1408348) were collected along the conveyance ditch in the area of contamination and submitted to the laboratory for analysis which gave a preliminary findings. A secondary soil was collected also (B-6, B-7, B-8, B-9, B-10, and B-11) (lab # 1408F15) that was more comprehensive in scope. These findings indicated that only one area (B-7) reflected a higher level of TPH, DRO, and MRO. Additional soils was removed for sample point (B-7) and resubmitted under sample points (C-12 and C-13) (lab # 1409D84). A composite sample was collected for Bin # 2051 (lab # 1409350) for the material that is to be shipped offsite. A Waste Determination indicated that this material is RCRA Non-hazardous TPH soil (PCS, Petroleum Contaminated Soil) and was shipped to a RCRA Non-hazardous Subtitle D Landfill for proper disposal on November 3, 2014 (manifest # D68606) Refer to the attached analysis for further detail.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Beck Larsen:	Approved by Environmental Specialist:	
Title: Environmental Engineer	Approval Date:	Expiration Date:
E-mail Address: Thurman.larsen@wnr.com	Conditions of Approval:	Attached ☐
Date: 2/25/2015 Phone: (505) 722-0258		

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
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1000 Rio Brazos Road, Aztec, NM 87410
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State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company: WESTERN REFINING	Contact: Beck Larsen
Address: I-40 / EXIT 39, JAMESTOWN,NM 87347	Telephone No.(505) 722-0258
Facility Name: WESTERN RENINING (GALLUP REFINERY)	Facility Type: Petroleum Refinery

Surface Owner	Mineral Owner	API No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	28	15 N	15 W					MCKINLEY

Latitude__35° 029' 024"__ **Longitude**__108° 024' 024"__

NATURE OF RELEASE

Type of Release: NHT Feed stream containing Naphtha and Hydrogen	Volume of Release ~ 10 bbls	Volume Recovered: N/A
Source of Release: pinhole in the NHT Piping inlet going to the Fin Fan	Date and Hour of Occurrence 11/30/14 @ 1715 hrs	Date and Hour of Discovery 11/30/14 @ 1715 hrs
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? OCD (B. Powel/ C. Chavez); NMED (R Horowitz/K. Vanhorn)	
By Whom? Beck Larsen	Date and Hour: 12/01/14 1712 / 1715; 1719/ 1722 hrs	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.* No

Describe Cause of Problem and Remedial Action Taken.*
A 1/8 inch pinhole was found in the inlet piping to the NHT Fin Fan. Valve was closed and isolating the fin fan at 1740 hrs. Release was from 1715 hrs to 1820 hrs with the last 45 minutes with foam applied. Operations applied steam to release until ERT team responded within the first 20 minutes and began applying foam to the affected area.

Describe Area Affected and Cleanup Action Taken.*
Concrete containment pad in the NHT Unit. Area was cleaned up. No contamination to soil was impacted.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Beck Larsen	Approved by Environmental Specialist:	
Title: Environmental Engineer	Approval Date:	Expiration Date:
E-mail Address: thurman.larsen@wnr.com	Conditions of Approval:	Attached ☐
Date: 12/8/2014 Phone: (505) 722-0258		

APPENDIX I

BLANK

APPENDIX J

TEMPORARY LAND FARM ANALYTICAL RESULTS

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 10, 2014

Ed Riege
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 722-0210

RE: OCD Central Landfarm Semiannual Sampling OrderNo.: 1403323

Dear Ed Riege:

Hall Environmental Analysis Laboratory received 9 sample(s) on 3/7/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1403323**
Date Reported: **4/10/2014**

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-01-3-6
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 3/6/2014 10:00:00 AM
Lab ID: 1403323-001
Matrix: SOIL
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Chloride	180	30		mg/Kg	20	3/12/2014 3:30:22 PM	12145
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**cadg**
Benzene	ND	0.047		mg/Kg	1	3/12/2014 1:53:48 PM	12124
Toluene	ND	0.047		mg/Kg	1	3/12/2014 1:53:48 PM	12124
Ethylbenzene	ND	0.047		mg/Kg	1	3/12/2014 1:53:48 PM	12124
Xylenes, Total	ND	0.093		mg/Kg	1	3/12/2014 1:53:48 PM	12124
Surr: 1,2-Dichloroethane-d4	102	70-130		%REC	1	3/12/2014 1:53:48 PM	12124
Surr: 4-Bromofluorobenzene	94.9	70-130		%REC	1	3/12/2014 1:53:48 PM	12124
Surr: Dibromofluoromethane	104	70-130		%REC	1	3/12/2014 1:53:48 PM	12124
Surr: Toluene-d8	93.9	70-130		%REC	1	3/12/2014 1:53:48 PM	12124
EPA METHOD 418.1: TPH						Analyst:	**JME**
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	3/12/2014 10:02:00 AM	12076

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-02-3-6
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 3/6/2014 9:25:00 AM
Lab ID: 1403323-002 **Matrix:** SOIL
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Chloride	65	7.5		mg/Kg	5	3/12/2014 4:44:51 PM	12145
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**cadg**
Benzene	ND	0.047		mg/Kg	1	3/12/2014 3:19:54 PM	12124
Toluene	ND	0.047		mg/Kg	1	3/12/2014 3:19:54 PM	12124
Ethylbenzene	ND	0.047		mg/Kg	1	3/12/2014 3:19:54 PM	12124
Xylenes, Total	ND	0.095		mg/Kg	1	3/12/2014 3:19:54 PM	12124
Surr: 1,2-Dichloroethane-d4	103	70-130		%REC	1	3/12/2014 3:19:54 PM	12124
Surr: 4-Bromofluorobenzene	92.9	70-130		%REC	1	3/12/2014 3:19:54 PM	12124
Surr: Dibromofluoromethane	101	70-130		%REC	1	3/12/2014 3:19:54 PM	12124
Surr: Toluene-d8	88.4	70-130		%REC	1	3/12/2014 3:19:54 PM	12124
EPA METHOD 418.1: TPH						Analyst:	**JME**
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	3/12/2014 10:02:00 AM	12076

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-03-3-6
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 3/6/2014 10:50:00 AM
Lab ID: 1403323-003 **Matrix:** SOIL
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Chloride	130	30		mg/Kg	20	3/12/2014 5:22:05 PM	12145
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**cadg**
Benzene	ND	0.048		mg/Kg	1	3/12/2014 3:48:40 PM	12124
Toluene	ND	0.048		mg/Kg	1	3/12/2014 3:48:40 PM	12124
Ethylbenzene	ND	0.048		mg/Kg	1	3/12/2014 3:48:40 PM	12124
Xylenes, Total	ND	0.095		mg/Kg	1	3/12/2014 3:48:40 PM	12124
Surr: 1,2-Dichloroethane-d4	104	70-130		%REC	1	3/12/2014 3:48:40 PM	12124
Surr: 4-Bromofluorobenzene	92.6	70-130		%REC	1	3/12/2014 3:48:40 PM	12124
Surr: Dibromofluoromethane	97.5	70-130		%REC	1	3/12/2014 3:48:40 PM	12124
Surr: Toluene-d8	86.4	70-130		%REC	1	3/12/2014 3:48:40 PM	12124
EPA METHOD 418.1: TPH						Analyst:	**JME**
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	3/12/2014 10:02:00 AM	12076

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-04-3-6
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 3/6/2014 8:50:00 AM
Lab ID: 1403323-004 **Matrix:** SOIL
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Chloride	140	7.5		mg/Kg	5	3/12/2014 5:34:30 PM	12145
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**cadg**
Benzene	ND	0.047		mg/Kg	1	3/12/2014 4:17:31 PM	12124
Toluene	ND	0.047		mg/Kg	1	3/12/2014 4:17:31 PM	12124
Ethylbenzene	ND	0.047		mg/Kg	1	3/12/2014 4:17:31 PM	12124
Xylenes, Total	ND	0.093		mg/Kg	1	3/12/2014 4:17:31 PM	12124
Surr: 1,2-Dichloroethane-d4	104	70-130		%REC	1	3/12/2014 4:17:31 PM	12124
Surr: 4-Bromofluorobenzene	92.2	70-130		%REC	1	3/12/2014 4:17:31 PM	12124
Surr: Dibromofluoromethane	103	70-130		%REC	1	3/12/2014 4:17:31 PM	12124
Surr: Toluene-d8	94.9	70-130		%REC	1	3/12/2014 4:17:31 PM	12124
EPA METHOD 418.1: TPH						Analyst:	**JME**
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	3/12/2014 10:02:00 AM	12076

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BD-3-6
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 3/6/2014
Lab ID: 1403323-005
Matrix: SOIL
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Chloride	95	7.5		mg/Kg	5	3/12/2014 5:59:20 PM	12145
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**cadg**
Benzene	ND	0.047		mg/Kg	1	3/12/2014 4:46:07 PM	12124
Toluene	ND	0.047		mg/Kg	1	3/12/2014 4:46:07 PM	12124
Ethylbenzene	ND	0.047		mg/Kg	1	3/12/2014 4:46:07 PM	12124
Xylenes, Total	ND	0.093		mg/Kg	1	3/12/2014 4:46:07 PM	12124
Surr: 1,2-Dichloroethane-d4	97.5	70-130		%REC	1	3/12/2014 4:46:07 PM	12124
Surr: 4-Bromofluorobenzene	96.2	70-130		%REC	1	3/12/2014 4:46:07 PM	12124
Surr: Dibromofluoromethane	98.8	70-130		%REC	1	3/12/2014 4:46:07 PM	12124
Surr: Toluene-d8	85.0	70-130		%REC	1	3/12/2014 4:46:07 PM	12124
EPA METHOD 418.1: TPH						Analyst:	**JME**
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	3/12/2014 10:02:00 AM	12076

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-TZ-3-6
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 3/6/2014 10:35:00 AM
Lab ID: 1403323-006 **Matrix:** SOIL
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 504.1 MODIFIED: EDB						Analyst:	**LRW**
1,2-Dibromoethane	ND	0.10		µg/Kg	1	3/17/2014 9:25:53 AM	12197
EPA METHOD 8082: PCB'S						Analyst:	**SCC**
Aroclor 1016	ND	0.10		mg/Kg	1	3/15/2014 12:23:05 PM	12183
Aroclor 1221	ND	0.10		mg/Kg	1	3/15/2014 12:23:05 PM	12183
Aroclor 1232	ND	0.10		mg/Kg	1	3/15/2014 12:23:05 PM	12183
Aroclor 1242	ND	0.10		mg/Kg	1	3/15/2014 12:23:05 PM	12183
Aroclor 1248	ND	0.10		mg/Kg	1	3/15/2014 12:23:05 PM	12183
Aroclor 1254	ND	0.10		mg/Kg	1	3/15/2014 12:23:05 PM	12183
Aroclor 1260	ND	0.10		mg/Kg	1	3/15/2014 12:23:05 PM	12183
Surr: Decachlorobiphenyl	72.0	37.8-143		%REC	1	3/15/2014 12:23:05 PM	12183
Surr: Tetrachloro-m-xylene	58.0	13.8-144		%REC	1	3/15/2014 12:23:05 PM	12183
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst:	**BCN**
Diesel Range Organics (DRO)	310	9.9		mg/Kg	1	3/13/2014 12:16:33 PM	12115
Motor Oil Range Organics (MRO)	420	49		mg/Kg	1	3/13/2014 12:16:33 PM	12115
Surr: DNOP	112	66-131		%REC	1	3/13/2014 12:16:33 PM	12115
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**JMP**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/12/2014 12:33:04 PM	12124
Surr: BFB	84.2	74.5-129		%REC	1	3/12/2014 12:33:04 PM	12124
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	9.1	0.30		mg/Kg	1	3/12/2014 6:24:11 PM	12145
Chloride	91	30		mg/Kg	20	3/12/2014 6:36:35 PM	12145
Nitrogen, Nitrate (As N)	8.0	0.30		mg/Kg	1	3/12/2014 6:24:11 PM	12145
Sulfate	890	30		mg/Kg	20	3/12/2014 6:36:35 PM	12145
EPA METHOD 7471: MERCURY						Analyst:	**JML**
Mercury	0.22	0.031		mg/Kg	1	3/13/2014 8:11:53 PM	12137
EPA METHOD 6010B: SOIL METALS						Analyst:	**ELS**
Arsenic	ND	2.5		mg/Kg	1	3/18/2014 10:29:18 AM	12198
Barium	300	0.20		mg/Kg	2	3/18/2014 10:37:39 AM	12198
Cadmium	ND	0.10		mg/Kg	1	3/18/2014 10:29:18 AM	12198
Chromium	15	0.30		mg/Kg	1	3/18/2014 10:29:18 AM	12198
Copper	11	0.30		mg/Kg	1	3/18/2014 10:29:18 AM	12198
Iron	15000	100	B	mg/Kg	100	3/18/2014 10:57:18 AM	12198
Lead	35	0.25		mg/Kg	1	3/18/2014 10:29:18 AM	12198
Manganese	340	0.20		mg/Kg	2	3/18/2014 10:37:39 AM	12198
Selenium	ND	2.5		mg/Kg	1	3/18/2014 10:29:18 AM	12198
Silver	ND	0.25		mg/Kg	1	3/18/2014 10:29:18 AM	12198

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-TZ-3-6
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 3/6/2014 10:35:00 AM
Lab ID: 1403323-006 **Matrix:** SOIL
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 6010B: SOIL METALS						Analyst:	**ELS**
Uranium	ND	5.0		mg/Kg	1	3/18/2014 10:29:18 AM	12198
Zinc	61	2.5		mg/Kg	1	3/18/2014 10:29:18 AM	12198
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Acenaphthylene	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Aniline	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Anthracene	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Azobenzene	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Benz(a)anthracene	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Benzo(a)pyrene	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Benzo(b)fluoranthene	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Benzo(g,h,i)perylene	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Benzo(k)fluoranthene	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Benzoic acid	ND	5.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Benzyl alcohol	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Bis(2-chloroethoxy)methane	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Bis(2-chloroethyl)ether	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Bis(2-chloroisopropyl)ether	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Bis(2-ethylhexyl)phthalate	ND	5.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
4-Bromophenyl phenyl ether	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Butyl benzyl phthalate	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Carbazole	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
4-Chloro-3-methylphenol	ND	5.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
4-Chloroaniline	ND	5.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
2-Chloronaphthalene	ND	2.5		mg/Kg	1	3/17/2014 2:11:33 PM	12184
2-Chlorophenol	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
4-Chlorophenyl phenyl ether	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Chrysene	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Di-n-butyl phthalate	ND	5.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Di-n-octyl phthalate	ND	4.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Dibenz(a,h)anthracene	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Dibenzofuran	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
1,2-Dichlorobenzene	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
1,3-Dichlorobenzene	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
1,4-Dichlorobenzene	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
3,3´-Dichlorobenzidine	ND	2.5		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Diethyl phthalate	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Dimethyl phthalate	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
2,4-Dichlorophenol	ND	4.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-TZ-3-6
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 3/6/2014 10:35:00 AM
Lab ID: 1403323-006 **Matrix:** SOIL
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2,4-Dimethylphenol	ND	3.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
4,6-Dinitro-2-methylphenol	ND	5.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
2,4-Dinitrophenol	ND	5.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
2,4-Dinitrotoluene	ND	5.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
2,6-Dinitrotoluene	ND	5.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Fluoranthene	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Fluorene	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Hexachlorobenzene	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Hexachlorobutadiene	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Hexachlorocyclopentadiene	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Hexachloroethane	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Indeno(1,2,3-cd)pyrene	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Isophorone	ND	5.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
1-Methylnaphthalene	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
2-Methylnaphthalene	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
2-Methylphenol	ND	5.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
3+4-Methylphenol	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
N-Nitrosodi-n-propylamine	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
N-Nitrosodiphenylamine	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Naphthalene	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
2-Nitroaniline	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
3-Nitroaniline	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
4-Nitroaniline	ND	4.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Nitrobenzene	ND	5.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
2-Nitrophenol	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
4-Nitrophenol	ND	2.5		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Pentachlorophenol	ND	4.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Phenanthrene	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Phenol	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Pyrene	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Pyridine	ND	5.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
1,2,4-Trichlorobenzene	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
2,4,5-Trichlorophenol	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
2,4,6-Trichlorophenol	ND	2.0		mg/Kg	1	3/17/2014 2:11:33 PM	12184
Surr: 2-Fluorophenol	0	27.9-127	S	%REC	1	3/17/2014 2:11:33 PM	12184
Surr: Phenol-d5	0	24.5-126	S	%REC	1	3/17/2014 2:11:33 PM	12184
Surr: 2,4,6-Tribromophenol	0	27.6-136	S	%REC	1	3/17/2014 2:11:33 PM	12184
Surr: Nitrobenzene-d5	0	23.5-128	S	%REC	1	3/17/2014 2:11:33 PM	12184
Surr: 2-Fluorobiphenyl	0	22.6-132	S	%REC	1	3/17/2014 2:11:33 PM	12184

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-TZ-3-6
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 3/6/2014 10:35:00 AM
Lab ID: 1403323-006
Matrix: SOIL
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Surr: 4-Terphenyl-d14	0	28.1-128	S	%REC	1	3/17/2014 2:11:33 PM	12184
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
Toluene	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
Ethylbenzene	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
Methyl tert-butyl ether (MTBE)	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
1,2,4-Trimethylbenzene	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
1,3,5-Trimethylbenzene	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
1,2-Dichloroethane (EDC)	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
1,2-Dibromoethane (EDB)	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
Naphthalene	ND	0.095		mg/Kg	1	3/12/2014 5:14:42 PM	12124
1-Methylnaphthalene	ND	0.19		mg/Kg	1	3/12/2014 5:14:42 PM	12124
2-Methylnaphthalene	ND	0.19		mg/Kg	1	3/12/2014 5:14:42 PM	12124
Acetone	ND	0.71		mg/Kg	1	3/12/2014 5:14:42 PM	12124
Bromobenzene	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
Bromodichloromethane	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
Bromoform	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
Bromomethane	ND	0.14		mg/Kg	1	3/12/2014 5:14:42 PM	12124
2-Butanone	ND	0.48		mg/Kg	1	3/12/2014 5:14:42 PM	12124
Carbon disulfide	ND	0.48		mg/Kg	1	3/12/2014 5:14:42 PM	12124
Carbon tetrachloride	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
Chlorobenzene	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
Chloroethane	ND	0.095		mg/Kg	1	3/12/2014 5:14:42 PM	12124
Chloroform	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
Chloromethane	ND	0.14		mg/Kg	1	3/12/2014 5:14:42 PM	12124
2-Chlorotoluene	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
4-Chlorotoluene	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
cis-1,2-DCE	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
cis-1,3-Dichloropropene	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
1,2-Dibromo-3-chloropropane	ND	0.095		mg/Kg	1	3/12/2014 5:14:42 PM	12124
Dibromochloromethane	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
Dibromomethane	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
1,2-Dichlorobenzene	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
1,3-Dichlorobenzene	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
1,4-Dichlorobenzene	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
Dichlorodifluoromethane	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
1,1-Dichloroethane	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
1,1-Dichloroethene	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
1,2-Dichloropropane	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-TZ-3-6
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 3/6/2014 10:35:00 AM
Lab ID: 1403323-006 **Matrix:** SOIL
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,3-Dichloropropane	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
2,2-Dichloropropane	ND	0.095		mg/Kg	1	3/12/2014 5:14:42 PM	12124
1,1-Dichloropropene	ND	0.095		mg/Kg	1	3/12/2014 5:14:42 PM	12124
Hexachlorobutadiene	ND	0.095		mg/Kg	1	3/12/2014 5:14:42 PM	12124
2-Hexanone	ND	0.48		mg/Kg	1	3/12/2014 5:14:42 PM	12124
Isopropylbenzene	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
4-Isopropyltoluene	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
4-Methyl-2-pentanone	ND	0.48		mg/Kg	1	3/12/2014 5:14:42 PM	12124
Methylene chloride	ND	0.14		mg/Kg	1	3/12/2014 5:14:42 PM	12124
n-Butylbenzene	ND	0.14		mg/Kg	1	3/12/2014 5:14:42 PM	12124
n-Propylbenzene	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
sec-Butylbenzene	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
Styrene	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
tert-Butylbenzene	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
1,1,1,2-Tetrachloroethane	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
1,1,2,2-Tetrachloroethane	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
Tetrachloroethene (PCE)	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
trans-1,2-DCE	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
trans-1,3-Dichloropropene	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
1,2,3-Trichlorobenzene	ND	0.095		mg/Kg	1	3/12/2014 5:14:42 PM	12124
1,2,4-Trichlorobenzene	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
1,1,1-Trichloroethane	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
1,1,2-Trichloroethane	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
Trichloroethene (TCE)	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
Trichlorofluoromethane	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
1,2,3-Trichloropropane	ND	0.095		mg/Kg	1	3/12/2014 5:14:42 PM	12124
Vinyl chloride	ND	0.048		mg/Kg	1	3/12/2014 5:14:42 PM	12124
Xylenes, Total	ND	0.095		mg/Kg	1	3/12/2014 5:14:42 PM	12124
Surr: Dibromofluoromethane	103	70-130		%REC	1	3/12/2014 5:14:42 PM	12124
Surr: 1,2-Dichloroethane-d4	104	70-130		%REC	1	3/12/2014 5:14:42 PM	12124
Surr: Toluene-d8	91.8	70-130		%REC	1	3/12/2014 5:14:42 PM	12124
Surr: 4-Bromofluorobenzene	93.9	70-130		%REC	1	3/12/2014 5:14:42 PM	12124
EPA METHOD 418.1: TPH						Analyst: **JME**	
Petroleum Hydrocarbons, TR	270	20		mg/Kg	1	3/12/2014 10:02:00 AM	12076

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EB-3-6
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 3/6/2014 8:30:00 AM
Lab ID: 1403323-007
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	3/11/2014 7:00:02 PM	R17242
Toluene	ND	1.0		µg/L	1	3/11/2014 7:00:02 PM	R17242
Ethylbenzene	ND	1.0		µg/L	1	3/11/2014 7:00:02 PM	R17242
Xylenes, Total	ND	1.5		µg/L	1	3/11/2014 7:00:02 PM	R17242
Surr: 1,2-Dichloroethane-d4	92.4	70-130		%REC	1	3/11/2014 7:00:02 PM	R17242
Surr: 4-Bromofluorobenzene	93.7	70-130		%REC	1	3/11/2014 7:00:02 PM	R17242
Surr: Dibromofluoromethane	99.2	70-130		%REC	1	3/11/2014 7:00:02 PM	R17242
Surr: Toluene-d8	90.6	70-130		%REC	1	3/11/2014 7:00:02 PM	R17242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-3-6
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 3/6/2014 8:20:00 AM
Lab ID: 1403323-008
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	3/11/2014 7:27:58 PM	R17242
Toluene	ND	1.0		µg/L	1	3/11/2014 7:27:58 PM	R17242
Ethylbenzene	ND	1.0		µg/L	1	3/11/2014 7:27:58 PM	R17242
Xylenes, Total	ND	1.5		µg/L	1	3/11/2014 7:27:58 PM	R17242
Surr: 1,2-Dichloroethane-d4	92.1	70-130		%REC	1	3/11/2014 7:27:58 PM	R17242
Surr: 4-Bromofluorobenzene	101	70-130		%REC	1	3/11/2014 7:27:58 PM	R17242
Surr: Dibromofluoromethane	95.9	70-130		%REC	1	3/11/2014 7:27:58 PM	R17242
Surr: Toluene-d8	93.8	70-130		%REC	1	3/11/2014 7:27:58 PM	R17242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Trip Blank
Project: OCD Central Landfarm Semiannual Sam
Collection Date:
Lab ID: 1403323-009
Matrix: TRIP BLANK
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	3/11/2014 7:55:58 PM	R17242
Toluene	ND	1.0		µg/L	1	3/11/2014 7:55:58 PM	R17242
Ethylbenzene	ND	1.0		µg/L	1	3/11/2014 7:55:58 PM	R17242
Xylenes, Total	ND	1.5		µg/L	1	3/11/2014 7:55:58 PM	R17242
Surr: 1,2-Dichloroethane-d4	88.5	70-130		%REC	1	3/11/2014 7:55:58 PM	R17242
Surr: 4-Bromofluorobenzene	91.4	70-130		%REC	1	3/11/2014 7:55:58 PM	R17242
Surr: Dibromofluoromethane	99.3	70-130		%REC	1	3/11/2014 7:55:58 PM	R17242
Surr: Toluene-d8	92.0	70-130		%REC	1	3/11/2014 7:55:58 PM	R17242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	140313048
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1403323
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	140313048-001	**Sampling Date**	3/6/2014	**Date/Time Received**	3/13/2014 1:10 PM
Client Sample ID	1403323-006B / CENTRALOCD-TZ-3-6			**Sampling Time**	10:35 AM
Matrix	Soil				
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	1.58	mg/Kg	0.287	3/17/2014	CRW	EPA 335.4	
%moisture	20.2	Percent		3/14/2014	AJT	%moisture	

Authorized Signature

John Coddington, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

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The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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www.pacelabs.com

Pace Analytical Services, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: 1403323
Pace Project No.: 30115198

Sample: 1403323-006C CentralOCD-TZ-3-6 **Lab ID: 30115198001** Collected: 03/06/14 10:35 Received: 03/12/14 09:30 Matrix: Solid

PWS: Site ID: Sample Type:

Results reported on a "dry-weight" basis

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 901.1	**1.317 ± 0.310 (0.225) C:NA T:NA**	pCi/g	04/07/14 08:59	13982-63-3	
Radium-228	EPA 901.1	**1.230 ± 0.460 (0.652) C:NA T:NA**	pCi/g	04/07/14 08:59	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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Date: 04/09/2014 02:23 PM

Pace Analytical Services, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: 1403323
Pace Project No.: 30115198

QC Batch: RADC/19081
QC Batch Method: EPA 901.1
Analysis Method: EPA 901.1
Analysis Description: 901.1 Gamma Spec Ingrowth
Associated Lab Samples: 30115198001

METHOD BLANK: 705500
Matrix: Solid
Associated Lab Samples: 30115198001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.037 ± 7.107 (0.193) C:NA T:NA	pCi/g	04/07/14 09:12	
Radium-228	0.019 ± 0.166 (0.326) C:NA T:NA	pCi/g	04/07/14 09:12	

REPORT OF LABORATORY ANALYSIS

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Date: 04/09/2014 02:23 PM

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403323**
10-Apr-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **MB-12145** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **12145** RunNo: **17276**
Prep Date: **3/12/2014** Analysis Date: **3/12/2014** SeqNo: **497582** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.30								
Chloride	ND	1.5								
Nitrogen, Nitrate (As N)	ND	0.30								
Sulfate	ND	1.5								

Sample ID **LCS-12145** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **12145** RunNo: **17276**
Prep Date: **3/12/2014** Analysis Date: **3/12/2014** SeqNo: **497583** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.6	0.30	1.500	0	104	90	110			
Chloride	14	1.5	15.00	0	95.1	90	110			
Nitrogen, Nitrate (As N)	7.5	0.30	7.500	0	100	90	110			
Sulfate	29	1.5	30.00	0	96.7	90	110			

Sample ID **1403323-001AMS** SampType: **MS** TestCode: **EPA Method 300.0: Anions**
Client ID: **CentralOCD-01-3-6** Batch ID: **12145** RunNo: **17276**
Prep Date: **3/12/2014** Analysis Date: **3/12/2014** SeqNo: **497586** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	4.0	0.30	1.500	3.409	36.2	9.86	110			

Sample ID **1403323-001AMSD** SampType: **MSD** TestCode: **EPA Method 300.0: Anions**
Client ID: **CentralOCD-01-3-6** Batch ID: **12145** RunNo: **17276**
Prep Date: **3/12/2014** Analysis Date: **3/12/2014** SeqNo: **497587** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	4.0	0.30	1.500	3.409	37.4	9.86	110	0.454	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403323**
10-Apr-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **MB-12076** SampType: **MBLK** TestCode: **EPA Method 418.1: TPH**
Client ID: **PBS** Batch ID: **12076** RunNo: **17241**
Prep Date: **3/6/2014** Analysis Date: **3/12/2014** SeqNo: **496555** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID **LCS-12076** SampType: **LCS** TestCode: **EPA Method 418.1: TPH**
Client ID: **LCSS** Batch ID: **12076** RunNo: **17241**
Prep Date: **3/6/2014** Analysis Date: **3/12/2014** SeqNo: **496556** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	98	20	100.0	0	98.0	80	120			

Sample ID **LCSD-12076** SampType: **LCSD** TestCode: **EPA Method 418.1: TPH**
Client ID: **LCSS02** Batch ID: **12076** RunNo: **17241**
Prep Date: **3/6/2014** Analysis Date: **3/12/2014** SeqNo: **496557** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	94	20	100.0	0	93.7	80	120	4.47	20	

Sample ID **1403323-001AMS** SampType: **MS** TestCode: **EPA Method 418.1: TPH**
Client ID: **CentralOCD-01-3-6** Batch ID: **12076** RunNo: **17241**
Prep Date: **3/6/2014** Analysis Date: **3/12/2014** SeqNo: **496562** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	100	20	98.91	0	104	80	120			

Sample ID **1403323-001AMSD** SampType: **MSD** TestCode: **EPA Method 418.1: TPH**
Client ID: **CentralOCD-01-3-6** Batch ID: **12076** RunNo: **17241**
Prep Date: **3/6/2014** Analysis Date: **3/12/2014** SeqNo: **496563** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	110	20	100.2	0	109	80	120	6.66	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403323**
10-Apr-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **MB-12197** SampType: **MBLK** TestCode: **EPA Method 504.1 Modified: EDB**
Client ID: **PBS** Batch ID: **12197** RunNo: **17344**
Prep Date: **3/17/2014** Analysis Date: **3/17/2014** SeqNo: **499655** Units: **µg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.10								

Sample ID **LCS-12197** SampType: **LCS** TestCode: **EPA Method 504.1 Modified: EDB**
Client ID: **LCSS** Batch ID: **12197** RunNo: **17344**
Prep Date: **3/17/2014** Analysis Date: **3/17/2014** SeqNo: **499656** Units: **µg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.87	0.10	1.000	0	86.7	70	130			

Sample ID **1403323-006AMS** SampType: **MS** TestCode: **EPA Method 504.1 Modified: EDB**
Client ID: **CentralOCD-TZ-3-6** Batch ID: **12197** RunNo: **17344**
Prep Date: **3/17/2014** Analysis Date: **3/17/2014** SeqNo: **499709** Units: **µg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	1.2	0.10	0.9972	0	117	62.4	144			

Sample ID **1403323-006AMSD** SampType: **MSD** TestCode: **EPA Method 504.1 Modified: EDB**
Client ID: **CentralOCD-TZ-3-6** Batch ID: **12197** RunNo: **17344**
Prep Date: **3/17/2014** Analysis Date: **3/17/2014** SeqNo: **499710** Units: **µg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	1.0	0.10	1.000	0	104	62.4	144	11.8	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403323**
10-Apr-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **MB-12115**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **12115**	RunNo: **17240**
Prep Date: **3/11/2014**	Analysis Date: **3/12/2014**	SeqNo: **496883** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		108	66	131			

Sample ID **LCS-12115**	SampType: **LCS**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **12115**	RunNo: **17240**
Prep Date: **3/11/2014**	Analysis Date: **3/12/2014**	SeqNo: **496884** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	57	10	50.00	0	114	60.8	145			
Surr: DNOP	5.8		5.000		116	66	131			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403323**
10-Apr-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **MB-12124** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **12124** RunNo: **17249**
Prep Date: **3/11/2014** Analysis Date: **3/12/2014** SeqNo: **497263** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	850		1000		85.4	74.5	129			

Sample ID **LCS-12124** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **12124** RunNo: **17249**
Prep Date: **3/11/2014** Analysis Date: **3/12/2014** SeqNo: **497264** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	25.00	0	115	71.7	134			
Surr: BFB	920		1000		91.9	74.5	129			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403323**
10-Apr-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	**MB-12183**	SampType:	**MBLK**	TestCode:	**EPA Method 8082: PCB's**
Client ID:	**PBS**	Batch ID:	**12183**	RunNo:	**17336**
Prep Date:	**3/14/2014**	Analysis Date:	**3/15/2014**	SeqNo:	**499276** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.020								
Aroclor 1221	ND	0.020								
Aroclor 1232	ND	0.020								
Aroclor 1242	ND	0.020								
Aroclor 1248	ND	0.020								
Aroclor 1254	ND	0.020								
Aroclor 1260	ND	0.020								
Surr: Decachlorobiphenyl	0.059		0.06250		94.8	37.8	143			
Surr: Tetrachloro-m-xylene	0.059		0.06250		94.8	13.8	144			

Sample ID	**LCS-12183**	SampType:	**LCS**	TestCode:	**EPA Method 8082: PCB's**
Client ID:	**LCSS**	Batch ID:	**12183**	RunNo:	**17336**
Prep Date:	**3/14/2014**	Analysis Date:	**3/15/2014**	SeqNo:	**499277** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	0.11	0.020	0.1250	0	89.6	18.5	135			
Aroclor 1260	0.13	0.020	0.1250	0	104	53.9	145			
Surr: Decachlorobiphenyl	0.058		0.06250		93.2	37.8	143			
Surr: Tetrachloro-m-xylene	0.057		0.06250		90.8	13.8	144			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403323**
10-Apr-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **mb-12124**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles**			
Client ID: **PBS**	Batch ID: **12124**	RunNo: **17267**			
Prep Date: **3/11/2014**	Analysis Date: **3/12/2014**	SeqNo: **497390**	Units: **mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Methyl tert-butyl ether (MTBE)	ND	0.050								
1,2,4-Trimethylbenzene	ND	0.050								
1,3,5-Trimethylbenzene	ND	0.050								
1,2-Dichloroethane (EDC)	ND	0.050								
1,2-Dibromoethane (EDB)	ND	0.050								
Naphthalene	ND	0.10								
1-Methylnaphthalene	ND	0.20								
2-Methylnaphthalene	ND	0.20								
Acetone	ND	0.75								
Bromobenzene	ND	0.050								
Bromodichloromethane	ND	0.050								
Bromoform	ND	0.050								
Bromomethane	ND	0.15								
2-Butanone	ND	0.50								
Carbon disulfide	ND	0.50								
Carbon tetrachloride	ND	0.050								
Chlorobenzene	ND	0.050								
Chloroethane	ND	0.10								
Chloroform	ND	0.050								
Chloromethane	ND	0.15								
2-Chlorotoluene	ND	0.050								
4-Chlorotoluene	ND	0.050								
cis-1,2-DCE	ND	0.050								
cis-1,3-Dichloropropene	ND	0.050								
1,2-Dibromo-3-chloropropane	ND	0.10								
Dibromochloromethane	ND	0.050								
Dibromomethane	ND	0.050								
1,2-Dichlorobenzene	ND	0.050								
1,3-Dichlorobenzene	ND	0.050								
1,4-Dichlorobenzene	ND	0.050								
Dichlorodifluoromethane	ND	0.050								
1,1-Dichloroethane	ND	0.050								
1,1-Dichloroethene	ND	0.050								
1,2-Dichloropropane	ND	0.050								
1,3-Dichloropropane	ND	0.050								
2,2-Dichloropropane	ND	0.10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403323**
10-Apr-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **mb-12124** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles**
Client ID: **PBS** Batch ID: **12124** RunNo: **17267**
Prep Date: **3/11/2014** Analysis Date: **3/12/2014** SeqNo: **497390** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	0.10								
Hexachlorobutadiene	ND	0.10								
2-Hexanone	ND	0.50								
Isopropylbenzene	ND	0.050								
4-Isopropyltoluene	ND	0.050								
4-Methyl-2-pentanone	ND	0.50								
Methylene chloride	ND	0.15								
n-Butylbenzene	ND	0.15								
n-Propylbenzene	ND	0.050								
sec-Butylbenzene	ND	0.050								
Styrene	ND	0.050								
tert-Butylbenzene	ND	0.050								
1,1,1,2-Tetrachloroethane	ND	0.050								
1,1,2,2-Tetrachloroethane	ND	0.050								
Tetrachloroethene (PCE)	ND	0.050								
trans-1,2-DCE	ND	0.050								
trans-1,3-Dichloropropene	ND	0.050								
1,2,3-Trichlorobenzene	ND	0.10								
1,2,4-Trichlorobenzene	ND	0.050								
1,1,1-Trichloroethane	ND	0.050								
1,1,2-Trichloroethane	ND	0.050								
Trichloroethene (TCE)	ND	0.050								
Trichlorofluoromethane	ND	0.050								
1,2,3-Trichloropropane	ND	0.10								
Vinyl chloride	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: Dibromofluoromethane	0.52		0.5000		104	70	130			
Surr: 1,2-Dichloroethane-d4	0.51		0.5000		103	70	130			
Surr: Toluene-d8	0.45		0.5000		90.2	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.5000		93.1	70	130			

Sample ID **lcs-12124** SampType: **LCS** TestCode: **EPA Method 8260B: Volatiles**
Client ID: **LCSS** Batch ID: **12124** RunNo: **17267**
Prep Date: **3/11/2014** Analysis Date: **3/12/2014** SeqNo: **497391** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	111	70	130			
Toluene	1.0	0.050	1.000	0	99.7	60.1	120			
Chlorobenzene	1.0	0.050	1.000	0	103	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403323**
10-Apr-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	**lcs-12124**	SampType:	**LCS**	TestCode:	**EPA Method 8260B: Volatiles**
Client ID:	**LCSS**	Batch ID:	**12124**	RunNo:	**17267**
Prep Date:	**3/11/2014**	Analysis Date:	**3/12/2014**	SeqNo:	**497391** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	1.1	0.050	1.000	0	107	78.2	162			
Trichloroethene (TCE)	0.94	0.050	1.000	0	94.5	70	130			
Surr: Dibromofluoromethane	0.50		0.5000		101	70	130			
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		104	70	130			
Surr: Toluene-d8	0.47		0.5000		93.1	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.5000		93.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403323**
10-Apr-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **mb-12124** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS** Batch ID: **12124** RunNo: **17267**
Prep Date: **3/11/2014** Analysis Date: **3/12/2014** SeqNo: **497394** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.050								
Benzene	ND	0.050								
1,2-Dichloroethane (EDC)	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
1,2-Dibromoethane (EDB)	ND	0.050								
1,2,4-Trimethylbenzene	ND	0.050								
1,3,5-Trimethylbenzene	ND	0.050								
Naphthalene	ND	0.10								
2-Methylnaphthalene	ND	0.20								
1-Methylnaphthalene	ND	0.20								
Surr: 1,2-Dichloroethane-d4	0.51		0.5000		103	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.5000		93.1	70	130			
Surr: Dibromofluoromethane	0.52		0.5000		104	70	130			
Surr: Toluene-d8	0.45		0.5000		90.2	70	130			

Sample ID **lcs-12124** SampType: **LCS** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **LCSS** Batch ID: **12124** RunNo: **17267**
Prep Date: **3/11/2014** Analysis Date: **3/12/2014** SeqNo: **497395** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	111	70	130			
Toluene	1.0	0.050	1.000	0	99.7	60.1	120			
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		104	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.5000		93.5	70	130			
Surr: Dibromofluoromethane	0.50		0.5000		101	70	130			
Surr: Toluene-d8	0.47		0.5000		93.1	70	130			

Sample ID **1403323-001ams** SampType: **MS** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **CentralOCD-01-3-6** Batch ID: **12124** RunNo: **17267**
Prep Date: **3/11/2014** Analysis Date: **3/12/2014** SeqNo: **497397** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.3	0.047	0.9497	0	134	62.6	140			
Toluene	1.1	0.047	0.9497	0	113	66.3	136			
Surr: 1,2-Dichloroethane-d4	0.50		0.4748		105	70	130			
Surr: 4-Bromofluorobenzene	0.44		0.4748		91.8	70	130			
Surr: Dibromofluoromethane	0.50		0.4748		106	70	130			
Surr: Toluene-d8	0.43		0.4748		90.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403323**
10-Apr-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **1403323-001amsd** SampType: **MSD** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **CentralOCD-01-3-6** Batch ID: **12124** RunNo: **17267**
Prep Date: **3/11/2014** Analysis Date: **3/12/2014** SeqNo: **497398** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.3	0.048	0.9506	0	134	62.6	140	0.0361	20	
Toluene	1.1	0.048	0.9506	0	120	66.3	136	5.45	20	
Surr: 1,2-Dichloroethane-d4	0.50		0.4753		105	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.42		0.4753		87.8	70	130	0	0	
Surr: Dibromofluoromethane	0.49		0.4753		104	70	130	0	0	
Surr: Toluene-d8	0.44		0.4753		92.7	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403323**
10-Apr-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **5ml-rb2** SampType: **MBLK** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW** Batch ID: **R17242** RunNo: **17242**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496775** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.0	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		94.4	70	130			
Surr: Dibromofluoromethane	8.1		10.00		80.5	70	130			
Surr: Toluene-d8	9.3		10.00		93.0	70	130			

Sample ID **100ngLCS200ngAnn** SampType: **LCS** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW** Batch ID: **R17242** RunNo: **17242**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496776** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	110	70	130			
Toluene	19	1.0	20.00	0	96.9	80	120			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		93.7	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		91.2	70	130			
Surr: Dibromofluoromethane	8.6		10.00		85.8	70	130			
Surr: Toluene-d8	9.0		10.00		90.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403323**
10-Apr-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **mb-12184**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBS**	Batch ID: **12184**	RunNo: **17382**			
Prep Date: **3/14/2014**	Analysis Date: **3/17/2014**	SeqNo: **500665**	Units: **mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	0.20								
Acenaphthylene	ND	0.20								
Aniline	ND	0.20								
Anthracene	ND	0.20								
Azobenzene	ND	0.20								
Benz(a)anthracene	ND	0.20								
Benzo(a)pyrene	ND	0.20								
Benzo(b)fluoranthene	ND	0.20								
Benzo(g,h,i)perylene	ND	0.20								
Benzo(k)fluoranthene	ND	0.20								
Benzoic acid	ND	0.50								
Benzyl alcohol	ND	0.20								
Bis(2-chloroethoxy)methane	ND	0.20								
Bis(2-chloroethyl)ether	ND	0.20								
Bis(2-chloroisopropyl)ether	ND	0.20								
Bis(2-ethylhexyl)phthalate	ND	0.50								
4-Bromophenyl phenyl ether	ND	0.20								
Butyl benzyl phthalate	ND	0.20								
Carbazole	ND	0.20								
4-Chloro-3-methylphenol	ND	0.50								
4-Chloroaniline	ND	0.50								
2-Chloronaphthalene	ND	0.25								
2-Chlorophenol	ND	0.20								
4-Chlorophenyl phenyl ether	ND	0.20								
Chrysene	ND	0.20								
Di-n-butyl phthalate	ND	0.50								
Di-n-octyl phthalate	ND	0.40								
Dibenz(a,h)anthracene	ND	0.20								
Dibenzofuran	ND	0.20								
1,2-Dichlorobenzene	ND	0.20								
1,3-Dichlorobenzene	ND	0.20								
1,4-Dichlorobenzene	ND	0.20								
3,3´-Dichlorobenzidine	ND	0.25								
Diethyl phthalate	ND	0.20								
Dimethyl phthalate	ND	0.20								
2,4-Dichlorophenol	ND	0.40								
2,4-Dimethylphenol	ND	0.30								
4,6-Dinitro-2-methylphenol	ND	0.50								
2,4-Dinitrophenol	ND	0.50								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403323**
10-Apr-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **mb-12184**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBS**	Batch ID: **12184**	RunNo: **17382**			
Prep Date: **3/14/2014**	Analysis Date: **3/17/2014**	SeqNo: **500665**	Units: **mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	0.50								
2,6-Dinitrotoluene	ND	0.50								
Fluoranthene	ND	0.20								
Fluorene	ND	0.20								
Hexachlorobenzene	ND	0.20								
Hexachlorobutadiene	ND	0.20								
Hexachlorocyclopentadiene	ND	0.20								
Hexachloroethane	ND	0.20								
Indeno(1,2,3-cd)pyrene	ND	0.20								
Isophorone	ND	0.50								
1-Methylnaphthalene	ND	0.20								
2-Methylnaphthalene	ND	0.20								
2-Methylphenol	ND	0.50								
3+4-Methylphenol	ND	0.20								
N-Nitrosodi-n-propylamine	ND	0.20								
N-Nitrosodiphenylamine	ND	0.20								
Naphthalene	ND	0.20								
2-Nitroaniline	ND	0.20								
3-Nitroaniline	ND	0.20								
4-Nitroaniline	ND	0.40								
Nitrobenzene	ND	0.50								
2-Nitrophenol	ND	0.20								
4-Nitrophenol	ND	0.25								
Pentachlorophenol	ND	0.40								
Phenanthrene	ND	0.20								
Phenol	ND	0.20								
Pyrene	ND	0.20								
Pyridine	ND	0.50								
1,2,4-Trichlorobenzene	ND	0.20								
2,4,5-Trichlorophenol	ND	0.20								
2,4,6-Trichlorophenol	ND	0.20								
Surr: 2-Fluorophenol	2.7		3.330		81.9	27.9	127			
Surr: Phenol-d5	2.8		3.330		85.5	24.5	126			
Surr: 2,4,6-Tribromophenol	2.3		3.330		70.5	27.6	136			
Surr: Nitrobenzene-d5	1.8		1.670		105	23.5	128			
Surr: 2-Fluorobiphenyl	1.6		1.670		97.3	22.6	132			
Surr: 4-Terphenyl-d14	1.5		1.670		90.3	28.1	128			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403323**
10-Apr-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **lcs-12184** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS** Batch ID: **12184** RunNo: **17387**
Prep Date: **3/14/2014** Analysis Date: **3/18/2014** SeqNo: **500774** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	1.4	0.20	1.670	0	83.5	50.7	110			
4-Chloro-3-methylphenol	2.7	0.50	3.330	0	80.0	47.8	107			
2-Chlorophenol	2.5	0.20	3.330	0	76.2	45.7	108			
1,4-Dichlorobenzene	1.4	0.20	1.670	0	82.4	46.1	112			
2,4-Dinitrotoluene	1.4	0.50	1.670	0	83.4	44.9	114			
N-Nitrosodi-n-propylamine	1.6	0.20	1.670	0	96.2	38.7	128			
4-Nitrophenol	2.5	0.25	3.330	0	74.0	40.2	103			
Pentachlorophenol	1.1	0.40	3.330	0	34.1	32.9	94			
Phenol	2.7	0.20	3.330	0	82.5	44.1	109			
Pyrene	1.4	0.20	1.670	0	81.1	51.9	109			
1,2,4-Trichlorobenzene	1.4	0.20	1.670	0	81.3	49.5	115			
Surr: 2-Fluorophenol	2.9		3.330		86.5	27.9	127			
Surr: Phenol-d5	3.1		3.330		93.7	24.5	126			
Surr: 2,4,6-Tribromophenol	3.3		3.330		99.4	27.6	136			
Surr: Nitrobenzene-d5	1.5		1.670		92.2	23.5	128			
Surr: 2-Fluorobiphenyl	1.6		1.670		97.9	22.6	132			
Surr: 4-Terphenyl-d14	1.7		1.670		104	28.1	128			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403323**
10-Apr-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	**MB-12137**	SampType:	**MBLK**	TestCode:	**EPA Method 7471: Mercury**
Client ID:	**PBS**	Batch ID:	**12137**	RunNo:	**17318**
Prep Date:	**3/11/2014**	Analysis Date:	**3/13/2014**	SeqNo:	**498736** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	**LCS-12137**	SampType:	**LCS**	TestCode:	**EPA Method 7471: Mercury**
Client ID:	**LCSS**	Batch ID:	**12137**	RunNo:	**17318**
Prep Date:	**3/11/2014**	Analysis Date:	**3/13/2014**	SeqNo:	**498737** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1667	0	99.9	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403323**
10-Apr-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **MB-12198** SampType: **MBLK** TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **PBS** Batch ID: **12198** RunNo: **17386**
Prep Date: **3/17/2014** Analysis Date: **3/18/2014** SeqNo: **500789** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Iron	2.6	1.0								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Uranium	ND	5.0								
Zinc	ND	2.5								

Sample ID **LCS-12198** SampType: **LCS** TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **LCSS** Batch ID: **12198** RunNo: **17386**
Prep Date: **3/17/2014** Analysis Date: **3/18/2014** SeqNo: **500790** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	23	2.5	25.00	0	90.1	80	120			
Barium	25	0.10	25.00	0	99.9	80	120			
Cadmium	25	0.10	25.00	0	98.4	80	120			
Chromium	25	0.30	25.00	0	99.2	80	120			
Copper	28	0.30	25.00	0	111	80	120			
Iron	27	1.0	25.00	0	107	80	120			B
Lead	24	0.25	25.00	0	95.3	80	120			
Manganese	25	0.10	25.00	0	100	80	120			
Selenium	21	2.5	25.00	0	84.9	80	120			
Silver	5.2	0.25	5.000	0	104	80	120			
Uranium	25	5.0	25.00	0	99.8	80	120			
Zinc	24	2.5	25.00	0	94.2	80	120			

Sample ID **1403323-006AMS** SampType: **MS** TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **CentralOCD-TZ-3-6** Batch ID: **12198** RunNo: **17386**
Prep Date: **3/17/2014** Analysis Date: **3/18/2014** SeqNo: **500792** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	19	2.4	23.97	2.127	72.3	75	125			S
Cadmium	19	0.096	23.97	0	79.8	75	125			
Chromium	37	0.29	23.97	14.82	90.5	75	125			
Copper	33	0.29	23.97	11.17	93.1	75	125			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403323**
10-Apr-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **1403323-006AMS** SampType: **MS** TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **CentralOCD-TZ-3-6** Batch ID: **12198** RunNo: **17386**
Prep Date: **3/17/2014** Analysis Date: **3/18/2014** SeqNo: **500792** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	64	0.24	23.97	35.34	118	75	125			E
Selenium	13	2.4	23.97	0	54.5	75	125			S
Silver	4.0	0.24	4.794	0	83.7	75	125			
Uranium	11	4.8	23.97	0	45.1	75	125			S
Zinc	85	2.4	23.97	60.79	99.0	75	125			

Sample ID **1403323-006AMSD** SampType: **MSD** TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **CentralOCD-TZ-3-6** Batch ID: **12198** RunNo: **17386**
Prep Date: **3/17/2014** Analysis Date: **3/18/2014** SeqNo: **500793** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	21	2.4	24.31	2.127	77.7	75	125	7.71	20	
Cadmium	20	0.097	24.31	0	80.5	75	125	2.40	20	
Chromium	36	0.29	24.31	14.82	85.8	75	125	2.34	20	
Copper	34	0.29	24.31	11.17	92.8	75	125	0.671	20	
Lead	49	0.24	24.31	35.34	54.3	75	125	26.8	20	RS
Selenium	15	2.4	24.31	0	60.7	75	125	12.2	20	S
Silver	4.1	0.24	4.863	0	83.8	75	125	1.51	20	
Uranium	11	4.9	24.31	0	45.8	75	125	3.08	20	S
Zinc	85	2.4	24.31	60.79	101	75	125	1.07	20	

Sample ID **1403323-006AMS** SampType: **MS** TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **CentralOCD-TZ-3-6** Batch ID: **12198** RunNo: **17386**
Prep Date: **3/17/2014** Analysis Date: **3/18/2014** SeqNo: **500795** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	350	0.19	23.97	303.7	194	75	125			S
Manganese	340	0.19	23.97	336.1	0.310	75	125			S

Sample ID **1403323-006AMSD** SampType: **MSD** TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **CentralOCD-TZ-3-6** Batch ID: **12198** RunNo: **17386**
Prep Date: **3/17/2014** Analysis Date: **3/18/2014** SeqNo: **500796** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	340	0.19	24.31	303.7	148	75	125	3.05	20	S
Manganese	350	0.19	24.31	336.1	57.3	75	125	4.04	20	S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1403323 RcptNo: 1

Received by/date: AG 03/07/14

Logged By: **Lindsay Mangin** 3/7/2014 5:00:00 PM

Completed By: **Lindsay Mangin** 3/10/2014 1:18:02 PM

Reviewed By: MG 03/11/14

Chain of Custody

AT 03/11/14

1. Custody seals intact on sample bottles? Yes ☒ No ☐ Not Present ☑
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.8	Good	Not Present			

Chain-of-Custody Record

Client: Western Refining

Mailing Address: Route 3 Box 7

Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-722-0210

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other_____
☐ EDD (Type) _Please provide EDD_____

Turn-Around Time:
☒ Standard ☐ Rush_____

Project Name:
OCD Central Landfarm Semiannual Sampling

Project #:
697-039-004

Project Manager:
Ed Riege

Sampler:
On Ice: ☒ Yes ☐ No
Sample Temperature: 3.8

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1403333	Vadose Zone List (see attached)	NMAC List (see attached)	BTEX (8260)												Air Bubbles (Y or N)
3/6/14	0900	soil	CentralOCD-01-3-6	4oz - 2	none	-001	X														
3/6/14	0925	soil	CentralOCD-02-3-6	4oz - 2	none	-002	X														
3/6/14	1050	soil	CentralOCD-03-3-6	4oz - 2	none	-003	X														
3/6/14	0850	soil	CentralOCD-04-3-6	4oz - 2	none	-004	X														
3/6/14		soil	BD-3-6	4oz - 2	none	-005	X														
3/6/14	1000	soil	CentralOCD-01-3-6-MS	4oz - 2	none	-001	X														
3/6/14	1000	soil	CentralOCD-01-3-6-MSD	4oz - 2	none	-001	X														
3/6/14	1035	soil	CentralOCD-TZ-3-6	EJ X 8oz ~~4oz - 3~~	As 03/11/14 none	-006	X	X													
3/6/14	0830	water	EB-3-6	VOA - 3	HCL	-007			X												
3/6/14	0820	water	FB-3-6	VOA - 3	HCL	-008			X												
		water	Trip Blank	VOA - 3	HCL	-009			X												

Date:	Time:	Relinquished by:	Received by:	Date	Time
3/7/14	1700	Don Flamer	Ashley Gallegos	03/07/14	1700
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Please cc Grant Price (gprice@trihydro.com) with results. Call Grant @ 307-745-7474 w/ questions. Verify that Reporting limits comply with those shown on the attached.

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

VADOSE ZONE ANALYTES AND REPORTING LIMITS, CENTRAL OIL CONSERVATION DIVISION LANDFARM
WESTERN REFINING SOUTHWEST, GALLUP REFINERY, GALLUP, NEW MEXICO

Analyte	Analytical Method	Reporting Units	Requested Reporting Limit
Chloride	E300	mg/kg	30
Benzene	SW8260B	mg/kg	0.050
Ethylbenzene	SW8260B	mg/kg	0.050
Toluene	SW8260B	mg/kg	0.050
Xylenes, Total	SW8260B	mg/kg	0.100
Petroleum Hydrocarbons, TR	E418.1	mg/kg	20

NMAC LIST ANALYTES AND REPORTING LIMITS, CONSTITUENTS LISTED IN SUBSECTIONS A AND B OF 20.6.2.3103 NMAC, CENTRAL OIL CONSERVATION DIVISION LANDFARM
WESTERN REFINING SOUTHWEST, GALLUP REFINERY, GALLUP, NEW MEXICO

Analyte	Analytical Method	Reporting Units	Requested Reporting Limit
Fluoride	E300	mg/kg	0.3000
Nitrogen, Nitrate (As N)	E300	mg/kg	2.2000
Sulfate	E300	mg/kg	21.5000
*Radium-226	E901.1	pCi/g	1.3950
*Radium-228	E901.1	pCi/g	1.2500
*Radium-226+Radium-228	E901.1	pCi/g	2.6450
Arsenic	SW6010A	mg/kg	2.5000
Barium	SW6010A	mg/kg	1.0000
Cadmium	SW6010A	mg/kg	0.1000
Chromium	SW6010A	mg/kg	0.3000
Copper	SW6010A	mg/kg	0.6000
Iron	SW6010A	mg/kg	500.0000
Lead	SW6010A	mg/kg	0.2500
Manganese	SW6010A	mg/kg	1.0000
Selenium	SW6010A	mg/kg	2.5000
Silver	SW6010A	mg/kg	0.2500
Uranium	SW6010A	mg/kg	5.0000
Zinc	SW6010A	mg/kg	2.5000
Mercury	SW7471	mg/kg	0.0330
Aroclor 1016	SW8082	mg/kg	0.0200
Aroclor 1221	SW8082	mg/kg	0.0200
Aroclor 1232	SW8082	mg/kg	0.0200
Aroclor 1242	SW8082	mg/kg	0.0200
Aroclor 1248	SW8082	mg/kg	0.0200
Aroclor 1254	SW8082	mg/kg	0.0200
Aroclor 1260	SW8082	mg/kg	0.0200
1,1,1-Trichloroethane	SW8260B	mg/kg	0.0480
1,1,2-Trichloroethane	SW8260B	mg/kg	0.0480
1,1-Dichloroethane	SW8260B	mg/kg	0.0970
1,1-Dichloroethene	SW8260B	mg/kg	0.0480
1,2-Dichloroethane	SW8260B	mg/kg	0.0480
Carbon tetrachloride	SW8260B	mg/kg	0.0970
Chloroform	SW8260B	mg/kg	0.0480
Dibromomethane	SW8260B	mg/kg	0.0020
Methylene chloride	SW8260B	mg/kg	0.1500
Tetrachloroethene	SW8260B	mg/kg	0.0480
Trichloroethene	SW8260B	mg/kg	0.0480
Vinyl chloride	SW8260B	mg/kg	0.0480
2,4,5-Trichlorophenol	SW8270C	mg/kg	0.2000
2,4,6-Trichlorophenol	SW8270C	mg/kg	0.2000
2,4-Dichlorophenol	SW8270C	mg/kg	0.4000
2,4-Dimethylphenol	SW8270C	mg/kg	0.3000
2,4-Dinitrophenol	SW8270C	mg/kg	0.4000
2-Chlorophenol	SW8270C	mg/kg	0.2000
2-Methylphenol	SW8270C	mg/kg	0.1000
2-Nitrophenol	SW8270C	mg/kg	0.1000
3+4-Methylphenol	SW8270C	mg/kg	0.1000
4,6-Dinitro-2-methylphenol	SW8270C	mg/kg	0.5000
4-Chloro-3-methylphenol	SW8270C	mg/kg	0.1000
4-Nitrophenol	SW8270C	mg/kg	0.1000
Pentachlorophenol	SW8270C	mg/kg	0.4000
Phenol	SW8270C	mg/kg	0.2000
1-Methylnaphthalene	SW8260B	mg/kg	0.2000
2-Methylnaphthalene	SW8260B	mg/kg	0.2000
Acenaphthene	SW8270C	mg/kg	0.2000
Acenaphthylene	SW8270C	mg/kg	0.2000
Anthracene	SW8270C	mg/kg	0.2000
Benzo(a)anthracene	SW8270C	mg/kg	0.2000
Benzo(a)pyrene	SW8270C	mg/kg	0.2000
Benzo(b)fluoranthene	SW8270C	mg/kg	0.2000
Benzo(g,h,i)perylene	SW8270C	mg/kg	0.2000
Benzo(k)fluoranthene	SW8270C	mg/kg	0.2000
Chrysene	SW8270C	mg/kg	0.2000
Dibenz(a,h)anthracene	SW8270C	mg/kg	0.2000
Fluoranthene	SW8270C	mg/kg	0.2000
Fluorene	SW8270C	mg/kg	0.2000
Indeno(1,2,3-c,d)pyrene	SW8270C	mg/kg	0.2000
Naphthalene	SW8270C	mg/kg	0.2000
Phenanthrene	SW8270C	mg/kg	0.2000
Pyrene	SW8270C	mg/kg	0.2000
Cyanide	EPA 335.4	mg/kg	0.3000
Diesel Range Organics (DRO)	SW8015	mg/kg	12
Gasoline Range Organics (GRO)	SW8015	mg/kg	1.0

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 21, 2014

Ed Riege
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 722-0210

RE: OCD Central Landfarm Semiannual Sampling OrderNo.: 1409874

Dear Ed Riege:

Hall Environmental Analysis Laboratory received 8 sample(s) on 9/16/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1409874**
Date Reported: **10/21/2014**

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-01-9/16/14
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 9/16/2014 11:10:00 AM
Lab ID: 1409874-001 **Matrix:** SOIL
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Chloride	230	30		mg/Kg	20	9/19/2014 1:25:43 PM	15404
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**RAA**
Benzene	ND	0.048		mg/Kg	1	9/20/2014 9:45:22 PM	15378
Toluene	ND	0.048		mg/Kg	1	9/20/2014 9:45:22 PM	15378
Ethylbenzene	ND	0.048		mg/Kg	1	9/20/2014 9:45:22 PM	15378
Xylenes, Total	ND	0.097		mg/Kg	1	9/20/2014 9:45:22 PM	15378
Surr: 1,2-Dichloroethane-d4	89.8	70-130		%REC	1	9/20/2014 9:45:22 PM	15378
Surr: 4-Bromofluorobenzene	85.8	70-130		%REC	1	9/20/2014 9:45:22 PM	15378
Surr: Dibromofluoromethane	95.5	70-130		%REC	1	9/20/2014 9:45:22 PM	15378
Surr: Toluene-d8	90.0	70-130		%REC	1	9/20/2014 9:45:22 PM	15378
EPA METHOD 418.1: TPH						Analyst:	**JME**
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	9/19/2014	15373

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-02-9/16/14
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 9/16/2014 10:30:00 AM
Lab ID: 1409874-002 **Matrix:** SOIL
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Chloride	93	30		mg/Kg	20	9/19/2014 1:38:07 PM	15404
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**RAA**
Benzene	ND	0.050		mg/Kg	1	9/20/2014 10:13:15 PM	15378
Toluene	ND	0.050		mg/Kg	1	9/20/2014 10:13:15 PM	15378
Ethylbenzene	ND	0.050		mg/Kg	1	9/20/2014 10:13:15 PM	15378
Xylenes, Total	ND	0.099		mg/Kg	1	9/20/2014 10:13:15 PM	15378
Surr: 1,2-Dichloroethane-d4	90.1	70-130		%REC	1	9/20/2014 10:13:15 PM	15378
Surr: 4-Bromofluorobenzene	80.6	70-130		%REC	1	9/20/2014 10:13:15 PM	15378
Surr: Dibromofluoromethane	93.4	70-130		%REC	1	9/20/2014 10:13:15 PM	15378
Surr: Toluene-d8	97.4	70-130		%REC	1	9/20/2014 10:13:15 PM	15378
EPA METHOD 418.1: TPH						Analyst:	**JME**
Petroleum Hydrocarbons, TR	1100	200		mg/Kg	10	9/19/2014	15373

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-03-9/16/14
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 9/16/2014 9:55:00 AM
Lab ID: 1409874-003 **Matrix:** SOIL
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Chloride	120	30		mg/Kg	20	9/19/2014 1:50:32 PM	15404
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**RAA**
Benzene	ND	0.048		mg/Kg	1	9/20/2014 10:41:12 PM	15378
Toluene	ND	0.048		mg/Kg	1	9/20/2014 10:41:12 PM	15378
Ethylbenzene	ND	0.048		mg/Kg	1	9/20/2014 10:41:12 PM	15378
Xylenes, Total	ND	0.097		mg/Kg	1	9/20/2014 10:41:12 PM	15378
Surr: 1,2-Dichloroethane-d4	87.0	70-130		%REC	1	9/20/2014 10:41:12 PM	15378
Surr: 4-Bromofluorobenzene	78.9	70-130		%REC	1	9/20/2014 10:41:12 PM	15378
Surr: Dibromofluoromethane	88.2	70-130		%REC	1	9/20/2014 10:41:12 PM	15378
Surr: Toluene-d8	86.5	70-130		%REC	1	9/20/2014 10:41:12 PM	15378
EPA METHOD 418.1: TPH						Analyst:	**JME**
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	9/19/2014	15373

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-04-9/16/14
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 9/16/2014 8:40:00 AM
Lab ID: 1409874-004 **Matrix:** SOIL
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Chloride	870	30		mg/Kg	20	9/19/2014 3:04:58 PM	15404
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**RAA**
Benzene	ND	0.049		mg/Kg	1	9/20/2014 11:09:13 PM	15378
Toluene	ND	0.049		mg/Kg	1	9/20/2014 11:09:13 PM	15378
Ethylbenzene	ND	0.049		mg/Kg	1	9/20/2014 11:09:13 PM	15378
Xylenes, Total	ND	0.098		mg/Kg	1	9/20/2014 11:09:13 PM	15378
Surr: 1,2-Dichloroethane-d4	85.8	70-130		%REC	1	9/20/2014 11:09:13 PM	15378
Surr: 4-Bromofluorobenzene	76.4	70-130		%REC	1	9/20/2014 11:09:13 PM	15378
Surr: Dibromofluoromethane	89.3	70-130		%REC	1	9/20/2014 11:09:13 PM	15378
Surr: Toluene-d8	89.9	70-130		%REC	1	9/20/2014 11:09:13 PM	15378
EPA METHOD 418.1: TPH						Analyst:	**JME**
Petroleum Hydrocarbons, TR	92	20		mg/Kg	1	9/19/2014	15373

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BD-9/16/14
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 9/16/2014
Lab ID: 1409874-005 **Matrix:** SOIL **Received Date:** 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Chloride	990	30		mg/Kg	20	9/19/2014 3:17:22 PM	15404
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**RAA**
Benzene	ND	0.050		mg/Kg	1	9/21/2014 12:33:06 AM	15378
Toluene	ND	0.050		mg/Kg	1	9/21/2014 12:33:06 AM	15378
Ethylbenzene	ND	0.050		mg/Kg	1	9/21/2014 12:33:06 AM	15378
Xylenes, Total	ND	0.099		mg/Kg	1	9/21/2014 12:33:06 AM	15378
Surr: 1,2-Dichloroethane-d4	84.9	70-130		%REC	1	9/21/2014 12:33:06 AM	15378
Surr: 4-Bromofluorobenzene	84.0	70-130		%REC	1	9/21/2014 12:33:06 AM	15378
Surr: Dibromofluoromethane	93.0	70-130		%REC	1	9/21/2014 12:33:06 AM	15378
Surr: Toluene-d8	90.3	70-130		%REC	1	9/21/2014 12:33:06 AM	15378
EPA METHOD 418.1: TPH						Analyst:	**JME**
Petroleum Hydrocarbons, TR	39	20		mg/Kg	1	9/19/2014	15373

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sam
Lab ID: 1409874-006 **Matrix:** SOIL

Client Sample ID: CentralOCD-TZ-9/16/14
Collection Date: 9/16/2014 10:55:00 AM
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8082: PCB'S						Analyst:	**SCC**
Aroclor 1016	ND	0.20		mg/Kg	1	9/24/2014 9:38:29 AM	15379
Aroclor 1221	ND	0.20		mg/Kg	1	9/24/2014 9:38:29 AM	15379
Aroclor 1232	ND	0.20		mg/Kg	1	9/24/2014 9:38:29 AM	15379
Aroclor 1242	ND	0.20		mg/Kg	1	9/24/2014 9:38:29 AM	15379
Aroclor 1248	ND	0.20		mg/Kg	1	9/24/2014 9:38:29 AM	15379
Aroclor 1254	ND	0.20		mg/Kg	1	9/24/2014 9:38:29 AM	15379
Aroclor 1260	ND	0.20		mg/Kg	1	9/24/2014 9:38:29 AM	15379
Surr: Decachlorobiphenyl	0	37.2-143	S	%REC	1	9/24/2014 9:38:29 AM	15379
Surr: Tetrachloro-m-xylene	0	35.6-141	S	%REC	1	9/24/2014 9:38:29 AM	15379
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst:	**BCN**
Diesel Range Organics (DRO)	1100	98		mg/Kg	10	9/22/2014 6:51:10 PM	15363
Surr: DNOP	0	57.9-140	S	%REC	10	9/22/2014 6:51:10 PM	15363
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	9/23/2014 11:51:20 AM	15378
Surr: BFB	82.8	80-120		%REC	1	9/23/2014 11:51:20 AM	15378
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	7.4	6.0		mg/Kg	20	9/19/2014 3:29:46 PM	15404
Chloride	130	30		mg/Kg	20	9/19/2014 3:29:46 PM	15404
Nitrogen, Nitrate (As N)	6.9	6.0		mg/Kg	20	9/19/2014 3:29:46 PM	15404
Sulfate	1000	30		mg/Kg	20	9/19/2014 3:29:46 PM	15404
EPA METHOD 7471: MERCURY						Analyst:	**MMD**
Mercury	0.062	0.033		mg/Kg	1	9/26/2014 11:16:27 AM	15505
EPA METHOD 6010B: SOIL METALS						Analyst:	**ELS**
Arsenic	ND	2.5		mg/Kg	1	9/24/2014 2:46:09 PM	15465
Barium	340	0.20		mg/Kg	2	9/24/2014 2:47:32 PM	15465
Cadmium	ND	0.098		mg/Kg	1	9/24/2014 2:46:09 PM	15465
Chromium	10	0.29		mg/Kg	1	9/24/2014 2:46:09 PM	15465
Copper	10	0.29		mg/Kg	1	9/24/2014 2:46:09 PM	15465
Iron	16000	250		mg/Kg	100	9/24/2014 1:07:26 PM	15465
Lead	5.6	0.25		mg/Kg	1	9/24/2014 2:46:09 PM	15465
Manganese	370	0.20		mg/Kg	2	9/24/2014 2:47:32 PM	15465
Selenium	ND	2.5		mg/Kg	1	9/24/2014 2:46:09 PM	15465
Silver	ND	0.25		mg/Kg	1	9/24/2014 2:46:09 PM	15465
Uranium	ND	4.9		mg/Kg	1	9/25/2014 12:35:49 PM	15465
Zinc	31	2.5		mg/Kg	1	9/24/2014 2:46:09 PM	15465
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sam
Lab ID: 1409874-006 **Matrix:** SOIL

Client Sample ID: CentralOCD-TZ-9/16/14
Collection Date: 9/16/2014 10:55:00 AM
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Acenaphthylene	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Aniline	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Anthracene	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Azobenzene	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Benz(a)anthracene	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Benzo(a)pyrene	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Benzo(b)fluoranthene	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Benzo(g,h,i)perylene	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Benzo(k)fluoranthene	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Benzoic acid	ND	5.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Benzyl alcohol	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Bis(2-chloroethoxy)methane	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Bis(2-chloroethyl)ether	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Bis(2-chloroisopropyl)ether	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Bis(2-ethylhexyl)phthalate	ND	5.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
4-Bromophenyl phenyl ether	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Butyl benzyl phthalate	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Carbazole	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
4-Chloro-3-methylphenol	ND	5.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
4-Chloroaniline	ND	5.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
2-Chloronaphthalene	ND	2.5		mg/Kg	1	9/19/2014 5:59:33 PM	15370
2-Chlorophenol	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
4-Chlorophenyl phenyl ether	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Chrysene	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Di-n-butyl phthalate	ND	5.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Di-n-octyl phthalate	ND	4.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Dibenz(a,h)anthracene	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Dibenzofuran	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
1,2-Dichlorobenzene	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
1,3-Dichlorobenzene	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
1,4-Dichlorobenzene	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
3,3´-Dichlorobenzidine	ND	2.5		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Diethyl phthalate	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Dimethyl phthalate	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
2,4-Dichlorophenol	ND	4.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
2,4-Dimethylphenol	ND	3.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
4,6-Dinitro-2-methylphenol	ND	5.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
2,4-Dinitrophenol	ND	5.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-TZ-9/16/14
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 9/16/2014 10:55:00 AM
Lab ID: 1409874-006 **Matrix:** SOIL
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2,4-Dinitrotoluene	ND	5.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
2,6-Dinitrotoluene	ND	5.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Fluoranthene	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Fluorene	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Hexachlorobenzene	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Hexachlorobutadiene	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Hexachlorocyclopentadiene	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Hexachloroethane	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Indeno(1,2,3-cd)pyrene	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Isophorone	ND	5.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
1-Methylnaphthalene	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
2-Methylnaphthalene	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
2-Methylphenol	ND	5.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
3+4-Methylphenol	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
N-Nitrosodi-n-propylamine	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
N-Nitrosodiphenylamine	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Naphthalene	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
2-Nitroaniline	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
3-Nitroaniline	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
4-Nitroaniline	ND	4.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Nitrobenzene	ND	5.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
2-Nitrophenol	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
4-Nitrophenol	ND	2.5		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Pentachlorophenol	ND	4.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Phenanthrene	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Phenol	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Pyrene	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Pyridine	ND	5.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
1,2,4-Trichlorobenzene	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
2,4,5-Trichlorophenol	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
2,4,6-Trichlorophenol	ND	2.0		mg/Kg	1	9/19/2014 5:59:33 PM	15370
Surr: 2-Fluorophenol	0	21-111	S	%REC	1	9/19/2014 5:59:33 PM	15370
Surr: Phenol-d5	0	23.1-117	S	%REC	1	9/19/2014 5:59:33 PM	15370
Surr: 2,4,6-Tribromophenol	0	22.7-88.9	S	%REC	1	9/19/2014 5:59:33 PM	15370
Surr: Nitrobenzene-d5	0	24.5-126	S	%REC	1	9/19/2014 5:59:33 PM	15370
Surr: 2-Fluorobiphenyl	0	21.2-129	S	%REC	1	9/19/2014 5:59:33 PM	15370
Surr: 4-Terphenyl-d14	0	39.4-107	S	%REC	1	9/19/2014 5:59:33 PM	15370
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-TZ-9/16/14
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 9/16/2014 10:55:00 AM
Lab ID: 1409874-006 **Matrix:** SOIL
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Toluene	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
Ethylbenzene	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
Methyl tert-butyl ether (MTBE)	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
1,2,4-Trimethylbenzene	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
1,3,5-Trimethylbenzene	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
1,2-Dichloroethane (EDC)	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
1,2-Dibromoethane (EDB)	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
Naphthalene	ND	0.092		mg/Kg	1	9/21/2014 1:00:56 AM	15378
1-Methylnaphthalene	ND	0.18		mg/Kg	1	9/21/2014 1:00:56 AM	15378
2-Methylnaphthalene	ND	0.18		mg/Kg	1	9/21/2014 1:00:56 AM	15378
Acetone	ND	0.69		mg/Kg	1	9/21/2014 1:00:56 AM	15378
Bromobenzene	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
Bromodichloromethane	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
Bromoform	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
Bromomethane	ND	0.14		mg/Kg	1	9/21/2014 1:00:56 AM	15378
2-Butanone	ND	0.46		mg/Kg	1	9/21/2014 1:00:56 AM	15378
Carbon disulfide	ND	0.46		mg/Kg	1	9/21/2014 1:00:56 AM	15378
Carbon tetrachloride	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
Chlorobenzene	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
Chloroethane	ND	0.092		mg/Kg	1	9/21/2014 1:00:56 AM	15378
Chloroform	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
Chloromethane	ND	0.14		mg/Kg	1	9/21/2014 1:00:56 AM	15378
2-Chlorotoluene	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
4-Chlorotoluene	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
cis-1,2-DCE	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
cis-1,3-Dichloropropene	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
1,2-Dibromo-3-chloropropane	ND	0.092		mg/Kg	1	9/21/2014 1:00:56 AM	15378
Dibromochloromethane	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
Dibromomethane	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
1,2-Dichlorobenzene	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
1,3-Dichlorobenzene	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
1,4-Dichlorobenzene	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
Dichlorodifluoromethane	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
1,1-Dichloroethane	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
1,1-Dichloroethene	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
1,2-Dichloropropane	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
1,3-Dichloropropane	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
2,2-Dichloropropane	ND	0.092		mg/Kg	1	9/21/2014 1:00:56 AM	15378
1,1-Dichloropropene	ND	0.092		mg/Kg	1	9/21/2014 1:00:56 AM	15378

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: CentralOCD-TZ-9/16/14
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 9/16/2014 10:55:00 AM
Lab ID: 1409874-006 **Matrix:** SOIL
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **RAA**	
Hexachlorobutadiene	ND	0.092		mg/Kg	1	9/21/2014 1:00:56 AM	15378
2-Hexanone	ND	0.46		mg/Kg	1	9/21/2014 1:00:56 AM	15378
Isopropylbenzene	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
4-Isopropyltoluene	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
4-Methyl-2-pentanone	ND	0.46		mg/Kg	1	9/21/2014 1:00:56 AM	15378
Methylene chloride	ND	0.14		mg/Kg	1	9/21/2014 1:00:56 AM	15378
n-Butylbenzene	ND	0.14		mg/Kg	1	9/21/2014 1:00:56 AM	15378
n-Propylbenzene	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
sec-Butylbenzene	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
Styrene	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
tert-Butylbenzene	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
1,1,1,2-Tetrachloroethane	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
1,1,2,2-Tetrachloroethane	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
Tetrachloroethene (PCE)	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
trans-1,2-DCE	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
trans-1,3-Dichloropropene	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
1,2,3-Trichlorobenzene	ND	0.092		mg/Kg	1	9/21/2014 1:00:56 AM	15378
1,2,4-Trichlorobenzene	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
1,1,1-Trichloroethane	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
1,1,2-Trichloroethane	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
Trichloroethene (TCE)	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
Trichlorofluoromethane	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
1,2,3-Trichloropropane	ND	0.092		mg/Kg	1	9/21/2014 1:00:56 AM	15378
Vinyl chloride	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
Xylenes, Total	ND	0.092		mg/Kg	1	9/21/2014 1:00:56 AM	15378
mp-Xylenes	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
o-Xylene	ND	0.046		mg/Kg	1	9/21/2014 1:00:56 AM	15378
Surr: Dibromofluoromethane	88.8	70-130		%REC	1	9/21/2014 1:00:56 AM	15378
Surr: 1,2-Dichloroethane-d4	84.1	70-130		%REC	1	9/21/2014 1:00:56 AM	15378
Surr: Toluene-d8	94.7	70-130		%REC	1	9/21/2014 1:00:56 AM	15378
Surr: 4-Bromofluorobenzene	84.0	70-130		%REC	1	9/21/2014 1:00:56 AM	15378
EPA METHOD 418.1: TPH						Analyst: **JME**	
Petroleum Hydrocarbons, TR	1400	200		mg/Kg	10	9/19/2014	15373

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EB-9/16/14
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 9/16/2014 12:10:00 PM
Lab ID: 1409874-007
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/22/2014 3:33:56 PM	R21353
Toluene	ND	1.0		µg/L	1	9/22/2014 3:33:56 PM	R21353
Ethylbenzene	ND	1.0		µg/L	1	9/22/2014 3:33:56 PM	R21353
Xylenes, Total	ND	1.5		µg/L	1	9/22/2014 3:33:56 PM	R21353
Surr: 1,2-Dichloroethane-d4	94.5	70-130		%REC	1	9/22/2014 3:33:56 PM	R21353
Surr: 4-Bromofluorobenzene	104	70-130		%REC	1	9/22/2014 3:33:56 PM	R21353
Surr: Dibromofluoromethane	95.8	70-130		%REC	1	9/22/2014 3:33:56 PM	R21353
Surr: Toluene-d8	92.0	70-130		%REC	1	9/22/2014 3:33:56 PM	R21353

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-9/16/14
Project: OCD Central Landfarm Semiannual Sam
Collection Date: 9/16/2014 12:15:00 PM
Lab ID: 1409874-008
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/22/2014 4:03:40 PM	R21353
Toluene	ND	1.0		µg/L	1	9/22/2014 4:03:40 PM	R21353
Ethylbenzene	ND	1.0		µg/L	1	9/22/2014 4:03:40 PM	R21353
Xylenes, Total	ND	1.5		µg/L	1	9/22/2014 4:03:40 PM	R21353
Surr: 1,2-Dichloroethane-d4	90.2	70-130		%REC	1	9/22/2014 4:03:40 PM	R21353
Surr: 4-Bromofluorobenzene	100	70-130		%REC	1	9/22/2014 4:03:40 PM	R21353
Surr: Dibromofluoromethane	89.9	70-130		%REC	1	9/22/2014 4:03:40 PM	R21353
Surr: Toluene-d8	88.8	70-130		%REC	1	9/22/2014 4:03:40 PM	R21353

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 140919029
Project Name: 1409874

Analytical Results Report

Sample Number 140919029-001 **Sampling Date** 9/16/2014 **Date/Time Received** 9/19/2014 12:10 PM
Client Sample ID 1409874-006C / CENTRALOCD-TZ-9/16/14 **Sampling Time** 10:55 AM
Matrix Soil **Sample Location**
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/Kg	0.285	9/29/2014	CRW	EPA 335.4	
%moisture	11.9	Percent		9/30/2014	KJS	%moisture	

Authorized Signature

John Coddington, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

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The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 140919029
Project Name: 1409874

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Cyanide	0.502	mg/kg	0.5	100.4	90-110	9/29/2014	9/29/2014

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
140919031-005	Cyanide	ND	12.7	mg/kg	14.1	90.1	90-110	9/29/2014	9/29/2014

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide	13.2	mg/kg	14.1	93.6	3.9	0-25	9/29/2014	9/29/2014

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide	ND	mg/Kg	0.5	9/29/2014	9/29/2014

AR	Acceptable Range
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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www.pacelabs.com

Pace Analytical Services, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 1409874
Pace Project No.: 30129978

Sample: 1409874-006B CentralOCD-TZ-9/1 **Lab ID: 30129978001** Collected: 09/16/14 10:55 Received: 09/19/14 09:45 Matrix: Solid
PWS: Site ID: Sample Type:

Results reported on a "dry-weight" basis

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 901.1	**1.134 ± 0.247 (0.192) C:NA T:NA**	pCi/g	10/19/14 13:48	13982-63-3	
Radium-228	EPA 901.1	**0.748 ± 0.241 (0.417) C:NA T:NA**	pCi/g	10/19/14 13:48	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: 1409874
Pace Project No.: 30129978

QC Batch:	RADC/21509	Analysis Method:	EPA 901.1
QC Batch Method:	EPA 901.1	Analysis Description:	901.1 Gamma Spec Ingrowth

Associated Lab Samples: 30129978001

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409874**
21-Oct-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **MB-15404** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **15404** RunNo: **21343**
Prep Date: **9/19/2014** Analysis Date: **9/19/2014** SeqNo: **623059** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.30								
Chloride	ND	1.5								
Nitrogen, Nitrate (As N)	ND	0.30								
Sulfate	ND	1.5								

Sample ID **LCS-15404** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **15404** RunNo: **21343**
Prep Date: **9/19/2014** Analysis Date: **9/19/2014** SeqNo: **623060** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.5	0.30	1.500	0	98.7	90	110			
Chloride	14	1.5	15.00	0	94.5	90	110			
Nitrogen, Nitrate (As N)	7.5	0.30	7.500	0	99.4	90	110			
Sulfate	29	1.5	30.00	0	97.1	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409874**
21-Oct-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **MB-15373** SampType: **MBLK** TestCode: **EPA Method 418.1: TPH**
Client ID: **PBS** Batch ID: **15373** RunNo: **21288**
Prep Date: **9/18/2014** Analysis Date: **9/19/2014** SeqNo: **621284** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID **LCS-15373** SampType: **LCS** TestCode: **EPA Method 418.1: TPH**
Client ID: **LCSS** Batch ID: **15373** RunNo: **21288**
Prep Date: **9/18/2014** Analysis Date: **9/19/2014** SeqNo: **621285** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	96	20	100.0	0	95.8	80	120			

Sample ID **1409874-004AMS** SampType: **MS** TestCode: **EPA Method 418.1: TPH**
Client ID: **CentralOCD-04-9/16/** Batch ID: **15373** RunNo: **21288**
Prep Date: **9/18/2014** Analysis Date: **9/19/2014** SeqNo: **621301** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	230	20	98.33	91.89	139	80	120			S

Sample ID **1409874-004AMSD** SampType: **MSD** TestCode: **EPA Method 418.1: TPH**
Client ID: **CentralOCD-04-9/16/** Batch ID: **15373** RunNo: **21288**
Prep Date: **9/18/2014** Analysis Date: **9/19/2014** SeqNo: **621302** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	330	20	98.72	91.89	237	80	120	35.2	20	RS

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409874**
21-Oct-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	**MB-15363**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Diesel Range Organics**
Client ID:	**PBS**	Batch ID:	**15363**	RunNo:	**21269**
Prep Date:	**9/18/2014**	Analysis Date:	**9/18/2014**	SeqNo:	**620601** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	10		10.00		100	57.9	140			

Sample ID	**LCS-15363**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Diesel Range Organics**
Client ID:	**LCSS**	Batch ID:	**15363**	RunNo:	**21269**
Prep Date:	**9/18/2014**	Analysis Date:	**9/18/2014**	SeqNo:	**620602** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	62	10	50.00	0	125	68.6	130			
Surr: DNOP	5.2		5.000		104	57.9	140			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409874**
21-Oct-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **MB-15378** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **15378** RunNo: **21342**
Prep Date: **9/18/2014** Analysis Date: **9/22/2014** SeqNo: **623292** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	940		1000		94.2	80	120			

Sample ID **LCS-15378** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **15378** RunNo: **21342**
Prep Date: **9/18/2014** Analysis Date: **9/22/2014** SeqNo: **623293** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	103	65.8	139			
Surr: BFB	1000		1000		101	80	120			

Sample ID **1409874-006AMS** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **CentralOCD-TZ-9/16** Batch ID: **15378** RunNo: **21342**
Prep Date: **9/18/2014** Analysis Date: **9/22/2014** SeqNo: **623304** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.6	23.08	0	101	71.8	132			
Surr: BFB	1000		923.4		110	80	120			

Sample ID **1409874-006AMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **CentralOCD-TZ-9/16** Batch ID: **15378** RunNo: **21342**
Prep Date: **9/18/2014** Analysis Date: **9/22/2014** SeqNo: **623305** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.6	23.15	0	96.5	71.8	132	4.58	20	
Surr: BFB	1000		925.9		108	80	120	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409874**
21-Oct-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **MB-15379** SampType: **MBLK** TestCode: **EPA Method 8082: PCB's**
Client ID: **PBS** Batch ID: **15379** RunNo: **21397**
Prep Date: **9/18/2014** Analysis Date: **9/24/2014** SeqNo: **625113** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.020								
Aroclor 1221	ND	0.020								
Aroclor 1232	ND	0.020								
Aroclor 1242	ND	0.020								
Aroclor 1248	ND	0.020								
Aroclor 1254	ND	0.020								
Aroclor 1260	ND	0.020								
Surr: Decachlorobiphenyl	0.041		0.06250		65.2	37.2	143			
Surr: Tetrachloro-m-xylene	0.034		0.06250		54.8	35.6	141			

Sample ID **LCS-15379** SampType: **LCS** TestCode: **EPA Method 8082: PCB's**
Client ID: **LCSS** Batch ID: **15379** RunNo: **21397**
Prep Date: **9/18/2014** Analysis Date: **9/24/2014** SeqNo: **625114** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	0.065	0.020	0.1250	0	52.1	34.7	146			
Aroclor 1260	0.085	0.020	0.1250	0	68.1	36.3	153			
Surr: Decachlorobiphenyl	0.040		0.06250		64.8	37.2	143			
Surr: Tetrachloro-m-xylene	0.035		0.06250		55.6	35.6	141			

Sample ID **LCS-15379 1221_12** SampType: **LCS** TestCode: **EPA Method 8082: PCB's**
Client ID: **LCSS** Batch ID: **15379** RunNo: **21397**
Prep Date: **9/18/2014** Analysis Date: **9/24/2014** SeqNo: **626901** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1221	0.044	0.020	0.1250	0	35.4	70	130			S
Aroclor 1248	0.068	0.020	0.1250	0	54.4	70	130			S
Surr: Decachlorobiphenyl	0.037		0.06250		59.6	37.2	143			
Surr: Tetrachloro-m-xylene	0.035		0.06250		55.6	35.6	141			

Sample ID **LCSD-15379 1221_1** SampType: **LCSD** TestCode: **EPA Method 8082: PCB's**
Client ID: **LCSS02** Batch ID: **15379** RunNo: **21397**
Prep Date: **9/18/2014** Analysis Date: **9/24/2014** SeqNo: **626902** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1221	0.043	0.020	0.1250	0	34.2	70	130	3.45	20	S
Aroclor 1248	0.069	0.020	0.1250	0	55.0	70	130	1.17	20	S
Surr: Decachlorobiphenyl	0.037		0.06250		59.6	37.2	143	0	0	
Surr: Tetrachloro-m-xylene	0.034		0.06250		54.8	35.6	141	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409874**
21-Oct-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **LCS-15379 1232_12** SampType: **LCS** TestCode: **EPA Method 8082: PCB's**
Client ID: **LCSS** Batch ID: **15379** RunNo: **21397**
Prep Date: **9/18/2014** Analysis Date: **9/24/2014** SeqNo: **626903** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1232	0.081	0.020	0.1250	0	64.9	70	130			S
Aroclor 1254	0.11	0.020	0.1250	0	86.7	70	130			
Surr: Decachlorobiphenyl	0.045		0.06250		71.6	37.2	143			
Surr: Tetrachloro-m-xylene	0.040		0.06250		63.2	35.6	141			

Sample ID **LCSD-15379 1232_1** SampType: **LCSD** TestCode: **EPA Method 8082: PCB's**
Client ID: **LCSS02** Batch ID: **15379** RunNo: **21397**
Prep Date: **9/18/2014** Analysis Date: **9/24/2014** SeqNo: **626904** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1232	0.074	0.020	0.1250	0	59.0	70	130	9.49	20	S
Aroclor 1254	0.093	0.020	0.1250	0	74.3	70	130	15.4	20	
Surr: Decachlorobiphenyl	0.042		0.06250		68.0	37.2	143	0	0	
Surr: Tetrachloro-m-xylene	0.038		0.06250		61.2	35.6	141	0	0	

Sample ID **LCS-15379 1242** SampType: **LCS** TestCode: **EPA Method 8082: PCB's**
Client ID: **LCSS** Batch ID: **15379** RunNo: **21397**
Prep Date: **9/18/2014** Analysis Date: **9/24/2014** SeqNo: **626905** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1242	0.079	0.020	0.1250	0	63.1	70	130			S
Surr: Decachlorobiphenyl	0.040		0.06250		64.4	37.2	143			
Surr: Tetrachloro-m-xylene	0.036		0.06250		56.8	35.6	141			

Sample ID **LCSD-15379 1242** SampType: **LCSD** TestCode: **EPA Method 8082: PCB's**
Client ID: **LCSS02** Batch ID: **15379** RunNo: **21397**
Prep Date: **9/18/2014** Analysis Date: **9/24/2014** SeqNo: **626906** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1242	0.088	0.020	0.1250	0	70.5	70	130	11.1	20	
Surr: Decachlorobiphenyl	0.044		0.06250		70.8	37.2	143	0	0	
Surr: Tetrachloro-m-xylene	0.038		0.06250		61.6	35.6	141	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409874**
21-Oct-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **mb-15378**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles**			
Client ID: **PBS**	Batch ID: **15378**	RunNo: **21355**			
Prep Date: **9/18/2014**	Analysis Date: **9/20/2014**	SeqNo: **623843**	Units: **mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Methyl tert-butyl ether (MTBE)	ND	0.050								
1,2,4-Trimethylbenzene	ND	0.050								
1,3,5-Trimethylbenzene	ND	0.050								
1,2-Dichloroethane (EDC)	ND	0.050								
1,2-Dibromoethane (EDB)	ND	0.050								
Naphthalene	ND	0.10								
1-Methylnaphthalene	ND	0.20								
2-Methylnaphthalene	ND	0.20								
Acetone	ND	0.75								
Bromobenzene	ND	0.050								
Bromodichloromethane	ND	0.050								
Bromoform	ND	0.050								
Bromomethane	ND	0.15								
2-Butanone	ND	0.50								
Carbon disulfide	ND	0.50								
Carbon tetrachloride	ND	0.050								
Chlorobenzene	ND	0.050								
Chloroethane	ND	0.10								
Chloroform	ND	0.050								
Chloromethane	ND	0.15								
2-Chlorotoluene	ND	0.050								
4-Chlorotoluene	ND	0.050								
cis-1,2-DCE	ND	0.050								
cis-1,3-Dichloropropene	ND	0.050								
1,2-Dibromo-3-chloropropane	ND	0.10								
Dibromochloromethane	ND	0.050								
Dibromomethane	ND	0.050								
1,2-Dichlorobenzene	ND	0.050								
1,3-Dichlorobenzene	ND	0.050								
1,4-Dichlorobenzene	ND	0.050								
Dichlorodifluoromethane	ND	0.050								
1,1-Dichloroethane	ND	0.050								
1,1-Dichloroethene	ND	0.050								
1,2-Dichloropropane	ND	0.050								
1,3-Dichloropropane	ND	0.050								
2,2-Dichloropropane	ND	0.10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409874**
21-Oct-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **mb-15378** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles**
Client ID: **PBS** Batch ID: **15378** RunNo: **21355**
Prep Date: **9/18/2014** Analysis Date: **9/20/2014** SeqNo: **623843** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	0.10								
Hexachlorobutadiene	ND	0.10								
2-Hexanone	ND	0.50								
Isopropylbenzene	ND	0.050								
4-Isopropyltoluene	ND	0.050								
4-Methyl-2-pentanone	ND	0.50								
Methylene chloride	ND	0.15								
n-Butylbenzene	ND	0.15								
n-Propylbenzene	ND	0.050								
sec-Butylbenzene	ND	0.050								
Styrene	ND	0.050								
tert-Butylbenzene	ND	0.050								
1,1,1,2-Tetrachloroethane	ND	0.050								
1,1,2,2-Tetrachloroethane	ND	0.050								
Tetrachloroethene (PCE)	ND	0.050								
trans-1,2-DCE	ND	0.050								
trans-1,3-Dichloropropene	ND	0.050								
1,2,3-Trichlorobenzene	ND	0.10								
1,2,4-Trichlorobenzene	ND	0.050								
1,1,1-Trichloroethane	ND	0.050								
1,1,2-Trichloroethane	ND	0.050								
Trichloroethene (TCE)	ND	0.050								
Trichlorofluoromethane	ND	0.050								
1,2,3-Trichloropropane	ND	0.10								
Vinyl chloride	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: Dibromofluoromethane	0.42		0.5000		84.4	70	130			
Surr: 1,2-Dichloroethane-d4	0.41		0.5000		82.2	70	130			
Surr: Toluene-d8	0.47		0.5000		94.6	70	130			
Surr: 4-Bromofluorobenzene	0.37		0.5000		74.2	70	130			

Sample ID **lcs-15378** SampType: **LCS** TestCode: **EPA Method 8260B: Volatiles**
Client ID: **LCSS** Batch ID: **15378** RunNo: **21355**
Prep Date: **9/18/2014** Analysis Date: **9/20/2014** SeqNo: **623844** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.050	1.000	0	96.0	70	130			
Toluene	1.0	0.050	1.000	0	101	70	130			
Chlorobenzene	1.0	0.050	1.000	0	101	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409874**
21-Oct-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **lcs-15378** SampType: **LCS** TestCode: **EPA Method 8260B: Volatiles**
Client ID: **LCSS** Batch ID: **15378** RunNo: **21355**
Prep Date: **9/18/2014** Analysis Date: **9/20/2014** SeqNo: **623844** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	1.1	0.050	1.000	0	105	60.5	160			
Trichloroethene (TCE)	0.92	0.050	1.000	0	91.5	58.8	139			
Surr: Dibromofluoromethane	0.44		0.5000		88.1	70	130			
Surr: 1,2-Dichloroethane-d4	0.41		0.5000		82.0	70	130			
Surr: Toluene-d8	0.44		0.5000		87.5	70	130			
Surr: 4-Bromofluorobenzene	0.42		0.5000		84.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409874**
21-Oct-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **mb-15378** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS** Batch ID: **15378** RunNo: **21355**
Prep Date: **9/18/2014** Analysis Date: **9/20/2014** SeqNo: **623834** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.050								
Benzene	ND	0.050								
1,2-Dichloroethane (EDC)	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
1,2-Dibromoethane (EDB)	ND	0.050								
1,2,4-Trimethylbenzene	ND	0.050								
1,3,5-Trimethylbenzene	ND	0.050								
Naphthalene	ND	0.10								
2-Methylnaphthalene	ND	0.20								
1-Methylnaphthalene	ND	0.20								
Surr: 1,2-Dichloroethane-d4	0.41		0.5000		82.2	70	130			
Surr: 4-Bromofluorobenzene	0.37		0.5000		74.2	70	130			
Surr: Dibromofluoromethane	0.42		0.5000		84.4	70	130			
Surr: Toluene-d8	0.47		0.5000		94.6	70	130			

Sample ID **1409874-004ams** SampType: **MS** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **CentralOCD-04-9/16/** Batch ID: **15378** RunNo: **21355**
Prep Date: **9/18/2014** Analysis Date: **9/20/2014** SeqNo: **623840** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.049	0.9794	0	104	32.2	145			
Toluene	0.98	0.049	0.9794	0	99.6	29.1	139			
Surr: 1,2-Dichloroethane-d4	0.43		0.4897		88.0	70	130			
Surr: 4-Bromofluorobenzene	0.38		0.4897		78.6	70	130			
Surr: Dibromofluoromethane	0.45		0.4897		92.3	70	130			
Surr: Toluene-d8	0.43		0.4897		87.0	70	130			

Sample ID **1409874-004amsd** SampType: **MSD** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **CentralOCD-04-9/16/** Batch ID: **15378** RunNo: **21355**
Prep Date: **9/18/2014** Analysis Date: **9/21/2014** SeqNo: **623841** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.049	0.9814	0	108	32.2	145	3.73	20	
Toluene	0.99	0.049	0.9814	0	100	29.1	139	1.05	20	
Surr: 1,2-Dichloroethane-d4	0.42		0.4907		85.6	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.40		0.4907		82.0	70	130	0	0	
Surr: Dibromofluoromethane	0.47		0.4907		95.0	70	130	0	0	
Surr: Toluene-d8	0.41		0.4907		84.2	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409874**
21-Oct-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	**lcs-15378**	SampType:	**LCS**	TestCode:	**EPA Method 8260B: Volatiles Short List**
Client ID:	**LCSS**	Batch ID:	**15378**	RunNo:	**21355**
Prep Date:	**9/18/2014**	Analysis Date:	**9/20/2014**	SeqNo:	**625670** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.050	1.000	0	96.0	70	130			
Toluene	1.0	0.050	1.000	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	0.41		0.5000		82.0	70	130			
Surr: 4-Bromofluorobenzene	0.42		0.5000		84.7	70	130			
Surr: Dibromofluoromethane	0.44		0.5000		88.1	70	130			
Surr: Toluene-d8	0.44		0.5000		87.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409874**
21-Oct-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **b3** SampType: **MBLK** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **PBW** Batch ID: **R21353** RunNo: **21353**
Prep Date: Analysis Date: **9/22/2014** SeqNo: **623722** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
mp-Xylenes	ND	1.0								
o-Xylene	ND	1.0								
Surr: 1,2-Dichloroethane-d4	9.0		10.00		90.0	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	9.0		10.00		89.5	70	130			
Surr: Toluene-d8	8.7		10.00		87.0	70	130			

Sample ID **100ng lcs2** SampType: **LCS** TestCode: **EPA Method 8260: Volatiles Short List**
Client ID: **LCSW** Batch ID: **R21353** RunNo: **21353**
Prep Date: Analysis Date: **9/22/2014** SeqNo: **623723** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	18	1.0	20.00	0	91.1	80	120			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		91.1	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	9.0		10.00		90.2	70	130			
Surr: Toluene-d8	9.2		10.00		91.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409874**
21-Oct-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **mb-15370**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBS**	Batch ID: **15370**	RunNo: **21328**			
Prep Date: **9/18/2014**	Analysis Date: **9/19/2014**	SeqNo: **622393**	Units: **mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	0.20								
Acenaphthylene	ND	0.20								
Aniline	ND	0.20								
Anthracene	ND	0.20								
Azobenzene	ND	0.20								
Benz(a)anthracene	ND	0.20								
Benzo(a)pyrene	ND	0.20								
Benzo(b)fluoranthene	ND	0.20								
Benzo(g,h,i)perylene	ND	0.20								
Benzo(k)fluoranthene	ND	0.20								
Benzoic acid	ND	0.50								
Benzyl alcohol	ND	0.20								
Bis(2-chloroethoxy)methane	ND	0.20								
Bis(2-chloroethyl)ether	ND	0.20								
Bis(2-chloroisopropyl)ether	ND	0.20								
Bis(2-ethylhexyl)phthalate	ND	0.50								
4-Bromophenyl phenyl ether	ND	0.20								
Butyl benzyl phthalate	ND	0.20								
Carbazole	ND	0.20								
4-Chloro-3-methylphenol	ND	0.50								
4-Chloroaniline	ND	0.50								
2-Chloronaphthalene	ND	0.25								
2-Chlorophenol	ND	0.20								
4-Chlorophenyl phenyl ether	ND	0.20								
Chrysene	ND	0.20								
Di-n-butyl phthalate	ND	0.50								
Di-n-octyl phthalate	ND	0.40								
Dibenz(a,h)anthracene	ND	0.20								
Dibenzofuran	ND	0.20								
1,2-Dichlorobenzene	ND	0.20								
1,3-Dichlorobenzene	ND	0.20								
1,4-Dichlorobenzene	ND	0.20								
3,3´-Dichlorobenzidine	ND	0.25								
Diethyl phthalate	ND	0.20								
Dimethyl phthalate	ND	0.20								
2,4-Dichlorophenol	ND	0.40								
2,4-Dimethylphenol	ND	0.30								
4,6-Dinitro-2-methylphenol	ND	0.50								
2,4-Dinitrophenol	ND	0.50								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409874**
21-Oct-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **mb-15370**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBS**	Batch ID: **15370**	RunNo: **21328**			
Prep Date: **9/18/2014**	Analysis Date: **9/19/2014**	SeqNo: **622393**	Units: **mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	0.50								
2,6-Dinitrotoluene	ND	0.50								
Fluoranthene	ND	0.20								
Fluorene	ND	0.20								
Hexachlorobenzene	ND	0.20								
Hexachlorobutadiene	ND	0.20								
Hexachlorocyclopentadiene	ND	0.20								
Hexachloroethane	ND	0.20								
Indeno(1,2,3-cd)pyrene	ND	0.20								
Isophorone	ND	0.50								
1-Methylnaphthalene	ND	0.20								
2-Methylnaphthalene	ND	0.20								
2-Methylphenol	ND	0.50								
3+4-Methylphenol	ND	0.20								
N-Nitrosodi-n-propylamine	ND	0.20								
N-Nitrosodiphenylamine	ND	0.20								
Naphthalene	ND	0.20								
2-Nitroaniline	ND	0.20								
3-Nitroaniline	ND	0.20								
4-Nitroaniline	ND	0.40								
Nitrobenzene	ND	0.50								
2-Nitrophenol	ND	0.20								
4-Nitrophenol	ND	0.25								
Pentachlorophenol	ND	0.40								
Phenanthrene	ND	0.20								
Phenol	ND	0.20								
Pyrene	ND	0.20								
Pyridine	ND	0.50								
1,2,4-Trichlorobenzene	ND	0.20								
2,4,5-Trichlorophenol	ND	0.20								
2,4,6-Trichlorophenol	ND	0.20								
Surr: 2-Fluorophenol	1.9		3.330		58.4	21	111			
Surr: Phenol-d5	2.3		3.330		69.7	23.1	117			
Surr: 2,4,6-Tribromophenol	2.4		3.330		70.8	22.7	88.9			
Surr: Nitrobenzene-d5	1.1		1.670		67.3	24.5	126			
Surr: 2-Fluorobiphenyl	1.2		1.670		74.2	21.2	129			
Surr: 4-Terphenyl-d14	1.4		1.670		81.0	39.4	107			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409874**
21-Oct-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **lcs-15370** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS** Batch ID: **15370** RunNo: **21328**
Prep Date: **9/18/2014** Analysis Date: **9/19/2014** SeqNo: **622394** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	0.93	0.20	1.670	0	55.4	50.7	110			
4-Chloro-3-methylphenol	2.2	0.50	3.330	0	66.9	47.8	107			
2-Chlorophenol	2.2	0.20	3.330	0	66.6	45.7	108			
1,4-Dichlorobenzene	0.88	0.20	1.670	0	52.7	46.1	112			
2,4-Dinitrotoluene	0.80	0.50	1.670	0	47.8	44.9	114			
N-Nitrosodi-n-propylamine	0.81	0.20	1.670	0	48.5	38.7	128			
4-Nitrophenol	1.8	0.25	3.330	0	54.3	40.2	103			
Pentachlorophenol	1.6	0.40	3.330	0	48.5	32.9	94			
Phenol	2.2	0.20	3.330	0	64.8	44.1	109			
Pyrene	1.1	0.20	1.670	0	64.3	51.9	109			
1,2,4-Trichlorobenzene	0.92	0.20	1.670	0	55.3	49.5	115			
Surr: 2-Fluorophenol	1.8		3.330		54.4	21	111			
Surr: Phenol-d5	2.2		3.330		65.8	23.1	117			
Surr: 2,4,6-Tribromophenol	1.8		3.330		53.1	22.7	88.9			
Surr: Nitrobenzene-d5	1.1		1.670		64.4	24.5	126			
Surr: 2-Fluorobiphenyl	0.96		1.670		57.7	21.2	129			
Surr: 4-Terphenyl-d14	1.1		1.670		63.7	39.4	107			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409874**
21-Oct-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	**MB-15505**	SampType:	**MBLK**	TestCode:	**EPA Method 7471: Mercury**
Client ID:	**PBS**	Batch ID:	**15505**	RunNo:	**21480**
Prep Date:	**9/25/2014**	Analysis Date:	**9/26/2014**	SeqNo:	**628099** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	**LCS-15505**	SampType:	**LCS**	TestCode:	**EPA Method 7471: Mercury**
Client ID:	**LCSS**	Batch ID:	**15505**	RunNo:	**21480**
Prep Date:	**9/25/2014**	Analysis Date:	**9/26/2014**	SeqNo:	**628100** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1667	0	100	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409874**
21-Oct-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID **MB-15465** SampType: **MBLK** TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **PBS** Batch ID: **15465** RunNo: **21420**
Prep Date: **9/23/2014** Analysis Date: **9/24/2014** SeqNo: **625694** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Iron	ND	2.5								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID **LCS-15465** SampType: **LCS** TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **LCSS** Batch ID: **15465** RunNo: **21420**
Prep Date: **9/23/2014** Analysis Date: **9/24/2014** SeqNo: **625695** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	24	2.5	25.00	0	95.6	80	120			
Barium	25	0.10	25.00	0	99.2	80	120			
Cadmium	24	0.10	25.00	0	97.4	80	120			
Chromium	24	0.30	25.00	0	97.3	80	120			
Copper	28	0.30	25.00	0	110	80	120			
Iron	26	2.5	25.00	0	103	80	120			
Lead	24	0.25	25.00	0	97.8	80	120			
Manganese	25	0.10	25.00	0	101	80	120			
Selenium	24	2.5	25.00	0	95.5	80	120			
Silver	5.0	0.25	5.000	0	101	80	120			
Zinc	23	2.5	25.00	0	90.7	80	120			

Sample ID **MB-15465** SampType: **MBLK** TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **PBS** Batch ID: **15465** RunNo: **21466**
Prep Date: **9/23/2014** Analysis Date: **9/25/2014** SeqNo: **627397** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	5.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409874**
21-Oct-14

Client: Western Refining Southwest, Gallup
Project: OCD Central Landfarm Semiannual Sampling

Sample ID	**LCS-15465**	SampType:	**LCS**	TestCode:	**EPA Method 6010B: Soil Metals**
Client ID:	**LCSS**	Batch ID:	**15465**	RunNo:	**21466**
Prep Date:	**9/23/2014**	Analysis Date:	**9/25/2014**	SeqNo:	**627398** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	24	5.0	25.00	0	97.1	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1409874 RcptNo: 1

Received by/date: CS 09/16/14

Logged By: **Lindsay Mangin** 9/16/2014 5:03:00 PM

Completed By: **Lindsay Mangin** 9/18/2014 8:26:23 AM

Reviewed By: CS 09/18/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☑
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Not Present			

Client: Western Refining

Mailing Address: Route 3 Box 7

Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-722-0210

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other_____

☐ EDD (Type) _Please provide EDD_____

☐ Standard ☐ Rush_____

Project Name:
OCD Central Landfarm Semiannual Sampling

Project #:
697-039-004

Project Manager:
Ed Riege

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.1°

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1409874	Vadose Zone List (see attached)	NMAC List (see attached)	DRO and GRO by 8015D	BTEX (8260)											Air Bubbles (Y or N)
16/14	1110	soil	CentralOCD-01-9/16/14	4oz - 2	none	-001	X														
16/14	1030	soil	CentralOCD-02-9/16/14	4oz - 2	none	-002	X														
16/14	0955	soil	CentralOCD-03-9/16/14	4oz - 2	none	-003	X														
16/14	0840	soil	CentralOCD-04-9/16/14	4oz - 2	none	-004	X														
16/14		soil	BD-9/16/14	4oz - 2	none	-005	X														
16/14	0855	soil	CentralOCD-04-9/16/14-MS	4oz - 2	none	-004	X														
16/14	0900	soil	CentralOCD-04-9/16/14-MSD	4oz - 2	none	-004	X														
16/14	1055	soil	CentralOCD-TZ-9/16/14	8oz - 3, 4oz - 1	none	-006	X	X	X												
16/14	1210	water	EB-9/16/14	VOA - 3	HCL	-007				X											
16/14	1215	water	FB-9/16/14	VOA - 3	HCL	-008				X											
		water	~~Trip Blank~~	~~VOA - 3~~	~~HCL~~	~~-009~~				~~X~~											

Date:	Time:	Relinquished by:	Received by:	Date	Time
16/14	1450			9-16-14	1450
Date:	Time:	Relinquished by:	Received by:	Date	Time
9-16-14	1703		Celina Sena	09/16/14	1703

Remarks: Please cc Grant Price (gprice@trihydro.com) with results Call Grant @ 307-745-7474 w/ questions. **Verify that Reporting limits comply with those shown on the attached. PCBs need DL of 0.02 mg/kg.**

Did not recieve trip blank

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

NMAC LIST ANALYTES AND REPORTING LIMITS, CONSTITUENTS LISTED IN SUBSECTIONS A AND B OF 20.6.2.3103 NMAC, CENTRAL OIL CONSERVATION DIVISION LANDFARM
WESTERN REFINING SOUTHWEST, GALLUP REFINERY, GALLUP, NEW MEXICO

Analyte	Analytical Method	Reporting Units	Requested Reporting Limit
Fluoride	E300	mg/kg	0.3000
Nitrogen, Nitrate (As N)	E300	mg/kg	2.2000
Sulfate	E300	mg/kg	21.5000
*Radium-226	E901.1	pCi/g	1.3950
*Radium-228	E901.1	pCi/g	1.2500
*Radium-226+Radium-228	E901.1	pCi/g	2.6450
Arsenic	SW6010A	mg/kg	2.5000
Barium	SW6010A	mg/kg	1.0000
Cadmium	SW6010A	mg/kg	0.1000
Chromium	SW6010A	mg/kg	0.3000
Copper	SW6010A	mg/kg	0.6000
Iron	SW6010A	mg/kg	500.0000
Lead	SW6010A	mg/kg	0.2500
Manganese	SW6010A	mg/kg	1.0000
Selenium	SW6010A	mg/kg	2.5000
Silver	SW6010A	mg/kg	0.2500
Uranium	SW6010A	mg/kg	5.0000
Zinc	SW6010A	mg/kg	2.5000
Mercury	SW7471	mg/kg	0.0330
Aroclor 1016	SW8082	mg/kg	0.0200
Aroclor 1221	SW8082	mg/kg	0.0200
Aroclor 1232	SW8082	mg/kg	0.0200
Aroclor 1242	SW8082	mg/kg	0.0200
Aroclor 1248	SW8082	mg/kg	0.0200
Aroclor 1254	SW8082	mg/kg	0.0200
Aroclor 1260	SW8082	mg/kg	0.0200
1,1,1-Trichloroethane	SW8260B	mg/kg	0.0480
1,1,2-Trichloroethane	SW8260B	mg/kg	0.0480
1,1-Dichloroethane	SW8260B	mg/kg	0.0970
1,1-Dichloroethene	SW8260B	mg/kg	0.0480
1,2-Dichloroethane	SW8260B	mg/kg	0.0480
Carbon tetrachloride	SW8260B	mg/kg	0.0970
Chloroform	SW8260B	mg/kg	0.0480
Dibromomethane	SW8260B	mg/kg	0.1000
Methylene chloride	SW8260B	mg/kg	0.1500
Tetrachloroethene	SW8260B	mg/kg	0.0480
Trichloroethene	SW8260B	mg/kg	0.0480
Vinyl chloride	SW8260B	mg/kg	0.0480
2,4,5-Trichlorophenol	SW8270C	mg/kg	0.2000
2,4,6-Trichlorophenol	SW8270C	mg/kg	0.2000
2,4-Dichlorophenol	SW8270C	mg/kg	0.4000
2,4-Dimethylphenol	SW8270C	mg/kg	0.3000
2,4-Dinitrophenol	SW8270C	mg/kg	0.4000
2-Chlorophenol	SW8270C	mg/kg	0.2000
2-Methylphenol	SW8270C	mg/kg	0.1000
2-Nitrophenol	SW8270C	mg/kg	0.1000
3+4-Methylphenol	SW8270C	mg/kg	0.1000
4,6-Dinitro-2-methylphenol	SW8270C	mg/kg	0.5000
4-Chloro-3-methylphenol	SW8270C	mg/kg	0.1000
4-Nitrophenol	SW8270C	mg/kg	0.1000
Pentachlorophenol	SW8270C	mg/kg	0.4000
Phenol	SW8270C	mg/kg	0.2000
1-Methylnaphthalene	SW8260B	mg/kg	0.2000
2-Methylnaphthalene	SW8260B	mg/kg	0.2000
Acenaphthene	SW8270C	mg/kg	0.2000
Acenaphthylene	SW8270C	mg/kg	0.2000
Anthracene	SW8270C	mg/kg	0.2000
Benzo(a)anthracene	SW8270C	mg/kg	0.2000
Benzo(a)pyrene	SW8270C	mg/kg	0.2000
Benzo(b)fluoranthene	SW8270C	mg/kg	0.2000
Benzo(g,h,i)perylene	SW8270C	mg/kg	0.2000
Benzo(k)fluoranthene	SW8270C	mg/kg	0.2000
Chrysene	SW8270C	mg/kg	0.2000
Dibenz(a,h)anthracene	SW8270C	mg/kg	0.2000
Fluoranthene	SW8270C	mg/kg	0.2000
Fluorene	SW8270C	mg/kg	0.2000
Indeno(1,2,3-c,d)pyrene	SW8270C	mg/kg	0.2000
Naphthalene	SW8270C	mg/kg	0.2000
Phenanthrene	SW8270C	mg/kg	0.2000
Pyrene	SW8270C	mg/kg	0.2000
Cyanide	EPA 335.4	mg/kg	0.3000
Diesel Range Organics (DRO)	SW8015	mg/kg	12
Gasoline Range Organics (GRO)	SW8015	mg/kg	1.0

VADOSE ZONE ANALYTES AND REPORTING LIMITS, CENTRAL OIL CONSERVATION DIVISION LANDFARM
WESTERN REFINING SOUTHWEST, GALLUP REFINERY, GALLUP, NEW MEXICO

Analyte	Analytical Method	Reporting Units	Requested Reporting Limit
Chloride	E300	mg/kg	30
Benzene	SW8260B	mg/kg	0.050
Ethylbenzene	SW8260B	mg/kg	0.050
Toluene	SW8260B	mg/kg	0.050
Xylenes, Total	SW8260B	mg/kg	0.100
Petroleum Hydrocarbons, TR	E418.1	mg/kg	20

APPENDIX K

HALL LABORATORY ANALYTICAL DATA

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 06, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: 2014 Annual GW OrderNo.: 1409805

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 6 sample(s) on 9/16/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1409805**
Date Reported: **10/6/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-1
Project: 2014 Annual GW
Collection Date: 9/11/2014 6:00:00 PM
Lab ID: 1409805-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/18/2014 2:35:01 PM	15312
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/18/2014 2:35:01 PM	15312
Surr: DNOP	93.7	59-141		%REC	1	9/18/2014 2:35:01 PM	15312
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**DJF**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/17/2014 11:35:05 PM	R21267
Surr: BFB	93.8	70.9-130		%REC	1	9/17/2014 11:35:05 PM	R21267
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	ND	0.50		mg/L	5	9/18/2014 12:31:40 AM	R21283
Chloride	60	10		mg/L	20	9/18/2014 12:19:15 AM	R21283
Bromide	ND	0.50		mg/L	5	9/18/2014 12:31:40 AM	R21283
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	9/18/2014 12:31:40 AM	R21283
Sulfate	150	10		mg/L	20	9/18/2014 12:19:15 AM	R21283
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/18/2014 5:29:34 AM	R21283
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.12	0.0020		mg/L	1	9/18/2014 1:59:00 PM	R21290
Cadmium	ND	0.0020		mg/L	1	9/18/2014 1:59:00 PM	R21290
Calcium	17	1.0		mg/L	1	9/18/2014 1:59:00 PM	R21290
Chromium	0.0082	0.0060		mg/L	1	9/18/2014 1:59:00 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 1:59:00 PM	R21290
Iron	7.1	0.20	*	mg/L	10	9/19/2014 5:12:39 PM	R21336
Magnesium	1.7	1.0		mg/L	1	9/18/2014 1:59:00 PM	R21290
Manganese	0.23	0.0020	*	mg/L	1	9/19/2014 5:11:02 PM	R21336
Potassium	2.0	1.0		mg/L	1	9/18/2014 1:59:00 PM	R21290
Silver	ND	0.0050		mg/L	1	9/19/2014 5:11:02 PM	R21336
Sodium	330	10		mg/L	10	9/19/2014 5:12:39 PM	R21336
Zinc	0.078	0.010		mg/L	1	9/19/2014 5:11:02 PM	R21336
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.56	0.0020		mg/L	1	9/18/2014 4:44:20 PM	15343
Cadmium	ND	0.0020		mg/L	1	9/18/2014 4:44:20 PM	15343
Chromium	0.12	0.0060	*	mg/L	1	9/18/2014 4:44:20 PM	15343
Copper	0.025	0.0060		mg/L	1	9/18/2014 4:44:20 PM	15343
Iron	41	2.0	*	mg/L	100	9/18/2014 5:20:13 PM	15343
Manganese	1.7	0.020	*	mg/L	10	9/18/2014 5:18:29 PM	15343
Silver	ND	0.0050		mg/L	1	9/18/2014 4:44:20 PM	15343
Zinc	0.19	0.010		mg/L	1	9/18/2014 4:44:20 PM	15343
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0025	0.0010		mg/L	1	9/26/2014 11:26:01 AM	R21493

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-1
Project: 2014 Annual GW
Collection Date: 9/11/2014 6:00:00 PM
Lab ID: 1409805-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	0.017	0.010	*	mg/L	10	9/29/2014 4:46:56 PM	R21527
Selenium	0.0044	0.0010		mg/L	1	9/26/2014 11:26:01 AM	R21493
Uranium	0.048	0.010	*	mg/L	10	9/29/2014 4:46:56 PM	R21527
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.013	0.010	*	mg/L	10	9/29/2014 1:08:15 PM	15343
Lead	0.078	0.010	*	mg/L	10	9/29/2014 1:08:15 PM	15343
Selenium	ND	0.010		mg/L	10	9/29/2014 1:08:15 PM	15343
Uranium	0.066	0.010	*	mg/L	10	9/29/2014 1:08:15 PM	15343
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/24/2014 10:49:52 AM	15449
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Acenaphthylene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Aniline	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Anthracene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Azobenzene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Benz(a)anthracene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Benzo(a)pyrene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Benzo(b)fluoranthene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Benzo(g,h,i)perylene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Benzo(k)fluoranthene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Benzoic acid	ND	100		µg/L	1	9/18/2014 9:42:30 PM	15342
Benzyl alcohol	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Bis(2-chloroethoxy)methane	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Bis(2-chloroethyl)ether	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Bis(2-chloroisopropyl)ether	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Bis(2-ethylhexyl)phthalate	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
4-Bromophenyl phenyl ether	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Butyl benzyl phthalate	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Carbazole	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
4-Chloro-3-methylphenol	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
4-Chloroaniline	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
2-Chloronaphthalene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
2-Chlorophenol	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
4-Chlorophenyl phenyl ether	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Chrysene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Di-n-butyl phthalate	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Di-n-octyl phthalate	ND	100		µg/L	1	9/18/2014 9:42:30 PM	15342

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-1
Project: 2014 Annual GW
Collection Date: 9/11/2014 6:00:00 PM
Lab ID: 1409805-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Dibenzofuran	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
1,2-Dichlorobenzene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
1,3-Dichlorobenzene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
1,4-Dichlorobenzene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
3,3´-Dichlorobenzidine	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Diethyl phthalate	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Dimethyl phthalate	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
2,4-Dichlorophenol	ND	100		µg/L	1	9/18/2014 9:42:30 PM	15342
2,4-Dimethylphenol	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
4,6-Dinitro-2-methylphenol	ND	100		µg/L	1	9/18/2014 9:42:30 PM	15342
2,4-Dinitrophenol	ND	100		µg/L	1	9/18/2014 9:42:30 PM	15342
2,4-Dinitrotoluene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
2,6-Dinitrotoluene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Fluoranthene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Fluorene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Hexachlorobenzene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Hexachlorobutadiene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Hexachlorocyclopentadiene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Hexachloroethane	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Isophorone	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
1-Methylnaphthalene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
2-Methylnaphthalene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
2-Methylphenol	ND	100		µg/L	1	9/18/2014 9:42:30 PM	15342
3+4-Methylphenol	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
N-Nitrosodi-n-propylamine	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
N-Nitrosodimethylamine	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
N-Nitrosodiphenylamine	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Naphthalene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
2-Nitroaniline	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
3-Nitroaniline	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
4-Nitroaniline	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Nitrobenzene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
2-Nitrophenol	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
4-Nitrophenol	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Pentachlorophenol	ND	100		µg/L	1	9/18/2014 9:42:30 PM	15342
Phenanthrene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Phenol	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-1
Project: 2014 Annual GW
Collection Date: 9/11/2014 6:00:00 PM
Lab ID: 1409805-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyrene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Pyridine	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
1,2,4-Trichlorobenzene	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
2,4,5-Trichlorophenol	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
2,4,6-Trichlorophenol	ND	50		µg/L	1	9/18/2014 9:42:30 PM	15342
Surr: 2-Fluorophenol	61.0	12.1-85.8		%REC	1	9/18/2014 9:42:30 PM	15342
Surr: Phenol-d5	53.9	17.7-65.8		%REC	1	9/18/2014 9:42:30 PM	15342
Surr: 2,4,6-Tribromophenol	61.9	26-138		%REC	1	9/18/2014 9:42:30 PM	15342
Surr: Nitrobenzene-d5	76.4	47.5-119		%REC	1	9/18/2014 9:42:30 PM	15342
Surr: 2-Fluorobiphenyl	66.4	48.1-106		%REC	1	9/18/2014 9:42:30 PM	15342
Surr: 4-Terphenyl-d14	59.9	44-113		%REC	1	9/18/2014 9:42:30 PM	15342
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
Toluene	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
Ethylbenzene	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
Methyl tert-butyl ether (MTBE)	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
1,2,4-Trimethylbenzene	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
1,3,5-Trimethylbenzene	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
1,2-Dichloroethane (EDC)	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
1,2-Dibromoethane (EDB)	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
Naphthalene	ND	4.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
1-Methylnaphthalene	ND	8.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
2-Methylnaphthalene	ND	8.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
Acetone	ND	20		µg/L	2	9/19/2014 4:22:17 PM	R21319
Bromobenzene	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
Bromodichloromethane	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
Bromoform	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
Bromomethane	ND	6.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
2-Butanone	ND	20		µg/L	2	9/19/2014 4:22:17 PM	R21319
Carbon disulfide	ND	20		µg/L	2	9/19/2014 4:22:17 PM	R21319
Carbon Tetrachloride	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
Chlorobenzene	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
Chloroethane	ND	4.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
Chloroform	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
Chloromethane	ND	6.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
2-Chlorotoluene	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
4-Chlorotoluene	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
cis-1,2-DCE	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
cis-1,3-Dichloropropene	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-1
Project: 2014 Annual GW
Collection Date: 9/11/2014 6:00:00 PM
Lab ID: 1409805-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dibromo-3-chloropropane	ND	4.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
Dibromochloromethane	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
Dibromomethane	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
1,2-Dichlorobenzene	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
1,3-Dichlorobenzene	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
1,4-Dichlorobenzene	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
Dichlorodifluoromethane	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
1,1-Dichloroethane	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
1,1-Dichloroethene	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
1,2-Dichloropropane	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
1,3-Dichloropropane	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
2,2-Dichloropropane	ND	4.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
1,1-Dichloropropene	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
Hexachlorobutadiene	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
2-Hexanone	ND	20		µg/L	2	9/19/2014 4:22:17 PM	R21319
Isopropylbenzene	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
4-Isopropyltoluene	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
4-Methyl-2-pentanone	ND	20		µg/L	2	9/19/2014 4:22:17 PM	R21319
Methylene Chloride	ND	6.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
n-Butylbenzene	ND	6.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
n-Propylbenzene	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
sec-Butylbenzene	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
Styrene	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
tert-Butylbenzene	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
1,1,2,2-Tetrachloroethane	ND	4.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
Tetrachloroethene (PCE)	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
trans-1,2-DCE	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
trans-1,3-Dichloropropene	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
1,2,3-Trichlorobenzene	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
1,2,4-Trichlorobenzene	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
1,1,1-Trichloroethane	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
1,1,2-Trichloroethane	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
Trichloroethene (TCE)	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
Trichlorofluoromethane	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
1,2,3-Trichloropropane	ND	4.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
Vinyl chloride	ND	2.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
Xylenes, Total	ND	3.0		µg/L	2	9/19/2014 4:22:17 PM	R21319
Surr: 1,2-Dichloroethane-d4	94.0	70-130		%REC	2	9/19/2014 4:22:17 PM	R21319

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-1
Project: 2014 Annual GW
Collection Date: 9/11/2014 6:00:00 PM
Lab ID: 1409805-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Surr: 4-Bromofluorobenzene	101	70-130		%REC	2	9/19/2014 4:22:17 PM	R21319
Surr: Dibromofluoromethane	97.6	70-130		%REC	2	9/19/2014 4:22:17 PM	R21319
Surr: Toluene-d8	85.3	70-130		%REC	2	9/19/2014 4:22:17 PM	R21319

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-10
Project: 2014 Annual GW
Collection Date: 9/12/2014 9:35:00 AM
Lab ID: 1409805-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/18/2014 2:56:57 PM	15312
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/18/2014 2:56:57 PM	15312
Surr: DNOP	102	59-141		%REC	1	9/18/2014 2:56:57 PM	15312
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**DJF**
Gasoline Range Organics (GRO)	0.064	0.050		mg/L	1	9/18/2014 12:05:15 AM	R21267
Surr: BFB	102	70.9-130		%REC	1	9/18/2014 12:05:15 AM	R21267
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	0.12	0.10		mg/L	1	9/18/2014 12:44:05 AM	R21283
Chloride	1500	50		mg/L	100	9/19/2014 1:58:35 AM	R21310
Bromide	1.4	0.10		mg/L	1	9/18/2014 12:44:05 AM	R21283
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/18/2014 12:44:05 AM	R21283
Sulfate	200	10		mg/L	20	9/18/2014 12:56:30 AM	R21283
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/18/2014 5:41:59 AM	R21283
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.099	0.0020		mg/L	1	9/18/2014 2:00:42 PM	R21290
Cadmium	ND	0.0020		mg/L	1	9/18/2014 2:00:42 PM	R21290
Calcium	220	10		mg/L	10	9/19/2014 5:16:44 PM	R21336
Chromium	ND	0.0060		mg/L	1	9/18/2014 2:00:42 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 2:00:42 PM	R21290
Iron	ND	0.020		mg/L	1	9/19/2014 5:14:54 PM	R21336
Magnesium	36	1.0		mg/L	1	9/18/2014 2:00:42 PM	R21290
Manganese	0.20	0.0020	*	mg/L	1	9/19/2014 5:14:54 PM	R21336
Potassium	4.1	1.0		mg/L	1	9/18/2014 2:00:42 PM	R21290
Silver	ND	0.0050		mg/L	1	9/19/2014 5:14:54 PM	R21336
Sodium	1100	100		mg/L	100	9/19/2014 5:18:31 PM	R21336
Zinc	ND	0.010		mg/L	1	9/19/2014 5:14:54 PM	R21336
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.086	0.0020		mg/L	1	9/18/2014 4:46:06 PM	15343
Cadmium	ND	0.0020		mg/L	1	9/18/2014 4:46:06 PM	15343
Chromium	ND	0.0060		mg/L	1	9/18/2014 4:46:06 PM	15343
Copper	ND	0.0060		mg/L	1	9/18/2014 4:46:06 PM	15343
Iron	ND	0.020		mg/L	1	9/18/2014 4:46:06 PM	15343
Manganese	0.18	0.0020	*	mg/L	1	9/18/2014 4:46:06 PM	15343
Silver	ND	0.0050		mg/L	1	9/18/2014 4:46:06 PM	15343
Zinc	ND	0.010		mg/L	1	9/18/2014 4:46:06 PM	15343
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	9/26/2014 2:23:28 PM	R21493

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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-10
Project: 2014 Annual GW
Collection Date: 9/12/2014 9:35:00 AM
Lab ID: 1409805-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.010		mg/L	10	9/29/2014 4:50:02 PM	R21527
Selenium	0.017	0.0050		mg/L	5	9/26/2014 2:23:28 PM	R21493
Uranium	0.064	0.010	*	mg/L	10	9/29/2014 4:50:02 PM	R21527
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	9/29/2014 1:11:20 PM	15343
Lead	ND	0.0010		mg/L	1	9/23/2014 6:03:45 PM	15343
Selenium	0.017	0.010		mg/L	10	9/29/2014 1:11:20 PM	15343
Uranium	0.065	0.010	*	mg/L	10	9/29/2014 1:11:20 PM	15343
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/24/2014 10:51:38 AM	15449
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Acenaphthylene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Aniline	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Anthracene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Azobenzene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Benz(a)anthracene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Benzo(a)pyrene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Benzo(b)fluoranthene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Benzo(k)fluoranthene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Benzoic acid	ND	20		µg/L	1	9/18/2014 10:11:29 PM	15342
Benzyl alcohol	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Butyl benzyl phthalate	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Carbazole	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
4-Chloroaniline	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
2-Chloronaphthalene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
2-Chlorophenol	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Chrysene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Di-n-butyl phthalate	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Di-n-octyl phthalate	ND	20		µg/L	1	9/18/2014 10:11:29 PM	15342

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-10
Project: 2014 Annual GW
Collection Date: 9/12/2014 9:35:00 AM
Lab ID: 1409805-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Dibenzofuran	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
1,2-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
1,3-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
1,4-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Diethyl phthalate	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Dimethyl phthalate	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
2,4-Dichlorophenol	ND	20		µg/L	1	9/18/2014 10:11:29 PM	15342
2,4-Dimethylphenol	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/18/2014 10:11:29 PM	15342
2,4-Dinitrophenol	ND	20		µg/L	1	9/18/2014 10:11:29 PM	15342
2,4-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
2,6-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Fluoranthene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Fluorene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Hexachlorobenzene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Hexachlorobutadiene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Hexachloroethane	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Isophorone	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
1-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
2-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
2-Methylphenol	ND	20		µg/L	1	9/18/2014 10:11:29 PM	15342
3+4-Methylphenol	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
N-Nitrosodimethylamine	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Naphthalene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
2-Nitroaniline	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
3-Nitroaniline	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
4-Nitroaniline	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Nitrobenzene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
2-Nitrophenol	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
4-Nitrophenol	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Pentachlorophenol	ND	20		µg/L	1	9/18/2014 10:11:29 PM	15342
Phenanthrene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Phenol	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-10
Project: 2014 Annual GW
Collection Date: 9/12/2014 9:35:00 AM
Lab ID: 1409805-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Pyrene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Pyridine	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/18/2014 10:11:29 PM	15342
Surr: 2-Fluorophenol	24.2	12.1-85.8		%REC	1	9/18/2014 10:11:29 PM	15342
Surr: Phenol-d5	34.1	17.7-65.8		%REC	1	9/18/2014 10:11:29 PM	15342
Surr: 2,4,6-Tribromophenol	20.6	26-138	S	%REC	1	9/18/2014 10:11:29 PM	15342
Surr: Nitrobenzene-d5	63.8	47.5-119		%REC	1	9/18/2014 10:11:29 PM	15342
Surr: 2-Fluorobiphenyl	62.5	48.1-106		%REC	1	9/18/2014 10:11:29 PM	15342
Surr: 4-Terphenyl-d14	65.3	44-113		%REC	1	9/18/2014 10:11:29 PM	15342
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
Toluene	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
Ethylbenzene	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
Methyl tert-butyl ether (MTBE)	110	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
1,2-Dichloroethane (EDC)	1.1	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
Naphthalene	ND	2.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
1-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
2-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
Acetone	ND	10		µg/L	1	9/19/2014 4:51:56 PM	R21319
Bromobenzene	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
Bromodichloromethane	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
Bromoform	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
Bromomethane	ND	3.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
2-Butanone	ND	10		µg/L	1	9/19/2014 4:51:56 PM	R21319
Carbon disulfide	ND	10		µg/L	1	9/19/2014 4:51:56 PM	R21319
Carbon Tetrachloride	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
Chlorobenzene	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
Chloroethane	ND	2.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
Chloroform	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
Chloromethane	ND	3.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
2-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
4-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
cis-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-10
Project: 2014 Annual GW
Collection Date: 9/12/2014 9:35:00 AM
Lab ID: 1409805-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
Dibromochloromethane	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
Dibromomethane	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
1,1-Dichloroethane	1.6	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
1,1-Dichloroethene	1.8	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
1,2-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
1,3-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
2,2-Dichloropropane	ND	2.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
1,1-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
Hexachlorobutadiene	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
2-Hexanone	ND	10		µg/L	1	9/19/2014 4:51:56 PM	R21319
Isopropylbenzene	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
4-Isopropyltoluene	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
4-Methyl-2-pentanone	ND	10		µg/L	1	9/19/2014 4:51:56 PM	R21319
Methylene Chloride	ND	3.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
n-Butylbenzene	ND	3.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
n-Propylbenzene	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
sec-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
Styrene	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
tert-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
trans-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
Trichlorofluoromethane	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
Vinyl chloride	ND	1.0		µg/L	1	9/19/2014 4:51:56 PM	R21319
Xylenes, Total	ND	1.5		µg/L	1	9/19/2014 4:51:56 PM	R21319
Surr: 1,2-Dichloroethane-d4	102	70-130		%REC	1	9/19/2014 4:51:56 PM	R21319

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-10
Project: 2014 Annual GW
Collection Date: 9/12/2014 9:35:00 AM
Lab ID: 1409805-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Surr: 4-Bromofluorobenzene	101	70-130		%REC	1	9/19/2014 4:51:56 PM	R21319
Surr: Dibromofluoromethane	104	70-130		%REC	1	9/19/2014 4:51:56 PM	R21319
Surr: Toluene-d8	87.6	70-130		%REC	1	9/19/2014 4:51:56 PM	R21319

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-12
Project: 2014 Annual GW
Collection Date: 9/12/2014 11:00:00 AM
Lab ID: 1409805-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/18/2014 3:19:00 PM	15312
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/18/2014 3:19:00 PM	15312
Surr: DNOP	103	59-141		%REC	1	9/18/2014 3:19:00 PM	15312
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**DJF**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/18/2014 12:35:28 AM	R21267
Surr: BFB	93.5	70.9-130		%REC	1	9/18/2014 12:35:28 AM	R21267
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	0.47	0.10		mg/L	1	9/18/2014 1:08:55 AM	R21283
Chloride	19	0.50		mg/L	1	9/18/2014 1:08:55 AM	R21283
Bromide	0.14	0.10		mg/L	1	9/18/2014 1:08:55 AM	R21283
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/18/2014 1:08:55 AM	R21283
Sulfate	150	10		mg/L	20	9/18/2014 1:21:20 AM	R21283
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/18/2014 5:54:24 AM	R21283
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.021	0.0020		mg/L	1	9/18/2014 2:02:35 PM	R21290
Cadmium	ND	0.0020		mg/L	1	9/18/2014 2:02:35 PM	R21290
Calcium	1.7	1.0		mg/L	1	9/18/2014 2:02:35 PM	R21290
Chromium	ND	0.0060		mg/L	1	9/18/2014 2:02:35 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 2:02:35 PM	R21290
Iron	0.037	0.020		mg/L	1	9/19/2014 5:20:19 PM	R21336
Magnesium	ND	1.0		mg/L	1	9/18/2014 2:02:35 PM	R21290
Manganese	ND	0.0020		mg/L	1	9/19/2014 5:20:19 PM	R21336
Potassium	1.7	1.0		mg/L	1	9/18/2014 2:02:35 PM	R21290
Silver	ND	0.0050		mg/L	1	9/19/2014 5:20:19 PM	R21336
Sodium	260	10		mg/L	10	9/19/2014 5:22:17 PM	R21336
Zinc	0.023	0.010		mg/L	1	9/19/2014 5:20:19 PM	R21336
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.024	0.0020		mg/L	1	9/18/2014 4:47:59 PM	15343
Cadmium	ND	0.0020		mg/L	1	9/18/2014 4:47:59 PM	15343
Chromium	ND	0.0060		mg/L	1	9/18/2014 4:47:59 PM	15343
Copper	ND	0.0060		mg/L	1	9/18/2014 4:47:59 PM	15343
Iron	0.12	0.020		mg/L	1	9/18/2014 4:47:59 PM	15343
Manganese	0.0054	0.0020		mg/L	1	9/18/2014 4:47:59 PM	15343
Silver	ND	0.0050		mg/L	1	9/18/2014 4:47:59 PM	15343
Zinc	ND	0.010		mg/L	1	9/18/2014 4:47:59 PM	15343
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0020	0.0010		mg/L	1	9/26/2014 11:32:24 AM	R21493

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-12
Project: 2014 Annual GW
Collection Date: 9/12/2014 11:00:00 AM
Lab ID: 1409805-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.010		mg/L	10	9/29/2014 4:53:08 PM	R21527
Selenium	0.0011	0.0010		mg/L	1	9/26/2014 11:32:24 AM	R21493
Uranium	0.012	0.010		mg/L	10	9/29/2014 4:53:08 PM	R21527
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0021	0.0010		mg/L	1	9/23/2014 6:06:51 PM	15343
Lead	ND	0.0010		mg/L	1	9/23/2014 6:06:51 PM	15343
Selenium	0.0011	0.0010		mg/L	1	9/23/2014 6:06:51 PM	15343
Uranium	0.014	0.0010		mg/L	1	9/23/2014 6:06:51 PM	15343
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/24/2014 10:57:07 AM	15449
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Acenaphthylene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Aniline	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Anthracene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Azobenzene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Benz(a)anthracene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Benzo(a)pyrene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Benzo(b)fluoranthene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Benzo(k)fluoranthene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Benzoic acid	ND	20		µg/L	1	9/18/2014 10:40:26 PM	15342
Benzyl alcohol	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Butyl benzyl phthalate	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Carbazole	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
4-Chloroaniline	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
2-Chloronaphthalene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
2-Chlorophenol	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Chrysene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Di-n-butyl phthalate	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Di-n-octyl phthalate	ND	20		µg/L	1	9/18/2014 10:40:26 PM	15342

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-12
Project: 2014 Annual GW
Collection Date: 9/12/2014 11:00:00 AM
Lab ID: 1409805-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Dibenzofuran	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
1,2-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
1,3-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
1,4-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Diethyl phthalate	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Dimethyl phthalate	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
2,4-Dichlorophenol	ND	20		µg/L	1	9/18/2014 10:40:26 PM	15342
2,4-Dimethylphenol	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/18/2014 10:40:26 PM	15342
2,4-Dinitrophenol	ND	20		µg/L	1	9/18/2014 10:40:26 PM	15342
2,4-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
2,6-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Fluoranthene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Fluorene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Hexachlorobenzene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Hexachlorobutadiene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Hexachloroethane	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Isophorone	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
1-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
2-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
2-Methylphenol	ND	20		µg/L	1	9/18/2014 10:40:26 PM	15342
3+4-Methylphenol	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
N-Nitrosodimethylamine	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Naphthalene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
2-Nitroaniline	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
3-Nitroaniline	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
4-Nitroaniline	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Nitrobenzene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
2-Nitrophenol	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
4-Nitrophenol	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Pentachlorophenol	ND	20		µg/L	1	9/18/2014 10:40:26 PM	15342
Phenanthrene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Phenol	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-12
Project: 2014 Annual GW
Collection Date: 9/12/2014 11:00:00 AM
Lab ID: 1409805-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyrene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Pyridine	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/18/2014 10:40:26 PM	15342
Surr: 2-Fluorophenol	51.9	12.1-85.8		%REC	1	9/18/2014 10:40:26 PM	15342
Surr: Phenol-d5	45.9	17.7-65.8		%REC	1	9/18/2014 10:40:26 PM	15342
Surr: 2,4,6-Tribromophenol	50.2	26-138		%REC	1	9/18/2014 10:40:26 PM	15342
Surr: Nitrobenzene-d5	66.6	47.5-119		%REC	1	9/18/2014 10:40:26 PM	15342
Surr: 2-Fluorobiphenyl	64.0	48.1-106		%REC	1	9/18/2014 10:40:26 PM	15342
Surr: 4-Terphenyl-d14	61.3	44-113		%REC	1	9/18/2014 10:40:26 PM	15342
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
Toluene	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
Ethylbenzene	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
Naphthalene	ND	2.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
1-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
2-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
Acetone	ND	10		µg/L	1	9/19/2014 5:21:37 PM	R21319
Bromobenzene	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
Bromodichloromethane	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
Bromoform	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
Bromomethane	ND	3.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
2-Butanone	ND	10		µg/L	1	9/19/2014 5:21:37 PM	R21319
Carbon disulfide	ND	10		µg/L	1	9/19/2014 5:21:37 PM	R21319
Carbon Tetrachloride	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
Chlorobenzene	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
Chloroethane	ND	2.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
Chloroform	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
Chloromethane	ND	3.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
2-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
4-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
cis-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-12
Project: 2014 Annual GW
Collection Date: 9/12/2014 11:00:00 AM
Lab ID: 1409805-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
Dibromochloromethane	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
Dibromomethane	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
1,1-Dichloroethane	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
1,1-Dichloroethene	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
1,2-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
1,3-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
2,2-Dichloropropane	ND	2.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
1,1-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
Hexachlorobutadiene	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
2-Hexanone	ND	10		µg/L	1	9/19/2014 5:21:37 PM	R21319
Isopropylbenzene	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
4-Isopropyltoluene	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
4-Methyl-2-pentanone	ND	10		µg/L	1	9/19/2014 5:21:37 PM	R21319
Methylene Chloride	ND	3.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
n-Butylbenzene	ND	3.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
n-Propylbenzene	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
sec-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
Styrene	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
tert-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
trans-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
Trichlorofluoromethane	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
Vinyl chloride	ND	1.0		µg/L	1	9/19/2014 5:21:37 PM	R21319
Xylenes, Total	ND	1.5		µg/L	1	9/19/2014 5:21:37 PM	R21319
Surr: 1,2-Dichloroethane-d4	97.0	70-130		%REC	1	9/19/2014 5:21:37 PM	R21319

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Qualifiers:

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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-12
Project: 2014 Annual GW
Collection Date: 9/12/2014 11:00:00 AM
Lab ID: 1409805-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Surr: 4-Bromofluorobenzene	106	70-130		%REC	1	9/19/2014 5:21:37 PM	R21319
Surr: Dibromofluoromethane	98.8	70-130		%REC	1	9/19/2014 5:21:37 PM	R21319
Surr: Toluene-d8	84.1	70-130		%REC	1	9/19/2014 5:21:37 PM	R21319

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-11
Project: 2014 Annual GW
Collection Date: 9/12/2014 12:20:00 PM
Lab ID: 1409805-004
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/18/2014 3:40:49 PM	15312
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/18/2014 3:40:49 PM	15312
Surr: DNOP	102	59-141		%REC	1	9/18/2014 3:40:49 PM	15312
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**DJF**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/18/2014 1:52:23 PM	R21299
Surr: BFB	93.6	70.9-130		%REC	1	9/18/2014 1:52:23 PM	R21299
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	2.3	0.10		mg/L	1	9/18/2014 1:33:45 AM	R21283
Chloride	77	10		mg/L	20	9/18/2014 1:46:10 AM	R21283
Bromide	ND	0.10		mg/L	1	9/18/2014 1:33:45 AM	R21283
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/18/2014 1:33:45 AM	R21283
Sulfate	960	25		mg/L	50	9/19/2014 2:11:00 AM	R21310
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/18/2014 6:06:49 AM	R21283
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.0080	0.0020		mg/L	1	9/18/2014 2:04:30 PM	R21290
Cadmium	ND	0.0020		mg/L	1	9/18/2014 2:04:30 PM	R21290
Calcium	12	1.0		mg/L	1	9/18/2014 2:04:30 PM	R21290
Chromium	ND	0.0060		mg/L	1	9/18/2014 2:04:30 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 2:04:30 PM	R21290
Iron	ND	0.020		mg/L	1	9/19/2014 5:23:58 PM	R21336
Magnesium	1.4	1.0		mg/L	1	9/18/2014 2:04:30 PM	R21290
Manganese	0.017	0.0020		mg/L	1	9/19/2014 5:23:58 PM	R21336
Potassium	3.1	1.0		mg/L	1	9/18/2014 2:04:30 PM	R21290
Silver	ND	0.0050		mg/L	1	9/19/2014 5:23:58 PM	R21336
Sodium	660	10		mg/L	10	9/19/2014 5:25:58 PM	R21336
Zinc	ND	0.010		mg/L	1	9/19/2014 5:23:58 PM	R21336
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.0083	0.0020		mg/L	1	9/18/2014 4:49:53 PM	15343
Cadmium	ND	0.0020		mg/L	1	9/18/2014 4:49:53 PM	15343
Chromium	ND	0.0060		mg/L	1	9/18/2014 4:49:53 PM	15343
Copper	ND	0.0060		mg/L	1	9/18/2014 4:49:53 PM	15343
Iron	0.047	0.020		mg/L	1	9/18/2014 4:49:53 PM	15343
Manganese	0.021	0.0020		mg/L	1	9/18/2014 4:49:53 PM	15343
Silver	ND	0.0050		mg/L	1	9/18/2014 4:49:53 PM	15343
Zinc	ND	0.010		mg/L	1	9/18/2014 4:49:53 PM	15343
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0026	0.0010		mg/L	1	9/26/2014 11:35:38 AM	R21493

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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-11
Project: 2014 Annual GW
Collection Date: 9/12/2014 12:20:00 PM
Lab ID: 1409805-004
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.010		mg/L	10	9/29/2014 4:56:14 PM	R21527
Selenium	0.0020	0.0010		mg/L	1	9/26/2014 11:35:38 AM	R21493
Uranium	0.25	0.010	*	mg/L	10	9/29/2014 4:56:14 PM	R21527
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0027	0.0010		mg/L	1	9/23/2014 6:09:58 PM	15343
Lead	ND	0.0010		mg/L	1	9/23/2014 6:09:58 PM	15343
Selenium	0.0023	0.0010		mg/L	1	9/23/2014 6:09:58 PM	15343
Uranium	0.25	0.010	*	mg/L	10	9/29/2014 1:14:26 PM	15343
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/24/2014 10:58:53 AM	15449
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Acenaphthylene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Aniline	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Anthracene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Azobenzene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Benz(a)anthracene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Benzo(a)pyrene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Benzo(b)fluoranthene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Benzo(k)fluoranthene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Benzoic acid	ND	20		µg/L	1	9/18/2014 11:09:18 PM	15342
Benzyl alcohol	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Butyl benzyl phthalate	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Carbazole	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
4-Chloroaniline	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
2-Chloronaphthalene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
2-Chlorophenol	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Chrysene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Di-n-butyl phthalate	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Di-n-octyl phthalate	ND	20		µg/L	1	9/18/2014 11:09:18 PM	15342

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-11
Project: 2014 Annual GW
Collection Date: 9/12/2014 12:20:00 PM
Lab ID: 1409805-004
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Dibenzofuran	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
1,2-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
1,3-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
1,4-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Diethyl phthalate	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Dimethyl phthalate	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
2,4-Dichlorophenol	ND	20		µg/L	1	9/18/2014 11:09:18 PM	15342
2,4-Dimethylphenol	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/18/2014 11:09:18 PM	15342
2,4-Dinitrophenol	ND	20		µg/L	1	9/18/2014 11:09:18 PM	15342
2,4-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
2,6-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Fluoranthene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Fluorene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Hexachlorobenzene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Hexachlorobutadiene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Hexachloroethane	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Isophorone	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
1-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
2-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
2-Methylphenol	ND	20		µg/L	1	9/18/2014 11:09:18 PM	15342
3+4-Methylphenol	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
N-Nitrosodimethylamine	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Naphthalene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
2-Nitroaniline	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
3-Nitroaniline	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
4-Nitroaniline	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Nitrobenzene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
2-Nitrophenol	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
4-Nitrophenol	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Pentachlorophenol	ND	20		µg/L	1	9/18/2014 11:09:18 PM	15342
Phenanthrene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Phenol	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342

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*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-11
Project: 2014 Annual GW
Collection Date: 9/12/2014 12:20:00 PM
Lab ID: 1409805-004
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Pyrene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Pyridine	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/18/2014 11:09:18 PM	15342
Surr: 2-Fluorophenol	51.9	12.1-85.8		%REC	1	9/18/2014 11:09:18 PM	15342
Surr: Phenol-d5	48.5	17.7-65.8		%REC	1	9/18/2014 11:09:18 PM	15342
Surr: 2,4,6-Tribromophenol	51.5	26-138		%REC	1	9/18/2014 11:09:18 PM	15342
Surr: Nitrobenzene-d5	70.5	47.5-119		%REC	1	9/18/2014 11:09:18 PM	15342
Surr: 2-Fluorobiphenyl	64.5	48.1-106		%REC	1	9/18/2014 11:09:18 PM	15342
Surr: 4-Terphenyl-d14	64.4	44-113		%REC	1	9/18/2014 11:09:18 PM	15342
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
Toluene	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
Ethylbenzene	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
Naphthalene	ND	2.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
1-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
2-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
Acetone	ND	10		µg/L	1	9/19/2014 5:51:24 PM	R21319
Bromobenzene	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
Bromodichloromethane	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
Bromoform	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
Bromomethane	ND	3.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
2-Butanone	ND	10		µg/L	1	9/19/2014 5:51:24 PM	R21319
Carbon disulfide	ND	10		µg/L	1	9/19/2014 5:51:24 PM	R21319
Carbon Tetrachloride	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
Chlorobenzene	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
Chloroethane	ND	2.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
Chloroform	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
Chloromethane	ND	3.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
2-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
4-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
cis-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-11
Project: 2014 Annual GW
Collection Date: 9/12/2014 12:20:00 PM
Lab ID: 1409805-004
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
Dibromochloromethane	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
Dibromomethane	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
1,1-Dichloroethane	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
1,1-Dichloroethene	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
1,2-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
1,3-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
2,2-Dichloropropane	ND	2.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
1,1-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
Hexachlorobutadiene	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
2-Hexanone	ND	10		µg/L	1	9/19/2014 5:51:24 PM	R21319
Isopropylbenzene	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
4-Isopropyltoluene	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
4-Methyl-2-pentanone	ND	10		µg/L	1	9/19/2014 5:51:24 PM	R21319
Methylene Chloride	ND	3.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
n-Butylbenzene	ND	3.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
n-Propylbenzene	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
sec-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
Styrene	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
tert-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
trans-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
Trichlorofluoromethane	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
Vinyl chloride	ND	1.0		µg/L	1	9/19/2014 5:51:24 PM	R21319
Xylenes, Total	ND	1.5		µg/L	1	9/19/2014 5:51:24 PM	R21319
Surr: 1,2-Dichloroethane-d4	105	70-130		%REC	1	9/19/2014 5:51:24 PM	R21319

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-11
Project: 2014 Annual GW
Collection Date: 9/12/2014 12:20:00 PM
Lab ID: 1409805-004
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Surr: 4-Bromofluorobenzene	100	70-130		%REC	1	9/19/2014 5:51:24 PM	R21319
Surr: Dibromofluoromethane	105	70-130		%REC	1	9/19/2014 5:51:24 PM	R21319
Surr: Toluene-d8	85.5	70-130		%REC	1	9/19/2014 5:51:24 PM	R21319

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group 1-9/11/14
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409805-005
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
Toluene	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
Ethylbenzene	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
Naphthalene	ND	2.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
1-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
2-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
Acetone	ND	10		µg/L	1	9/19/2014 6:21:10 PM	R21319
Bromobenzene	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
Bromodichloromethane	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
Bromoform	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
Bromomethane	ND	3.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
2-Butanone	ND	10		µg/L	1	9/19/2014 6:21:10 PM	R21319
Carbon disulfide	ND	10		µg/L	1	9/19/2014 6:21:10 PM	R21319
Carbon Tetrachloride	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
Chlorobenzene	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
Chloroethane	ND	2.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
Chloroform	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
Chloromethane	ND	3.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
2-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
4-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
cis-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
Dibromochloromethane	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
Dibromomethane	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
1,1-Dichloroethane	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
1,1-Dichloroethene	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
1,2-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
1,3-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
2,2-Dichloropropane	ND	2.0		µg/L	1	9/19/2014 6:21:10 PM	R21319

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group 1-9/11/14
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409805-005
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
Hexachlorobutadiene	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
2-Hexanone	ND	10		µg/L	1	9/19/2014 6:21:10 PM	R21319
Isopropylbenzene	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
4-Isopropyltoluene	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
4-Methyl-2-pentanone	ND	10		µg/L	1	9/19/2014 6:21:10 PM	R21319
Methylene Chloride	ND	3.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
n-Butylbenzene	ND	3.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
n-Propylbenzene	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
sec-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
Styrene	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
tert-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
trans-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
Trichlorofluoromethane	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
Vinyl chloride	ND	1.0		µg/L	1	9/19/2014 6:21:10 PM	R21319
Xylenes, Total	ND	1.5		µg/L	1	9/19/2014 6:21:10 PM	R21319
Surr: 1,2-Dichloroethane-d4	97.4	70-130		%REC	1	9/19/2014 6:21:10 PM	R21319
Surr: 4-Bromofluorobenzene	104	70-130		%REC	1	9/19/2014 6:21:10 PM	R21319
Surr: Dibromofluoromethane	100	70-130		%REC	1	9/19/2014 6:21:10 PM	R21319
Surr: Toluene-d8	81.9	70-130		%REC	1	9/19/2014 6:21:10 PM	R21319

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409805-006
Matrix: TRIP BLANK
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**DJF**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/18/2014 1:05:46 AM	R21267
Surr: BFB	86.6	70.9-130		%REC	1	9/18/2014 1:05:46 AM	R21267
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
Toluene	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
Ethylbenzene	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
Naphthalene	ND	2.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
1-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
2-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
Acetone	ND	10		µg/L	1	9/19/2014 6:50:54 PM	R21319
Bromobenzene	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
Bromodichloromethane	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
Bromoform	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
Bromomethane	ND	3.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
2-Butanone	ND	10		µg/L	1	9/19/2014 6:50:54 PM	R21319
Carbon disulfide	ND	10		µg/L	1	9/19/2014 6:50:54 PM	R21319
Carbon Tetrachloride	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
Chlorobenzene	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
Chloroethane	ND	2.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
Chloroform	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
Chloromethane	ND	3.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
2-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
4-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
cis-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
Dibromochloromethane	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
Dibromomethane	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
1,1-Dichloroethane	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
1,1-Dichloroethene	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409805-006
Matrix: TRIP BLANK
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
1,3-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
2,2-Dichloropropane	ND	2.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
1,1-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
Hexachlorobutadiene	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
2-Hexanone	ND	10		µg/L	1	9/19/2014 6:50:54 PM	R21319
Isopropylbenzene	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
4-Isopropyltoluene	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
4-Methyl-2-pentanone	ND	10		µg/L	1	9/19/2014 6:50:54 PM	R21319
Methylene Chloride	ND	3.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
n-Butylbenzene	ND	3.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
n-Propylbenzene	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
sec-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
Styrene	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
tert-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
trans-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
Trichlorofluoromethane	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
Vinyl chloride	ND	1.0		µg/L	1	9/19/2014 6:50:54 PM	R21319
Xylenes, Total	ND	1.5		µg/L	1	9/19/2014 6:50:54 PM	R21319
Surr: 1,2-Dichloroethane-d4	103	70-130		%REC	1	9/19/2014 6:50:54 PM	R21319
Surr: 4-Bromofluorobenzene	108	70-130		%REC	1	9/19/2014 6:50:54 PM	R21319
Surr: Dibromofluoromethane	108	70-130		%REC	1	9/19/2014 6:50:54 PM	R21319
Surr: Toluene-d8	87.2	70-130		%REC	1	9/19/2014 6:50:54 PM	R21319

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409805**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621146** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Magnesium	ND	1.0								
Potassium	ND	1.0								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621147** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.6	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.0	85	115			
Calcium	49	1.0	50.00	0	97.2	85	115			
Chromium	0.48	0.0060	0.5000	0	96.8	85	115			
Copper	0.49	0.0060	0.5000	0	97.1	85	115			
Magnesium	49	1.0	50.00	0	97.8	85	115			
Potassium	48	1.0	50.00	0	96.0	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621149** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Magnesium	ND	1.0								
Potassium	ND	1.0								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621150** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.7	85	115			

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409805**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21290**	RunNo: **21290**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621150** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.48	0.0020	0.5000	0	96.8	85	115			
Calcium	48	1.0	50.00	0	96.8	85	115			
Chromium	0.48	0.0060	0.5000	0	96.4	85	115			
Copper	0.48	0.0060	0.5000	0	95.5	85	115			
Magnesium	49	1.0	50.00	0	97.7	85	115			
Potassium	48	1.0	50.00	0	96.3	85	115			

Sample ID **LCS TEST**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21290**	RunNo: **21290**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621170** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	101	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.6	85	115			
Calcium	50	1.0	50.00	0	99.9	85	115			
Chromium	0.49	0.0060	0.5000	0	98.7	85	115			
Copper	0.49	0.0060	0.5000	0	97.3	85	115			
Magnesium	50	1.0	50.00	0	99.5	85	115			
Potassium	50	1.0	50.00	0	99.2	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R21336**	RunNo: **21336**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622776** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21336**	RunNo: **21336**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622777** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50	1.0	50.00	0	99.8	85	115			
Iron	0.47	0.020	0.5000	0	93.2	85	115			
Manganese	0.45	0.0020	0.5000	0	89.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409805**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622777** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	50	1.0	50.00	0	99.3	85	115			
Zinc	0.46	0.010	0.5000	0	91.8	85	115			

Sample ID **LCS Ag** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622778** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.096	0.0050	0.1000	0	95.7	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622779** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622780** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50	1.0	50.00	0	99.4	85	115			
Iron	0.48	0.020	0.5000	0	95.4	85	115			
Manganese	0.46	0.0020	0.5000	0	91.5	85	115			
Sodium	49	1.0	50.00	0	98.5	85	115			
Zinc	0.47	0.010	0.5000	0	93.7	85	115			

Sample ID **LCS Ag** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622781** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	102	85	115			

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409805**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB-15343** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **15343** RunNo: **21297**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621503** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-15343** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **15343** RunNo: **21297**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621504** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.2	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.6	85	115			
Chromium	0.49	0.0060	0.5000	0	98.1	85	115			
Copper	0.48	0.0060	0.5000	0	96.9	85	115			
Iron	0.48	0.020	0.5000	0	96.5	85	115			
Manganese	0.48	0.0020	0.5000	0	95.0	85	115			
Zinc	0.48	0.010	0.5000	0	96.9	85	115			

Sample ID **LCS Ag-15343** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **15343** RunNo: **21297**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621505** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409805**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**		
Client ID: **LCSW**	Batch ID: **R21493**	RunNo: **21493**		
Prep Date:	Analysis Date: **9/26/2014**	SeqNo: **628608**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.7	85	115			
Selenium	0.022	0.0010	0.02500	0	90.0	85	115			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**		
Client ID: **LCSW**	Batch ID: **R21493**	RunNo: **21493**		
Prep Date:	Analysis Date: **9/26/2014**	SeqNo: **628609**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	92.9	85	115			
Selenium	0.023	0.0010	0.02500	0	92.4	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**		
Client ID: **PBW**	Batch ID: **R21493**	RunNo: **21493**		
Prep Date:	Analysis Date: **9/26/2014**	SeqNo: **628610**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**		
Client ID: **PBW**	Batch ID: **R21493**	RunNo: **21493**		
Prep Date:	Analysis Date: **9/26/2014**	SeqNo: **628611**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**		
Client ID: **LCSW**	Batch ID: **R21527**	RunNo: **21527**		
Prep Date:	Analysis Date: **9/29/2014**	SeqNo: **629894**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.025	0.0010	0.02500	0	99.4	85	115			
Uranium	0.025	0.0010	0.02500	0	101	85	115			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**		
Client ID: **LCSW**	Batch ID: **R21527**	RunNo: **21527**		
Prep Date:	Analysis Date: **9/29/2014**	SeqNo: **629895**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409805**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**						
Client ID:	**LCSW**	Batch ID:	**R21527**	RunNo:	**21527**						
Prep Date:		Analysis Date:	**9/29/2014**	SeqNo:	**629895**	Units:	**mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead		0.025	0.0010	0.02500	0	101	85	115			
Uranium		0.025	0.0010	0.02500	0	101	85	115			

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**						
Client ID:	**PBW**	Batch ID:	**R21527**	RunNo:	**21527**						
Prep Date:		Analysis Date:	**9/29/2014**	SeqNo:	**629896**	Units:	**mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead		ND	0.0010								
Uranium		ND	0.0010								

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**						
Client ID:	**PBW**	Batch ID:	**R21527**	RunNo:	**21527**						
Prep Date:		Analysis Date:	**9/29/2014**	SeqNo:	**629897**	Units:	**mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead		ND	0.0010								
Uranium		ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409805**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **1409805-004GMSLL** SampType: **MSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **OW-11** Batch ID: **15343** RunNo: **21376**
Prep Date: **9/17/2014** Analysis Date: **9/23/2014** SeqNo: **624878** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.029	0.0010	0.02500	0.002708	106	70	130			
Lead	0.027	0.0010	0.02500	0	110	70	130			
Selenium	0.028	0.0010	0.02500	0.002277	102	70	130			

Sample ID **LLLCS-15343** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **15343** RunNo: **21376**
Prep Date: **9/17/2014** Analysis Date: **9/23/2014** SeqNo: **624955** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0	104	85	115			
Lead	0.026	0.0010	0.02500	0	103	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.026	0.0010	0.02500	0	105	85	115			

Sample ID **MB-15343** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **15343** RunNo: **21376**
Prep Date: **9/17/2014** Analysis Date: **9/23/2014** SeqNo: **624958** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409805**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**MB-15449**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**						
Client ID:	**PBW**	Batch ID:	**15449**	RunNo:	**21410**						
Prep Date:	**9/23/2014**	Analysis Date:	**9/24/2014**	SeqNo:	**625480**	Units:	**mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		ND	0.00020								

Sample ID	**LCS-15449**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**						
Client ID:	**LCSW**	Batch ID:	**15449**	RunNo:	**21410**						
Prep Date:	**9/23/2014**	Analysis Date:	**9/24/2014**	SeqNo:	**625481**	Units:	**mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.0049	0.00020	0.005000	0	97.5	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409805**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**		
Client ID: **PBW**	Batch ID: **R21283**	RunNo: **21283**		
Prep Date:	Analysis Date: **9/17/2014**	SeqNo: **621017**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**		
Client ID: **LCSW**	Batch ID: **R21283**	RunNo: **21283**		
Prep Date:	Analysis Date: **9/17/2014**	SeqNo: **621018**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.47	0.10	0.5000	0	94.8	90	110			
Chloride	4.6	0.50	5.000	0	92.4	90	110			
Bromide	2.4	0.10	2.500	0	96.3	90	110			
Phosphorus, Orthophosphate (As P	4.6	0.50	5.000	0	91.2	90	110			
Sulfate	9.5	0.50	10.00	0	94.9	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	97.6	90	110			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**		
Client ID: **PBW**	Batch ID: **R21310**	RunNo: **21310**		
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621823**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**		
Client ID: **LCSW**	Batch ID: **R21310**	RunNo: **21310**		
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621824**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000	0	92.0	90	110			
Sulfate	9.4	0.50	10.00	0	94.1	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409805**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**MB-15312**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Diesel Range**					
Client ID:	**PBW**	Batch ID:	**15312**	RunNo:	**21248**					
Prep Date:	**9/16/2014**	Analysis Date:	**9/17/2014**	SeqNo:	**619740**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.99		1.000		99.1	59	141			

Sample ID	**LCS-15312**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Diesel Range**					
Client ID:	**LCSW**	Batch ID:	**15312**	RunNo:	**21248**					
Prep Date:	**9/16/2014**	Analysis Date:	**9/17/2014**	SeqNo:	**619860**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	101	69.7	142			
Surr: DNOP	0.49		0.5000		98.9	59	141			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409805**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **5ML RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **R21267**	RunNo: **21267**
Prep Date:	Analysis Date: **9/17/2014**	SeqNo: **620386** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		89.0	70.9	130			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **R21267**	RunNo: **21267**
Prep Date:	Analysis Date: **9/17/2014**	SeqNo: **620387** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.49	0.050	0.5000	0	98.4	80	120			
Surr: BFB	19		20.00		93.9	70.9	130			

Sample ID **5ML RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **R21299**	RunNo: **21299**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621575** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		93.8	70.9	130			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **R21299**	RunNo: **21299**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **624430** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.48	0.050	0.5000	0	95.7	80	120			
Surr: BFB	20		20.00		101	70.9	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409805**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R21319**	RunNo: **21319**			
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622116**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409805**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R21319**	RunNo: **21319**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622116** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.7		10.00		97.2	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.2	70	130			
Surr: Dibromofluoromethane	10		10.00		99.8	70	130			
Surr: Toluene-d8	8.8		10.00		87.9	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R21319**	RunNo: **21319**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622118** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	19	1.0	20.00	0	95.1	80	120			
Chlorobenzene	18	1.0	20.00	0	92.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409805**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **LCSW**	Batch ID: **R21319**	RunNo: **21319**			
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622118**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	23	1.0	20.00	0	116	82.6	131			
Trichloroethene (TCE)	19	1.0	20.00	0	97.1	70	130			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.1	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.8	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.2	70	130			
Surr: Toluene-d8	9.3		10.00		93.3	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409805**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15342**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **15342**	RunNo: **21301**			
Prep Date: **9/17/2014**	Analysis Date: **9/18/2014**	SeqNo: **621609**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409805**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15342**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **15342**	RunNo: **21301**			
Prep Date: **9/17/2014**	Analysis Date: **9/18/2014**	SeqNo: **621609**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	93		200.0		46.3	12.1	85.8			
Surr: Phenol-d5	84		200.0		41.9	17.7	65.8			
Surr: 2,4,6-Tribromophenol	130		200.0		64.4	26	138			
Surr: Nitrobenzene-d5	66		100.0		65.5	47.5	119			
Surr: 2-Fluorobiphenyl	63		100.0		62.6	48.1	106			
Surr: 4-Terphenyl-d14	74		100.0		73.5	44	113			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409805**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **lcs-15342** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **15342** RunNo: **21301**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621610** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	58	10	100.0	0	58.1	47.9	114			
4-Chloro-3-methylphenol	130	10	200.0	0	62.8	51.7	122			
2-Chlorophenol	120	10	200.0	0	58.4	40.7	113			
1,4-Dichlorobenzene	50	10	100.0	0	50.4	39.6	99.9			
2,4-Dinitrotoluene	47	10	100.0	0	47.3	40.8	113			
N-Nitrosodi-n-propylamine	64	10	100.0	0	64.3	51.2	111			
4-Nitrophenol	66	10	200.0	0	32.8	15.7	86.9			
Pentachlorophenol	93	20	200.0	0	46.4	21.6	104			
Phenol	86	10	200.0	0	43.1	28.6	71.7			
Pyrene	64	10	100.0	0	64.2	54.2	128			
1,2,4-Trichlorobenzene	49	10	100.0	0	49.5	40.9	101			
Surr: 2-Fluorophenol	84		200.0		42.0	12.1	85.8			
Surr: Phenol-d5	80		200.0		39.9	17.7	65.8			
Surr: 2,4,6-Tribromophenol	110		200.0		55.7	26	138			
Surr: Nitrobenzene-d5	61		100.0		60.6	47.5	119			
Surr: 2-Fluorobiphenyl	57		100.0		56.6	48.1	106			
Surr: 4-Terphenyl-d14	67		100.0		66.5	44	113			

Sample ID **lcsd-15342** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **15342** RunNo: **21301**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621611** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	70	10	100.0	0	70.1	47.9	114	18.7	27.2	
4-Chloro-3-methylphenol	140	10	200.0	0	72.1	51.7	122	13.7	25.9	
2-Chlorophenol	110	10	200.0	0	55.9	40.7	113	4.29	22.5	
1,4-Dichlorobenzene	52	10	100.0	0	51.9	39.6	99.9	2.93	24.6	
2,4-Dinitrotoluene	71	10	100.0	0	70.6	40.8	113	39.5	25.3	R
N-Nitrosodi-n-propylamine	70	10	100.0	0	69.7	51.2	111	8.09	23.6	
4-Nitrophenol	69	10	200.0	0	34.4	15.7	86.9	4.53	34.7	
Pentachlorophenol	83	20	200.0	0	41.3	21.6	104	11.6	32.8	
Phenol	87	10	200.0	0	43.3	28.6	71.7	0.509	25.5	
Pyrene	82	10	100.0	0	82.0	54.2	128	24.4	31.4	
1,2,4-Trichlorobenzene	53	10	100.0	0	52.5	40.9	101	6.00	25.9	
Surr: 2-Fluorophenol	73		200.0		36.5	12.1	85.8	0	0	
Surr: Phenol-d5	77		200.0		38.4	17.7	65.8	0	0	
Surr: 2,4,6-Tribromophenol	110		200.0		53.7	26	138	0	0	
Surr: Nitrobenzene-d5	61		100.0		60.9	47.5	119	0	0	
Surr: 2-Fluorobiphenyl	64		100.0		63.6	48.1	106	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409805**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**lcsd-15342**	SampType:	**LCSD**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**LCSS02**	Batch ID:	**15342**	RunNo:	**21301**
Prep Date:	**9/17/2014**	Analysis Date:	**9/18/2014**	SeqNo:	**621611** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	85		100.0		84.6	44	113	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Western Refining Gallup** Work Order Number: **1409805** RcptNo: **1**

Received by/date: C.S. 09/16/14

Logged By: **Ashley Gallegos** **9/16/2014 5:03:00 PM** AG

Completed By: **Ashley Gallegos** **9/17/2014 8:12:00 AM** AG

Reviewed By: AT 09/17/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 12
(<2 or >12 unless noted)
Adjusted? No
Checked by: mg

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

2014 ANNUAL GW

Project #:

OW-1,-10,-11,-12

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.1°

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1409805	8260 + MTBE	8015B extended	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major Cations/Anions									Air Bubbles (Y or N)
9/11/14	1600	H_2O	OW-1			-001	X	X	X	X	X	X									
9/12/14	0935	H_2O	OW-10			-002	X	X	X	X	X	X									
9/12/14	1100	H_2O	OW-12			-003	X	X	X	X	X	X									
9/12/14	1220	H_2O	OW-11			-004	X	X	X	X	X	X									
9/11/14	1815	H_2O	FB-Group 1-9/11/14			-005	X														

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/16/14	1450	[signature]	[signature]	9/16/14	1450
9/16/14	1703	[signature]	[signature]	09/16/14	1703

Remarks: Trip Blank-006 AS 09/17/14

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 06, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: 2014 Annual GW OrderNo.: 1409808

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 9/16/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1409808**
Date Reported: **10/6/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-52
Project: 2014 Annual GW
Collection Date: 9/15/2014 12:45:00 PM
Lab ID: 1409808-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/19/2014 5:00:00 PM	15341
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/19/2014 5:00:00 PM	15341
Surr: DNOP	108	59-141		%REC	1	9/19/2014 5:00:00 PM	15341
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**DJF**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/18/2014 9:25:11 PM	R21299
Surr: BFB	93.8	70.9-130		%REC	1	9/18/2014 9:25:11 PM	R21299
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	0.50	0.10		mg/L	1	9/17/2014 11:47:01 AM	R21277
Chloride	27	10		mg/L	20	9/17/2014 12:24:15 PM	R21277
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	9/17/2014 11:47:01 AM	R21277
Bromide	0.19	0.10		mg/L	1	9/17/2014 11:47:01 AM	R21277
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	9/17/2014 11:47:01 AM	R21277
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	9/17/2014 11:47:01 AM	R21277
Sulfate	130	10		mg/L	20	9/17/2014 12:24:15 PM	R21277
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.029	0.0020		mg/L	1	9/18/2014 2:09:52 PM	R21290
Cadmium	ND	0.0020		mg/L	1	9/18/2014 2:09:52 PM	R21290
Calcium	7.5	1.0		mg/L	1	9/18/2014 2:09:52 PM	R21290
Chromium	ND	0.0060		mg/L	1	9/18/2014 2:09:52 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 2:09:52 PM	R21290
Iron	0.051	0.020		mg/L	1	9/19/2014 5:46:30 PM	R21336
Magnesium	ND	1.0		mg/L	1	9/18/2014 2:09:52 PM	R21290
Manganese	0.026	0.0020		mg/L	1	9/19/2014 5:46:30 PM	R21336
Potassium	2.0	1.0		mg/L	1	9/18/2014 2:09:52 PM	R21290
Silver	ND	0.0050		mg/L	1	9/19/2014 5:46:30 PM	R21336
Sodium	240	10		mg/L	10	9/19/2014 5:48:27 PM	R21336
Zinc	ND	0.010		mg/L	1	9/19/2014 5:46:30 PM	R21336
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.032	0.0020		mg/L	1	9/19/2014 11:47:14 AM	15380
Cadmium	ND	0.0020		mg/L	1	9/19/2014 11:47:14 AM	15380
Chromium	ND	0.0060		mg/L	1	9/19/2014 11:47:14 AM	15380
Copper	ND	0.0060		mg/L	1	9/19/2014 11:47:14 AM	15380
Iron	0.31	0.020	*	mg/L	1	9/19/2014 11:47:14 AM	15380
Manganese	0.036	0.0020		mg/L	1	9/19/2014 11:47:14 AM	15380
Silver	ND	0.0050		mg/L	1	9/19/2014 11:47:14 AM	15380
Zinc	ND	0.010		mg/L	1	9/19/2014 11:47:14 AM	15380
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-52
Project: 2014 Annual GW
Collection Date: 9/15/2014 12:45:00 PM
Lab ID: 1409808-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0010		mg/L	1	9/26/2014 12:10:08 PM	R21493
Lead	ND	0.0010		mg/L	1	9/26/2014 12:10:08 PM	R21493
Selenium	0.0012	0.0010		mg/L	1	9/26/2014 12:10:08 PM	R21493
Uranium	0.011	0.0010		mg/L	1	9/26/2014 12:10:08 PM	R21493
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0010		mg/L	1	9/23/2014 4:24:26 PM	15380
Lead	ND	0.0010		mg/L	1	9/23/2014 4:24:26 PM	15380
Selenium	ND	0.0010		mg/L	1	9/23/2014 4:24:26 PM	15380
Uranium	0.011	0.0010		mg/L	1	9/23/2014 4:24:26 PM	15380
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/24/2014 11:07:53 AM	15450
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Acenaphthylene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Aniline	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Anthracene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Azobenzene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Benz(a)anthracene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Benzo(a)pyrene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Benzo(b)fluoranthene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Benzo(k)fluoranthene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Benzoic acid	ND	20		µg/L	1	9/19/2014 12:36:15 AM	15342
Benzyl alcohol	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Butyl benzyl phthalate	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Carbazole	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
4-Chloroaniline	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
2-Chloronaphthalene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
2-Chlorophenol	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Chrysene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Di-n-butyl phthalate	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-52
Project: 2014 Annual GW
Collection Date: 9/15/2014 12:45:00 PM
Lab ID: 1409808-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Di-n-octyl phthalate	ND	20		µg/L	1	9/19/2014 12:36:15 AM	15342
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Dibenzofuran	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
1,2-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
1,3-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
1,4-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Diethyl phthalate	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Dimethyl phthalate	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
2,4-Dichlorophenol	ND	20		µg/L	1	9/19/2014 12:36:15 AM	15342
2,4-Dimethylphenol	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/19/2014 12:36:15 AM	15342
2,4-Dinitrophenol	ND	20		µg/L	1	9/19/2014 12:36:15 AM	15342
2,4-Dinitrotoluene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
2,6-Dinitrotoluene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Fluoranthene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Fluorene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Hexachlorobenzene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Hexachlorobutadiene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Hexachloroethane	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Isophorone	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
1-Methylnaphthalene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
2-Methylnaphthalene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
2-Methylphenol	ND	20		µg/L	1	9/19/2014 12:36:15 AM	15342
3+4-Methylphenol	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
N-Nitrosodimethylamine	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Naphthalene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
2-Nitroaniline	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
3-Nitroaniline	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
4-Nitroaniline	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Nitrobenzene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
2-Nitrophenol	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
4-Nitrophenol	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Pentachlorophenol	ND	20		µg/L	1	9/19/2014 12:36:15 AM	15342
Phenanthrene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-52
Project: 2014 Annual GW
Collection Date: 9/15/2014 12:45:00 PM
Lab ID: 1409808-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Phenol	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Pyrene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Pyridine	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/19/2014 12:36:15 AM	15342
Surr: 2-Fluorophenol	51.0	12.1-85.8		%REC	1	9/19/2014 12:36:15 AM	15342
Surr: Phenol-d5	47.6	17.7-65.8		%REC	1	9/19/2014 12:36:15 AM	15342
Surr: 2,4,6-Tribromophenol	63.1	26-138		%REC	1	9/19/2014 12:36:15 AM	15342
Surr: Nitrobenzene-d5	69.4	47.5-119		%REC	1	9/19/2014 12:36:15 AM	15342
Surr: 2-Fluorobiphenyl	66.1	48.1-106		%REC	1	9/19/2014 12:36:15 AM	15342
Surr: 4-Terphenyl-d14	62.8	44-113		%REC	1	9/19/2014 12:36:15 AM	15342
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
Toluene	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
Ethylbenzene	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
Naphthalene	ND	2.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
1-Methylnaphthalene	ND	4.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
2-Methylnaphthalene	ND	4.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
Acetone	ND	10		µg/L	1	9/22/2014 4:33:22 PM	R21353
Bromobenzene	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
Bromodichloromethane	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
Bromoform	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
Bromomethane	ND	3.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
2-Butanone	ND	10		µg/L	1	9/22/2014 4:33:22 PM	R21353
Carbon disulfide	ND	10		µg/L	1	9/22/2014 4:33:22 PM	R21353
Carbon Tetrachloride	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
Chlorobenzene	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
Chloroethane	ND	2.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
Chloroform	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
Chloromethane	ND	3.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
2-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
4-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
cis-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-52
Project: 2014 Annual GW
Collection Date: 9/15/2014 12:45:00 PM
Lab ID: 1409808-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
Dibromochloromethane	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
Dibromomethane	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
1,1-Dichloroethane	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
1,1-Dichloroethene	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
1,2-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
1,3-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
2,2-Dichloropropane	ND	2.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
1,1-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
Hexachlorobutadiene	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
2-Hexanone	ND	10		µg/L	1	9/22/2014 4:33:22 PM	R21353
Isopropylbenzene	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
4-Isopropyltoluene	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
4-Methyl-2-pentanone	ND	10		µg/L	1	9/22/2014 4:33:22 PM	R21353
Methylene Chloride	ND	3.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
n-Butylbenzene	ND	3.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
n-Propylbenzene	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
sec-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
Styrene	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
tert-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
trans-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
Trichlorofluoromethane	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
Vinyl chloride	ND	1.0		µg/L	1	9/22/2014 4:33:22 PM	R21353
Xylenes, Total	ND	1.5		µg/L	1	9/22/2014 4:33:22 PM	R21353

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-52
Project: 2014 Annual GW
Collection Date: 9/15/2014 12:45:00 PM
Lab ID: 1409808-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Surr: 1,2-Dichloroethane-d4	90.8	70-130		%REC	1	9/22/2014 4:33:22 PM	R21353
Surr: 4-Bromofluorobenzene	105	70-130		%REC	1	9/22/2014 4:33:22 PM	R21353
Surr: Dibromofluoromethane	94.4	70-130		%REC	1	9/22/2014 4:33:22 PM	R21353
Surr: Toluene-d8	87.3	70-130		%REC	1	9/22/2014 4:33:22 PM	R21353

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-50
Project: 2014 Annual GW
Collection Date: 9/15/2014 1:35:00 PM
Lab ID: 1409808-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/19/2014 5:21:21 PM	15341
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/19/2014 5:21:21 PM	15341
Surr: DNOP	113	59-141		%REC	1	9/19/2014 5:21:21 PM	15341
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**DJF**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/18/2014 9:55:16 PM	R21299
Surr: BFB	87.5	70.9-130		%REC	1	9/18/2014 9:55:16 PM	R21299
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	0.45	0.10		mg/L	1	9/17/2014 12:36:39 PM	R21277
Chloride	30	10		mg/L	20	9/17/2014 12:49:04 PM	R21277
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	9/17/2014 12:36:39 PM	R21277
Bromide	0.26	0.10		mg/L	1	9/17/2014 12:36:39 PM	R21277
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	9/17/2014 12:36:39 PM	R21277
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	9/17/2014 12:36:39 PM	R21277
Sulfate	150	10		mg/L	20	9/17/2014 12:49:04 PM	R21277
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.047	0.0020		mg/L	1	9/18/2014 2:11:47 PM	R21290
Cadmium	ND	0.0020		mg/L	1	9/18/2014 2:11:47 PM	R21290
Calcium	24	1.0		mg/L	1	9/18/2014 2:11:47 PM	R21290
Chromium	ND	0.0060		mg/L	1	9/18/2014 2:11:47 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 2:11:47 PM	R21290
Iron	ND	0.020		mg/L	1	9/19/2014 5:50:11 PM	R21336
Magnesium	3.9	1.0		mg/L	1	9/18/2014 2:11:47 PM	R21290
Manganese	0.091	0.0020	*	mg/L	1	9/19/2014 5:50:11 PM	R21336
Potassium	1.1	1.0		mg/L	1	9/18/2014 2:11:47 PM	R21290
Silver	ND	0.0050		mg/L	1	9/19/2014 5:50:11 PM	R21336
Sodium	240	10		mg/L	10	9/19/2014 5:52:11 PM	R21336
Zinc	ND	0.010		mg/L	1	9/19/2014 5:50:11 PM	R21336
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.075	0.0020		mg/L	1	9/19/2014 11:49:05 AM	15380
Cadmium	ND	0.0020		mg/L	1	9/19/2014 11:49:05 AM	15380
Chromium	ND	0.0060		mg/L	1	9/19/2014 11:49:05 AM	15380
Copper	ND	0.0060		mg/L	1	9/19/2014 11:49:05 AM	15380
Iron	0.60	0.020	*	mg/L	1	9/19/2014 11:49:05 AM	15380
Manganese	0.11	0.0020	*	mg/L	1	9/19/2014 11:49:05 AM	15380
Silver	ND	0.0050		mg/L	1	9/19/2014 11:49:05 AM	15380
Zinc	ND	0.010		mg/L	1	9/19/2014 11:49:05 AM	15380
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-50
Project: 2014 Annual GW
Collection Date: 9/15/2014 1:35:00 PM
Lab ID: 1409808-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0024	0.0010		mg/L	1	9/26/2014 12:13:13 PM	R21493
Lead	ND	0.0010		mg/L	1	9/26/2014 12:13:13 PM	R21493
Selenium	0.0017	0.0010		mg/L	1	9/26/2014 12:13:13 PM	R21493
Uranium	0.0098	0.0010		mg/L	1	9/26/2014 12:13:13 PM	R21493
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0019	0.0010		mg/L	1	9/23/2014 4:33:45 PM	15380
Lead	ND	0.0010		mg/L	1	9/23/2014 4:33:45 PM	15380
Selenium	0.0010	0.0010		mg/L	1	9/23/2014 4:33:45 PM	15380
Uranium	0.010	0.0010		mg/L	1	9/23/2014 4:33:45 PM	15380
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/24/2014 11:12:32 AM	15450
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Acenaphthylene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Aniline	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Anthracene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Azobenzene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Benz(a)anthracene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Benzo(a)pyrene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Benzo(b)fluoranthene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Benzo(k)fluoranthene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Benzoic acid	ND	20		µg/L	1	9/19/2014 1:05:17 AM	15342
Benzyl alcohol	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Butyl benzyl phthalate	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Carbazole	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
4-Chloroaniline	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
2-Chloronaphthalene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
2-Chlorophenol	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Chrysene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Di-n-butyl phthalate	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-50
Project: 2014 Annual GW
Collection Date: 9/15/2014 1:35:00 PM
Lab ID: 1409808-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Di-n-octyl phthalate	ND	20		µg/L	1	9/19/2014 1:05:17 AM	15342
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Dibenzofuran	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
1,2-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
1,3-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
1,4-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Diethyl phthalate	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Dimethyl phthalate	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
2,4-Dichlorophenol	ND	20		µg/L	1	9/19/2014 1:05:17 AM	15342
2,4-Dimethylphenol	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/19/2014 1:05:17 AM	15342
2,4-Dinitrophenol	ND	20		µg/L	1	9/19/2014 1:05:17 AM	15342
2,4-Dinitrotoluene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
2,6-Dinitrotoluene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Fluoranthene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Fluorene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Hexachlorobenzene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Hexachlorobutadiene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Hexachloroethane	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Isophorone	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
1-Methylnaphthalene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
2-Methylnaphthalene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
2-Methylphenol	ND	20		µg/L	1	9/19/2014 1:05:17 AM	15342
3+4-Methylphenol	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
N-Nitrosodimethylamine	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Naphthalene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
2-Nitroaniline	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
3-Nitroaniline	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
4-Nitroaniline	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Nitrobenzene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
2-Nitrophenol	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
4-Nitrophenol	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Pentachlorophenol	ND	20		µg/L	1	9/19/2014 1:05:17 AM	15342
Phenanthrene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-50
Project: 2014 Annual GW
Collection Date: 9/15/2014 1:35:00 PM
Lab ID: 1409808-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Phenol	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Pyrene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Pyridine	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/19/2014 1:05:17 AM	15342
Surr: 2-Fluorophenol	48.3	12.1-85.8		%REC	1	9/19/2014 1:05:17 AM	15342
Surr: Phenol-d5	40.5	17.7-65.8		%REC	1	9/19/2014 1:05:17 AM	15342
Surr: 2,4,6-Tribromophenol	53.8	26-138		%REC	1	9/19/2014 1:05:17 AM	15342
Surr: Nitrobenzene-d5	61.1	47.5-119		%REC	1	9/19/2014 1:05:17 AM	15342
Surr: 2-Fluorobiphenyl	53.6	48.1-106		%REC	1	9/19/2014 1:05:17 AM	15342
Surr: 4-Terphenyl-d14	60.6	44-113		%REC	1	9/19/2014 1:05:17 AM	15342
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
Toluene	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
Ethylbenzene	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
Naphthalene	ND	2.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
1-Methylnaphthalene	ND	4.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
2-Methylnaphthalene	ND	4.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
Acetone	ND	10		µg/L	1	9/22/2014 5:03:02 PM	R21353
Bromobenzene	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
Bromodichloromethane	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
Bromoform	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
Bromomethane	ND	3.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
2-Butanone	ND	10		µg/L	1	9/22/2014 5:03:02 PM	R21353
Carbon disulfide	ND	10		µg/L	1	9/22/2014 5:03:02 PM	R21353
Carbon Tetrachloride	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
Chlorobenzene	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
Chloroethane	ND	2.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
Chloroform	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
Chloromethane	ND	3.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
2-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
4-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
cis-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-50
Project: 2014 Annual GW
Collection Date: 9/15/2014 1:35:00 PM
Lab ID: 1409808-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
Dibromochloromethane	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
Dibromomethane	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
1,1-Dichloroethane	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
1,1-Dichloroethene	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
1,2-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
1,3-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
2,2-Dichloropropane	ND	2.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
1,1-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
Hexachlorobutadiene	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
2-Hexanone	ND	10		µg/L	1	9/22/2014 5:03:02 PM	R21353
Isopropylbenzene	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
4-Isopropyltoluene	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
4-Methyl-2-pentanone	ND	10		µg/L	1	9/22/2014 5:03:02 PM	R21353
Methylene Chloride	ND	3.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
n-Butylbenzene	ND	3.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
n-Propylbenzene	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
sec-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
Styrene	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
tert-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
trans-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
Trichlorofluoromethane	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
Vinyl chloride	ND	1.0		µg/L	1	9/22/2014 5:03:02 PM	R21353
Xylenes, Total	ND	1.5		µg/L	1	9/22/2014 5:03:02 PM	R21353

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-50
Project: 2014 Annual GW
Collection Date: 9/15/2014 1:35:00 PM
Lab ID: 1409808-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Surr: 1,2-Dichloroethane-d4	96.7	70-130		%REC	1	9/22/2014 5:03:02 PM	R21353
Surr: 4-Bromofluorobenzene	97.8	70-130		%REC	1	9/22/2014 5:03:02 PM	R21353
Surr: Dibromofluoromethane	97.8	70-130		%REC	1	9/22/2014 5:03:02 PM	R21353
Surr: Toluene-d8	90.5	70-130		%REC	1	9/22/2014 5:03:02 PM	R21353

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group 3-9/15/14
Project: 2014 Annual GW
Collection Date: 9/15/2014 11:35:00 AM
Lab ID: 1409808-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
Toluene	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
Ethylbenzene	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
Naphthalene	ND	2.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
1-Methylnaphthalene	ND	4.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
2-Methylnaphthalene	ND	4.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
Acetone	ND	10		µg/L	1	9/22/2014 5:32:40 PM	R21353
Bromobenzene	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
Bromodichloromethane	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
Bromoform	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
Bromomethane	ND	3.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
2-Butanone	ND	10		µg/L	1	9/22/2014 5:32:40 PM	R21353
Carbon disulfide	ND	10		µg/L	1	9/22/2014 5:32:40 PM	R21353
Carbon Tetrachloride	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
Chlorobenzene	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
Chloroethane	ND	2.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
Chloroform	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
Chloromethane	ND	3.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
2-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
4-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
cis-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
Dibromochloromethane	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
Dibromomethane	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
1,1-Dichloroethane	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
1,1-Dichloroethene	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
1,2-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
1,3-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
2,2-Dichloropropane	ND	2.0		µg/L	1	9/22/2014 5:32:40 PM	R21353

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group 3-9/15/14
Project: 2014 Annual GW
Collection Date: 9/15/2014 11:35:00 AM
Lab ID: 1409808-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
Hexachlorobutadiene	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
2-Hexanone	ND	10		µg/L	1	9/22/2014 5:32:40 PM	R21353
Isopropylbenzene	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
4-Isopropyltoluene	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
4-Methyl-2-pentanone	ND	10		µg/L	1	9/22/2014 5:32:40 PM	R21353
Methylene Chloride	ND	3.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
n-Butylbenzene	ND	3.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
n-Propylbenzene	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
sec-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
Styrene	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
tert-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
trans-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
Trichlorofluoromethane	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
Vinyl chloride	ND	1.0		µg/L	1	9/22/2014 5:32:40 PM	R21353
Xylenes, Total	ND	1.5		µg/L	1	9/22/2014 5:32:40 PM	R21353
Surr: 1,2-Dichloroethane-d4	88.2	70-130		%REC	1	9/22/2014 5:32:40 PM	R21353
Surr: 4-Bromofluorobenzene	103	70-130		%REC	1	9/22/2014 5:32:40 PM	R21353
Surr: Dibromofluoromethane	89.2	70-130		%REC	1	9/22/2014 5:32:40 PM	R21353
Surr: Toluene-d8	92.5	70-130		%REC	1	9/22/2014 5:32:40 PM	R21353

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409808-004
Matrix: TRIP BLANK
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**DJF**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/18/2014 10:25:27 PM	R21299
Surr: BFB	92.2	70.9-130		%REC	1	9/18/2014 10:25:27 PM	R21299
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
Toluene	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
Ethylbenzene	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
Naphthalene	ND	2.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
1-Methylnaphthalene	ND	4.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
2-Methylnaphthalene	ND	4.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
Acetone	ND	10		µg/L	1	9/22/2014 12:35:59 PM	R21353
Bromobenzene	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
Bromodichloromethane	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
Bromoform	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
Bromomethane	ND	3.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
2-Butanone	ND	10		µg/L	1	9/22/2014 12:35:59 PM	R21353
Carbon disulfide	ND	10		µg/L	1	9/22/2014 12:35:59 PM	R21353
Carbon Tetrachloride	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
Chlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
Chloroethane	ND	2.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
Chloroform	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
Chloromethane	ND	3.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
2-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
4-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
cis-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
Dibromochloromethane	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
Dibromomethane	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
1,1-Dichloroethane	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
1,1-Dichloroethene	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409808-004
Matrix: TRIP BLANK
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
1,3-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
2,2-Dichloropropane	ND	2.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
1,1-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
Hexachlorobutadiene	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
2-Hexanone	ND	10		µg/L	1	9/22/2014 12:35:59 PM	R21353
Isopropylbenzene	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
4-Isopropyltoluene	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
4-Methyl-2-pentanone	ND	10		µg/L	1	9/22/2014 12:35:59 PM	R21353
Methylene Chloride	ND	3.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
n-Butylbenzene	ND	3.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
n-Propylbenzene	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
sec-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
Styrene	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
tert-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
trans-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
Trichlorofluoromethane	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
Vinyl chloride	ND	1.0		µg/L	1	9/22/2014 12:35:59 PM	R21353
Xylenes, Total	ND	1.5		µg/L	1	9/22/2014 12:35:59 PM	R21353
Surr: 1,2-Dichloroethane-d4	89.7	70-130		%REC	1	9/22/2014 12:35:59 PM	R21353
Surr: 4-Bromofluorobenzene	99.8	70-130		%REC	1	9/22/2014 12:35:59 PM	R21353
Surr: Dibromofluoromethane	92.5	70-130		%REC	1	9/22/2014 12:35:59 PM	R21353
Surr: Toluene-d8	91.7	70-130		%REC	1	9/22/2014 12:35:59 PM	R21353

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409808**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R21290**	RunNo: **21290**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621146** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Magnesium	ND	1.0								
Potassium	ND	1.0								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21290**	RunNo: **21290**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621147** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.6	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.0	85	115			
Calcium	49	1.0	50.00	0	97.2	85	115			
Chromium	0.48	0.0060	0.5000	0	96.8	85	115			
Copper	0.49	0.0060	0.5000	0	97.1	85	115			
Magnesium	49	1.0	50.00	0	97.8	85	115			
Potassium	48	1.0	50.00	0	96.0	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R21290**	RunNo: **21290**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621149** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Magnesium	ND	1.0								
Potassium	ND	1.0								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21290**	RunNo: **21290**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621150** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.7	85	115			

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409808**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21290**	RunNo: **21290**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621150** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.48	0.0020	0.5000	0	96.8	85	115			
Calcium	48	1.0	50.00	0	96.8	85	115			
Chromium	0.48	0.0060	0.5000	0	96.4	85	115			
Copper	0.48	0.0060	0.5000	0	95.5	85	115			
Magnesium	49	1.0	50.00	0	97.7	85	115			
Potassium	48	1.0	50.00	0	96.3	85	115			

Sample ID **LCS TEST**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21290**	RunNo: **21290**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621170** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	101	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.6	85	115			
Calcium	50	1.0	50.00	0	99.9	85	115			
Chromium	0.49	0.0060	0.5000	0	98.7	85	115			
Copper	0.49	0.0060	0.5000	0	97.3	85	115			
Magnesium	50	1.0	50.00	0	99.5	85	115			
Potassium	50	1.0	50.00	0	99.2	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R21336**	RunNo: **21336**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622776** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21336**	RunNo: **21336**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622777** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.47	0.020	0.5000	0	93.2	85	115			
Manganese	0.45	0.0020	0.5000	0	89.7	85	115			
Sodium	50	1.0	50.00	0	99.3	85	115			
Zinc	0.46	0.010	0.5000	0	91.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409808**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**LCS Ag**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**R21336**	RunNo:	**21336**					
Prep Date:		Analysis Date:	**9/19/2014**	SeqNo:	**622778**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver		0.096	0.0050	0.1000	0	95.7	85	115			

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**R21336**	RunNo:	**21336**					
Prep Date:		Analysis Date:	**9/19/2014**	SeqNo:	**622779**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron		ND	0.020								
Manganese		ND	0.0020								
Silver		ND	0.0050								
Sodium		ND	1.0								
Zinc		ND	0.010								

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**R21336**	RunNo:	**21336**					
Prep Date:		Analysis Date:	**9/19/2014**	SeqNo:	**622780**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron		0.48	0.020	0.5000	0	95.4	85	115			
Manganese		0.46	0.0020	0.5000	0	91.5	85	115			
Sodium		49	1.0	50.00	0	98.5	85	115			
Zinc		0.47	0.010	0.5000	0	93.7	85	115			

Sample ID	**LCS Ag**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**R21336**	RunNo:	**21336**					
Prep Date:		Analysis Date:	**9/19/2014**	SeqNo:	**622781**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver		0.10	0.0050	0.1000	0	102	85	115			

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409808**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**LCS-15380**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID:	**15380**	RunNo:	**21318**					
Prep Date:	**9/18/2014**	Analysis Date:	**9/19/2014**	SeqNo:	**622068**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.6	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.7	85	115			
Chromium	0.48	0.0060	0.5000	0	96.8	85	115			
Copper	0.50	0.0060	0.5000	0	99.7	85	115			
Iron	0.51	0.020	0.5000	0	102	85	115			
Manganese	0.50	0.0020	0.5000	0	99.1	85	115			
Zinc	0.50	0.010	0.5000	0	100	85	115			

Sample ID	**LCS AG-15380**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**LCSW**	Batch ID:	**15380**	RunNo:	**21318**					
Prep Date:	**9/18/2014**	Analysis Date:	**9/19/2014**	SeqNo:	**622069**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	104	85	115			

Sample ID	**MB-15380**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**					
Client ID:	**PBW**	Batch ID:	**15380**	RunNo:	**21318**					
Prep Date:	**9/18/2014**	Analysis Date:	**9/19/2014**	SeqNo:	**622074**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409808**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628608** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.7	85	115			
Lead	0.024	0.0010	0.02500	0	94.4	85	115			
Selenium	0.022	0.0010	0.02500	0	90.0	85	115			
Uranium	0.024	0.0010	0.02500	0	95.1	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628609** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	92.9	85	115			
Lead	0.023	0.0010	0.02500	0	92.6	85	115			
Selenium	0.023	0.0010	0.02500	0	92.4	85	115			
Uranium	0.023	0.0010	0.02500	0	91.6	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628610** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628611** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409808**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LLLCS-15380** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **15380** RunNo: **21376**
Prep Date: **9/18/2014** Analysis Date: **9/23/2014** SeqNo: **624956** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.6	85	115			
Lead	0.024	0.0010	0.02500	0	97.8	85	115			
Selenium	0.024	0.0010	0.02500	0	97.9	85	115			
Uranium	0.025	0.0010	0.02500	0	99.1	85	115			

Sample ID **MB-15380** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **15380** RunNo: **21376**
Prep Date: **9/18/2014** Analysis Date: **9/23/2014** SeqNo: **624959** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409808**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**MB-15450**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**						
Client ID:	**PBW**	Batch ID:	**15450**	RunNo:	**21410**						
Prep Date:	**9/23/2014**	Analysis Date:	**9/24/2014**	SeqNo:	**625508**	Units:	**mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		ND	0.00020								

Sample ID	**LCS-15450**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**						
Client ID:	**LCSW**	Batch ID:	**15450**	RunNo:	**21410**						
Prep Date:	**9/23/2014**	Analysis Date:	**9/24/2014**	SeqNo:	**625509**	Units:	**mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.0048	0.00020	0.005000	0	95.8	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409808**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R21277** RunNo: **21277**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **620661** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R21277** RunNo: **21277**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **620662** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	104	90	110			
Chloride	4.9	0.50	5.000	0	97.2	90	110			
Nitrogen, Nitrite (As N)	1.0	0.10	1.000	0	101	90	110			
Bromide	2.5	0.10	2.500	0	101	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	101	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	99.8	90	110			
Sulfate	10	0.50	10.00	0	99.6	90	110			

Sample ID **1409808-001EMS** SampType: **MS** TestCode: **EPA Method 300.0: Anions**
Client ID: **OW-52** Batch ID: **R21277** RunNo: **21277**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **620673** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.96	0.10	0.5000	0.5026	92.5	72.7	110			
Nitrogen, Nitrite (As N)	0.92	0.10	1.000	0	92.3	75.5	104			
Bromide	2.5	0.10	2.500	0.1886	91.4	85.1	108			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0.03280	96.4	87.8	111			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	93.0	81.3	101			

Sample ID **1409808-001EMSD** SampType: **MSD** TestCode: **EPA Method 300.0: Anions**
Client ID: **OW-52** Batch ID: **R21277** RunNo: **21277**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **620674** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.96	0.10	0.5000	0.5026	91.4	72.7	110	0.551	20	
Nitrogen, Nitrite (As N)	0.91	0.10	1.000	0	91.4	75.5	104	0.979	20	
Bromide	2.5	0.10	2.500	0.1886	91.0	85.1	108	0.389	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409808**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **1409808-001EMSD** SampType: **MSD** TestCode: **EPA Method 300.0: Anions**
Client ID: **OW-52** Batch ID: **R21277** RunNo: **21277**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **620674** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0.03280	95.5	87.8	111	0.958	20	
Phosphorus, Orthophosphate (As P	4.6	0.50	5.000	0	92.8	81.3	101	0.271	20	

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R21277** RunNo: **21277**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **620708** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R21277** RunNo: **21277**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **620709** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	96.8	90	110			
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	93.8	90	110			
Bromide	2.3	0.10	2.500	0	93.0	90	110			
Nitrogen, Nitrate (As N)	2.3	0.10	2.500	0	93.7	90	110			
Phosphorus, Orthophosphate (As P	4.6	0.50	5.000	0	92.3	90	110			
Sulfate	9.2	0.50	10.00	0	91.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409808**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**MB-15341**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Diesel Range**					
Client ID:	**PBW**	Batch ID:	**15341**	RunNo:	**21248**					
Prep Date:	**9/17/2014**	Analysis Date:	**9/17/2014**	SeqNo:	**619741**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		106	59	141			

Sample ID	**LCS-15341**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Diesel Range**					
Client ID:	**LCSW**	Batch ID:	**15341**	RunNo:	**21248**					
Prep Date:	**9/17/2014**	Analysis Date:	**9/17/2014**	SeqNo:	**619742**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	100	69.7	142			
Surr: DNOP	0.52		0.5000		105	59	141			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409808**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBW**	Batch ID:	**R21299**	RunNo:	**21299**					
Prep Date:		Analysis Date:	**9/18/2014**	SeqNo:	**621575**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		ND	0.050								
Surr: BFB		19		20.00		93.8	70.9	130			

Sample ID	**2.5UG GRO LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSW**	Batch ID:	**R21299**	RunNo:	**21299**					
Prep Date:		Analysis Date:	**9/18/2014**	SeqNo:	**624430**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		0.48	0.050	0.5000	0	95.7	80	120			
Surr: BFB		20		20.00		101	70.9	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409808**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R21353**	RunNo: **21353**			
Prep Date:	Analysis Date: **9/22/2014**	SeqNo: **623590**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409808**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R21353**	RunNo: **21353**
Prep Date:	Analysis Date: **9/22/2014**	SeqNo: **623590** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.7	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.2	70	130			
Surr: Dibromofluoromethane	9.0		10.00		89.9	70	130			
Surr: Toluene-d8	9.2		10.00		91.7	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R21353**	RunNo: **21353**
Prep Date:	Analysis Date: **9/22/2014**	SeqNo: **623592** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	93.7	70	130			
Toluene	19	1.0	20.00	0	93.1	80	120			
Chlorobenzene	19	1.0	20.00	0	95.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409808**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R21353**	RunNo: **21353**
Prep Date:	Analysis Date: **9/22/2014**	SeqNo: **623592** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22	1.0	20.00	0	109	82.6	131			
Trichloroethene (TCE)	17	1.0	20.00	0	83.6	70	130			
Surr: 1,2-Dichloroethane-d4	8.7		10.00		87.2	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.2	70	130			
Surr: Dibromofluoromethane	8.9		10.00		88.8	70	130			
Surr: Toluene-d8	9.4		10.00		94.4	70	130			

Sample ID **b3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R21353**	RunNo: **21353**
Prep Date:	Analysis Date: **9/22/2014**	SeqNo: **623718** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409808**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **b3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R21353**	RunNo: **21353**	
Prep Date:	Analysis Date: **9/22/2014**	SeqNo: **623718**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.0		10.00		90.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409808**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **b3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R21353**	RunNo: **21353**
Prep Date:	Analysis Date: **9/22/2014**	SeqNo: **623718** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	9.0		10.00		89.5	70	130			
Surr: Toluene-d8	8.7		10.00		87.0	70	130			

Sample ID **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R21353**	RunNo: **21353**
Prep Date:	Analysis Date: **9/22/2014**	SeqNo: **623720** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	18	1.0	20.00	0	91.1	80	120			
Chlorobenzene	19	1.0	20.00	0	94.0	70	130			
1,1-Dichloroethene	25	1.0	20.00	0	125	82.6	131			
Trichloroethene (TCE)	18	1.0	20.00	0	92.0	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		91.1	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	9.0		10.00		90.2	70	130			
Surr: Toluene-d8	9.2		10.00		91.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409808**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15342**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **15342**	RunNo: **21301**			
Prep Date: **9/17/2014**	Analysis Date: **9/18/2014**	SeqNo: **621609**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409808**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15342**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **15342**	RunNo: **21301**			
Prep Date: **9/17/2014**	Analysis Date: **9/18/2014**	SeqNo: **621609**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	93		200.0		46.3	12.1	85.8			
Surr: Phenol-d5	84		200.0		41.9	17.7	65.8			
Surr: 2,4,6-Tribromophenol	130		200.0		64.4	26	138			
Surr: Nitrobenzene-d5	66		100.0		65.5	47.5	119			
Surr: 2-Fluorobiphenyl	63		100.0		62.6	48.1	106			
Surr: 4-Terphenyl-d14	74		100.0		73.5	44	113			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409808**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **lcs-15342** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **15342** RunNo: **21301**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621610** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	58	10	100.0	0	58.1	47.9	114			
4-Chloro-3-methylphenol	130	10	200.0	0	62.8	51.7	122			
2-Chlorophenol	120	10	200.0	0	58.4	40.7	113			
1,4-Dichlorobenzene	50	10	100.0	0	50.4	39.6	99.9			
2,4-Dinitrotoluene	47	10	100.0	0	47.3	40.8	113			
N-Nitrosodi-n-propylamine	64	10	100.0	0	64.3	51.2	111			
4-Nitrophenol	66	10	200.0	0	32.8	15.7	86.9			
Pentachlorophenol	93	20	200.0	0	46.4	21.6	104			
Phenol	86	10	200.0	0	43.1	28.6	71.7			
Pyrene	64	10	100.0	0	64.2	54.2	128			
1,2,4-Trichlorobenzene	49	10	100.0	0	49.5	40.9	101			
Surr: 2-Fluorophenol	84		200.0		42.0	12.1	85.8			
Surr: Phenol-d5	80		200.0		39.9	17.7	65.8			
Surr: 2,4,6-Tribromophenol	110		200.0		55.7	26	138			
Surr: Nitrobenzene-d5	61		100.0		60.6	47.5	119			
Surr: 2-Fluorobiphenyl	57		100.0		56.6	48.1	106			
Surr: 4-Terphenyl-d14	67		100.0		66.5	44	113			

Sample ID **lcsd-15342** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **15342** RunNo: **21301**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621611** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	70	10	100.0	0	70.1	47.9	114	18.7	27.2	
4-Chloro-3-methylphenol	140	10	200.0	0	72.1	51.7	122	13.7	25.9	
2-Chlorophenol	110	10	200.0	0	55.9	40.7	113	4.29	22.5	
1,4-Dichlorobenzene	52	10	100.0	0	51.9	39.6	99.9	2.93	24.6	
2,4-Dinitrotoluene	71	10	100.0	0	70.6	40.8	113	39.5	25.3	R
N-Nitrosodi-n-propylamine	70	10	100.0	0	69.7	51.2	111	8.09	23.6	
4-Nitrophenol	69	10	200.0	0	34.4	15.7	86.9	4.53	34.7	
Pentachlorophenol	83	20	200.0	0	41.3	21.6	104	11.6	32.8	
Phenol	87	10	200.0	0	43.3	28.6	71.7	0.509	25.5	
Pyrene	82	10	100.0	0	82.0	54.2	128	24.4	31.4	
1,2,4-Trichlorobenzene	53	10	100.0	0	52.5	40.9	101	6.00	25.9	
Surr: 2-Fluorophenol	73		200.0		36.5	12.1	85.8	0	0	
Surr: Phenol-d5	77		200.0		38.4	17.7	65.8	0	0	
Surr: 2,4,6-Tribromophenol	110		200.0		53.7	26	138	0	0	
Surr: Nitrobenzene-d5	61		100.0		60.9	47.5	119	0	0	
Surr: 2-Fluorobiphenyl	64		100.0		63.6	48.1	106	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409808**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**lcsd-15342**	SampType:	**LCSD**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**LCSS02**	Batch ID:	**15342**	RunNo:	**21301**
Prep Date:	**9/17/2014**	Analysis Date:	**9/18/2014**	SeqNo:	**621611** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	85		100.0		84.6	44	113	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Western Refining Gallup** Work Order Number: **1409808** RcptNo: 1

Received by/date: C.S. 09/16/14

Logged By: **Ashley Gallegos** **9/16/2014 5:03:00 PM** AG

Completed By: **Ashley Gallegos** **9/17/2014 8:19:34 AM** AG

Reviewed By: Mg 09/17/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

2 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

2014 ~~2011~~ 09/17/14 ANNUAL GW

Project #:

OW-50,-52

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.1°

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8260 + MTBE	8015B extended	8270 + phenols	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	Major Cations/Anions							Air Bubbles (Y or N)
9/15/14	1245	H_2O	OW-52			1409808001													
9/15/14	1335	H_2O	OW-50			-001	X	X	X	X	X	X							
						-002	X	X	X	X	X	X							
9/15/14	1135	H_2O	FB-Group3-9/15/14			-003	X												

Date:	Time:	Relinquished by:	Received by:	Date Time
9/16/14	1450	[signature]	[signature]	9/16/14 1450
9-16-14	17:03	[signature]	Celina Sanchez	09/16/14 1703

Remarks: -004-Trip Blank

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 06, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: 2014 Annual GW OrderNo.: 1409794

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 8 sample(s) on 9/16/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1409794**
Date Reported: **10/6/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-2B
Project: 2014 Annual GW
Collection Date: 9/9/2014 4:10:00 PM
Lab ID: 1409794-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	1.6	0.10		mg/L	1	9/18/2014 1:50:55 AM	R21277
Chloride	29	10		mg/L	20	9/19/2014 3:17:45 AM	R21321
Bromide	0.43	0.10		mg/L	1	9/18/2014 1:50:55 AM	R21277
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/18/2014 1:50:55 AM	R21277
Sulfate	160	10		mg/L	20	9/18/2014 2:03:20 AM	R21277
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/18/2014 2:23:26 AM	R21283
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.042	0.0020		mg/L	1	9/18/2014 1:07:53 PM	R21290
Cadmium	ND	0.0020		mg/L	1	9/18/2014 1:07:53 PM	R21290
Calcium	13	1.0		mg/L	1	9/18/2014 1:07:53 PM	R21290
Chromium	ND	0.0060		mg/L	1	9/18/2014 1:07:53 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 1:07:53 PM	R21290
Iron	0.096	0.020		mg/L	1	9/18/2014 1:07:53 PM	R21290
Magnesium	3.0	1.0		mg/L	1	9/18/2014 1:07:53 PM	R21290
Manganese	0.14	0.0020	*	mg/L	1	9/19/2014 3:28:40 PM	R21336
Potassium	2.1	1.0		mg/L	1	9/18/2014 1:07:53 PM	R21290
Silver	ND	0.0050		mg/L	1	9/18/2014 1:07:53 PM	R21290
Sodium	580	10		mg/L	10	9/19/2014 3:30:38 PM	R21336
Zinc	ND	0.010		mg/L	1	9/19/2014 3:28:40 PM	R21336
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.040	0.0020		mg/L	1	9/18/2014 5:02:52 PM	15343
Cadmium	ND	0.0020		mg/L	1	9/18/2014 5:02:52 PM	15343
Chromium	ND	0.0060		mg/L	1	9/18/2014 5:02:52 PM	15343
Copper	ND	0.0060		mg/L	1	9/18/2014 5:02:52 PM	15343
Iron	0.21	0.020		mg/L	1	9/18/2014 5:02:52 PM	15343
Manganese	0.14	0.0020	*	mg/L	1	9/18/2014 5:02:52 PM	15343
Silver	ND	0.0050		mg/L	1	9/18/2014 5:02:52 PM	15343
Zinc	ND	0.010		mg/L	1	9/18/2014 5:02:52 PM	15343
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0022	0.0010		mg/L	1	9/26/2014 10:33:14 AM	R21493
Lead	ND	0.0010		mg/L	1	9/26/2014 10:33:14 AM	R21493
Selenium	0.0047	0.0010		mg/L	1	9/26/2014 10:33:14 AM	R21493
Uranium	0.014	0.0010		mg/L	1	9/26/2014 10:33:14 AM	R21493
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0022	0.0010		mg/L	1	9/23/2014 5:14:10 PM	15343
Lead	ND	0.0010		mg/L	1	9/23/2014 5:14:10 PM	15343
Selenium	0.0048	0.0010		mg/L	1	9/23/2014 5:14:10 PM	15343

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-2B
Project: 2014 Annual GW
Collection Date: 9/9/2014 4:10:00 PM
Lab ID: 1409794-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Uranium	0.015	0.0010		mg/L	1	9/23/2014 5:14:10 PM	15343
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/24/2014 10:19:06 AM	15449
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Acenaphthylene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Aniline	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Anthracene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Azobenzene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Benz(a)anthracene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Benzo(a)pyrene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Benzo(b)fluoranthene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Benzo(g,h,i)perylene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Benzo(k)fluoranthene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Benzoic acid	ND	20	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Benzyl alcohol	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Bis(2-chloroethoxy)methane	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Bis(2-chloroethyl)ether	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Bis(2-chloroisopropyl)ether	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Bis(2-ethylhexyl)phthalate	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
4-Bromophenyl phenyl ether	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Butyl benzyl phthalate	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Carbazole	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
4-Chloro-3-methylphenol	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
4-Chloroaniline	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
2-Chloronaphthalene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
2-Chlorophenol	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
4-Chlorophenyl phenyl ether	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Chrysene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Di-n-butyl phthalate	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Di-n-octyl phthalate	ND	20	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Dibenz(a,h)anthracene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Dibenzofuran	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
1,2-Dichlorobenzene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
1,3-Dichlorobenzene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
1,4-Dichlorobenzene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
3,3´-Dichlorobenzidine	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Diethyl phthalate	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-2B
Project: 2014 Annual GW
Collection Date: 9/9/2014 4:10:00 PM
Lab ID: 1409794-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dimethyl phthalate	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
2,4-Dichlorophenol	ND	20	H	µg/L	1	9/18/2014 3:03:02 PM	15342
2,4-Dimethylphenol	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
4,6-Dinitro-2-methylphenol	ND	20	H	µg/L	1	9/18/2014 3:03:02 PM	15342
2,4-Dinitrophenol	ND	20	H	µg/L	1	9/18/2014 3:03:02 PM	15342
2,4-Dinitrotoluene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
2,6-Dinitrotoluene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Fluoranthene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Fluorene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Hexachlorobenzene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Hexachlorobutadiene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Hexachlorocyclopentadiene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Hexachloroethane	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Indeno(1,2,3-cd)pyrene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Isophorone	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
1-Methylnaphthalene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
2-Methylnaphthalene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
2-Methylphenol	ND	20	H	µg/L	1	9/18/2014 3:03:02 PM	15342
3+4-Methylphenol	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
N-Nitrosodi-n-propylamine	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
N-Nitrosodimethylamine	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
N-Nitrosodiphenylamine	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Naphthalene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
2-Nitroaniline	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
3-Nitroaniline	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
4-Nitroaniline	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Nitrobenzene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
2-Nitrophenol	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
4-Nitrophenol	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Pentachlorophenol	ND	20	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Phenanthrene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Phenol	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Pyrene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Pyridine	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
1,2,4-Trichlorobenzene	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
2,4,5-Trichlorophenol	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
2,4,6-Trichlorophenol	ND	10	H	µg/L	1	9/18/2014 3:03:02 PM	15342
Surr: 2-Fluorophenol	54.3	12.1-85.8	H	%REC	1	9/18/2014 3:03:02 PM	15342
Surr: Phenol-d5	43.9	17.7-65.8	H	%REC	1	9/18/2014 3:03:02 PM	15342

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-2B
Project: 2014 Annual GW
Collection Date: 9/9/2014 4:10:00 PM
Lab ID: 1409794-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Surr: 2,4,6-Tribromophenol	62.1	26-138	H	%REC	1	9/18/2014 3:03:02 PM	15342
Surr: Nitrobenzene-d5	70.9	47.5-119	H	%REC	1	9/18/2014 3:03:02 PM	15342
Surr: 2-Fluorobiphenyl	71.4	48.1-106	H	%REC	1	9/18/2014 3:03:02 PM	15342
Surr: 4-Terphenyl-d14	71.9	44-113	H	%REC	1	9/18/2014 3:03:02 PM	15342
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
Toluene	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
Ethylbenzene	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
Naphthalene	ND	2.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
1-Methylnaphthalene	ND	4.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
2-Methylnaphthalene	ND	4.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
Acetone	ND	10		µg/L	1	9/18/2014 1:21:21 PM	R21295
Bromobenzene	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
Bromodichloromethane	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
Bromoform	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
Bromomethane	ND	3.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
2-Butanone	ND	10		µg/L	1	9/18/2014 1:21:21 PM	R21295
Carbon disulfide	ND	10		µg/L	1	9/18/2014 1:21:21 PM	R21295
Carbon Tetrachloride	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
Chlorobenzene	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
Chloroethane	ND	2.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
Chloroform	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
Chloromethane	ND	3.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
2-Chlorotoluene	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
4-Chlorotoluene	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
cis-1,2-DCE	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
Dibromochloromethane	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
Dibromomethane	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-2B
Project: 2014 Annual GW
Collection Date: 9/9/2014 4:10:00 PM
Lab ID: 1409794-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloroethane	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
1,1-Dichloroethene	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
1,2-Dichloropropane	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
1,3-Dichloropropane	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
2,2-Dichloropropane	ND	2.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
1,1-Dichloropropene	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
Hexachlorobutadiene	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
2-Hexanone	ND	10		µg/L	1	9/18/2014 1:21:21 PM	R21295
Isopropylbenzene	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
4-Isopropyltoluene	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
4-Methyl-2-pentanone	ND	10		µg/L	1	9/18/2014 1:21:21 PM	R21295
Methylene Chloride	ND	3.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
n-Butylbenzene	ND	3.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
n-Propylbenzene	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
sec-Butylbenzene	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
Styrene	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
tert-Butylbenzene	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
trans-1,2-DCE	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
Trichlorofluoromethane	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
Vinyl chloride	ND	1.0		µg/L	1	9/18/2014 1:21:21 PM	R21295
Xylenes, Total	ND	1.5		µg/L	1	9/18/2014 1:21:21 PM	R21295
Surr: 1,2-Dichloroethane-d4	87.8	70-130		%REC	1	9/18/2014 1:21:21 PM	R21295
Surr: 4-Bromofluorobenzene	102	70-130		%REC	1	9/18/2014 1:21:21 PM	R21295
Surr: Dibromofluoromethane	90.6	70-130		%REC	1	9/18/2014 1:21:21 PM	R21295
Surr: Toluene-d8	92.3	70-130		%REC	1	9/18/2014 1:21:21 PM	R21295

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-2A
Project: 2014 Annual GW
Collection Date: 9/9/2014 5:10:00 PM
Lab ID: 1409794-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	1.1	0.10		mg/L	1	9/18/2014 2:40:34 AM	R21277
Chloride	37	10		mg/L	20	9/19/2014 3:30:10 AM	R21321
Bromide	0.40	0.10		mg/L	1	9/18/2014 2:40:34 AM	R21277
Phosphorus, Orthophosphate (As P)	0.57	0.50	H	mg/L	1	9/18/2014 2:40:34 AM	R21277
Sulfate	7.1	0.50		mg/L	1	9/18/2014 2:40:34 AM	R21277
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/18/2014 2:35:50 AM	R21283
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.16	0.0020		mg/L	1	9/18/2014 1:09:49 PM	R21290
Cadmium	ND	0.0020		mg/L	1	9/18/2014 1:09:49 PM	R21290
Calcium	8.9	1.0		mg/L	1	9/18/2014 1:09:49 PM	R21290
Chromium	ND	0.0060		mg/L	1	9/18/2014 1:09:49 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 1:09:49 PM	R21290
Iron	0.38	0.020	*	mg/L	1	9/18/2014 1:09:49 PM	R21290
Magnesium	3.3	1.0		mg/L	1	9/18/2014 1:09:49 PM	R21290
Manganese	0.13	0.0020	*	mg/L	1	9/19/2014 3:32:29 PM	R21336
Potassium	1.2	1.0		mg/L	1	9/18/2014 1:09:49 PM	R21290
Silver	ND	0.0050		mg/L	1	9/18/2014 1:09:49 PM	R21290
Sodium	340	10		mg/L	10	9/19/2014 3:34:33 PM	R21336
Zinc	ND	0.010		mg/L	1	9/19/2014 3:32:29 PM	R21336
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.13	0.0020		mg/L	1	9/18/2014 4:15:11 PM	15343
Cadmium	ND	0.0020		mg/L	1	9/18/2014 4:15:11 PM	15343
Chromium	ND	0.0060		mg/L	1	9/18/2014 4:15:11 PM	15343
Copper	ND	0.0060		mg/L	1	9/18/2014 4:15:11 PM	15343
Iron	0.34	0.020	*	mg/L	1	9/18/2014 4:15:11 PM	15343
Manganese	0.12	0.0020	*	mg/L	1	9/18/2014 4:15:11 PM	15343
Silver	ND	0.0050		mg/L	1	9/18/2014 4:15:11 PM	15343
Zinc	ND	0.010		mg/L	1	9/18/2014 4:15:11 PM	15343
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0083	0.0010		mg/L	1	9/26/2014 10:42:33 AM	R21493
Lead	ND	0.0050		mg/L	5	9/29/2014 4:03:30 PM	R21527
Selenium	0.0027	0.0010		mg/L	1	9/26/2014 10:42:33 AM	R21493
Uranium	ND	0.0050		mg/L	5	9/29/2014 4:03:30 PM	R21527
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0085	0.0010		mg/L	1	9/23/2014 5:17:16 PM	15343
Lead	ND	0.0010		mg/L	1	9/23/2014 5:17:16 PM	15343
Selenium	0.0023	0.0010		mg/L	1	9/23/2014 5:17:16 PM	15343

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-2A
Project: 2014 Annual GW
Collection Date: 9/9/2014 5:10:00 PM
Lab ID: 1409794-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Uranium	ND	0.0010		mg/L	1	9/23/2014 5:17:16 PM	15343
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/24/2014 10:20:52 AM	15449
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Acenaphthylene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Aniline	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Anthracene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Azobenzene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Benz(a)anthracene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Benzo(a)pyrene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Benzo(b)fluoranthene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Benzo(g,h,i)perylene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Benzo(k)fluoranthene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Benzoic acid	ND	20	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Benzyl alcohol	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Bis(2-chloroethoxy)methane	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Bis(2-chloroethyl)ether	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Bis(2-chloroisopropyl)ether	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Bis(2-ethylhexyl)phthalate	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
4-Bromophenyl phenyl ether	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Butyl benzyl phthalate	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Carbazole	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
4-Chloro-3-methylphenol	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
4-Chloroaniline	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
2-Chloronaphthalene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
2-Chlorophenol	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
4-Chlorophenyl phenyl ether	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Chrysene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Di-n-butyl phthalate	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Di-n-octyl phthalate	ND	20	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Dibenz(a,h)anthracene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Dibenzofuran	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
1,2-Dichlorobenzene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
1,3-Dichlorobenzene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
1,4-Dichlorobenzene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
3,3´-Dichlorobenzidine	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Diethyl phthalate	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-2A
Project: 2014 Annual GW
Collection Date: 9/9/2014 5:10:00 PM
Lab ID: 1409794-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dimethyl phthalate	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
2,4-Dichlorophenol	ND	20	H	µg/L	1	9/18/2014 3:32:22 PM	15342
2,4-Dimethylphenol	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
4,6-Dinitro-2-methylphenol	ND	20	H	µg/L	1	9/18/2014 3:32:22 PM	15342
2,4-Dinitrophenol	ND	20	H	µg/L	1	9/18/2014 3:32:22 PM	15342
2,4-Dinitrotoluene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
2,6-Dinitrotoluene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Fluoranthene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Fluorene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Hexachlorobenzene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Hexachlorobutadiene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Hexachlorocyclopentadiene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Hexachloroethane	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Indeno(1,2,3-cd)pyrene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Isophorone	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
1-Methylnaphthalene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
2-Methylnaphthalene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
2-Methylphenol	ND	20	H	µg/L	1	9/18/2014 3:32:22 PM	15342
3+4-Methylphenol	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
N-Nitrosodi-n-propylamine	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
N-Nitrosodimethylamine	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
N-Nitrosodiphenylamine	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Naphthalene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
2-Nitroaniline	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
3-Nitroaniline	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
4-Nitroaniline	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Nitrobenzene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
2-Nitrophenol	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
4-Nitrophenol	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Pentachlorophenol	ND	20	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Phenanthrene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Phenol	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Pyrene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Pyridine	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
1,2,4-Trichlorobenzene	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
2,4,5-Trichlorophenol	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
2,4,6-Trichlorophenol	ND	10	H	µg/L	1	9/18/2014 3:32:22 PM	15342
Surr: 2-Fluorophenol	62.6	12.1-85.8	H	%REC	1	9/18/2014 3:32:22 PM	15342
Surr: Phenol-d5	52.9	17.7-65.8	H	%REC	1	9/18/2014 3:32:22 PM	15342

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-2A
Project: 2014 Annual GW
Collection Date: 9/9/2014 5:10:00 PM
Lab ID: 1409794-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Surr: 2,4,6-Tribromophenol	73.7	26-138	H	%REC	1	9/18/2014 3:32:22 PM	15342
Surr: Nitrobenzene-d5	84.2	47.5-119	H	%REC	1	9/18/2014 3:32:22 PM	15342
Surr: 2-Fluorobiphenyl	77.8	48.1-106	H	%REC	1	9/18/2014 3:32:22 PM	15342
Surr: 4-Terphenyl-d14	85.4	44-113	H	%REC	1	9/18/2014 3:32:22 PM	15342
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
Toluene	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
Ethylbenzene	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
Naphthalene	ND	2.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
1-Methylnaphthalene	ND	4.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
2-Methylnaphthalene	ND	4.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
Acetone	ND	10		µg/L	1	9/18/2014 1:51:04 PM	R21295
Bromobenzene	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
Bromodichloromethane	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
Bromoform	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
Bromomethane	ND	3.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
2-Butanone	ND	10		µg/L	1	9/18/2014 1:51:04 PM	R21295
Carbon disulfide	ND	10		µg/L	1	9/18/2014 1:51:04 PM	R21295
Carbon Tetrachloride	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
Chlorobenzene	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
Chloroethane	ND	2.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
Chloroform	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
Chloromethane	ND	3.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
2-Chlorotoluene	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
4-Chlorotoluene	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
cis-1,2-DCE	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
Dibromochloromethane	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
Dibromomethane	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-2A
Project: 2014 Annual GW
Collection Date: 9/9/2014 5:10:00 PM
Lab ID: 1409794-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloroethane	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
1,1-Dichloroethene	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
1,2-Dichloropropane	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
1,3-Dichloropropane	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
2,2-Dichloropropane	ND	2.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
1,1-Dichloropropene	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
Hexachlorobutadiene	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
2-Hexanone	ND	10		µg/L	1	9/18/2014 1:51:04 PM	R21295
Isopropylbenzene	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
4-Isopropyltoluene	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
4-Methyl-2-pentanone	ND	10		µg/L	1	9/18/2014 1:51:04 PM	R21295
Methylene Chloride	ND	3.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
n-Butylbenzene	ND	3.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
n-Propylbenzene	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
sec-Butylbenzene	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
Styrene	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
tert-Butylbenzene	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
trans-1,2-DCE	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
Trichlorofluoromethane	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
Vinyl chloride	ND	1.0		µg/L	1	9/18/2014 1:51:04 PM	R21295
Xylenes, Total	ND	1.5		µg/L	1	9/18/2014 1:51:04 PM	R21295
Surr: 1,2-Dichloroethane-d4	92.3	70-130		%REC	1	9/18/2014 1:51:04 PM	R21295
Surr: 4-Bromofluorobenzene	108	70-130		%REC	1	9/18/2014 1:51:04 PM	R21295
Surr: Dibromofluoromethane	93.0	70-130		%REC	1	9/18/2014 1:51:04 PM	R21295
Surr: Toluene-d8	91.0	70-130		%REC	1	9/18/2014 1:51:04 PM	R21295

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-1C
Project: 2014 Annual GW
Collection Date: 9/10/2014 1:45:00 PM
Lab ID: 1409794-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	2.6	0.10		mg/L	1	9/18/2014 3:05:23 AM	R21277
Chloride	33	10		mg/L	20	9/19/2014 3:42:34 AM	R21321
Bromide	0.12	0.10		mg/L	1	9/18/2014 3:05:23 AM	R21277
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/18/2014 3:05:23 AM	R21277
Sulfate	260	10		mg/L	20	9/18/2014 3:17:48 AM	R21277
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/18/2014 2:48:15 AM	R21283
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.020	0.0020		mg/L	1	9/18/2014 1:11:46 PM	R21290
Cadmium	ND	0.0020		mg/L	1	9/18/2014 1:11:46 PM	R21290
Calcium	3.2	1.0		mg/L	1	9/18/2014 1:11:46 PM	R21290
Chromium	ND	0.0060		mg/L	1	9/18/2014 1:11:46 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 1:11:46 PM	R21290
Iron	ND	0.020		mg/L	1	9/18/2014 1:11:46 PM	R21290
Magnesium	ND	1.0		mg/L	1	9/18/2014 1:11:46 PM	R21290
Manganese	0.011	0.0020		mg/L	1	9/19/2014 3:36:15 PM	R21336
Potassium	1.6	1.0		mg/L	1	9/18/2014 1:11:46 PM	R21290
Silver	ND	0.0050		mg/L	1	9/18/2014 1:11:46 PM	R21290
Sodium	320	10		mg/L	10	9/19/2014 3:38:33 PM	R21336
Zinc	ND	0.010		mg/L	1	9/19/2014 3:36:15 PM	R21336
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.026	0.0020		mg/L	1	9/18/2014 4:18:55 PM	15343
Cadmium	ND	0.0020		mg/L	1	9/18/2014 4:18:55 PM	15343
Chromium	ND	0.0060		mg/L	1	9/18/2014 4:18:55 PM	15343
Copper	ND	0.0060		mg/L	1	9/18/2014 4:18:55 PM	15343
Iron	0.43	0.020	*	mg/L	1	9/18/2014 4:18:55 PM	15343
Manganese	0.028	0.0020		mg/L	1	9/18/2014 4:18:55 PM	15343
Silver	ND	0.0050		mg/L	1	9/18/2014 4:18:55 PM	15343
Zinc	ND	0.010		mg/L	1	9/18/2014 4:18:55 PM	15343
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0010		mg/L	1	9/26/2014 10:45:39 AM	R21493
Lead	ND	0.0050		mg/L	5	9/29/2014 4:06:37 PM	R21527
Selenium	ND	0.0010		mg/L	1	9/26/2014 10:45:39 AM	R21493
Uranium	0.0089	0.0050		mg/L	5	9/29/2014 4:06:37 PM	R21527
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0010		mg/L	1	9/23/2014 5:20:22 PM	15343
Lead	ND	0.0010		mg/L	1	9/23/2014 5:20:22 PM	15343
Selenium	ND	0.0010		mg/L	1	9/23/2014 5:20:22 PM	15343

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-1C
Project: 2014 Annual GW
Collection Date: 9/10/2014 1:45:00 PM
Lab ID: 1409794-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Uranium	0.0099	0.0010		mg/L	1	9/23/2014 5:20:22 PM	15343
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/24/2014 10:26:14 AM	15449
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Acenaphthylene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Aniline	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Anthracene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Azobenzene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Benz(a)anthracene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Benzo(a)pyrene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Benzo(b)fluoranthene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Benzo(k)fluoranthene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Benzoic acid	ND	20		µg/L	1	9/18/2014 4:01:42 PM	15342
Benzyl alcohol	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Butyl benzyl phthalate	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Carbazole	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
4-Chloroaniline	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
2-Chloronaphthalene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
2-Chlorophenol	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Chrysene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Di-n-butyl phthalate	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Di-n-octyl phthalate	ND	20		µg/L	1	9/18/2014 4:01:42 PM	15342
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Dibenzofuran	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
1,2-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
1,3-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
1,4-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Diethyl phthalate	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-1C
Project: 2014 Annual GW
Collection Date: 9/10/2014 1:45:00 PM
Lab ID: 1409794-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dimethyl phthalate	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
2,4-Dichlorophenol	ND	20		µg/L	1	9/18/2014 4:01:42 PM	15342
2,4-Dimethylphenol	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/18/2014 4:01:42 PM	15342
2,4-Dinitrophenol	ND	20		µg/L	1	9/18/2014 4:01:42 PM	15342
2,4-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
2,6-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Fluoranthene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Fluorene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Hexachlorobenzene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Hexachlorobutadiene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Hexachloroethane	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Isophorone	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
1-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
2-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
2-Methylphenol	ND	20		µg/L	1	9/18/2014 4:01:42 PM	15342
3+4-Methylphenol	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
N-Nitrosodimethylamine	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Naphthalene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
2-Nitroaniline	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
3-Nitroaniline	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
4-Nitroaniline	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Nitrobenzene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
2-Nitrophenol	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
4-Nitrophenol	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Pentachlorophenol	ND	20		µg/L	1	9/18/2014 4:01:42 PM	15342
Phenanthrene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Phenol	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Pyrene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Pyridine	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/18/2014 4:01:42 PM	15342
Surr: 2-Fluorophenol	57.4	12.1-85.8		%REC	1	9/18/2014 4:01:42 PM	15342
Surr: Phenol-d5	46.1	17.7-65.8		%REC	1	9/18/2014 4:01:42 PM	15342

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-1C
Project: 2014 Annual GW
Collection Date: 9/10/2014 1:45:00 PM
Lab ID: 1409794-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Surr: 2,4,6-Tribromophenol	62.3	26-138		%REC	1	9/18/2014 4:01:42 PM	15342
Surr: Nitrobenzene-d5	75.1	47.5-119		%REC	1	9/18/2014 4:01:42 PM	15342
Surr: 2-Fluorobiphenyl	73.6	48.1-106		%REC	1	9/18/2014 4:01:42 PM	15342
Surr: 4-Terphenyl-d14	79.5	44-113		%REC	1	9/18/2014 4:01:42 PM	15342
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
Toluene	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
Ethylbenzene	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
Naphthalene	ND	2.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
1-Methylnaphthalene	ND	4.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
2-Methylnaphthalene	ND	4.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
Acetone	ND	10		µg/L	1	9/18/2014 2:20:43 PM	R21295
Bromobenzene	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
Bromodichloromethane	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
Bromoform	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
Bromomethane	ND	3.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
2-Butanone	ND	10		µg/L	1	9/18/2014 2:20:43 PM	R21295
Carbon disulfide	ND	10		µg/L	1	9/18/2014 2:20:43 PM	R21295
Carbon Tetrachloride	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
Chlorobenzene	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
Chloroethane	ND	2.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
Chloroform	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
Chloromethane	ND	3.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
2-Chlorotoluene	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
4-Chlorotoluene	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
cis-1,2-DCE	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
Dibromochloromethane	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
Dibromomethane	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-1C
Project: 2014 Annual GW
Collection Date: 9/10/2014 1:45:00 PM
Lab ID: 1409794-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloroethane	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
1,1-Dichloroethene	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
1,2-Dichloropropane	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
1,3-Dichloropropane	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
2,2-Dichloropropane	ND	2.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
1,1-Dichloropropene	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
Hexachlorobutadiene	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
2-Hexanone	ND	10		µg/L	1	9/18/2014 2:20:43 PM	R21295
Isopropylbenzene	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
4-Isopropyltoluene	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
4-Methyl-2-pentanone	ND	10		µg/L	1	9/18/2014 2:20:43 PM	R21295
Methylene Chloride	ND	3.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
n-Butylbenzene	ND	3.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
n-Propylbenzene	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
sec-Butylbenzene	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
Styrene	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
tert-Butylbenzene	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
trans-1,2-DCE	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
Trichlorofluoromethane	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
Vinyl chloride	ND	1.0		µg/L	1	9/18/2014 2:20:43 PM	R21295
Xylenes, Total	ND	1.5		µg/L	1	9/18/2014 2:20:43 PM	R21295
Surr: 1,2-Dichloroethane-d4	90.0	70-130		%REC	1	9/18/2014 2:20:43 PM	R21295
Surr: 4-Bromofluorobenzene	110	70-130		%REC	1	9/18/2014 2:20:43 PM	R21295
Surr: Dibromofluoromethane	91.1	70-130		%REC	1	9/18/2014 2:20:43 PM	R21295
Surr: Toluene-d8	93.5	70-130		%REC	1	9/18/2014 2:20:43 PM	R21295

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-2C
Project: 2014 Annual GW
Collection Date: 9/10/2014 3:40:00 PM
Lab ID: 1409794-004
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	2.0	0.10		mg/L	1	9/18/2014 3:30:13 AM	R21277
Chloride	42	10		mg/L	20	9/19/2014 3:54:59 AM	R21321
Bromide	0.11	0.10		mg/L	1	9/18/2014 3:30:13 AM	R21277
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/18/2014 3:30:13 AM	R21277
Sulfate	260	10		mg/L	20	9/18/2014 3:42:38 AM	R21277
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/18/2014 3:00:40 AM	R21283
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.031	0.0020		mg/L	1	9/18/2014 1:13:40 PM	R21290
Cadmium	ND	0.0020		mg/L	1	9/18/2014 1:13:40 PM	R21290
Calcium	3.0	1.0		mg/L	1	9/18/2014 1:13:40 PM	R21290
Chromium	ND	0.0060		mg/L	1	9/18/2014 1:13:40 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 1:13:40 PM	R21290
Iron	0.81	0.020	*	mg/L	1	9/18/2014 1:13:40 PM	R21290
Magnesium	ND	1.0		mg/L	1	9/18/2014 1:13:40 PM	R21290
Manganese	0.026	0.0020		mg/L	1	9/19/2014 3:40:16 PM	R21336
Potassium	1.6	1.0		mg/L	1	9/18/2014 1:13:40 PM	R21290
Silver	ND	0.0050		mg/L	1	9/18/2014 1:13:40 PM	R21290
Sodium	300	10		mg/L	10	9/19/2014 3:41:55 PM	R21336
Zinc	ND	0.010		mg/L	1	9/19/2014 3:40:16 PM	R21336
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.055	0.0020		mg/L	1	9/18/2014 4:20:55 PM	15343
Cadmium	ND	0.0020		mg/L	1	9/18/2014 4:20:55 PM	15343
Chromium	0.010	0.0060		mg/L	1	9/18/2014 4:20:55 PM	15343
Copper	ND	0.0060		mg/L	1	9/18/2014 4:20:55 PM	15343
Iron	2.5	0.20	*	mg/L	10	9/18/2014 5:09:16 PM	15343
Manganese	0.067	0.0020	*	mg/L	1	9/18/2014 4:20:55 PM	15343
Silver	ND	0.0050		mg/L	1	9/18/2014 4:20:55 PM	15343
Zinc	0.014	0.010		mg/L	1	9/18/2014 4:20:55 PM	15343
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0010		mg/L	1	9/26/2014 10:48:45 AM	R21493
Lead	ND	0.0050		mg/L	5	9/29/2014 4:09:43 PM	R21527
Selenium	ND	0.0010		mg/L	1	9/26/2014 10:48:45 AM	R21493
Uranium	0.0051	0.0050		mg/L	5	9/29/2014 4:09:43 PM	R21527
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0011	0.0010		mg/L	1	9/23/2014 5:23:28 PM	15343
Lead	0.0017	0.0010		mg/L	1	9/23/2014 5:23:28 PM	15343
Selenium	ND	0.0010		mg/L	1	9/23/2014 5:23:28 PM	15343

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-2C
Project: 2014 Annual GW
Collection Date: 9/10/2014 3:40:00 PM
Lab ID: 1409794-004
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Uranium	0.0056	0.0010		mg/L	1	9/23/2014 5:23:28 PM	15343
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/24/2014 10:28:02 AM	15449
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Acenaphthylene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Aniline	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Anthracene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Azobenzene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Benz(a)anthracene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Benzo(a)pyrene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Benzo(b)fluoranthene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Benzo(k)fluoranthene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Benzoic acid	ND	20		µg/L	1	9/18/2014 4:30:53 PM	15342
Benzyl alcohol	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Butyl benzyl phthalate	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Carbazole	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
4-Chloroaniline	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
2-Chloronaphthalene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
2-Chlorophenol	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Chrysene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Di-n-butyl phthalate	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Di-n-octyl phthalate	ND	20		µg/L	1	9/18/2014 4:30:53 PM	15342
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Dibenzofuran	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
1,2-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
1,3-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
1,4-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Diethyl phthalate	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-2C
Project: 2014 Annual GW
Collection Date: 9/10/2014 3:40:00 PM
Lab ID: 1409794-004
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dimethyl phthalate	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
2,4-Dichlorophenol	ND	20		µg/L	1	9/18/2014 4:30:53 PM	15342
2,4-Dimethylphenol	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/18/2014 4:30:53 PM	15342
2,4-Dinitrophenol	ND	20		µg/L	1	9/18/2014 4:30:53 PM	15342
2,4-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
2,6-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Fluoranthene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Fluorene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Hexachlorobenzene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Hexachlorobutadiene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Hexachloroethane	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Isophorone	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
1-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
2-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
2-Methylphenol	ND	20		µg/L	1	9/18/2014 4:30:53 PM	15342
3+4-Methylphenol	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
N-Nitrosodimethylamine	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Naphthalene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
2-Nitroaniline	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
3-Nitroaniline	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
4-Nitroaniline	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Nitrobenzene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
2-Nitrophenol	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
4-Nitrophenol	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Pentachlorophenol	ND	20		µg/L	1	9/18/2014 4:30:53 PM	15342
Phenanthrene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Phenol	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Pyrene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Pyridine	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/18/2014 4:30:53 PM	15342
Surr: 2-Fluorophenol	53.0	12.1-85.8		%REC	1	9/18/2014 4:30:53 PM	15342
Surr: Phenol-d5	43.5	17.7-65.8		%REC	1	9/18/2014 4:30:53 PM	15342

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-2C
Project: 2014 Annual GW
Collection Date: 9/10/2014 3:40:00 PM
Lab ID: 1409794-004
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Surr: 2,4,6-Tribromophenol	58.8	26-138		%REC	1	9/18/2014 4:30:53 PM	15342
Surr: Nitrobenzene-d5	64.6	47.5-119		%REC	1	9/18/2014 4:30:53 PM	15342
Surr: 2-Fluorobiphenyl	62.0	48.1-106		%REC	1	9/18/2014 4:30:53 PM	15342
Surr: 4-Terphenyl-d14	64.3	44-113		%REC	1	9/18/2014 4:30:53 PM	15342
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
Toluene	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
Ethylbenzene	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
Naphthalene	ND	2.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
1-Methylnaphthalene	ND	4.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
2-Methylnaphthalene	ND	4.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
Acetone	ND	10		µg/L	1	9/18/2014 2:50:21 PM	R21295
Bromobenzene	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
Bromodichloromethane	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
Bromoform	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
Bromomethane	ND	3.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
2-Butanone	ND	10		µg/L	1	9/18/2014 2:50:21 PM	R21295
Carbon disulfide	ND	10		µg/L	1	9/18/2014 2:50:21 PM	R21295
Carbon Tetrachloride	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
Chlorobenzene	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
Chloroethane	ND	2.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
Chloroform	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
Chloromethane	ND	3.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
2-Chlorotoluene	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
4-Chlorotoluene	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
cis-1,2-DCE	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
Dibromochloromethane	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
Dibromomethane	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295

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Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-2C
Project: 2014 Annual GW
Collection Date: 9/10/2014 3:40:00 PM
Lab ID: 1409794-004
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloroethane	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
1,1-Dichloroethene	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
1,2-Dichloropropane	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
1,3-Dichloropropane	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
2,2-Dichloropropane	ND	2.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
1,1-Dichloropropene	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
Hexachlorobutadiene	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
2-Hexanone	ND	10		µg/L	1	9/18/2014 2:50:21 PM	R21295
Isopropylbenzene	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
4-Isopropyltoluene	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
4-Methyl-2-pentanone	ND	10		µg/L	1	9/18/2014 2:50:21 PM	R21295
Methylene Chloride	ND	3.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
n-Butylbenzene	ND	3.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
n-Propylbenzene	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
sec-Butylbenzene	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
Styrene	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
tert-Butylbenzene	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
trans-1,2-DCE	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
Trichlorofluoromethane	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
Vinyl chloride	ND	1.0		µg/L	1	9/18/2014 2:50:21 PM	R21295
Xylenes, Total	ND	1.5		µg/L	1	9/18/2014 2:50:21 PM	R21295
Surr: 1,2-Dichloroethane-d4	96.6	70-130		%REC	1	9/18/2014 2:50:21 PM	R21295
Surr: 4-Bromofluorobenzene	108	70-130		%REC	1	9/18/2014 2:50:21 PM	R21295
Surr: Dibromofluoromethane	93.8	70-130		%REC	1	9/18/2014 2:50:21 PM	R21295
Surr: Toluene-d8	88.8	70-130		%REC	1	9/18/2014 2:50:21 PM	R21295

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
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R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-3C
Project: 2014 Annual GW
Collection Date: 9/10/2014 4:50:00 PM
Lab ID: 1409794-005
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	1.3	0.10		mg/L	1	9/18/2014 3:55:02 AM	R21277
Chloride	35	10		mg/L	20	9/19/2014 4:32:13 AM	R21321
Bromide	0.14	0.10		mg/L	1	9/18/2014 3:55:02 AM	R21277
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/18/2014 3:55:02 AM	R21277
Sulfate	300	10		mg/L	20	9/18/2014 4:07:26 AM	R21277
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/18/2014 3:13:05 AM	R21283
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.046	0.0020		mg/L	1	9/18/2014 1:15:37 PM	R21290
Cadmium	ND	0.0020		mg/L	1	9/18/2014 1:15:37 PM	R21290
Calcium	4.1	1.0		mg/L	1	9/18/2014 1:15:37 PM	R21290
Chromium	ND	0.0060		mg/L	1	9/18/2014 1:15:37 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 1:15:37 PM	R21290
Iron	0.73	0.020	*	mg/L	1	9/18/2014 1:15:37 PM	R21290
Magnesium	1.0	1.0		mg/L	1	9/18/2014 1:15:37 PM	R21290
Manganese	0.024	0.0020		mg/L	1	9/19/2014 3:43:39 PM	R21336
Potassium	2.0	1.0		mg/L	1	9/18/2014 1:15:37 PM	R21290
Silver	ND	0.0050		mg/L	1	9/18/2014 1:15:37 PM	R21290
Sodium	380	10		mg/L	10	9/19/2014 3:45:40 PM	R21336
Zinc	ND	0.010		mg/L	1	9/19/2014 3:43:39 PM	R21336
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.11	0.0020		mg/L	1	9/18/2014 4:22:35 PM	15343
Cadmium	ND	0.0020		mg/L	1	9/18/2014 4:22:35 PM	15343
Chromium	0.013	0.0060		mg/L	1	9/18/2014 4:22:35 PM	15343
Copper	ND	0.0060		mg/L	1	9/18/2014 4:22:35 PM	15343
Iron	2.7	0.20	*	mg/L	10	9/18/2014 5:10:59 PM	15343
Manganese	0.073	0.0020	*	mg/L	1	9/18/2014 4:22:35 PM	15343
Silver	ND	0.0050		mg/L	1	9/18/2014 4:22:35 PM	15343
Zinc	0.016	0.010		mg/L	1	9/18/2014 4:22:35 PM	15343
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0019	0.0010		mg/L	1	9/26/2014 10:51:51 AM	R21493
Lead	ND	0.0050		mg/L	5	9/29/2014 4:12:49 PM	R21527
Selenium	ND	0.0010		mg/L	1	9/26/2014 10:51:51 AM	R21493
Uranium	ND	0.0050		mg/L	5	9/29/2014 4:12:49 PM	R21527
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0021	0.0010		mg/L	1	9/23/2014 5:26:34 PM	15343
Lead	0.0015	0.0010		mg/L	1	9/23/2014 5:26:34 PM	15343
Selenium	ND	0.0010		mg/L	1	9/23/2014 5:26:34 PM	15343

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-3C
Project: 2014 Annual GW
Collection Date: 9/10/2014 4:50:00 PM
Lab ID: 1409794-005
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Uranium	0.0017	0.0010		mg/L	1	9/23/2014 5:26:34 PM	15343
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/24/2014 10:29:51 AM	15449
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Acenaphthylene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Aniline	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Anthracene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Azobenzene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Benz(a)anthracene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Benzo(a)pyrene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Benzo(b)fluoranthene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Benzo(k)fluoranthene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Benzoic acid	ND	20		µg/L	1	9/18/2014 5:00:00 PM	15342
Benzyl alcohol	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Butyl benzyl phthalate	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Carbazole	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
4-Chloroaniline	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
2-Chloronaphthalene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
2-Chlorophenol	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Chrysene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Di-n-butyl phthalate	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Di-n-octyl phthalate	ND	20		µg/L	1	9/18/2014 5:00:00 PM	15342
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Dibenzofuran	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
1,2-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
1,3-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
1,4-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Diethyl phthalate	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-3C
Project: 2014 Annual GW
Collection Date: 9/10/2014 4:50:00 PM
Lab ID: 1409794-005
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dimethyl phthalate	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
2,4-Dichlorophenol	ND	20		µg/L	1	9/18/2014 5:00:00 PM	15342
2,4-Dimethylphenol	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/18/2014 5:00:00 PM	15342
2,4-Dinitrophenol	ND	20		µg/L	1	9/18/2014 5:00:00 PM	15342
2,4-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
2,6-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Fluoranthene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Fluorene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Hexachlorobenzene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Hexachlorobutadiene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Hexachloroethane	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Isophorone	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
1-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
2-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
2-Methylphenol	ND	20		µg/L	1	9/18/2014 5:00:00 PM	15342
3+4-Methylphenol	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
N-Nitrosodimethylamine	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Naphthalene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
2-Nitroaniline	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
3-Nitroaniline	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
4-Nitroaniline	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Nitrobenzene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
2-Nitrophenol	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
4-Nitrophenol	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Pentachlorophenol	ND	20		µg/L	1	9/18/2014 5:00:00 PM	15342
Phenanthrene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Phenol	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Pyrene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Pyridine	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/18/2014 5:00:00 PM	15342
Surr: 2-Fluorophenol	56.9	12.1-85.8		%REC	1	9/18/2014 5:00:00 PM	15342
Surr: Phenol-d5	48.7	17.7-65.8		%REC	1	9/18/2014 5:00:00 PM	15342

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-3C
Project: 2014 Annual GW
Collection Date: 9/10/2014 4:50:00 PM
Lab ID: 1409794-005
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Surr: 2,4,6-Tribromophenol	64.6	26-138		%REC	1	9/18/2014 5:00:00 PM	15342
Surr: Nitrobenzene-d5	74.2	47.5-119		%REC	1	9/18/2014 5:00:00 PM	15342
Surr: 2-Fluorobiphenyl	70.2	48.1-106		%REC	1	9/18/2014 5:00:00 PM	15342
Surr: 4-Terphenyl-d14	71.2	44-113		%REC	1	9/18/2014 5:00:00 PM	15342
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
Toluene	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
Ethylbenzene	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
Naphthalene	ND	2.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
1-Methylnaphthalene	ND	4.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
2-Methylnaphthalene	ND	4.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
Acetone	ND	10		µg/L	1	9/18/2014 3:20:06 PM	R21295
Bromobenzene	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
Bromodichloromethane	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
Bromoform	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
Bromomethane	ND	3.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
2-Butanone	ND	10		µg/L	1	9/18/2014 3:20:06 PM	R21295
Carbon disulfide	ND	10		µg/L	1	9/18/2014 3:20:06 PM	R21295
Carbon Tetrachloride	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
Chlorobenzene	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
Chloroethane	ND	2.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
Chloroform	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
Chloromethane	ND	3.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
2-Chlorotoluene	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
4-Chlorotoluene	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
cis-1,2-DCE	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
Dibromochloromethane	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
Dibromomethane	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-3C
Project: 2014 Annual GW
Collection Date: 9/10/2014 4:50:00 PM
Lab ID: 1409794-005
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloroethane	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
1,1-Dichloroethene	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
1,2-Dichloropropane	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
1,3-Dichloropropane	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
2,2-Dichloropropane	ND	2.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
1,1-Dichloropropene	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
Hexachlorobutadiene	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
2-Hexanone	ND	10		µg/L	1	9/18/2014 3:20:06 PM	R21295
Isopropylbenzene	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
4-Isopropyltoluene	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
4-Methyl-2-pentanone	ND	10		µg/L	1	9/18/2014 3:20:06 PM	R21295
Methylene Chloride	ND	3.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
n-Butylbenzene	ND	3.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
n-Propylbenzene	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
sec-Butylbenzene	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
Styrene	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
tert-Butylbenzene	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
trans-1,2-DCE	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
Trichlorofluoromethane	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
Vinyl chloride	ND	1.0		µg/L	1	9/18/2014 3:20:06 PM	R21295
Xylenes, Total	ND	1.5		µg/L	1	9/18/2014 3:20:06 PM	R21295
Surr: 1,2-Dichloroethane-d4	92.5	70-130		%REC	1	9/18/2014 3:20:06 PM	R21295
Surr: 4-Bromofluorobenzene	109	70-130		%REC	1	9/18/2014 3:20:06 PM	R21295
Surr: Dibromofluoromethane	93.9	70-130		%REC	1	9/18/2014 3:20:06 PM	R21295
Surr: Toluene-d8	88.2	70-130		%REC	1	9/18/2014 3:20:06 PM	R21295

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-3B
Project: 2014 Annual GW
Collection Date: 9/10/2014 5:40:00 PM
Lab ID: 1409794-006
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	1.6	0.10		mg/L	1	9/18/2014 4:19:51 AM	R21277
Chloride	35	10		mg/L	20	9/19/2014 4:44:37 AM	R21321
Bromide	0.44	0.10		mg/L	1	9/18/2014 4:19:51 AM	R21277
Phosphorus, Orthophosphate (As P)	1.0	0.50	H	mg/L	1	9/18/2014 4:19:51 AM	R21277
Sulfate	54	10		mg/L	20	9/18/2014 4:32:15 AM	R21277
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/18/2014 3:25:29 AM	R21283
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.11	0.0020		mg/L	1	9/18/2014 1:17:34 PM	R21290
Cadmium	ND	0.0020		mg/L	1	9/18/2014 1:17:34 PM	R21290
Calcium	8.3	1.0		mg/L	1	9/18/2014 1:17:34 PM	R21290
Chromium	ND	0.0060		mg/L	1	9/18/2014 1:17:34 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 1:17:34 PM	R21290
Iron	0.42	0.020	*	mg/L	1	9/18/2014 1:17:34 PM	R21290
Magnesium	2.6	1.0		mg/L	1	9/18/2014 1:17:34 PM	R21290
Manganese	0.10	0.0020	*	mg/L	1	9/19/2014 3:53:09 PM	R21336
Potassium	1.4	1.0		mg/L	1	9/18/2014 1:17:34 PM	R21290
Silver	ND	0.0050		mg/L	1	9/18/2014 1:17:34 PM	R21290
Sodium	390	10		mg/L	10	9/19/2014 3:55:10 PM	R21336
Zinc	0.015	0.010		mg/L	1	9/19/2014 3:53:09 PM	R21336
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.074	0.0020		mg/L	1	9/18/2014 4:24:26 PM	15343
Cadmium	ND	0.0020		mg/L	1	9/18/2014 4:24:26 PM	15343
Chromium	ND	0.0060		mg/L	1	9/18/2014 4:24:26 PM	15343
Copper	ND	0.0060		mg/L	1	9/18/2014 4:24:26 PM	15343
Iron	0.32	0.020	*	mg/L	1	9/18/2014 4:24:26 PM	15343
Manganese	0.081	0.0020	*	mg/L	1	9/18/2014 4:24:26 PM	15343
Silver	ND	0.0050		mg/L	1	9/18/2014 4:24:26 PM	15343
Zinc	ND	0.010		mg/L	1	9/18/2014 4:24:26 PM	15343
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0061	0.0010		mg/L	1	9/26/2014 10:54:57 AM	R21493
Lead	ND	0.0050		mg/L	5	9/29/2014 4:15:55 PM	R21527
Selenium	0.0027	0.0010		mg/L	1	9/26/2014 10:54:57 AM	R21493
Uranium	ND	0.0050		mg/L	5	9/29/2014 4:15:55 PM	R21527
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0047	0.0010		mg/L	1	9/23/2014 5:29:40 PM	15343
Lead	ND	0.0010		mg/L	1	9/23/2014 5:29:40 PM	15343
Selenium	0.0022	0.0010		mg/L	1	9/23/2014 5:29:40 PM	15343

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-3B
Project: 2014 Annual GW
Collection Date: 9/10/2014 5:40:00 PM
Lab ID: 1409794-006
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Uranium	ND	0.0010		mg/L	1	9/23/2014 5:29:40 PM	15343
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/24/2014 10:35:25 AM	15449
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Acenaphthylene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Aniline	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Anthracene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Azobenzene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Benz(a)anthracene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Benzo(a)pyrene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Benzo(b)fluoranthene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Benzo(k)fluoranthene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Benzoic acid	ND	20		µg/L	1	9/18/2014 5:29:07 PM	15342
Benzyl alcohol	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Butyl benzyl phthalate	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Carbazole	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
4-Chloroaniline	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
2-Chloronaphthalene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
2-Chlorophenol	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Chrysene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Di-n-butyl phthalate	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Di-n-octyl phthalate	ND	20		µg/L	1	9/18/2014 5:29:07 PM	15342
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Dibenzofuran	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
1,2-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
1,3-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
1,4-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Diethyl phthalate	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-3B
Project: 2014 Annual GW
Collection Date: 9/10/2014 5:40:00 PM
Lab ID: 1409794-006
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dimethyl phthalate	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
2,4-Dichlorophenol	ND	20		µg/L	1	9/18/2014 5:29:07 PM	15342
2,4-Dimethylphenol	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/18/2014 5:29:07 PM	15342
2,4-Dinitrophenol	ND	20		µg/L	1	9/18/2014 5:29:07 PM	15342
2,4-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
2,6-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Fluoranthene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Fluorene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Hexachlorobenzene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Hexachlorobutadiene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Hexachloroethane	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Isophorone	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
1-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
2-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
2-Methylphenol	ND	20		µg/L	1	9/18/2014 5:29:07 PM	15342
3+4-Methylphenol	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
N-Nitrosodimethylamine	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Naphthalene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
2-Nitroaniline	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
3-Nitroaniline	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
4-Nitroaniline	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Nitrobenzene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
2-Nitrophenol	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
4-Nitrophenol	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Pentachlorophenol	ND	20		µg/L	1	9/18/2014 5:29:07 PM	15342
Phenanthrene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Phenol	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Pyrene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Pyridine	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/18/2014 5:29:07 PM	15342
Surr: 2-Fluorophenol	69.5	12.1-85.8		%REC	1	9/18/2014 5:29:07 PM	15342
Surr: Phenol-d5	60.5	17.7-65.8		%REC	1	9/18/2014 5:29:07 PM	15342

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-3B
Project: 2014 Annual GW
Collection Date: 9/10/2014 5:40:00 PM
Lab ID: 1409794-006
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Surr: 2,4,6-Tribromophenol	75.4	26-138		%REC	1	9/18/2014 5:29:07 PM	15342
Surr: Nitrobenzene-d5	85.5	47.5-119		%REC	1	9/18/2014 5:29:07 PM	15342
Surr: 2-Fluorobiphenyl	80.9	48.1-106		%REC	1	9/18/2014 5:29:07 PM	15342
Surr: 4-Terphenyl-d14	81.9	44-113		%REC	1	9/18/2014 5:29:07 PM	15342
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
Toluene	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
Ethylbenzene	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
Naphthalene	ND	2.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
1-Methylnaphthalene	ND	4.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
2-Methylnaphthalene	ND	4.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
Acetone	ND	10		µg/L	1	9/18/2014 3:49:51 PM	R21295
Bromobenzene	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
Bromodichloromethane	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
Bromoform	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
Bromomethane	ND	3.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
2-Butanone	ND	10		µg/L	1	9/18/2014 3:49:51 PM	R21295
Carbon disulfide	ND	10		µg/L	1	9/18/2014 3:49:51 PM	R21295
Carbon Tetrachloride	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
Chlorobenzene	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
Chloroethane	ND	2.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
Chloroform	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
Chloromethane	ND	3.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
2-Chlorotoluene	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
4-Chlorotoluene	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
cis-1,2-DCE	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
Dibromochloromethane	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
Dibromomethane	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-3B
Project: 2014 Annual GW
Collection Date: 9/10/2014 5:40:00 PM
Lab ID: 1409794-006
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloroethane	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
1,1-Dichloroethene	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
1,2-Dichloropropane	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
1,3-Dichloropropane	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
2,2-Dichloropropane	ND	2.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
1,1-Dichloropropene	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
Hexachlorobutadiene	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
2-Hexanone	ND	10		µg/L	1	9/18/2014 3:49:51 PM	R21295
Isopropylbenzene	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
4-Isopropyltoluene	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
4-Methyl-2-pentanone	ND	10		µg/L	1	9/18/2014 3:49:51 PM	R21295
Methylene Chloride	ND	3.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
n-Butylbenzene	ND	3.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
n-Propylbenzene	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
sec-Butylbenzene	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
Styrene	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
tert-Butylbenzene	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
trans-1,2-DCE	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
Trichlorofluoromethane	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
Vinyl chloride	ND	1.0		µg/L	1	9/18/2014 3:49:51 PM	R21295
Xylenes, Total	ND	1.5		µg/L	1	9/18/2014 3:49:51 PM	R21295
Surr: 1,2-Dichloroethane-d4	96.2	70-130		%REC	1	9/18/2014 3:49:51 PM	R21295
Surr: 4-Bromofluorobenzene	110	70-130		%REC	1	9/18/2014 3:49:51 PM	R21295
Surr: Dibromofluoromethane	96.7	70-130		%REC	1	9/18/2014 3:49:51 PM	R21295
Surr: Toluene-d8	92.0	70-130		%REC	1	9/18/2014 3:49:51 PM	R21295

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Field Blank
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409794-007
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
Toluene	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
Ethylbenzene	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
Naphthalene	ND	2.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
1-Methylnaphthalene	ND	4.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
2-Methylnaphthalene	ND	4.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
Acetone	ND	10		µg/L	1	9/18/2014 4:19:34 PM	R21295
Bromobenzene	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
Bromodichloromethane	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
Bromoform	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
Bromomethane	ND	3.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
2-Butanone	ND	10		µg/L	1	9/18/2014 4:19:34 PM	R21295
Carbon disulfide	ND	10		µg/L	1	9/18/2014 4:19:34 PM	R21295
Carbon Tetrachloride	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
Chlorobenzene	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
Chloroethane	ND	2.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
Chloroform	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
Chloromethane	ND	3.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
2-Chlorotoluene	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
4-Chlorotoluene	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
cis-1,2-DCE	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
Dibromochloromethane	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
Dibromomethane	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
1,1-Dichloroethane	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
1,1-Dichloroethene	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
1,2-Dichloropropane	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
1,3-Dichloropropane	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
2,2-Dichloropropane	ND	2.0		µg/L	1	9/18/2014 4:19:34 PM	R21295

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Field Blank
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409794-007
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
Hexachlorobutadiene	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
2-Hexanone	ND	10		µg/L	1	9/18/2014 4:19:34 PM	R21295
Isopropylbenzene	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
4-Isopropyltoluene	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
4-Methyl-2-pentanone	ND	10		µg/L	1	9/18/2014 4:19:34 PM	R21295
Methylene Chloride	ND	3.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
n-Butylbenzene	ND	3.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
n-Propylbenzene	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
sec-Butylbenzene	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
Styrene	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
tert-Butylbenzene	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
trans-1,2-DCE	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
Trichlorofluoromethane	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
Vinyl chloride	ND	1.0		µg/L	1	9/18/2014 4:19:34 PM	R21295
Xylenes, Total	ND	1.5		µg/L	1	9/18/2014 4:19:34 PM	R21295
Surr: 1,2-Dichloroethane-d4	94.2	70-130		%REC	1	9/18/2014 4:19:34 PM	R21295
Surr: 4-Bromofluorobenzene	109	70-130		%REC	1	9/18/2014 4:19:34 PM	R21295
Surr: Dibromofluoromethane	94.9	70-130		%REC	1	9/18/2014 4:19:34 PM	R21295
Surr: Toluene-d8	88.7	70-130		%REC	1	9/18/2014 4:19:34 PM	R21295

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409794-008
Matrix: TRIP BLANK
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
Toluene	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
Ethylbenzene	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
Naphthalene	ND	2.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
1-Methylnaphthalene	ND	4.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
2-Methylnaphthalene	ND	4.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
Acetone	ND	10		µg/L	1	9/18/2014 4:49:18 PM	R21295
Bromobenzene	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
Bromodichloromethane	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
Bromoform	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
Bromomethane	ND	3.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
2-Butanone	ND	10		µg/L	1	9/18/2014 4:49:18 PM	R21295
Carbon disulfide	ND	10		µg/L	1	9/18/2014 4:49:18 PM	R21295
Carbon Tetrachloride	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
Chlorobenzene	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
Chloroethane	ND	2.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
Chloroform	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
Chloromethane	ND	3.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
2-Chlorotoluene	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
4-Chlorotoluene	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
cis-1,2-DCE	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
Dibromochloromethane	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
Dibromomethane	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
1,1-Dichloroethane	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
1,1-Dichloroethene	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
1,2-Dichloropropane	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
1,3-Dichloropropane	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
2,2-Dichloropropane	ND	2.0		µg/L	1	9/18/2014 4:49:18 PM	R21295

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409794-008
Matrix: TRIP BLANK
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
Hexachlorobutadiene	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
2-Hexanone	ND	10		µg/L	1	9/18/2014 4:49:18 PM	R21295
Isopropylbenzene	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
4-Isopropyltoluene	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
4-Methyl-2-pentanone	ND	10		µg/L	1	9/18/2014 4:49:18 PM	R21295
Methylene Chloride	ND	3.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
n-Butylbenzene	ND	3.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
n-Propylbenzene	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
sec-Butylbenzene	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
Styrene	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
tert-Butylbenzene	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
trans-1,2-DCE	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
Trichlorofluoromethane	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
Vinyl chloride	ND	1.0		µg/L	1	9/18/2014 4:49:18 PM	R21295
Xylenes, Total	ND	1.5		µg/L	1	9/18/2014 4:49:18 PM	R21295
Surr: 1,2-Dichloroethane-d4	94.5	70-130		%REC	1	9/18/2014 4:49:18 PM	R21295
Surr: 4-Bromofluorobenzene	97.8	70-130		%REC	1	9/18/2014 4:49:18 PM	R21295
Surr: Dibromofluoromethane	99.7	70-130		%REC	1	9/18/2014 4:49:18 PM	R21295
Surr: Toluene-d8	93.5	70-130		%REC	1	9/18/2014 4:49:18 PM	R21295

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409794**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R21290**	RunNo: **21290**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621146** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Silver	ND	0.0050								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21290**	RunNo: **21290**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621147** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.6	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.0	85	115			
Calcium	49	1.0	50.00	0	97.2	85	115			
Chromium	0.48	0.0060	0.5000	0	96.8	85	115			
Copper	0.49	0.0060	0.5000	0	97.1	85	115			
Iron	0.50	0.020	0.5000	0	100	85	115			
Magnesium	49	1.0	50.00	0	97.8	85	115			
Potassium	48	1.0	50.00	0	96.0	85	115			

Sample ID **LCS (Ag)**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21290**	RunNo: **21290**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621148** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.096	0.0050	0.1000	0	95.6	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R21290**	RunNo: **21290**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621149** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409794**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621149** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Silver	ND	0.0050								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621150** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.7	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.8	85	115			
Calcium	48	1.0	50.00	0	96.8	85	115			
Chromium	0.48	0.0060	0.5000	0	96.4	85	115			
Copper	0.48	0.0060	0.5000	0	95.5	85	115			
Iron	0.50	0.020	0.5000	0	99.0	85	115			
Magnesium	49	1.0	50.00	0	97.7	85	115			
Potassium	48	1.0	50.00	0	96.3	85	115			

Sample ID **LCS (Ag)** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621151** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.095	0.0050	0.1000	0	94.6	85	115			

Sample ID **LCS TEST** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621170** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	101	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.6	85	115			
Calcium	50	1.0	50.00	0	99.9	85	115			
Chromium	0.49	0.0060	0.5000	0	98.7	85	115			
Copper	0.49	0.0060	0.5000	0	97.3	85	115			
Iron	0.50	0.020	0.5000	0	101	85	115			
Magnesium	50	1.0	50.00	0	99.5	85	115			
Potassium	50	1.0	50.00	0	99.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409794**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LCS TEST** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621170** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	102	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622776** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	ND	0.0020								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622777** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	0.45	0.0020	0.5000	0	89.7	85	115			
Sodium	50	1.0	50.00	0	99.3	85	115			
Zinc	0.46	0.010	0.5000	0	91.8	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622779** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	ND	0.0020								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622780** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	0.46	0.0020	0.5000	0	91.5	85	115			
Sodium	49	1.0	50.00	0	98.5	85	115			
Zinc	0.47	0.010	0.5000	0	93.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409794**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB-15343** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **15343** RunNo: **21297**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621503** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-15343** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **15343** RunNo: **21297**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621504** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.2	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.6	85	115			
Chromium	0.49	0.0060	0.5000	0	98.1	85	115			
Copper	0.48	0.0060	0.5000	0	96.9	85	115			
Iron	0.48	0.020	0.5000	0	96.5	85	115			
Manganese	0.48	0.0020	0.5000	0	95.0	85	115			
Zinc	0.48	0.010	0.5000	0	96.9	85	115			

Sample ID **LCS Ag-15343** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **15343** RunNo: **21297**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621505** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	102	85	115			

Sample ID **1409794-001DMS(1)** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BW-2B** Batch ID: **15343** RunNo: **21297**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621518** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	102	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409794**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **1409794-001DMSD(** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BW-2B** Batch ID: **15343** RunNo: **21297**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621522** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	102	70	130	0.118	20	

Sample ID **1409794-001DMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BW-2B** Batch ID: **15343** RunNo: **21297**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621550** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0.04041	94.7	70	130			
Cadmium	0.48	0.0020	0.5000	0	96.0	70	130			
Chromium	0.48	0.0060	0.5000	0	96.2	70	130			
Copper	0.52	0.0060	0.5000	0	105	70	130			
Iron	0.74	0.020	0.5000	0.2092	107	70	130			
Manganese	0.61	0.0020	0.5000	0.1359	93.9	70	130			
Zinc	0.48	0.010	0.5000	0	96.3	70	130			

Sample ID **1409794-001DMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BW-2B** Batch ID: **15343** RunNo: **21297**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621551** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0.04041	91.2	70	130	3.37	20	
Cadmium	0.47	0.0020	0.5000	0	93.1	70	130	3.07	20	
Chromium	0.47	0.0060	0.5000	0	93.0	70	130	3.28	20	
Copper	0.50	0.0060	0.5000	0	101	70	130	3.75	20	
Iron	0.71	0.020	0.5000	0.2092	100	70	130	4.50	20	
Manganese	0.58	0.0020	0.5000	0.1359	89.0	70	130	4.11	20	
Zinc	0.46	0.010	0.5000	0	92.6	70	130	3.93	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409794**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628608** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.7	85	115			
Lead	0.024	0.0010	0.02500	0	94.4	85	115			
Selenium	0.022	0.0010	0.02500	0	90.0	85	115			
Uranium	0.024	0.0010	0.02500	0	95.1	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628609** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	92.9	85	115			
Lead	0.023	0.0010	0.02500	0	92.6	85	115			
Selenium	0.023	0.0010	0.02500	0	92.4	85	115			
Uranium	0.023	0.0010	0.02500	0	91.6	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628610** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628611** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21527** RunNo: **21527**
Prep Date: Analysis Date: **9/29/2014** SeqNo: **629894** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409794**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21527** RunNo: **21527**
Prep Date: Analysis Date: **9/29/2014** SeqNo: **629894** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.025	0.0010	0.02500	0	99.4	85	115			
Uranium	0.025	0.0010	0.02500	0	101	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21527** RunNo: **21527**
Prep Date: Analysis Date: **9/29/2014** SeqNo: **629895** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.025	0.0010	0.02500	0	101	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21527** RunNo: **21527**
Prep Date: Analysis Date: **9/29/2014** SeqNo: **629896** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21527** RunNo: **21527**
Prep Date: Analysis Date: **9/29/2014** SeqNo: **629897** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409794**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LLLCS-15343** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **15343** RunNo: **21376**
Prep Date: **9/17/2014** Analysis Date: **9/23/2014** SeqNo: **624955** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0	104	85	115			
Lead	0.026	0.0010	0.02500	0	103	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.026	0.0010	0.02500	0	105	85	115			

Sample ID **MB-15343** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **15343** RunNo: **21376**
Prep Date: **9/17/2014** Analysis Date: **9/23/2014** SeqNo: **624958** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409794**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB-15449** SampType: **MBLK** TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW** Batch ID: **15449** RunNo: **21410**
Prep Date: **9/23/2014** Analysis Date: **9/24/2014** SeqNo: **625480** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID **LCS-15449** SampType: **LCS** TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW** Batch ID: **15449** RunNo: **21410**
Prep Date: **9/23/2014** Analysis Date: **9/24/2014** SeqNo: **625481** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.5	80	120			

Sample ID **1409794-002DMS** SampType: **MS** TestCode: **EPA Method 245.1: Mercury**
Client ID: **BW-2A** Batch ID: **15449** RunNo: **21410**
Prep Date: **9/23/2014** Analysis Date: **9/24/2014** SeqNo: **625485** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0042	0.00020	0.005000	0	84.6	75	125			

Sample ID **1409794-002DMSD** SampType: **MSD** TestCode: **EPA Method 245.1: Mercury**
Client ID: **BW-2A** Batch ID: **15449** RunNo: **21410**
Prep Date: **9/23/2014** Analysis Date: **9/24/2014** SeqNo: **625486** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0042	0.00020	0.005000	0	84.2	75	125	0.459	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409794**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R21277** RunNo: **21277**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **620661** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R21277** RunNo: **21277**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **620662** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	104	90	110			
Bromide	2.5	0.10	2.500	0	101	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	99.8	90	110			
Sulfate	10	0.50	10.00	0	99.6	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R21277** RunNo: **21277**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **620708** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R21277** RunNo: **21277**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **620709** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	96.8	90	110			
Bromide	2.3	0.10	2.500	0	93.0	90	110			
Phosphorus, Orthophosphate (As P	4.6	0.50	5.000	0	92.3	90	110			
Sulfate	9.2	0.50	10.00	0	91.7	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R21283** RunNo: **21283**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **621017** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409794**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R21283**	RunNo: **21283**							
Prep Date:	Analysis Date: **9/17/2014**	SeqNo: **621017**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R21283**	RunNo: **21283**							
Prep Date:	Analysis Date: **9/17/2014**	SeqNo: **621018**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.4	0.20	3.500	0	97.6	90	110			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R21321**	RunNo: **21321**							
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **622134**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R21321**	RunNo: **21321**							
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **622135**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.9	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409794**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R21295**	RunNo: **21295**			
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621332**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409794**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R21295**	RunNo: **21295**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621332** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.7	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	9.0		10.00		89.5	70	130			
Surr: Toluene-d8	9.5		10.00		94.8	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R21295**	RunNo: **21295**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621334** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130			
Toluene	19	1.0	20.00	0	94.5	80	120			
Chlorobenzene	19	1.0	20.00	0	93.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409794**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R21295**	RunNo: **21295**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621334** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22	1.0	20.00	0	109	82.6	131			
Trichloroethene (TCE)	17	1.0	20.00	0	85.2	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		91.5	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		94.5	70	130			
Surr: Dibromofluoromethane	9.2		10.00		92.4	70	130			
Surr: Toluene-d8	9.4		10.00		94.3	70	130			

Sample ID **b3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R21295**	RunNo: **21295**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621370** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409794**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **b3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R21295**	RunNo: **21295**	
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621370**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.3	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409794**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **b3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R21295**	RunNo: **21295**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621370** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	11		10.00		108	70	130			
Surr: Dibromofluoromethane	9.7		10.00		96.6	70	130			
Surr: Toluene-d8	9.2		10.00		92.1	70	130			

Sample ID **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R21295**	RunNo: **21295**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621372** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	70	130			
Toluene	19	1.0	20.00	0	95.8	80	120			
Chlorobenzene	20	1.0	20.00	0	97.9	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	122	82.6	131			
Trichloroethene (TCE)	18	1.0	20.00	0	91.7	70	130			
Surr: 1,2-Dichloroethane-d4	8.7		10.00		87.2	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		99.8	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.1	70	130			
Surr: Toluene-d8	9.3		10.00		92.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409794**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15342**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **15342**	RunNo: **21301**			
Prep Date: **9/17/2014**	Analysis Date: **9/18/2014**	SeqNo: **621609**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409794**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15342**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **15342**	RunNo: **21301**			
Prep Date: **9/17/2014**	Analysis Date: **9/18/2014**	SeqNo: **621609**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	93		200.0		46.3	12.1	85.8			
Surr: Phenol-d5	84		200.0		41.9	17.7	65.8			
Surr: 2,4,6-Tribromophenol	130		200.0		64.4	26	138			
Surr: Nitrobenzene-d5	66		100.0		65.5	47.5	119			
Surr: 2-Fluorobiphenyl	63		100.0		62.6	48.1	106			
Surr: 4-Terphenyl-d14	74		100.0		73.5	44	113			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409794**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **lcs-15342** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **15342** RunNo: **21301**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621610** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	58	10	100.0	0	58.1	47.9	114			
4-Chloro-3-methylphenol	130	10	200.0	0	62.8	51.7	122			
2-Chlorophenol	120	10	200.0	0	58.4	40.7	113			
1,4-Dichlorobenzene	50	10	100.0	0	50.4	39.6	99.9			
2,4-Dinitrotoluene	47	10	100.0	0	47.3	40.8	113			
N-Nitrosodi-n-propylamine	64	10	100.0	0	64.3	51.2	111			
4-Nitrophenol	66	10	200.0	0	32.8	15.7	86.9			
Pentachlorophenol	93	20	200.0	0	46.4	21.6	104			
Phenol	86	10	200.0	0	43.1	28.6	71.7			
Pyrene	64	10	100.0	0	64.2	54.2	128			
1,2,4-Trichlorobenzene	49	10	100.0	0	49.5	40.9	101			
Surr: 2-Fluorophenol	84		200.0		42.0	12.1	85.8			
Surr: Phenol-d5	80		200.0		39.9	17.7	65.8			
Surr: 2,4,6-Tribromophenol	110		200.0		55.7	26	138			
Surr: Nitrobenzene-d5	61		100.0		60.6	47.5	119			
Surr: 2-Fluorobiphenyl	57		100.0		56.6	48.1	106			
Surr: 4-Terphenyl-d14	67		100.0		66.5	44	113			

Sample ID **lcsd-15342** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **15342** RunNo: **21301**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621611** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	70	10	100.0	0	70.1	47.9	114	18.7	27.2	
4-Chloro-3-methylphenol	140	10	200.0	0	72.1	51.7	122	13.7	25.9	
2-Chlorophenol	110	10	200.0	0	55.9	40.7	113	4.29	22.5	
1,4-Dichlorobenzene	52	10	100.0	0	51.9	39.6	99.9	2.93	24.6	
2,4-Dinitrotoluene	71	10	100.0	0	70.6	40.8	113	39.5	25.3	R
N-Nitrosodi-n-propylamine	70	10	100.0	0	69.7	51.2	111	8.09	23.6	
4-Nitrophenol	69	10	200.0	0	34.4	15.7	86.9	4.53	34.7	
Pentachlorophenol	83	20	200.0	0	41.3	21.6	104	11.6	32.8	
Phenol	87	10	200.0	0	43.3	28.6	71.7	0.509	25.5	
Pyrene	82	10	100.0	0	82.0	54.2	128	24.4	31.4	
1,2,4-Trichlorobenzene	53	10	100.0	0	52.5	40.9	101	6.00	25.9	
Surr: 2-Fluorophenol	73		200.0		36.5	12.1	85.8	0	0	
Surr: Phenol-d5	77		200.0		38.4	17.7	65.8	0	0	
Surr: 2,4,6-Tribromophenol	110		200.0		53.7	26	138	0	0	
Surr: Nitrobenzene-d5	61		100.0		60.9	47.5	119	0	0	
Surr: 2-Fluorobiphenyl	64		100.0		63.6	48.1	106	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409794**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**lcsd-15342**	SampType:	**LCSD**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**LCSS02**	Batch ID:	**15342**	RunNo:	**21301**
Prep Date:	**9/17/2014**	Analysis Date:	**9/18/2014**	SeqNo:	**621611** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	85		100.0		84.6	44	113	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Western Refining Gallup** Work Order Number: **1409794** RcptNo: 1

Received by/date: C.S. 09/16/14

Logged By: **Ashley Gallegos** **9/16/2014 5:03:00 PM** AG

Completed By: **Ashley Gallegos** **9/16/2014 5:44:44 PM** AG

Reviewed By: 09/17/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

2 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard ☐ Rush

Project Name:

2014 ~~2011~~ ANNUAL GW

Project #:

BW Wells

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.10

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1409794	8260 + MTBE	8270 + phenols	WQCC Metals - Total	WQCC Metals - Dissolved, filtered	Major cations/anions								Air Bubbles (Y or N)
~~9/9/14~~	~~1610~~	~~H_2O~~	~~BW-2B~~ 13S																
9/9/14	1610	H_2O	BW-2B			-001	X	X	X	X	X								
9/9/14	1710	H_2O	BW-2A			-002	X	X	X	X	X								
9/10/14	1345	H_2O	BW-1C			-003	X	X	X	X	X								
9/10/14	1540	H_2O	BW-2C			-004	X	X	X	X	X								
~~9/10/14~~	~~0805~~	~~H_2O~~	~~PW-3~~				~~X~~	~~X~~	~~X~~	~~X~~									13S
9/10/14	1650	H_2O	BW-3C			-005	X	X	X	X	X								
9/10/14	1740	H_2O	BW-3B			-006	X	X	X	X	X								
9/10/14	1210	H_2O	FB-Group9-9/11/14			-007	X												

Date:	Time:	Relinquished by:	Received by:	Date Time
9/16/14	1450	[signature]	[signature]	9-16-14/1450
Date:	Time:	Relinquished by:	Received by:	Date Time
9/16/14	1709	[signature]	Celina Sanchez	09/16/14 1703

Remarks:

Trip Blank 008

AT 09/17/14

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

November 21, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: Evaporation Pond Study-TDS OrderNo.: 1411538

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 11 sample(s) on 11/13/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order: **1411538**
Date Reported: **11/21/2014**

CLIENT: Western Refining Southwest, Gallup
Project: Evaporation Pond Study-TDS
Lab Order: 1411538

Lab ID: 1411538-001 **Collection Date:** 11/12/2014 10:55:00 AM
Client Sample ID: EP-2 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	5800	200	*	mg/L	1	11/18/2014 10:52:00 PM	16426

Lab ID: 1411538-002 **Collection Date:** 11/12/2014 11:30:00 AM
Client Sample ID: EP-3 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	8200	200	*	mg/L	1	11/18/2014 10:52:00 PM	16426

Lab ID: 1411538-003 **Collection Date:** 11/12/2014 12:00:00 PM
Client Sample ID: EP-4 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	8940	200	*	mg/L	1	11/18/2014 10:52:00 PM	16426

Lab ID: 1411538-004 **Collection Date:** 11/12/2014 2:20:00 PM
Client Sample ID: EP-5 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	23300	200	*	mg/L	1	11/18/2014 10:52:00 PM	16426

Lab ID: 1411538-005 **Collection Date:** 11/12/2014 2:45:00 PM
Client Sample ID: EP-6 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	25300	200	*	mg/L	1	11/18/2014 10:52:00 PM	16426

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Project: Evaporation Pond Study-TDS
Lab Order: 1411538

Lab ID: 1411538-006 **Collection Date:** 11/12/2014 4:24:00 PM
Client Sample ID: EP-7 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	96600	1000	*	mg/L	1	11/18/2014 10:52:00 PM	16426

Lab ID: 1411538-007 **Collection Date:** 11/12/2014 4:53:00 PM
Client Sample ID: EP-8 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	92400	1000	*	mg/L	1	11/18/2014 10:52:00 PM	16426

Lab ID: 1411538-008 **Collection Date:** 11/13/2014 8:30:00 AM
Client Sample ID: EP-9 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	182000	2000	*	mg/L	1	11/18/2014 10:52:00 PM	16426

Lab ID: 1411538-009 **Collection Date:** 11/12/2014 4:06:00 PM
Client Sample ID: EP-11 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	108000	1000	*	mg/L	1	11/18/2014 10:52:00 PM	16426

Lab ID: 1411538-010 **Collection Date:** 11/12/2014 3:35:00 PM
Client Sample ID: EP-12A **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	7740	200	*	mg/L	1	11/18/2014 10:52:00 PM	16426

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Project: Evaporation Pond Study-TDS
Lab Order: 1411538

Lab ID: 1411538-011
Collection Date: 11/12/2014 3:15:00 PM
Client Sample ID: EP-12B
Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	5410	200	*	mg/L	1	11/18/2014 10:52:00 PM	16426

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411538**
21-Nov-14

Client: Western Refining Southwest, Gallup
Project: Evaporation Pond Study-TDS

Sample ID **MB-16426** SampType: **MBLK** TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **PBW** Batch ID: **16426** RunNo: **22612**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666812** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID **LCS-16426** SampType: **LCS** TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **LCSW** Batch ID: **16426** RunNo: **22612**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666813** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1020	20.0	1000	0	102	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1411538 RcptNo: 1

Received by/date: AG 11/13/14

Logged By: **Ashley Gallegos** 11/13/2014 3:48:00 PM

Completed By: **Ashley Gallegos** 11/14/2014 8:41:48 AM

Reviewed By: 11/14/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

Gallup Refinery

Mailing Address:

92 GIANT CROSSING RD, GALLUP, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

X Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard Rush_____

Project Name:

Evaporation Pond Study - TDS

Project #:

EP-2 THRU EP-12B

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: X Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No 1411538	TDS	8260	Air Bubbles (Y or N)
11-12-14	1055	Aqueous	EP-2	250 ML	NONE	-001	X		
11-12-14	1130	Aqueous	EP-3	250 ML	NONE	-002	X		
11-12-14	1200	Aqueous	EP-4	250 ML	NONE	-003	X		
11-12-14	1420	Aqueous	EP-5	250 ML	NONE	-004	X		
11-12-14	1445	Aqueous	EP-6	250 ML	NONE	-005	X		
11-12-14	1624	Aqueous	EP-7	250 ML	NONE	-006	X		
11-12-14	1653	Aqueous	EP-8	250 ML	NONE	-007	X		
11-13-14	830	Aqueous	EP-9	250 ML	NONE	-008	X		
11-12-14	1606	Aqueous	EP-11	250 ML	NONE	-009	X		
11-12-14	1535	Aqueous	EP-12A	250 ML	NONE	-010	X		
11-12-14	1515	Aqueous	EP-12B	250 ML	NONE	-011	X		
11-13-14	—		~~TB-400~~	2				X	

Date:	Time:	Relinquished by:	Received by:	Date	Time
11-13-14	1100	Pam Landers	[illegible]	11/13/14	1100
11-13-14	1548	[illegible]	[illegible]	11/13/14	1548

Remarks: **DO NOT COMBINE WITH OTHER REPORTS. SEND AS ONE WITH HEADING INDICATED**

11/14/14

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 05, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: Q4 2014 OrderNo.: 1411475

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 3 sample(s) on 11/12/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1411475**
Date Reported: **12/5/2014**

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: East LDU
Project: Q4 2014
Collection Date: 11/11/2014 3:50:00 PM
Lab ID: 1411475-001
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**JME**
Diesel Range Organics (DRO)	17	1.0		mg/L	1	11/18/2014 10:44:06 PM	16415
Surr: DNOP	97.9	59-141		%REC	1	11/18/2014 10:44:06 PM	16415
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	38	10		mg/L	200	11/13/2014 4:57:08 PM	R22533
Surr: BFB	89.0	80-120		%REC	200	11/13/2014 4:57:08 PM	R22533
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Methyl tert-butyl ether (MTBE)	ND	500		µg/L	200	11/13/2014 4:57:08 PM	R22533
Benzene	1700	200		µg/L	200	11/13/2014 4:57:08 PM	R22533
Toluene	4800	200		µg/L	200	11/13/2014 4:57:08 PM	R22533
Ethylbenzene	720	200		µg/L	200	11/13/2014 4:57:08 PM	R22533
Xylenes, Total	8200	400		µg/L	200	11/13/2014 4:57:08 PM	R22533
Surr: 4-Bromofluorobenzene	107	66.6-167		%REC	200	11/13/2014 4:57:08 PM	R22533
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.074	0.0020		mg/L	1	11/16/2014 8:45:40 PM	R22599
Cadmium	ND	0.0020		mg/L	1	11/16/2014 8:45:40 PM	R22599
Chromium	0.18	0.0060	*	mg/L	1	11/16/2014 8:45:40 PM	R22599
Copper	ND	0.0060		mg/L	1	11/16/2014 8:45:40 PM	R22599
Iron	1.4	0.10	*	mg/L	5	11/16/2014 8:47:26 PM	R22599
Manganese	4.9	0.010	*	mg/L	5	11/16/2014 8:47:26 PM	R22599
Silver	ND	0.0050		mg/L	1	11/16/2014 8:45:40 PM	R22599
Zinc	ND	0.010		mg/L	1	11/16/2014 8:45:40 PM	R22599
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.12	0.0020		mg/L	1	11/18/2014 3:52:44 PM	16416
Cadmium	ND	0.0020		mg/L	1	11/18/2014 3:52:44 PM	16416
Chromium	0.22	0.0060	*	mg/L	1	11/18/2014 3:52:44 PM	16416
Copper	ND	0.0060		mg/L	1	11/18/2014 3:52:44 PM	16416
Iron	19	0.40	*	mg/L	20	11/20/2014 4:12:21 PM	16416
Manganese	5.4	0.040	*	mg/L	20	11/20/2014 4:12:21 PM	16416
Silver	ND	0.0050		mg/L	1	11/18/2014 3:52:44 PM	16416
Zinc	0.18	0.010		mg/L	1	11/20/2014 4:10:37 PM	16416
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0013	0.0010		mg/L	1	11/24/2014 5:38:53 PM	R22774
Lead	ND	0.0010		mg/L	1	11/24/2014 5:38:53 PM	R22774
Selenium	ND	0.0010		mg/L	1	11/24/2014 5:38:53 PM	R22774
Uranium	ND	0.0010		mg/L	1	11/24/2014 5:38:53 PM	R22774
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: East LDU
Project: Q4 2014
Collection Date: 11/11/2014 3:50:00 PM
Lab ID: 1411475-001
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0015	0.0010		mg/L	1	11/18/2014 2:45:31 PM	16416
Lead	ND	0.0010		mg/L	1	11/18/2014 2:45:31 PM	16416
Selenium	ND	0.0010		mg/L	1	11/18/2014 2:45:31 PM	16416
Uranium	ND	0.0010		mg/L	1	11/18/2014 2:45:31 PM	16416
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/21/2014 3:11:33 PM	16511

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: Q4 2014
Collection Date: 11/11/2014 5:00:00 PM
Lab ID: 1411475-002
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**JME**
Diesel Range Organics (DRO)	9.2	1.0		mg/L	1	11/18/2014 11:13:32 PM	16415
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/18/2014 11:13:32 PM	16415
Surr: DNOP	99.6	59-141		%REC	1	11/18/2014 11:13:32 PM	16415
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	0.79	0.25		mg/L	5	11/14/2014 12:46:58 PM	R22544
Surr: BFB	107	80-120		%REC	5	11/14/2014 12:46:58 PM	R22544
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	1.9	0.50		mg/L	5	11/13/2014 7:50:11 PM	R22539
Chloride	1700	100		mg/L	200	12/2/2014 10:20:34 PM	R22899
Bromide	4.8	0.50		mg/L	5	11/13/2014 7:50:11 PM	R22539
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	11/13/2014 7:50:11 PM	R22539
Sulfate	23	2.5		mg/L	5	11/13/2014 7:50:11 PM	R22539
Nitrate+Nitrite as N	ND	2.0		mg/L	10	11/24/2014 9:11:47 PM	R22782
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.68	0.0020		mg/L	1	11/16/2014 8:56:04 PM	R22599
Cadmium	ND	0.0020		mg/L	1	11/16/2014 8:56:04 PM	R22599
Calcium	170	5.0		mg/L	5	11/16/2014 8:57:53 PM	R22599
Chromium	ND	0.0060		mg/L	1	11/16/2014 8:56:04 PM	R22599
Copper	ND	0.0060		mg/L	1	11/16/2014 8:56:04 PM	R22599
Iron	7.6	0.40	*	mg/L	20	11/18/2014 5:27:12 PM	R22614
Magnesium	31	1.0		mg/L	1	11/16/2014 8:56:04 PM	R22599
Manganese	1.8	0.010	*	mg/L	5	11/16/2014 8:57:53 PM	R22599
Potassium	4.8	1.0		mg/L	1	11/16/2014 8:56:04 PM	R22599
Silver	ND	0.0050		mg/L	1	11/16/2014 8:56:04 PM	R22599
Sodium	1300	20		mg/L	20	11/24/2014 12:16:09 PM	R22752
Zinc	0.029	0.010		mg/L	1	11/16/2014 8:56:04 PM	R22599
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.75	0.0020		mg/L	1	11/18/2014 3:56:14 PM	16416
Cadmium	ND	0.0020		mg/L	1	11/18/2014 3:56:14 PM	16416
Chromium	ND	0.0060		mg/L	1	11/18/2014 3:56:14 PM	16416
Copper	ND	0.0060		mg/L	1	11/18/2014 3:56:14 PM	16416
Iron	8.4	0.20	*	mg/L	10	11/20/2014 4:15:57 PM	16416
Manganese	1.9	0.010	*	mg/L	5	11/18/2014 3:58:00 PM	16416
Silver	ND	0.0050		mg/L	1	11/18/2014 3:56:14 PM	16416
Zinc	0.031	0.010		mg/L	1	11/20/2014 4:14:10 PM	16416
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.020	*	mg/L	20	11/25/2014 1:30:17 PM	R22788

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: Q4 2014
Collection Date: 11/11/2014 5:00:00 PM
Lab ID: 1411475-002
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.0010		mg/L	1	11/25/2014 1:11:33 PM	R22788
Selenium	0.022	0.020		mg/L	20	11/25/2014 1:30:17 PM	R22788
Uranium	0.022	0.0050		mg/L	5	11/25/2014 1:33:23 PM	R22788
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.016	0.010	*	mg/L	10	11/26/2014 6:10:20 PM	16416
Lead	0.0073	0.0010		mg/L	1	11/18/2014 2:56:04 PM	16416
Selenium	0.030	0.010		mg/L	10	11/26/2014 6:10:20 PM	16416
Uranium	0.030	0.0010		mg/L	1	11/18/2014 2:56:04 PM	16416
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/21/2014 3:13:21 PM	16511
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Acenaphthylene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Aniline	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Anthracene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Azobenzene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Benz(a)anthracene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Benzo(a)pyrene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Benzo(b)fluoranthene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Benzo(g,h,i)perylene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Benzo(k)fluoranthene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Benzoic acid	ND	100		µg/L	1	11/17/2014 8:42:34 PM	16377
Benzyl alcohol	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Bis(2-chloroethoxy)methane	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Bis(2-chloroethyl)ether	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Bis(2-chloroisopropyl)ether	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Bis(2-ethylhexyl)phthalate	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
4-Bromophenyl phenyl ether	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Butyl benzyl phthalate	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Carbazole	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
4-Chloro-3-methylphenol	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
4-Chloroaniline	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
2-Chloronaphthalene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
2-Chlorophenol	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
4-Chlorophenyl phenyl ether	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Chrysene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Di-n-butyl phthalate	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Di-n-octyl phthalate	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377

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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: Q4 2014
Collection Date: 11/11/2014 5:00:00 PM
Lab ID: 1411475-002
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Dibenzofuran	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
1,2-Dichlorobenzene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
1,3-Dichlorobenzene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
1,4-Dichlorobenzene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
3,3´-Dichlorobenzidine	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Diethyl phthalate	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Dimethyl phthalate	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
2,4-Dichlorophenol	ND	100		µg/L	1	11/17/2014 8:42:34 PM	16377
2,4-Dimethylphenol	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
4,6-Dinitro-2-methylphenol	ND	100		µg/L	1	11/17/2014 8:42:34 PM	16377
2,4-Dinitrophenol	ND	100		µg/L	1	11/17/2014 8:42:34 PM	16377
2,4-Dinitrotoluene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
2,6-Dinitrotoluene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Fluoranthene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Fluorene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Hexachlorobenzene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Hexachlorobutadiene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Hexachlorocyclopentadiene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Hexachloroethane	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Isophorone	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
1-Methylnaphthalene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
2-Methylnaphthalene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
2-Methylphenol	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
3+4-Methylphenol	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
N-Nitrosodi-n-propylamine	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
N-Nitrosodimethylamine	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
N-Nitrosodiphenylamine	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Naphthalene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
2-Nitroaniline	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
3-Nitroaniline	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
4-Nitroaniline	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Nitrobenzene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
2-Nitrophenol	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
4-Nitrophenol	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Pentachlorophenol	ND	100		µg/L	1	11/17/2014 8:42:34 PM	16377
Phenanthrene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Phenol	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: Q4 2014
Collection Date: 11/11/2014 5:00:00 PM
Lab ID: 1411475-002
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Pyrene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Pyridine	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
1,2,4-Trichlorobenzene	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
2,4,5-Trichlorophenol	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
2,4,6-Trichlorophenol	ND	50		µg/L	1	11/17/2014 8:42:34 PM	16377
Surr: 2-Fluorophenol	40.5	17.6-104		%REC	1	11/17/2014 8:42:34 PM	16377
Surr: Phenol-d5	32.6	17.7-89.9		%REC	1	11/17/2014 8:42:34 PM	16377
Surr: 2,4,6-Tribromophenol	59.5	16.3-122		%REC	1	11/17/2014 8:42:34 PM	16377
Surr: Nitrobenzene-d5	56.2	45.3-117		%REC	1	11/17/2014 8:42:34 PM	16377
Surr: 2-Fluorobiphenyl	54.6	43-113		%REC	1	11/17/2014 8:42:34 PM	16377
Surr: 4-Terphenyl-d14	63.9	47.6-122		%REC	1	11/17/2014 8:42:34 PM	16377
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	150	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
Toluene	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
Ethylbenzene	10	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
Methyl tert-butyl ether (MTBE)	400	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
1,2,4-Trimethylbenzene	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
1,3,5-Trimethylbenzene	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
Naphthalene	ND	10		µg/L	5	11/13/2014 4:22:18 PM	R22531
1-Methylnaphthalene	32	20		µg/L	5	11/13/2014 4:22:18 PM	R22531
2-Methylnaphthalene	ND	20		µg/L	5	11/13/2014 4:22:18 PM	R22531
Acetone	ND	50		µg/L	5	11/13/2014 4:22:18 PM	R22531
Bromobenzene	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
Bromodichloromethane	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
Bromoform	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
Bromomethane	ND	15		µg/L	5	11/13/2014 4:22:18 PM	R22531
2-Butanone	ND	50		µg/L	5	11/13/2014 4:22:18 PM	R22531
Carbon disulfide	ND	50		µg/L	5	11/13/2014 4:22:18 PM	R22531
Carbon Tetrachloride	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
Chlorobenzene	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
Chloroethane	ND	10		µg/L	5	11/13/2014 4:22:18 PM	R22531
Chloroform	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
Chloromethane	ND	15		µg/L	5	11/13/2014 4:22:18 PM	R22531
2-Chlorotoluene	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
4-Chlorotoluene	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
cis-1,2-DCE	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
cis-1,3-Dichloropropene	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: Q4 2014
Collection Date: 11/11/2014 5:00:00 PM
Lab ID: 1411475-002
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,2-Dibromo-3-chloropropane	ND	10		µg/L	5	11/13/2014 4:22:18 PM	R22531
Dibromochloromethane	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
Dibromomethane	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
1,2-Dichlorobenzene	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
1,3-Dichlorobenzene	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
1,4-Dichlorobenzene	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
Dichlorodifluoromethane	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
1,1-Dichloroethane	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
1,1-Dichloroethene	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
1,2-Dichloropropane	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
1,3-Dichloropropane	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
2,2-Dichloropropane	ND	10		µg/L	5	11/13/2014 4:22:18 PM	R22531
1,1-Dichloropropene	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
Hexachlorobutadiene	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
2-Hexanone	ND	50		µg/L	5	11/13/2014 4:22:18 PM	R22531
Isopropylbenzene	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
4-Isopropyltoluene	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
4-Methyl-2-pentanone	ND	50		µg/L	5	11/13/2014 4:22:18 PM	R22531
Methylene Chloride	ND	15		µg/L	5	11/13/2014 4:22:18 PM	R22531
n-Butylbenzene	ND	15		µg/L	5	11/13/2014 4:22:18 PM	R22531
n-Propylbenzene	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
sec-Butylbenzene	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
Styrene	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
tert-Butylbenzene	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
1,1,2,2-Tetrachloroethane	ND	10		µg/L	5	11/13/2014 4:22:18 PM	R22531
Tetrachloroethene (PCE)	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
trans-1,2-DCE	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
trans-1,3-Dichloropropene	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
1,2,3-Trichlorobenzene	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
1,2,4-Trichlorobenzene	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
1,1,1-Trichloroethane	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
1,1,2-Trichloroethane	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
Trichloroethene (TCE)	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
Trichlorofluoromethane	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
1,2,3-Trichloropropane	ND	10		µg/L	5	11/13/2014 4:22:18 PM	R22531
Vinyl chloride	ND	5.0		µg/L	5	11/13/2014 4:22:18 PM	R22531
Xylenes, Total	ND	7.5		µg/L	5	11/13/2014 4:22:18 PM	R22531
Surr: 1,2-Dichloroethane-d4	83.5	70-130		%REC	5	11/13/2014 4:22:18 PM	R22531

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: Q4 2014
Collection Date: 11/11/2014 5:00:00 PM
Lab ID: 1411475-002
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Surr: 4-Bromofluorobenzene	77.4	70-130		%REC	5	11/13/2014 4:22:18 PM	R22531
Surr: Dibromofluoromethane	94.4	70-130		%REC	5	11/13/2014 4:22:18 PM	R22531
Surr: Toluene-d8	88.0	70-130		%REC	5	11/13/2014 4:22:18 PM	R22531

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: Q4 2014
Collection Date:
Lab ID: 1411475-003
Matrix: TRIP BLANK
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/13/2014 6:46:25 PM	R22533
Surr: BFB	88.3	80-120		%REC	1	11/13/2014 6:46:25 PM	R22533
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	11/13/2014 6:46:25 PM	R22533
Benzene	ND	1.0		µg/L	1	11/13/2014 6:46:25 PM	R22533
Toluene	ND	1.0		µg/L	1	11/13/2014 6:46:25 PM	R22533
Ethylbenzene	ND	1.0		µg/L	1	11/13/2014 6:46:25 PM	R22533
Xylenes, Total	ND	2.0		µg/L	1	11/13/2014 6:46:25 PM	R22533
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/13/2014 6:46:25 PM	R22533
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/13/2014 6:46:25 PM	R22533
Surr: 4-Bromofluorobenzene	103	66.6-167		%REC	1	11/13/2014 6:46:25 PM	R22533
EPA METHOD 8260B: VOLATILES						Analyst:	**DJF**
Benzene	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
Toluene	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
Ethylbenzene	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
Naphthalene	ND	2.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
1-Methylnaphthalene	ND	4.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
2-Methylnaphthalene	ND	4.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
Acetone	ND	10		µg/L	1	11/13/2014 4:50:19 PM	R22531
Bromobenzene	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
Bromodichloromethane	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
Bromoform	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
Bromomethane	ND	3.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
2-Butanone	ND	10		µg/L	1	11/13/2014 4:50:19 PM	R22531
Carbon disulfide	ND	10		µg/L	1	11/13/2014 4:50:19 PM	R22531
Carbon Tetrachloride	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
Chlorobenzene	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
Chloroethane	ND	2.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
Chloroform	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
Chloromethane	ND	3.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
2-Chlorotoluene	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
4-Chlorotoluene	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
cis-1,2-DCE	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: Q4 2014
Collection Date:
Lab ID: 1411475-003
Matrix: TRIP BLANK
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
Dibromochloromethane	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
Dibromomethane	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
1,1-Dichloroethane	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
1,1-Dichloroethene	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
1,2-Dichloropropane	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
1,3-Dichloropropane	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
2,2-Dichloropropane	ND	2.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
1,1-Dichloropropene	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
Hexachlorobutadiene	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
2-Hexanone	ND	10		µg/L	1	11/13/2014 4:50:19 PM	R22531
Isopropylbenzene	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
4-Isopropyltoluene	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
4-Methyl-2-pentanone	ND	10		µg/L	1	11/13/2014 4:50:19 PM	R22531
Methylene Chloride	ND	3.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
n-Butylbenzene	ND	3.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
n-Propylbenzene	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
sec-Butylbenzene	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
Styrene	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
tert-Butylbenzene	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
trans-1,2-DCE	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
Trichlorofluoromethane	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
Vinyl chloride	ND	1.0		µg/L	1	11/13/2014 4:50:19 PM	R22531
Xylenes, Total	ND	1.5		µg/L	1	11/13/2014 4:50:19 PM	R22531

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: Q4 2014
Collection Date:
Lab ID: 1411475-003
Matrix: TRIP BLANK
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Surr: 1,2-Dichloroethane-d4	83.6	70-130		%REC	1	11/13/2014 4:50:19 PM	R22531
Surr: 4-Bromofluorobenzene	76.1	70-130		%REC	1	11/13/2014 4:50:19 PM	R22531
Surr: Dibromofluoromethane	94.7	70-130		%REC	1	11/13/2014 4:50:19 PM	R22531
Surr: Toluene-d8	88.2	70-130		%REC	1	11/13/2014 4:50:19 PM	R22531

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	141114030
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1411475
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	141114030-001	**Sampling Date**	11/11/2014	**Date/Time Received**	11/14/2014 11:45 AM
Client Sample ID	1411475-002H / OAPIS-1	**Sampling Time**	5:00 PM		
Matrix	Water				
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	0.0587	mg/L	0.01	11/18/2014	CRW	EPA 335.4	

Authorized Signature

John Coddington, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 141114030
Project Name: 1411475

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Cyanide	0.503	mg/L	0.5	100.6	90-110	11/18/2014	11/18/2014

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
141113037-007	Cyanide	ND	0.507	mg/L	0.5	101.4	90-110	11/18/2014	11/18/2014

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide	0.493	mg/L	0.5	98.6	2.8	0-20	11/18/2014	11/18/2014

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide	ND	mg/L	0.01	11/18/2014	11/18/2014

AR Acceptable Range
ND Not Detected
PQL Practical Quantitation Limit
RPD Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411475**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22599** RunNo: **22599**
Prep Date: Analysis Date: **11/16/2014** SeqNo: **666147** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22599** RunNo: **22599**
Prep Date: Analysis Date: **11/16/2014** SeqNo: **666149** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22599** RunNo: **22599**
Prep Date: Analysis Date: **11/16/2014** SeqNo: **666151** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.2	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.5	85	115			
Calcium	45	1.0	50.00	0	90.8	85	115			
Chromium	0.48	0.0060	0.5000	0	96.9	85	115			
Copper	0.49	0.0060	0.5000	0	98.1	85	115			
Iron	0.48	0.020	0.5000	0	95.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411475**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22599** RunNo: **22599**
Prep Date: Analysis Date: **11/16/2014** SeqNo: **666151** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	45	1.0	50.00	0	89.1	85	115			
Manganese	0.47	0.0020	0.5000	0	94.7	85	115			
Potassium	43	1.0	50.00	0	86.4	85	115			
Silver	0.11	0.0050	0.1000	0	105	85	115			
Zinc	0.50	0.010	0.5000	0	99.2	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22599** RunNo: **22599**
Prep Date: Analysis Date: **11/16/2014** SeqNo: **666152** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.55	0.0020	0.5000	0	109	85	115			
Cadmium	0.55	0.0020	0.5000	0	110	85	115			
Calcium	56	1.0	50.00	0	113	85	115			
Chromium	0.54	0.0060	0.5000	0	108	85	115			
Copper	0.55	0.0060	0.5000	0	109	85	115			
Iron	0.53	0.020	0.5000	0	107	85	115			
Magnesium	56	1.0	50.00	0	112	85	115			
Manganese	0.52	0.0020	0.5000	0	104	85	115			
Potassium	54	1.0	50.00	0	109	85	115			
Silver	0.12	0.0050	0.1000	0	117	85	115			S
Zinc	0.54	0.010	0.5000	0	109	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22614** RunNo: **22614**
Prep Date: Analysis Date: **11/18/2014** SeqNo: **666850** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22614** RunNo: **22614**
Prep Date: Analysis Date: **11/18/2014** SeqNo: **666851** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.50	0.020	0.5000	0	99.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411475**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22752** RunNo: **22752**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671318** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22752** RunNo: **22752**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671319** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	52	1.0	50.00	0	104	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22752** RunNo: **22752**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671320** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22752** RunNo: **22752**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671321** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	50	1.0	50.00	0	99.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411475**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB-16416** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **16416** RunNo: **22614**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666852** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-16416** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **16416** RunNo: **22614**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666853** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	101	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Copper	0.51	0.0060	0.5000	0	101	85	115			
Iron	0.50	0.020	0.5000	0	101	85	115			
Manganese	0.49	0.0020	0.5000	0	98.1	85	115			
Silver	0.11	0.0050	0.1000	0	111	85	115			
Zinc	0.50	0.010	0.5000	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411475**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22774** RunNo: **22774**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672122** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	92.5	85	115			
Lead	0.024	0.0010	0.02500	0	94.4	85	115			
Selenium	0.022	0.0010	0.02500	0	89.7	85	115			
Uranium	0.024	0.0010	0.02500	0	95.2	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22774** RunNo: **22774**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672123** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.3	85	115			
Lead	0.024	0.0010	0.02500	0	97.3	85	115			
Selenium	0.024	0.0010	0.02500	0	95.2	85	115			
Uranium	0.024	0.0010	0.02500	0	94.8	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22774** RunNo: **22774**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672124** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22774** RunNo: **22774**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672125** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **1411475-002FMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **OAPIS-1** Batch ID: **R22788** RunNo: **22788**
Prep Date: Analysis Date: **11/25/2014** SeqNo: **672513** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411475**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **1411475-002FMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **OAPIS-1** Batch ID: **R22788** RunNo: **22788**
Prep Date: Analysis Date: **11/25/2014** SeqNo: **672513** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.027	0.0010	0.02500	0.0008898	104	70	130			

Sample ID **1411475-002FMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **OAPIS-1** Batch ID: **R22788** RunNo: **22788**
Prep Date: Analysis Date: **11/25/2014** SeqNo: **672514** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.15	0.0050	0.1250	0.02169	104	70	130			

Sample ID **1411475-002FMSD** SampType: **MSD** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **OAPIS-1** Batch ID: **R22788** RunNo: **22788**
Prep Date: Analysis Date: **11/25/2014** SeqNo: **672515** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.027	0.0010	0.02500	0.0008898	106	70	130	1.74	20	

Sample ID **1411475-002FMSD** SampType: **MSD** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **OAPIS-1** Batch ID: **R22788** RunNo: **22788**
Prep Date: Analysis Date: **11/25/2014** SeqNo: **672516** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.15	0.0050	0.1250	0.02169	103	70	130	0.862	20	

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22788** RunNo: **22788**
Prep Date: Analysis Date: **11/25/2014** SeqNo: **672517** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.1	85	115			
Lead	0.024	0.0010	0.02500	0	97.4	85	115			
Selenium	0.024	0.0010	0.02500	0	96.5	85	115			
Uranium	0.025	0.0010	0.02500	0	98.7	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22788** RunNo: **22788**
Prep Date: Analysis Date: **11/25/2014** SeqNo: **672518** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411475**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**			
Client ID: **PBW**	Batch ID: **R22788**	RunNo: **22788**			
Prep Date:	Analysis Date: **11/25/2014**	SeqNo: **672518**	Units: **mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411475**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LLLCS-16416** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **16416** RunNo: **22609**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666765** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.5	85	115			
Lead	0.026	0.0010	0.02500	0	106	85	115			
Selenium	0.024	0.0010	0.02500	0	96.6	85	115			
Uranium	0.026	0.0010	0.02500	0	106	85	115			

Sample ID **MB-16416** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **16416** RunNo: **22609**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666767** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411475**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**MB-16511**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**						
Client ID:	**PBW**	Batch ID:	**16511**	RunNo:	**22710**						
Prep Date:	**11/21/2014**	Analysis Date:	**11/21/2014**	SeqNo:	**669836**	Units:	**mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		ND	0.00020								

Sample ID	**LCS-16511**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**						
Client ID:	**LCSW**	Batch ID:	**16511**	RunNo:	**22710**						
Prep Date:	**11/21/2014**	Analysis Date:	**11/21/2014**	SeqNo:	**669837**	Units:	**mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.0051	0.00020	0.005000	0	102	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411475**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22539** RunNo: **22539**
Prep Date: Analysis Date: **11/13/2014** SeqNo: **664550** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R22539** RunNo: **22539**
Prep Date: Analysis Date: **11/13/2014** SeqNo: **664551** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	100	90	110			
Bromide	2.4	0.10	2.500	0	94.9	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.8	90	110			
Sulfate	10	0.50	10.00	0	99.5	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22539** RunNo: **22539**
Prep Date: Analysis Date: **11/14/2014** SeqNo: **664604** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R22539** RunNo: **22539**
Prep Date: Analysis Date: **11/14/2014** SeqNo: **664605** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	100	90	110			
Bromide	2.3	0.10	2.500	0	92.2	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.9	90	110			
Sulfate	9.5	0.50	10.00	0	95.4	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22782** RunNo: **22782**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672326** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411475**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R22782**	RunNo: **22782**							
Prep Date:	Analysis Date: **11/24/2014**	SeqNo: **672326**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R22782**	RunNo: **22782**							
Prep Date:	Analysis Date: **11/24/2014**	SeqNo: **672327**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.3	0.20	3.500	0	94.6	90	110			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R22899**	RunNo: **22899**							
Prep Date:	Analysis Date: **12/2/2014**	SeqNo: **676194**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R22899**	RunNo: **22899**							
Prep Date:	Analysis Date: **12/2/2014**	SeqNo: **676195**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.1	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411475**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB-16356** SampType: **MBLK** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **PBW** Batch ID: **16356** RunNo: **22538**
Prep Date: **11/12/2014** Analysis Date: **11/14/2014** SeqNo: **665412** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	1.2		1.000		122	59	141			

Sample ID **LCS-16356** SampType: **LCS** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSW** Batch ID: **16356** RunNo: **22538**
Prep Date: **11/12/2014** Analysis Date: **11/14/2014** SeqNo: **665425** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	0.73		0.5000		145	59	141			S

Sample ID **MB-16415** SampType: **MBLK** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **PBW** Batch ID: **16415** RunNo: **22594**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666747** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.0		1.000		101	59	141			

Sample ID **LCS-16415** SampType: **LCS** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSW** Batch ID: **16415** RunNo: **22594**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666748** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.7	1.0	5.000	0	93.6	69.7	142			
Surr: DNOP	0.60		0.5000		119	59	141			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411475**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW** Batch ID: **R22533** RunNo: **22533**
Prep Date: Analysis Date: **11/13/2014** SeqNo: **664414** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	17		20.00		86.0	80	120			

Sample ID **2.5UG GRO LCS** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW** Batch ID: **R22533** RunNo: **22533**
Prep Date: Analysis Date: **11/13/2014** SeqNo: **664415** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.48	0.050	0.5000	0	95.0	80	120			
Surr: BFB	19		20.00		93.2	80	120			

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW** Batch ID: **R22544** RunNo: **22544**
Prep Date: Analysis Date: **11/14/2014** SeqNo: **665051** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		87.8	80	120			

Sample ID **2.5UG GRO LCS** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW** Batch ID: **R22544** RunNo: **22544**
Prep Date: Analysis Date: **11/14/2014** SeqNo: **665052** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.47	0.050	0.5000	0	93.8	80	120			
Surr: BFB	18		20.00		91.7	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411475**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW** Batch ID: **R22533** RunNo: **22533**
Prep Date: Analysis Date: **11/13/2014** SeqNo: **664457** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5								
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Surr: 4-Bromofluorobenzene	21		20.00		104	66.6	167			

Sample ID **100NG BTEX LCS** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW** Batch ID: **R22533** RunNo: **22533**
Prep Date: Analysis Date: **11/13/2014** SeqNo: **664458** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	21	2.5	20.00	0	105	67.4	147			
Benzene	21	1.0	20.00	0	105	80	120			
Toluene	21	1.0	20.00	0	106	80	120			
Ethylbenzene	21	1.0	20.00	0	107	80	120			
Xylenes, Total	65	2.0	60.00	0	108	80	120			
1,2,4-Trimethylbenzene	21	1.0	20.00	0	107	80	120			
1,3,5-Trimethylbenzene	22	1.0	20.00	0	108	80	120			
Surr: 4-Bromofluorobenzene	21		20.00		103	66.6	167			

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW** Batch ID: **R22544** RunNo: **22544**
Prep Date: Analysis Date: **11/14/2014** SeqNo: **664757** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	21		20.00		106	66.6	167			

Sample ID **100NG BTEX LCS** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW** Batch ID: **R22544** RunNo: **22544**
Prep Date: Analysis Date: **11/14/2014** SeqNo: **664758** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	21		20.00		106	66.6	167			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411475**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **5ml rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R22531**	RunNo: **22531**			
Prep Date:	Analysis Date: **11/13/2014**	SeqNo: **664345**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411475**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **5ml rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22531** RunNo: **22531**
Prep Date: Analysis Date: **11/13/2014** SeqNo: **664345** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.5		10.00		85.1	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		86.6	70	130			
Surr: Dibromofluoromethane	9.1		10.00		91.0	70	130			
Surr: Toluene-d8	9.1		10.00		91.4	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22531** RunNo: **22531**
Prep Date: Analysis Date: **11/13/2014** SeqNo: **664347** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	117	70	130			
Toluene	22	1.0	20.00	0	110	80	120			
Chlorobenzene	19	1.0	20.00	0	95.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411475**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **100ng lcs**	SampType: **LCS**		TestCode: **EPA Method 8260B: VOLATILES**		
Client ID: **LCSW**	Batch ID: **R22531**		RunNo: **22531**		
Prep Date:	Analysis Date: **11/13/2014**		SeqNo: **664347**	Units: **µg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22	1.0	20.00	0	111	82.6	131			
Trichloroethene (TCE)	20	1.0	20.00	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	8.2		10.00		82.0	70	130			
Surr: 4-Bromofluorobenzene	8.1		10.00		80.7	70	130			
Surr: Dibromofluoromethane	9.0		10.00		90.5	70	130			
Surr: Toluene-d8	9.1		10.00		90.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411475**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **mb-16377**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **16377**	RunNo: **22600**			
Prep Date: **11/13/2014**	Analysis Date: **11/17/2014**	SeqNo: **666318**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411475**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**mb-16377**	SampType:	**MBLK**	TestCode:	**EPA Method 8270C: Semivolatiles**		
Client ID:	**PBW**	Batch ID:	**16377**	RunNo:	**22600**		
Prep Date:	**11/13/2014**	Analysis Date:	**11/17/2014**	SeqNo:	**666318**	Units:	**µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	95		200.0		47.6	17.6	104			
Surr: Phenol-d5	96		200.0		48.2	17.7	89.9			
Surr: 2,4,6-Tribromophenol	75		200.0		37.5	16.3	122			
Surr: Nitrobenzene-d5	67		100.0		67.1	45.3	117			
Surr: 2-Fluorobiphenyl	61		100.0		61.2	43	113			
Surr: 4-Terphenyl-d14	73		100.0		72.5	47.6	122			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411475**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **lcs-16377** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **16377** RunNo: **22600**
Prep Date: **11/13/2014** Analysis Date: **11/17/2014** SeqNo: **666368** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	66	10	100.0	0	66.2	47.9	114			
4-Chloro-3-methylphenol	160	10	200.0	0	82.4	51.7	122			
2-Chlorophenol	140	10	200.0	0	69.9	40.7	113			
1,4-Dichlorobenzene	44	10	100.0	0	44.3	39.6	99.9			
2,4-Dinitrotoluene	68	10	100.0	0	68.0	40.8	113			
N-Nitrosodi-n-propylamine	74	10	100.0	0	74.3	51.2	111			
4-Nitrophenol	100	10	200.0	0	50.6	15.7	86.9			
Pentachlorophenol	130	20	200.0	0	67.5	21.6	104			
Phenol	90	10	200.0	0	44.8	28.6	71.7			
Pyrene	78	10	100.0	0	77.8	54.2	128			
1,2,4-Trichlorobenzene	50	10	100.0	0	50.0	40.9	101			
Surr: 2-Fluorophenol	94		200.0		47.0	17.6	104			
Surr: Phenol-d5	77		200.0		38.5	17.7	89.9			
Surr: 2,4,6-Tribromophenol	160		200.0		80.7	16.3	122			
Surr: Nitrobenzene-d5	69		100.0		69.3	45.3	117			
Surr: 2-Fluorobiphenyl	65		100.0		64.8	43	113			
Surr: 4-Terphenyl-d14	85		100.0		85.0	47.6	122			

Sample ID **lcsd-16377** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **16377** RunNo: **22600**
Prep Date: **11/13/2014** Analysis Date: **11/17/2014** SeqNo: **666369** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	67	10	100.0	0	67.5	47.9	114	1.98	27.2	
4-Chloro-3-methylphenol	160	10	200.0	0	81.4	51.7	122	1.26	25.9	
2-Chlorophenol	140	10	200.0	0	68.2	40.7	113	2.40	22.5	
1,4-Dichlorobenzene	49	10	100.0	0	49.0	39.6	99.9	10.2	24.6	
2,4-Dinitrotoluene	69	10	100.0	0	68.8	40.8	113	1.20	25.3	
N-Nitrosodi-n-propylamine	74	10	100.0	0	74.3	51.2	111	0.0269	23.6	
4-Nitrophenol	130	10	200.0	0	63.4	15.7	86.9	22.5	34.7	
Pentachlorophenol	130	20	200.0	0	67.5	21.6	104	0.0148	32.8	
Phenol	100	10	200.0	0	52.0	28.6	71.7	14.9	25.5	
Pyrene	77	10	100.0	0	77.4	54.2	128	0.567	31.4	
1,2,4-Trichlorobenzene	54	10	100.0	0	53.7	40.9	101	7.13	25.9	
Surr: 2-Fluorophenol	110		200.0		53.4	17.6	104	0	0	
Surr: Phenol-d5	93		200.0		46.6	17.7	89.9	0	0	
Surr: 2,4,6-Tribromophenol	160		200.0		80.9	16.3	122	0	0	
Surr: Nitrobenzene-d5	70		100.0		70.1	45.3	117	0	0	
Surr: 2-Fluorobiphenyl	70		100.0		69.5	43	113	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411475**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**lcsd-16377**	SampType:	**LCSD**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**LCSS02**	Batch ID:	**16377**	RunNo:	**22600**
Prep Date:	**11/13/2014**	Analysis Date:	**11/17/2014**	SeqNo:	**666369** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	81		100.0		81.3	47.6	122	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1411475 RcptNo: 1

Received by/date: 11/12/14

Logged By: **Ashley Gallegos** 11/12/2014 4:12:00 PM

Completed By: **Ashley Gallegos** 11/13/2014 9:25:06 AM

Reviewed By: 11/13/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐ CS 11/13/14
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☑ No ☑ No VOA Vials ☐ CS 11/13/14 Sample -002A (all vials) have bubbles
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐ for an acceptable pH.
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐ CS 11/13/14
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

dissolved metals analysis, added 0.4ml HNO3 to -001B + -002F

# of preserved bottles checked for pH: 5 (<2 or >12 unless noted)
Adjusted? yes
Checked by: CS

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☑ No ☐ NA ☐

Person Notified:	Cheryl Johnson	Date:	11/13/2014
By Whom:	Anne Thorne	Via:	☑ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:	E Coli Sample was rejected		
Client Instructions:	See Section 19.		

17. Additional remarks:

    E. Coli Sample for -001 was rejected, sample was too dark even after dilution per Stephanie

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

2 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard ☐ Rush

Project Name:

Q4 2014

Project #: ELDU, OAPIS

~~East/West/Oil LDUs, GWM-1, -2, -3 and~~ OAPIS-1

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix (11/13/14)	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1411475	8260 + MTBE	8021 + MTBE	8015B extended	8270 + phenoles	WQCC metals - total	WQCC metals - dissolved (filtered)	major cations/anions	cyanide						Air Bubbles (Y or N)
11-11-14	1550	Aq	East LDU	8		-001		X	X		X	X								
11-11-14	1700	✓	OAPIS-1	12		-002	X		X	X	X	X	X	X						
			Trip Blank			-003	X	X	X											

Date:	Time:	Relinquished by:	Received by:	Date	Time
11-12-14	0630	Pat Landers		11/12/14	1:30
11-12-14	1619			11/12/14	1612

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
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December 05, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: Q4 2014 OrderNo.: 1411451

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 7 sample(s) on 11/12/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: **1411451**
Date: **12/5/2014**

CLIENT: Western Refining Southwest, Gallup
Project: Q4 2014

Analytical Comments Regarding BOD:
The method blank(s) had a DO depletion >0.2mg/L.

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-1
Project: Q4 2014
Collection Date: 11/12/2014 9:50:00 AM
Lab ID: 1411451-001
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	24	10	*	mg/L	100	11/13/2014 5:58:29 PM	R22539
Chloride	4200	250		mg/L	500	11/24/2014 9:34:17 PM	R22776
Nitrogen, Nitrite (As N)	ND	10		mg/L	100	11/13/2014 5:58:29 PM	R22539
Bromide	3.4	1.0		mg/L	10	11/13/2014 5:46:04 PM	R22539
Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	11/13/2014 5:46:04 PM	R22539
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	11/13/2014 5:46:04 PM	R22539
Sulfate	5800	250		mg/L	500	11/24/2014 9:34:17 PM	R22776
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.12	0.010		mg/L	5	11/16/2014 7:46:25 PM	R22599
Cadmium	ND	0.010		mg/L	5	11/16/2014 7:46:25 PM	R22599
Calcium	730	10		mg/L	10	11/16/2014 7:48:15 PM	R22599
Chromium	0.036	0.030		mg/L	5	11/16/2014 7:46:25 PM	R22599
Copper	ND	0.030		mg/L	5	11/16/2014 7:46:25 PM	R22599
Iron	1.2	0.10	*	mg/L	5	11/16/2014 7:46:25 PM	R22599
Magnesium	370	5.0		mg/L	5	11/16/2014 7:46:25 PM	R22599
Manganese	0.66	0.010	*	mg/L	5	11/16/2014 7:46:25 PM	R22599
Potassium	230	5.0		mg/L	5	11/16/2014 7:46:25 PM	R22599
Silver	ND	0.025		mg/L	5	11/16/2014 7:46:25 PM	R22599
Sodium	3300	50		mg/L	50	11/24/2014 12:00:50 PM	R22752
Zinc	0.058	0.050		mg/L	5	11/16/2014 7:46:25 PM	R22599
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.13	0.0020		mg/L	1	11/18/2014 3:05:20 PM	16416
Cadmium	ND	0.0020		mg/L	1	11/18/2014 3:05:20 PM	16416
Chromium	0.048	0.0060		mg/L	1	11/18/2014 3:05:20 PM	16416
Copper	ND	0.0060		mg/L	1	11/18/2014 3:05:20 PM	16416
Iron	2.2	0.10	*	mg/L	5	11/18/2014 3:06:57 PM	16416
Manganese	0.68	0.0020	*	mg/L	1	11/18/2014 3:05:20 PM	16416
Silver	ND	0.0050		mg/L	1	11/18/2014 3:05:20 PM	16416
Zinc	0.059	0.010		mg/L	1	11/18/2014 3:05:20 PM	16416
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.041	0.010	*	mg/L	10	11/17/2014 3:56:59 PM	R22589
Lead	ND	0.010		mg/L	10	11/24/2014 5:04:48 PM	R22774
Selenium	0.013	0.010		mg/L	10	11/17/2014 3:56:59 PM	R22589
Uranium	ND	0.010		mg/L	10	11/24/2014 5:04:48 PM	R22774
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.047	0.0050	*	mg/L	5	11/18/2014 2:17:34 PM	16416
Lead	ND	0.0050		mg/L	5	11/18/2014 2:17:34 PM	16416

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-1
Project: Q4 2014
Collection Date: 11/12/2014 9:50:00 AM
Lab ID: 1411451-001
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Selenium	0.017	0.0050		mg/L	5	11/18/2014 2:17:34 PM	16416
Uranium	ND	0.0050		mg/L	5	11/18/2014 2:17:34 PM	16416
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	0.00032	0.00020		mg/L	1	11/21/2014 2:53:46 PM	16511
SM5210B: BOD						Analyst:	**SMS**
Biochemical Oxygen Demand	240	2.0		mg/L	1	11/18/2014 2:28:00 PM	16371
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Acenaphthylene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Aniline	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Anthracene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Azobenzene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Benz(a)anthracene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Benzo(a)pyrene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Benzo(b)fluoranthene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Benzo(g,h,i)perylene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Benzo(k)fluoranthene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Benzoic acid	ND	100		µg/L	1	11/17/2014 4:36:15 PM	16377
Benzyl alcohol	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Bis(2-chloroethoxy)methane	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Bis(2-chloroethyl)ether	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Bis(2-chloroisopropyl)ether	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Bis(2-ethylhexyl)phthalate	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
4-Bromophenyl phenyl ether	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Butyl benzyl phthalate	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Carbazole	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
4-Chloro-3-methylphenol	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
4-Chloroaniline	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
2-Chloronaphthalene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
2-Chlorophenol	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
4-Chlorophenyl phenyl ether	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Chrysene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Di-n-butyl phthalate	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Di-n-octyl phthalate	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Dibenz(a,h)anthracene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Dibenzofuran	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
1,2-Dichlorobenzene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
1,3-Dichlorobenzene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-1
Project: Q4 2014
Collection Date: 11/12/2014 9:50:00 AM
Lab ID: 1411451-001
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,4-Dichlorobenzene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
3,3´-Dichlorobenzidine	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Diethyl phthalate	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Dimethyl phthalate	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
2,4-Dichlorophenol	ND	100		µg/L	1	11/17/2014 4:36:15 PM	16377
2,4-Dimethylphenol	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
4,6-Dinitro-2-methylphenol	ND	100		µg/L	1	11/17/2014 4:36:15 PM	16377
2,4-Dinitrophenol	ND	100		µg/L	1	11/17/2014 4:36:15 PM	16377
2,4-Dinitrotoluene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
2,6-Dinitrotoluene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Fluoranthene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Fluorene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Hexachlorobenzene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Hexachlorobutadiene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Hexachlorocyclopentadiene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Hexachloroethane	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Isophorone	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
1-Methylnaphthalene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
2-Methylnaphthalene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
2-Methylphenol	62	50		µg/L	1	11/17/2014 4:36:15 PM	16377
3+4-Methylphenol	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
N-Nitrosodi-n-propylamine	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
N-Nitrosodimethylamine	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
N-Nitrosodiphenylamine	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Naphthalene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
2-Nitroaniline	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
3-Nitroaniline	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
4-Nitroaniline	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Nitrobenzene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
2-Nitrophenol	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
4-Nitrophenol	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Pentachlorophenol	ND	100		µg/L	1	11/17/2014 4:36:15 PM	16377
Phenanthrene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Phenol	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Pyrene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Pyridine	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
1,2,4-Trichlorobenzene	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
2,4,5-Trichlorophenol	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-1
Project: Q4 2014
Collection Date: 11/12/2014 9:50:00 AM
Lab ID: 1411451-001
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
2,4,6-Trichlorophenol	ND	50		µg/L	1	11/17/2014 4:36:15 PM	16377
Surr: 2-Fluorophenol	71.2	17.6-104		%REC	1	11/17/2014 4:36:15 PM	16377
Surr: Phenol-d5	56.9	17.7-89.9		%REC	1	11/17/2014 4:36:15 PM	16377
Surr: 2,4,6-Tribromophenol	78.9	16.3-122		%REC	1	11/17/2014 4:36:15 PM	16377
Surr: Nitrobenzene-d5	82.2	45.3-117		%REC	1	11/17/2014 4:36:15 PM	16377
Surr: 2-Fluorobiphenyl	81.5	43-113		%REC	1	11/17/2014 4:36:15 PM	16377
Surr: 4-Terphenyl-d14	76.9	47.6-122		%REC	1	11/17/2014 4:36:15 PM	16377
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
Toluene	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
Ethylbenzene	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
1,2,4-Trimethylbenzene	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
1,3,5-Trimethylbenzene	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
Naphthalene	ND	20		µg/L	10	11/19/2014 4:53:41 PM	R22653
1-Methylnaphthalene	ND	40		µg/L	10	11/19/2014 4:53:41 PM	R22653
2-Methylnaphthalene	ND	40		µg/L	10	11/19/2014 4:53:41 PM	R22653
Acetone	ND	100		µg/L	10	11/19/2014 4:53:41 PM	R22653
Bromobenzene	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
Bromodichloromethane	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
Bromoform	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
Bromomethane	ND	30		µg/L	10	11/19/2014 4:53:41 PM	R22653
2-Butanone	ND	100		µg/L	10	11/19/2014 4:53:41 PM	R22653
Carbon disulfide	ND	100		µg/L	10	11/19/2014 4:53:41 PM	R22653
Carbon Tetrachloride	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
Chlorobenzene	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
Chloroethane	ND	20		µg/L	10	11/19/2014 4:53:41 PM	R22653
Chloroform	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
Chloromethane	ND	30		µg/L	10	11/19/2014 4:53:41 PM	R22653
2-Chlorotoluene	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
4-Chlorotoluene	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
cis-1,2-DCE	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/19/2014 4:53:41 PM	R22653
Dibromochloromethane	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
Dibromomethane	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
1,2-Dichlorobenzene	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-1
Project: Q4 2014
Collection Date: 11/12/2014 9:50:00 AM
Lab ID: 1411451-001
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,3-Dichlorobenzene	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
1,4-Dichlorobenzene	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
Dichlorodifluoromethane	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
1,1-Dichloroethane	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
1,1-Dichloroethene	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
1,2-Dichloropropane	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
1,3-Dichloropropane	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
2,2-Dichloropropane	ND	20		µg/L	10	11/19/2014 4:53:41 PM	R22653
1,1-Dichloropropene	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
Hexachlorobutadiene	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
2-Hexanone	ND	100		µg/L	10	11/19/2014 4:53:41 PM	R22653
Isopropylbenzene	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
4-Isopropyltoluene	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
4-Methyl-2-pentanone	ND	100		µg/L	10	11/19/2014 4:53:41 PM	R22653
Methylene Chloride	ND	30		µg/L	10	11/19/2014 4:53:41 PM	R22653
n-Butylbenzene	ND	30		µg/L	10	11/19/2014 4:53:41 PM	R22653
n-Propylbenzene	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
sec-Butylbenzene	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
Styrene	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
tert-Butylbenzene	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	11/19/2014 4:53:41 PM	R22653
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
trans-1,2-DCE	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
1,1,1-Trichloroethane	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
1,1,2-Trichloroethane	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
Trichloroethene (TCE)	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
Trichlorofluoromethane	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
1,2,3-Trichloropropane	ND	20		µg/L	10	11/19/2014 4:53:41 PM	R22653
Vinyl chloride	ND	10		µg/L	10	11/19/2014 4:53:41 PM	R22653
Xylenes, Total	ND	15		µg/L	10	11/19/2014 4:53:41 PM	R22653
Surr: 1,2-Dichloroethane-d4	100	70-130		%REC	10	11/19/2014 4:53:41 PM	R22653
Surr: 4-Bromofluorobenzene	99.2	70-130		%REC	10	11/19/2014 4:53:41 PM	R22653
Surr: Dibromofluoromethane	94.5	70-130		%REC	10	11/19/2014 4:53:41 PM	R22653
Surr: Toluene-d8	92.1	70-130		%REC	10	11/19/2014 4:53:41 PM	R22653
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **JRR**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-1
Project: Q4 2014
Collection Date: 11/12/2014 9:50:00 AM
Lab ID: 1411451-001
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM2510B: SPECIFIC CONDUCTANCE						Analyst:	**JRR**
Conductivity	17000	0.050		µmhos/cm	5	11/21/2014 7:00:08 PM	R22735
SM4500-H+B: PH						Analyst:	**JRR**
pH	8.00	1.68	H	pH units	1	11/13/2014 9:46:15 PM	R22543

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-2
Project: Q4 2014
Collection Date: 11/12/2014 10:55:00 AM
Lab ID: 1411451-002
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	40	10	*	mg/L	100	11/13/2014 6:23:17 PM	R22539
Chloride	2400	100		mg/L	200	11/24/2014 9:46:41 PM	R22776
Nitrogen, Nitrite (As N)	ND	10		mg/L	100	11/13/2014 6:23:17 PM	R22539
Bromide	ND	1.0		mg/L	10	11/13/2014 6:10:53 PM	R22539
Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	11/13/2014 6:10:53 PM	R22539
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	11/13/2014 6:10:53 PM	R22539
Sulfate	1300	50		mg/L	100	11/13/2014 6:23:17 PM	R22539
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.076	0.0020		mg/L	1	11/16/2014 7:50:22 PM	R22599
Cadmium	ND	0.0020		mg/L	1	11/16/2014 7:50:22 PM	R22599
Calcium	230	5.0		mg/L	5	11/16/2014 7:52:11 PM	R22599
Chromium	0.0099	0.0060		mg/L	1	11/16/2014 7:50:22 PM	R22599
Copper	ND	0.0060		mg/L	1	11/16/2014 7:50:22 PM	R22599
Iron	1.4	0.10	*	mg/L	5	11/16/2014 7:52:11 PM	R22599
Magnesium	54	1.0		mg/L	1	11/16/2014 7:50:22 PM	R22599
Manganese	0.21	0.0020	*	mg/L	1	11/16/2014 7:50:22 PM	R22599
Potassium	160	5.0		mg/L	5	11/16/2014 7:52:11 PM	R22599
Silver	ND	0.0050		mg/L	1	11/16/2014 7:50:22 PM	R22599
Sodium	1700	20		mg/L	20	11/24/2014 12:02:46 PM	R22752
Zinc	0.056	0.010		mg/L	1	11/16/2014 7:50:22 PM	R22599
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.11	0.0020		mg/L	1	11/18/2014 3:08:52 PM	16416
Cadmium	ND	0.0020		mg/L	1	11/18/2014 3:08:52 PM	16416
Chromium	0.012	0.0060		mg/L	1	11/18/2014 3:08:52 PM	16416
Copper	ND	0.0060		mg/L	1	11/18/2014 3:08:52 PM	16416
Iron	2.8	0.10	*	mg/L	5	11/18/2014 3:10:26 PM	16416
Manganese	0.24	0.0020	*	mg/L	1	11/18/2014 3:08:52 PM	16416
Silver	ND	0.0050		mg/L	1	11/18/2014 3:08:52 PM	16416
Zinc	0.025	0.010		mg/L	1	11/18/2014 3:08:52 PM	16416
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.011	0.010	*	mg/L	10	11/24/2014 5:07:54 PM	R22774
Lead	ND	0.010		mg/L	10	11/24/2014 5:07:54 PM	R22774
Selenium	ND	0.010		mg/L	10	11/24/2014 5:07:54 PM	R22774
Uranium	ND	0.010		mg/L	10	11/24/2014 5:07:54 PM	R22774
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.020	*	mg/L	20	12/3/2014 2:20:05 PM	16416
Lead	0.0020	0.0010		mg/L	1	11/18/2014 2:21:04 PM	16416

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Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-2
Project: Q4 2014
Collection Date: 11/12/2014 10:55:00 AM
Lab ID: 1411451-002
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Selenium	ND	0.020		mg/L	20	12/3/2014 2:20:05 PM	16416
Uranium	0.0071	0.0010		mg/L	1	11/18/2014 2:21:04 PM	16416
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/21/2014 2:55:37 PM	16511
SM5210B: BOD						Analyst:	**SMS**
Biochemical Oxygen Demand	170	2.0		mg/L	1	11/18/2014 2:28:00 PM	16371
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Acenaphthylene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Aniline	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Anthracene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Azobenzene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Benz(a)anthracene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Benzo(a)pyrene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Benzo(b)fluoranthene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Benzo(g,h,i)perylene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Benzo(k)fluoranthene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Benzoic acid	ND	100		µg/L	1	11/17/2014 5:03:46 PM	16377
Benzyl alcohol	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Bis(2-chloroethoxy)methane	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Bis(2-chloroethyl)ether	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Bis(2-chloroisopropyl)ether	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Bis(2-ethylhexyl)phthalate	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
4-Bromophenyl phenyl ether	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Butyl benzyl phthalate	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Carbazole	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
4-Chloro-3-methylphenol	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
4-Chloroaniline	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
2-Chloronaphthalene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
2-Chlorophenol	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
4-Chlorophenyl phenyl ether	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Chrysene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Di-n-butyl phthalate	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Di-n-octyl phthalate	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Dibenz(a,h)anthracene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Dibenzofuran	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
1,2-Dichlorobenzene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
1,3-Dichlorobenzene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-2
Project: Q4 2014
Collection Date: 11/12/2014 10:55:00 AM
Lab ID: 1411451-002
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,4-Dichlorobenzene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
3,3´-Dichlorobenzidine	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Diethyl phthalate	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Dimethyl phthalate	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
2,4-Dichlorophenol	ND	100		µg/L	1	11/17/2014 5:03:46 PM	16377
2,4-Dimethylphenol	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
4,6-Dinitro-2-methylphenol	ND	100		µg/L	1	11/17/2014 5:03:46 PM	16377
2,4-Dinitrophenol	ND	100		µg/L	1	11/17/2014 5:03:46 PM	16377
2,4-Dinitrotoluene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
2,6-Dinitrotoluene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Fluoranthene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Fluorene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Hexachlorobenzene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Hexachlorobutadiene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Hexachlorocyclopentadiene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Hexachloroethane	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Isophorone	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
1-Methylnaphthalene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
2-Methylnaphthalene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
2-Methylphenol	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
3+4-Methylphenol	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
N-Nitrosodi-n-propylamine	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
N-Nitrosodimethylamine	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
N-Nitrosodiphenylamine	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Naphthalene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
2-Nitroaniline	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
3-Nitroaniline	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
4-Nitroaniline	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Nitrobenzene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
2-Nitrophenol	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
4-Nitrophenol	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Pentachlorophenol	ND	100		µg/L	1	11/17/2014 5:03:46 PM	16377
Phenanthrene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Phenol	58	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Pyrene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Pyridine	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
1,2,4-Trichlorobenzene	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
2,4,5-Trichlorophenol	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-2
Project: Q4 2014
Collection Date: 11/12/2014 10:55:00 AM
Lab ID: 1411451-002
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
2,4,6-Trichlorophenol	ND	50		µg/L	1	11/17/2014 5:03:46 PM	16377
Surr: 2-Fluorophenol	64.4	17.6-104		%REC	1	11/17/2014 5:03:46 PM	16377
Surr: Phenol-d5	51.1	17.7-89.9		%REC	1	11/17/2014 5:03:46 PM	16377
Surr: 2,4,6-Tribromophenol	86.5	16.3-122		%REC	1	11/17/2014 5:03:46 PM	16377
Surr: Nitrobenzene-d5	82.5	45.3-117		%REC	1	11/17/2014 5:03:46 PM	16377
Surr: 2-Fluorobiphenyl	76.3	43-113		%REC	1	11/17/2014 5:03:46 PM	16377
Surr: 4-Terphenyl-d14	81.8	47.6-122		%REC	1	11/17/2014 5:03:46 PM	16377
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
Toluene	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
Ethylbenzene	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
1,2,4-Trimethylbenzene	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
1,3,5-Trimethylbenzene	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
Naphthalene	ND	20		µg/L	10	11/19/2014 5:23:33 PM	R22653
1-Methylnaphthalene	ND	40		µg/L	10	11/19/2014 5:23:33 PM	R22653
2-Methylnaphthalene	ND	40		µg/L	10	11/19/2014 5:23:33 PM	R22653
Acetone	ND	100		µg/L	10	11/19/2014 5:23:33 PM	R22653
Bromobenzene	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
Bromodichloromethane	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
Bromoform	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
Bromomethane	ND	30		µg/L	10	11/19/2014 5:23:33 PM	R22653
2-Butanone	ND	100		µg/L	10	11/19/2014 5:23:33 PM	R22653
Carbon disulfide	ND	100		µg/L	10	11/19/2014 5:23:33 PM	R22653
Carbon Tetrachloride	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
Chlorobenzene	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
Chloroethane	ND	20		µg/L	10	11/19/2014 5:23:33 PM	R22653
Chloroform	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
Chloromethane	ND	30		µg/L	10	11/19/2014 5:23:33 PM	R22653
2-Chlorotoluene	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
4-Chlorotoluene	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
cis-1,2-DCE	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/19/2014 5:23:33 PM	R22653
Dibromochloromethane	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
Dibromomethane	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
1,2-Dichlorobenzene	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-2
Project: Q4 2014
Collection Date: 11/12/2014 10:55:00 AM
Lab ID: 1411451-002
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,3-Dichlorobenzene	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
1,4-Dichlorobenzene	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
Dichlorodifluoromethane	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
1,1-Dichloroethane	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
1,1-Dichloroethene	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
1,2-Dichloropropane	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
1,3-Dichloropropane	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
2,2-Dichloropropane	ND	20		µg/L	10	11/19/2014 5:23:33 PM	R22653
1,1-Dichloropropene	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
Hexachlorobutadiene	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
2-Hexanone	ND	100		µg/L	10	11/19/2014 5:23:33 PM	R22653
Isopropylbenzene	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
4-Isopropyltoluene	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
4-Methyl-2-pentanone	ND	100		µg/L	10	11/19/2014 5:23:33 PM	R22653
Methylene Chloride	ND	30		µg/L	10	11/19/2014 5:23:33 PM	R22653
n-Butylbenzene	ND	30		µg/L	10	11/19/2014 5:23:33 PM	R22653
n-Propylbenzene	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
sec-Butylbenzene	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
Styrene	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
tert-Butylbenzene	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	11/19/2014 5:23:33 PM	R22653
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
trans-1,2-DCE	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
1,1,1-Trichloroethane	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
1,1,2-Trichloroethane	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
Trichloroethene (TCE)	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
Trichlorofluoromethane	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
1,2,3-Trichloropropane	ND	20		µg/L	10	11/19/2014 5:23:33 PM	R22653
Vinyl chloride	ND	10		µg/L	10	11/19/2014 5:23:33 PM	R22653
Xylenes, Total	ND	15		µg/L	10	11/19/2014 5:23:33 PM	R22653
Surr: 1,2-Dichloroethane-d4	101	70-130		%REC	10	11/19/2014 5:23:33 PM	R22653
Surr: 4-Bromofluorobenzene	96.7	70-130		%REC	10	11/19/2014 5:23:33 PM	R22653
Surr: Dibromofluoromethane	97.6	70-130		%REC	10	11/19/2014 5:23:33 PM	R22653
Surr: Toluene-d8	97.9	70-130		%REC	10	11/19/2014 5:23:33 PM	R22653
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **JRR**	

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-2
Project: Q4 2014
Collection Date: 11/12/2014 10:55:00 AM
Lab ID: 1411451-002
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM2510B: SPECIFIC CONDUCTANCE						Analyst:	**JRR**
Conductivity	8900	0.010		µmhos/cm	1	11/13/2014 9:50:17 PM	R22543
SM4500-H+B: PH						Analyst:	**JRR**
pH	7.97	1.68	H	pH units	1	11/13/2014 9:50:17 PM	R22543

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Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-3
Project: Q4 2014
Collection Date: 11/12/2014 11:30:00 AM
Lab ID: 1411451-003
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	34	1.0	*	mg/L	10	11/13/2014 7:00:32 PM	R22539
Chloride	4000	250		mg/L	500	11/24/2014 9:59:06 PM	R22776
Nitrogen, Nitrite (As N)	ND	10		mg/L	100	11/13/2014 7:12:57 PM	R22539
Bromide	1.0	1.0		mg/L	10	11/13/2014 7:00:32 PM	R22539
Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	11/13/2014 7:00:32 PM	R22539
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	11/13/2014 7:00:32 PM	R22539
Sulfate	1300	50		mg/L	100	11/13/2014 7:12:57 PM	R22539
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.10	0.0020		mg/L	1	11/16/2014 7:54:09 PM	R22599
Cadmium	ND	0.0020		mg/L	1	11/16/2014 7:54:09 PM	R22599
Calcium	370	5.0		mg/L	5	11/16/2014 7:55:42 PM	R22599
Chromium	0.0091	0.0060		mg/L	1	11/16/2014 7:54:09 PM	R22599
Copper	ND	0.0060		mg/L	1	11/16/2014 7:54:09 PM	R22599
Iron	1.6	0.10	*	mg/L	5	11/16/2014 7:55:42 PM	R22599
Magnesium	92	1.0		mg/L	1	11/16/2014 7:54:09 PM	R22599
Manganese	0.23	0.0020	*	mg/L	1	11/16/2014 7:54:09 PM	R22599
Potassium	160	5.0		mg/L	5	11/16/2014 7:55:42 PM	R22599
Silver	ND	0.0050		mg/L	1	11/16/2014 7:54:09 PM	R22599
Sodium	2500	50		mg/L	50	11/24/2014 12:04:38 PM	R22752
Zinc	0.016	0.010		mg/L	1	11/16/2014 7:54:09 PM	R22599
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.10	0.0020		mg/L	1	11/18/2014 3:12:26 PM	16416
Cadmium	ND	0.0020		mg/L	1	11/18/2014 3:12:26 PM	16416
Chromium	0.0098	0.0060		mg/L	1	11/18/2014 3:12:26 PM	16416
Copper	ND	0.0060		mg/L	1	11/18/2014 3:12:26 PM	16416
Iron	1.9	0.10	*	mg/L	5	11/18/2014 3:24:49 PM	16416
Manganese	0.23	0.0020	*	mg/L	1	11/18/2014 3:12:26 PM	16416
Silver	ND	0.0050		mg/L	1	11/18/2014 3:12:26 PM	16416
Zinc	0.020	0.010		mg/L	1	11/18/2014 3:12:26 PM	16416
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.012	0.010	*	mg/L	10	11/24/2014 5:17:14 PM	R22774
Lead	ND	0.010		mg/L	10	11/24/2014 5:17:14 PM	R22774
Selenium	ND	0.010		mg/L	10	11/24/2014 5:17:14 PM	R22774
Uranium	ND	0.010		mg/L	10	11/24/2014 5:17:14 PM	R22774
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.020	*	mg/L	20	12/3/2014 2:23:10 PM	16416
Lead	ND	0.020		mg/L	20	12/3/2014 2:23:10 PM	16416

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Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-3
Project: Q4 2014
Collection Date: 11/12/2014 11:30:00 AM
Lab ID: 1411451-003
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Selenium	ND	0.020		mg/L	20	12/3/2014 2:23:10 PM	16416
Uranium	ND	0.020		mg/L	20	12/3/2014 2:23:10 PM	16416
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/21/2014 2:57:21 PM	16511
SM5210B: BOD						Analyst:	**SMS**
Biochemical Oxygen Demand	120	2.0		mg/L	1	11/18/2014 2:28:00 PM	16371
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Acenaphthylene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Aniline	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Anthracene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Azobenzene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Benz(a)anthracene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Benzo(a)pyrene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Benzo(b)fluoranthene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Benzo(g,h,i)perylene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Benzo(k)fluoranthene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Benzoic acid	ND	100		µg/L	1	11/17/2014 5:31:18 PM	16377
Benzyl alcohol	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Bis(2-chloroethoxy)methane	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Bis(2-chloroethyl)ether	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Bis(2-chloroisopropyl)ether	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Bis(2-ethylhexyl)phthalate	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
4-Bromophenyl phenyl ether	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Butyl benzyl phthalate	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Carbazole	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
4-Chloro-3-methylphenol	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
4-Chloroaniline	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
2-Chloronaphthalene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
2-Chlorophenol	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
4-Chlorophenyl phenyl ether	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Chrysene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Di-n-butyl phthalate	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Di-n-octyl phthalate	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Dibenz(a,h)anthracene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Dibenzofuran	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
1,2-Dichlorobenzene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
1,3-Dichlorobenzene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-3
Project: Q4 2014
Collection Date: 11/12/2014 11:30:00 AM
Lab ID: 1411451-003
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,4-Dichlorobenzene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
3,3´-Dichlorobenzidine	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Diethyl phthalate	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Dimethyl phthalate	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
2,4-Dichlorophenol	ND	100		µg/L	1	11/17/2014 5:31:18 PM	16377
2,4-Dimethylphenol	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
4,6-Dinitro-2-methylphenol	ND	100		µg/L	1	11/17/2014 5:31:18 PM	16377
2,4-Dinitrophenol	ND	100		µg/L	1	11/17/2014 5:31:18 PM	16377
2,4-Dinitrotoluene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
2,6-Dinitrotoluene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Fluoranthene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Fluorene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Hexachlorobenzene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Hexachlorobutadiene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Hexachlorocyclopentadiene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Hexachloroethane	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Isophorone	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
1-Methylnaphthalene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
2-Methylnaphthalene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
2-Methylphenol	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
3+4-Methylphenol	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
N-Nitrosodi-n-propylamine	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
N-Nitrosodimethylamine	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
N-Nitrosodiphenylamine	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Naphthalene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
2-Nitroaniline	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
3-Nitroaniline	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
4-Nitroaniline	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Nitrobenzene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
2-Nitrophenol	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
4-Nitrophenol	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Pentachlorophenol	ND	100		µg/L	1	11/17/2014 5:31:18 PM	16377
Phenanthrene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Phenol	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Pyrene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Pyridine	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
1,2,4-Trichlorobenzene	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
2,4,5-Trichlorophenol	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-3
Project: Q4 2014
Collection Date: 11/12/2014 11:30:00 AM
Lab ID: 1411451-003
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
2,4,6-Trichlorophenol	ND	50		µg/L	1	11/17/2014 5:31:18 PM	16377
Surr: 2-Fluorophenol	59.0	17.6-104		%REC	1	11/17/2014 5:31:18 PM	16377
Surr: Phenol-d5	45.0	17.7-89.9		%REC	1	11/17/2014 5:31:18 PM	16377
Surr: 2,4,6-Tribromophenol	83.7	16.3-122		%REC	1	11/17/2014 5:31:18 PM	16377
Surr: Nitrobenzene-d5	77.5	45.3-117		%REC	1	11/17/2014 5:31:18 PM	16377
Surr: 2-Fluorobiphenyl	73.0	43-113		%REC	1	11/17/2014 5:31:18 PM	16377
Surr: 4-Terphenyl-d14	79.0	47.6-122		%REC	1	11/17/2014 5:31:18 PM	16377
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
Toluene	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
Ethylbenzene	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
1,2,4-Trimethylbenzene	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
1,3,5-Trimethylbenzene	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
Naphthalene	ND	20		µg/L	10	11/19/2014 5:53:25 PM	R22653
1-Methylnaphthalene	ND	40		µg/L	10	11/19/2014 5:53:25 PM	R22653
2-Methylnaphthalene	ND	40		µg/L	10	11/19/2014 5:53:25 PM	R22653
Acetone	ND	100		µg/L	10	11/19/2014 5:53:25 PM	R22653
Bromobenzene	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
Bromodichloromethane	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
Bromoform	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
Bromomethane	ND	30		µg/L	10	11/19/2014 5:53:25 PM	R22653
2-Butanone	ND	100		µg/L	10	11/19/2014 5:53:25 PM	R22653
Carbon disulfide	ND	100		µg/L	10	11/19/2014 5:53:25 PM	R22653
Carbon Tetrachloride	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
Chlorobenzene	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
Chloroethane	ND	20		µg/L	10	11/19/2014 5:53:25 PM	R22653
Chloroform	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
Chloromethane	ND	30		µg/L	10	11/19/2014 5:53:25 PM	R22653
2-Chlorotoluene	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
4-Chlorotoluene	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
cis-1,2-DCE	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/19/2014 5:53:25 PM	R22653
Dibromochloromethane	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
Dibromomethane	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
1,2-Dichlorobenzene	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-3
Project: Q4 2014
Collection Date: 11/12/2014 11:30:00 AM
Lab ID: 1411451-003
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,3-Dichlorobenzene	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
1,4-Dichlorobenzene	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
Dichlorodifluoromethane	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
1,1-Dichloroethane	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
1,1-Dichloroethene	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
1,2-Dichloropropane	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
1,3-Dichloropropane	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
2,2-Dichloropropane	ND	20		µg/L	10	11/19/2014 5:53:25 PM	R22653
1,1-Dichloropropene	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
Hexachlorobutadiene	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
2-Hexanone	ND	100		µg/L	10	11/19/2014 5:53:25 PM	R22653
Isopropylbenzene	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
4-Isopropyltoluene	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
4-Methyl-2-pentanone	ND	100		µg/L	10	11/19/2014 5:53:25 PM	R22653
Methylene Chloride	ND	30		µg/L	10	11/19/2014 5:53:25 PM	R22653
n-Butylbenzene	ND	30		µg/L	10	11/19/2014 5:53:25 PM	R22653
n-Propylbenzene	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
sec-Butylbenzene	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
Styrene	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
tert-Butylbenzene	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	11/19/2014 5:53:25 PM	R22653
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
trans-1,2-DCE	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
1,1,1-Trichloroethane	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
1,1,2-Trichloroethane	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
Trichloroethene (TCE)	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
Trichlorofluoromethane	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
1,2,3-Trichloropropane	ND	20		µg/L	10	11/19/2014 5:53:25 PM	R22653
Vinyl chloride	ND	10		µg/L	10	11/19/2014 5:53:25 PM	R22653
Xylenes, Total	ND	15		µg/L	10	11/19/2014 5:53:25 PM	R22653
Surr: 1,2-Dichloroethane-d4	100	70-130		%REC	10	11/19/2014 5:53:25 PM	R22653
Surr: 4-Bromofluorobenzene	94.4	70-130		%REC	10	11/19/2014 5:53:25 PM	R22653
Surr: Dibromofluoromethane	98.6	70-130		%REC	10	11/19/2014 5:53:25 PM	R22653
Surr: Toluene-d8	92.4	70-130		%REC	10	11/19/2014 5:53:25 PM	R22653
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **JRR**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-3
Project: Q4 2014
Collection Date: 11/12/2014 11:30:00 AM
Lab ID: 1411451-003
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM2510B: SPECIFIC CONDUCTANCE						Analyst:	**JRR**
Conductivity	12000	0.050		µmhos/cm	5	11/21/2014 7:08:25 PM	R22735
SM4500-H+B: PH						Analyst:	**JRR**
pH	7.85	1.68	H	pH units	1	11/13/2014 9:54:23 PM	R22543

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-4
Project: Q4 2014
Collection Date: 11/12/2014 12:00:00 PM
Lab ID: 1411451-004
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	33	1.0	*	mg/L	10	11/13/2014 7:25:22 PM	R22539
Chloride	4200	250		mg/L	500	11/24/2014 10:11:31 PM	R22776
Nitrogen, Nitrite (As N)	ND	10		mg/L	100	11/13/2014 7:37:47 PM	R22539
Bromide	1.1	1.0		mg/L	10	11/13/2014 7:25:22 PM	R22539
Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	11/13/2014 7:25:22 PM	R22539
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	11/13/2014 7:25:22 PM	R22539
Sulfate	1300	50		mg/L	100	11/13/2014 7:37:47 PM	R22539
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.11	0.0020		mg/L	1	11/16/2014 8:04:51 PM	R22599
Cadmium	ND	0.0020		mg/L	1	11/16/2014 8:04:51 PM	R22599
Calcium	370	5.0		mg/L	5	11/16/2014 8:06:32 PM	R22599
Chromium	0.010	0.0060		mg/L	1	11/16/2014 8:04:51 PM	R22599
Copper	ND	0.0060		mg/L	1	11/16/2014 8:04:51 PM	R22599
Iron	1.3	0.10	*	mg/L	5	11/16/2014 8:06:32 PM	R22599
Magnesium	97	1.0		mg/L	1	11/16/2014 8:04:51 PM	R22599
Manganese	0.27	0.0020	*	mg/L	1	11/16/2014 8:04:51 PM	R22599
Potassium	160	5.0		mg/L	5	11/16/2014 8:06:32 PM	R22599
Silver	ND	0.0050		mg/L	1	11/16/2014 8:04:51 PM	R22599
Sodium	2600	50		mg/L	50	11/24/2014 12:06:34 PM	R22752
Zinc	0.017	0.010		mg/L	1	11/16/2014 8:04:51 PM	R22599
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.11	0.0020		mg/L	1	11/18/2014 3:30:53 PM	16416
Cadmium	ND	0.0020		mg/L	1	11/18/2014 3:30:53 PM	16416
Chromium	0.010	0.0060		mg/L	1	11/18/2014 3:30:53 PM	16416
Copper	ND	0.0060		mg/L	1	11/18/2014 3:30:53 PM	16416
Iron	1.7	0.10	*	mg/L	5	11/18/2014 3:32:28 PM	16416
Manganese	0.28	0.0020	*	mg/L	1	11/18/2014 3:30:53 PM	16416
Silver	ND	0.0050		mg/L	1	11/18/2014 3:30:53 PM	16416
Zinc	0.023	0.010		mg/L	1	11/20/2014 3:57:41 PM	16416
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.012	0.010	*	mg/L	10	11/25/2014 1:27:10 PM	R22788
Lead	0.0013	0.0010		mg/L	1	11/25/2014 1:02:15 PM	R22788
Selenium	0.011	0.010		mg/L	10	11/25/2014 1:27:10 PM	R22788
Uranium	0.0039	0.0010		mg/L	1	11/25/2014 1:02:15 PM	R22788
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.020	*	mg/L	20	12/3/2014 2:26:15 PM	16416
Lead	ND	0.020		mg/L	20	12/3/2014 2:26:15 PM	16416

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-4
Project: Q4 2014
Collection Date: 11/12/2014 12:00:00 PM
Lab ID: 1411451-004
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Selenium	ND	0.020		mg/L	20	12/3/2014 2:26:15 PM	16416
Uranium	ND	0.020		mg/L	20	12/3/2014 2:26:15 PM	16416
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/21/2014 2:59:04 PM	16511
SM5210B: BOD						Analyst:	**SMS**
Biochemical Oxygen Demand	120	2.0		mg/L	1	11/18/2014 2:28:00 PM	16371
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Acenaphthylene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Aniline	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Anthracene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Azobenzene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Benz(a)anthracene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Benzo(a)pyrene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Benzo(b)fluoranthene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Benzo(g,h,i)perylene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Benzo(k)fluoranthene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Benzoic acid	ND	100		µg/L	1	11/17/2014 5:58:45 PM	16377
Benzyl alcohol	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Bis(2-chloroethoxy)methane	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Bis(2-chloroethyl)ether	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Bis(2-chloroisopropyl)ether	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Bis(2-ethylhexyl)phthalate	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
4-Bromophenyl phenyl ether	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Butyl benzyl phthalate	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Carbazole	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
4-Chloro-3-methylphenol	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
4-Chloroaniline	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
2-Chloronaphthalene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
2-Chlorophenol	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
4-Chlorophenyl phenyl ether	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Chrysene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Di-n-butyl phthalate	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Di-n-octyl phthalate	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Dibenz(a,h)anthracene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Dibenzofuran	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
1,2-Dichlorobenzene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
1,3-Dichlorobenzene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-4
Project: Q4 2014
Collection Date: 11/12/2014 12:00:00 PM
Lab ID: 1411451-004
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,4-Dichlorobenzene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
3,3´-Dichlorobenzidine	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Diethyl phthalate	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Dimethyl phthalate	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
2,4-Dichlorophenol	ND	100		µg/L	1	11/17/2014 5:58:45 PM	16377
2,4-Dimethylphenol	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
4,6-Dinitro-2-methylphenol	ND	100		µg/L	1	11/17/2014 5:58:45 PM	16377
2,4-Dinitrophenol	ND	100		µg/L	1	11/17/2014 5:58:45 PM	16377
2,4-Dinitrotoluene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
2,6-Dinitrotoluene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Fluoranthene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Fluorene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Hexachlorobenzene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Hexachlorobutadiene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Hexachlorocyclopentadiene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Hexachloroethane	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Isophorone	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
1-Methylnaphthalene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
2-Methylnaphthalene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
2-Methylphenol	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
3+4-Methylphenol	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
N-Nitrosodi-n-propylamine	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
N-Nitrosodimethylamine	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
N-Nitrosodiphenylamine	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Naphthalene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
2-Nitroaniline	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
3-Nitroaniline	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
4-Nitroaniline	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Nitrobenzene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
2-Nitrophenol	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
4-Nitrophenol	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Pentachlorophenol	ND	100		µg/L	1	11/17/2014 5:58:45 PM	16377
Phenanthrene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Phenol	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Pyrene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Pyridine	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
1,2,4-Trichlorobenzene	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
2,4,5-Trichlorophenol	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-4
Project: Q4 2014
Collection Date: 11/12/2014 12:00:00 PM
Lab ID: 1411451-004
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
2,4,6-Trichlorophenol	ND	50		µg/L	1	11/17/2014 5:58:45 PM	16377
Surr: 2-Fluorophenol	59.4	17.6-104		%REC	1	11/17/2014 5:58:45 PM	16377
Surr: Phenol-d5	49.4	17.7-89.9		%REC	1	11/17/2014 5:58:45 PM	16377
Surr: 2,4,6-Tribromophenol	80.6	16.3-122		%REC	1	11/17/2014 5:58:45 PM	16377
Surr: Nitrobenzene-d5	78.7	45.3-117		%REC	1	11/17/2014 5:58:45 PM	16377
Surr: 2-Fluorobiphenyl	74.5	43-113		%REC	1	11/17/2014 5:58:45 PM	16377
Surr: 4-Terphenyl-d14	76.4	47.6-122		%REC	1	11/17/2014 5:58:45 PM	16377
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
Toluene	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
Ethylbenzene	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
1,2,4-Trimethylbenzene	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
1,3,5-Trimethylbenzene	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
Naphthalene	ND	20		µg/L	10	11/19/2014 6:23:13 PM	R22653
1-Methylnaphthalene	ND	40		µg/L	10	11/19/2014 6:23:13 PM	R22653
2-Methylnaphthalene	ND	40		µg/L	10	11/19/2014 6:23:13 PM	R22653
Acetone	ND	100		µg/L	10	11/19/2014 6:23:13 PM	R22653
Bromobenzene	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
Bromodichloromethane	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
Bromoform	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
Bromomethane	ND	30		µg/L	10	11/19/2014 6:23:13 PM	R22653
2-Butanone	ND	100		µg/L	10	11/19/2014 6:23:13 PM	R22653
Carbon disulfide	ND	100		µg/L	10	11/19/2014 6:23:13 PM	R22653
Carbon Tetrachloride	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
Chlorobenzene	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
Chloroethane	ND	20		µg/L	10	11/19/2014 6:23:13 PM	R22653
Chloroform	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
Chloromethane	ND	30		µg/L	10	11/19/2014 6:23:13 PM	R22653
2-Chlorotoluene	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
4-Chlorotoluene	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
cis-1,2-DCE	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/19/2014 6:23:13 PM	R22653
Dibromochloromethane	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
Dibromomethane	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
1,2-Dichlorobenzene	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-4
Project: Q4 2014
Collection Date: 11/12/2014 12:00:00 PM
Lab ID: 1411451-004
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,3-Dichlorobenzene	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
1,4-Dichlorobenzene	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
Dichlorodifluoromethane	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
1,1-Dichloroethane	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
1,1-Dichloroethene	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
1,2-Dichloropropane	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
1,3-Dichloropropane	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
2,2-Dichloropropane	ND	20		µg/L	10	11/19/2014 6:23:13 PM	R22653
1,1-Dichloropropene	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
Hexachlorobutadiene	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
2-Hexanone	ND	100		µg/L	10	11/19/2014 6:23:13 PM	R22653
Isopropylbenzene	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
4-Isopropyltoluene	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
4-Methyl-2-pentanone	ND	100		µg/L	10	11/19/2014 6:23:13 PM	R22653
Methylene Chloride	ND	30		µg/L	10	11/19/2014 6:23:13 PM	R22653
n-Butylbenzene	ND	30		µg/L	10	11/19/2014 6:23:13 PM	R22653
n-Propylbenzene	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
sec-Butylbenzene	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
Styrene	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
tert-Butylbenzene	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	11/19/2014 6:23:13 PM	R22653
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
trans-1,2-DCE	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
1,1,1-Trichloroethane	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
1,1,2-Trichloroethane	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
Trichloroethene (TCE)	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
Trichlorofluoromethane	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
1,2,3-Trichloropropane	ND	20		µg/L	10	11/19/2014 6:23:13 PM	R22653
Vinyl chloride	ND	10		µg/L	10	11/19/2014 6:23:13 PM	R22653
Xylenes, Total	ND	15		µg/L	10	11/19/2014 6:23:13 PM	R22653
Surr: 1,2-Dichloroethane-d4	94.7	70-130		%REC	10	11/19/2014 6:23:13 PM	R22653
Surr: 4-Bromofluorobenzene	94.1	70-130		%REC	10	11/19/2014 6:23:13 PM	R22653
Surr: Dibromofluoromethane	91.5	70-130		%REC	10	11/19/2014 6:23:13 PM	R22653
Surr: Toluene-d8	96.1	70-130		%REC	10	11/19/2014 6:23:13 PM	R22653
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **JRR**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-4
Project: Q4 2014
Collection Date: 11/12/2014 12:00:00 PM
Lab ID: 1411451-004
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM2510B: SPECIFIC CONDUCTANCE						Analyst:	**JRR**
Conductivity	13000	0.050		µmhos/cm	5	11/24/2014 6:04:08 PM	R22777
SM4500-H+B: PH						Analyst:	**JRR**
pH	7.91	1.68	H	pH units	1	11/13/2014 9:58:38 PM	R22543

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-111214
Project: Q4 2014
Collection Date: 11/12/2014 1:25:00 PM
Lab ID: 1411451-005
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
Toluene	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
Ethylbenzene	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
Naphthalene	ND	2.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
1-Methylnaphthalene	ND	4.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
2-Methylnaphthalene	ND	4.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
Acetone	ND	10		µg/L	1	11/19/2014 6:53:06 PM	R22653
Bromobenzene	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
Bromodichloromethane	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
Bromoform	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
Bromomethane	ND	3.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
2-Butanone	ND	10		µg/L	1	11/19/2014 6:53:06 PM	R22653
Carbon disulfide	ND	10		µg/L	1	11/19/2014 6:53:06 PM	R22653
Carbon Tetrachloride	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
Chlorobenzene	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
Chloroethane	ND	2.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
Chloroform	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
Chloromethane	ND	3.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
2-Chlorotoluene	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
4-Chlorotoluene	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
cis-1,2-DCE	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
Dibromochloromethane	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
Dibromomethane	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
1,1-Dichloroethane	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
1,1-Dichloroethene	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
1,2-Dichloropropane	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
1,3-Dichloropropane	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
2,2-Dichloropropane	ND	2.0		µg/L	1	11/19/2014 6:53:06 PM	R22653

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-111214
Project: Q4 2014
Collection Date: 11/12/2014 1:25:00 PM
Lab ID: 1411451-005
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
Hexachlorobutadiene	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
2-Hexanone	ND	10		µg/L	1	11/19/2014 6:53:06 PM	R22653
Isopropylbenzene	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
4-Isopropyltoluene	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
4-Methyl-2-pentanone	ND	10		µg/L	1	11/19/2014 6:53:06 PM	R22653
Methylene Chloride	ND	3.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
n-Butylbenzene	ND	3.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
n-Propylbenzene	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
sec-Butylbenzene	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
Styrene	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
tert-Butylbenzene	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
trans-1,2-DCE	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
Trichlorofluoromethane	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
Vinyl chloride	ND	1.0		µg/L	1	11/19/2014 6:53:06 PM	R22653
Xylenes, Total	ND	1.5		µg/L	1	11/19/2014 6:53:06 PM	R22653
Surr: 1,2-Dichloroethane-d4	103	70-130		%REC	1	11/19/2014 6:53:06 PM	R22653
Surr: 4-Bromofluorobenzene	102	70-130		%REC	1	11/19/2014 6:53:06 PM	R22653
Surr: Dibromofluoromethane	103	70-130		%REC	1	11/19/2014 6:53:06 PM	R22653
Surr: Toluene-d8	98.0	70-130		%REC	1	11/19/2014 6:53:06 PM	R22653

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BD-111214
Project: Q4 2014
Collection Date: 11/12/2014
Lab ID: 1411451-006
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Acenaphthylene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Aniline	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Anthracene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Azobenzene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Benz(a)anthracene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Benzo(a)pyrene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Benzo(b)fluoranthene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Benzo(g,h,i)perylene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Benzo(k)fluoranthene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Benzoic acid	ND	100		µg/L	1	11/17/2014 6:26:15 PM	16377
Benzyl alcohol	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Bis(2-chloroethoxy)methane	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Bis(2-chloroethyl)ether	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Bis(2-chloroisopropyl)ether	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Bis(2-ethylhexyl)phthalate	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
4-Bromophenyl phenyl ether	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Butyl benzyl phthalate	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Carbazole	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
4-Chloro-3-methylphenol	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
4-Chloroaniline	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
2-Chloronaphthalene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
2-Chlorophenol	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
4-Chlorophenyl phenyl ether	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Chrysene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Di-n-butyl phthalate	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Di-n-octyl phthalate	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Dibenz(a,h)anthracene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Dibenzofuran	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
1,2-Dichlorobenzene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
1,3-Dichlorobenzene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
1,4-Dichlorobenzene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
3,3´-Dichlorobenzidine	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Diethyl phthalate	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Dimethyl phthalate	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
2,4-Dichlorophenol	ND	100		µg/L	1	11/17/2014 6:26:15 PM	16377
2,4-Dimethylphenol	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
4,6-Dinitro-2-methylphenol	ND	100		µg/L	1	11/17/2014 6:26:15 PM	16377
2,4-Dinitrophenol	ND	100		µg/L	1	11/17/2014 6:26:15 PM	16377

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BD-111214
Project: Q4 2014
Collection Date: 11/12/2014
Lab ID: 1411451-006
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2,4-Dinitrotoluene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
2,6-Dinitrotoluene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Fluoranthene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Fluorene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Hexachlorobenzene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Hexachlorobutadiene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Hexachlorocyclopentadiene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Hexachloroethane	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Isophorone	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
1-Methylnaphthalene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
2-Methylnaphthalene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
2-Methylphenol	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
3+4-Methylphenol	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
N-Nitrosodi-n-propylamine	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
N-Nitrosodimethylamine	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
N-Nitrosodiphenylamine	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Naphthalene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
2-Nitroaniline	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
3-Nitroaniline	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
4-Nitroaniline	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Nitrobenzene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
2-Nitrophenol	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
4-Nitrophenol	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Pentachlorophenol	ND	100		µg/L	1	11/17/2014 6:26:15 PM	16377
Phenanthrene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Phenol	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Pyrene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Pyridine	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
1,2,4-Trichlorobenzene	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
2,4,5-Trichlorophenol	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
2,4,6-Trichlorophenol	ND	50		µg/L	1	11/17/2014 6:26:15 PM	16377
Surr: 2-Fluorophenol	52.7	17.6-104		%REC	1	11/17/2014 6:26:15 PM	16377
Surr: Phenol-d5	41.5	17.7-89.9		%REC	1	11/17/2014 6:26:15 PM	16377
Surr: 2,4,6-Tribromophenol	68.0	16.3-122		%REC	1	11/17/2014 6:26:15 PM	16377
Surr: Nitrobenzene-d5	67.8	45.3-117		%REC	1	11/17/2014 6:26:15 PM	16377
Surr: 2-Fluorobiphenyl	61.0	43-113		%REC	1	11/17/2014 6:26:15 PM	16377
Surr: 4-Terphenyl-d14	69.2	47.6-122		%REC	1	11/17/2014 6:26:15 PM	16377

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TB-102
Project: Q4 2014
Collection Date:
Lab ID: 1411451-007
Matrix: TRIP BLANK
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
Toluene	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
Ethylbenzene	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
Naphthalene	ND	2.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
1-Methylnaphthalene	ND	4.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
2-Methylnaphthalene	ND	4.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
Acetone	ND	10		µg/L	1	11/19/2014 7:22:57 PM	R22653
Bromobenzene	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
Bromodichloromethane	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
Bromoform	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
Bromomethane	ND	3.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
2-Butanone	ND	10		µg/L	1	11/19/2014 7:22:57 PM	R22653
Carbon disulfide	ND	10		µg/L	1	11/19/2014 7:22:57 PM	R22653
Carbon Tetrachloride	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
Chlorobenzene	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
Chloroethane	ND	2.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
Chloroform	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
Chloromethane	ND	3.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
2-Chlorotoluene	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
4-Chlorotoluene	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
cis-1,2-DCE	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
Dibromochloromethane	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
Dibromomethane	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
1,1-Dichloroethane	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
1,1-Dichloroethene	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
1,2-Dichloropropane	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
1,3-Dichloropropane	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
2,2-Dichloropropane	ND	2.0		µg/L	1	11/19/2014 7:22:57 PM	R22653

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup **Client Sample ID:** TB-102
Project: Q4 2014 **Collection Date:**
Lab ID: 1411451-007 **Matrix:** TRIP BLANK **Received Date:** 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
Hexachlorobutadiene	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
2-Hexanone	ND	10		µg/L	1	11/19/2014 7:22:57 PM	R22653
Isopropylbenzene	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
4-Isopropyltoluene	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
4-Methyl-2-pentanone	ND	10		µg/L	1	11/19/2014 7:22:57 PM	R22653
Methylene Chloride	ND	3.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
n-Butylbenzene	ND	3.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
n-Propylbenzene	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
sec-Butylbenzene	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
Styrene	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
tert-Butylbenzene	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
trans-1,2-DCE	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
Trichlorofluoromethane	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
Vinyl chloride	ND	1.0		µg/L	1	11/19/2014 7:22:57 PM	R22653
Xylenes, Total	ND	1.5		µg/L	1	11/19/2014 7:22:57 PM	R22653
Surr: 1,2-Dichloroethane-d4	102	70-130		%REC	1	11/19/2014 7:22:57 PM	R22653
Surr: 4-Bromofluorobenzene	107	70-130		%REC	1	11/19/2014 7:22:57 PM	R22653
Surr: Dibromofluoromethane	101	70-130		%REC	1	11/19/2014 7:22:57 PM	R22653
Surr: Toluene-d8	102	70-130		%REC	1	11/19/2014 7:22:57 PM	R22653

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

12065 Lebanon Rd.
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Est. 1970

REPORT OF ANALYSIS

November 19, 2014

Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

ESC Sample # : L733771-01

Date Received : November 14, 2014
Description :

Site ID :

Sample ID : 1411451-001G EP-1

Project # :

Collected By :
Collection Date : 11/12/14 09:50

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	1700	50.	mg/l	410.4	11/19/14	5

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
This report shall not be reproduced, except in full, without the written approval from ESC.
.
Reported: 11/19/14 15:37 Printed: 11/19/14 15:37

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REPORT OF ANALYSIS

November 19, 2014

Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

ESC Sample # : L733771-02

Date Received : November 14, 2014
Description :

Site ID :

Sample ID : 1411451-002G EP-2

Project # :

Collected By :
Collection Date : 11/12/14 10:55

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	580	10.	mg/l	410.4	11/19/14	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
This report shall not be reproduced, except in full, without the written approval from ESC.
.
Reported: 11/19/14 15:37 Printed: 11/19/14 15:37

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REPORT OF ANALYSIS

November 19, 2014

Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

ESC Sample # : L733771-03

Date Received : November 14, 2014
Description :

Site ID :

Sample ID : 1411451-003G EP-3

Project # :

Collected By :
Collection Date : 11/12/14 11:30

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	590	10.	mg/l	410.4	11/19/14	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 11/19/14 15:37 Printed: 11/19/14 15:37

ESC
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Tax I.D. 62-0814289

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REPORT OF ANALYSIS

November 19, 2014

Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

ESC Sample # : L733771-04

Date Received : November 14, 2014
Description :

Site ID :

Sample ID : 1411451-004G EP-4

Project # :

Collected By :
Collection Date : 11/13/14 12:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	670	10.	mg/l	410.4	11/19/14	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 11/19/14 15:37 Printed: 11/19/14 15:37

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Hall Environmental Analysis Laboratory

4901 Hawkins NE

Albuquerque, NM 87109

Quality Assurance Report
Level II

L733771

November 19, 2014

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
COD	< 10	mg/l			WG755289	11/19/14 12:12

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
COD	mg/l	410.	410.	0.0	5	L733939-08	WG755289
COD	mg/l	9600	9600	0.0	5	L733485-01	WG755289

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
COD	mg/l	183	189.	103.	90-110	WG755289

Laboratory Control Sample Duplicate

Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
COD	mg/l	189.	189.	103.	90-110	0.0	5	WG755289

Matrix Spike

Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
COD	mg/l	699.	260.	400	110.	90-110	L733812-01	WG755289

Matrix Spike Duplicate

Analyte	Units	MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
COD	mg/l	700.	699.	110.	90-110	0.143	5	L733812-01	WG755289

Batch number /Run number / Sample number cross reference

WG755289: R3005377: L733771-01 02 03 04

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411451**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22599** RunNo: **22599**
Prep Date: Analysis Date: **11/16/2014** SeqNo: **666147** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22599** RunNo: **22599**
Prep Date: Analysis Date: **11/16/2014** SeqNo: **666149** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22599** RunNo: **22599**
Prep Date: Analysis Date: **11/16/2014** SeqNo: **666151** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.2	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.5	85	115			
Calcium	45	1.0	50.00	0	90.8	85	115			
Chromium	0.48	0.0060	0.5000	0	96.9	85	115			
Copper	0.49	0.0060	0.5000	0	98.1	85	115			
Iron	0.48	0.020	0.5000	0	95.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411451**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22599** RunNo: **22599**
Prep Date: Analysis Date: **11/16/2014** SeqNo: **666151** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	45	1.0	50.00	0	89.1	85	115			
Manganese	0.47	0.0020	0.5000	0	94.7	85	115			
Potassium	43	1.0	50.00	0	86.4	85	115			
Silver	0.11	0.0050	0.1000	0	105	85	115			
Zinc	0.50	0.010	0.5000	0	99.2	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22599** RunNo: **22599**
Prep Date: Analysis Date: **11/16/2014** SeqNo: **666152** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.55	0.0020	0.5000	0	109	85	115			
Cadmium	0.55	0.0020	0.5000	0	110	85	115			
Calcium	56	1.0	50.00	0	113	85	115			
Chromium	0.54	0.0060	0.5000	0	108	85	115			
Copper	0.55	0.0060	0.5000	0	109	85	115			
Iron	0.53	0.020	0.5000	0	107	85	115			
Magnesium	56	1.0	50.00	0	112	85	115			
Manganese	0.52	0.0020	0.5000	0	104	85	115			
Potassium	54	1.0	50.00	0	109	85	115			
Silver	0.12	0.0050	0.1000	0	117	85	115			S
Zinc	0.54	0.010	0.5000	0	109	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22752** RunNo: **22752**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671318** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22752** RunNo: **22752**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671319** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	52	1.0	50.00	0	104	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411451**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**							
Client ID: **PBW**	Batch ID: **R22752**	RunNo: **22752**							
Prep Date:	Analysis Date: **11/24/2014**	SeqNo: **671320**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**							
Client ID: **LCSW**	Batch ID: **R22752**	RunNo: **22752**							
Prep Date:	Analysis Date: **11/24/2014**	SeqNo: **671321**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	50	1.0	50.00	0	99.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411451**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB-16416** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **16416** RunNo: **22614**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666852** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-16416** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **16416** RunNo: **22614**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666853** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	101	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Copper	0.51	0.0060	0.5000	0	101	85	115			
Iron	0.50	0.020	0.5000	0	101	85	115			
Manganese	0.49	0.0020	0.5000	0	98.1	85	115			
Silver	0.11	0.0050	0.1000	0	111	85	115			
Zinc	0.50	0.010	0.5000	0	101	85	115			

Sample ID **1411451-003FMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **EP-3** Batch ID: **16416** RunNo: **22614**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666871** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.57	0.0020	0.5000	0.1032	93.9	70	130			
Cadmium	0.50	0.0020	0.5000	0	101	70	130			
Chromium	0.49	0.0060	0.5000	0.009810	95.9	70	130			
Copper	0.57	0.0060	0.5000	0	113	70	130			
Manganese	0.69	0.0020	0.5000	0.2346	91.2	70	130			
Silver	0.12	0.0050	0.1000	0	118	70	130			
Zinc	0.49	0.010	0.5000	0.01982	94.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411451**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **1411451-003FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **EP-3** Batch ID: **16416** RunNo: **22614**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666872** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.57	0.0020	0.5000	0.1032	93.1	70	130	0.717	20	
Cadmium	0.50	0.0020	0.5000	0	99.4	70	130	1.36	20	
Chromium	0.48	0.0060	0.5000	0.009810	94.1	70	130	1.84	20	
Copper	0.58	0.0060	0.5000	0	116	70	130	2.02	20	
Manganese	0.69	0.0020	0.5000	0.2346	90.8	70	130	0.293	20	
Silver	0.12	0.0050	0.1000	0	119	70	130	0.702	20	
Zinc	0.47	0.010	0.5000	0.01982	90.6	70	130	3.66	20	

Sample ID **1411451-003FMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **EP-3** Batch ID: **16416** RunNo: **22614**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666877** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	2.3	0.10	0.5000	1.877	76.4	70	130			

Sample ID **1411451-003FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **EP-3** Batch ID: **16416** RunNo: **22614**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666878** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	2.3	0.10	0.5000	1.877	79.9	70	130	0.770	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411451**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22589** RunNo: **22589**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **665959** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.0	85	115			
Selenium	0.023	0.0010	0.02500	0	93.9	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22589** RunNo: **22589**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **665960** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	101	85	115			
Selenium	0.026	0.0010	0.02500	0	103	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22589** RunNo: **22589**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **665963** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22589** RunNo: **22589**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **665964** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22774** RunNo: **22774**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672122** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	92.5	85	115			
Lead	0.024	0.0010	0.02500	0	94.4	85	115			
Selenium	0.022	0.0010	0.02500	0	89.7	85	115			
Uranium	0.024	0.0010	0.02500	0	95.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411451**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22774** RunNo: **22774**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672123** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.3	85	115			
Lead	0.024	0.0010	0.02500	0	97.3	85	115			
Selenium	0.024	0.0010	0.02500	0	95.2	85	115			
Uranium	0.024	0.0010	0.02500	0	94.8	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22774** RunNo: **22774**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672124** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22774** RunNo: **22774**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672125** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22788** RunNo: **22788**
Prep Date: Analysis Date: **11/25/2014** SeqNo: **672517** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.1	85	115			
Lead	0.024	0.0010	0.02500	0	97.4	85	115			
Selenium	0.024	0.0010	0.02500	0	96.5	85	115			
Uranium	0.025	0.0010	0.02500	0	98.7	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22788** RunNo: **22788**
Prep Date: Analysis Date: **11/25/2014** SeqNo: **672518** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411451**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**			
Client ID: **PBW**	Batch ID: **R22788**	RunNo: **22788**			
Prep Date:	Analysis Date: **11/25/2014**	SeqNo: **672518**	Units: **mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411451**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**LLLCS-16416**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**		
Client ID:	**BatchQC**	Batch ID:	**16416**	RunNo:	**22609**		
Prep Date:	**11/17/2014**	Analysis Date:	**11/18/2014**	SeqNo:	**666765**	Units:	**mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.5	85	115			
Lead	0.026	0.0010	0.02500	0	106	85	115			
Selenium	0.024	0.0010	0.02500	0	96.6	85	115			
Uranium	0.026	0.0010	0.02500	0	106	85	115			

Sample ID	**MB-16416**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**		
Client ID:	**PBW**	Batch ID:	**16416**	RunNo:	**22609**		
Prep Date:	**11/17/2014**	Analysis Date:	**11/18/2014**	SeqNo:	**666767**	Units:	**mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411451**
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Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**MB-16511**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**						
Client ID:	**PBW**	Batch ID:	**16511**	RunNo:	**22710**						
Prep Date:	**11/21/2014**	Analysis Date:	**11/21/2014**	SeqNo:	**669836**	Units:	**mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		ND	0.00020								

Sample ID	**LCS-16511**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**						
Client ID:	**LCSW**	Batch ID:	**16511**	RunNo:	**22710**						
Prep Date:	**11/21/2014**	Analysis Date:	**11/21/2014**	SeqNo:	**669837**	Units:	**mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.0051	0.00020	0.005000	0	102	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411451**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22539** RunNo: **22539**
Prep Date: Analysis Date: **11/13/2014** SeqNo: **664550** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R22539** RunNo: **22539**
Prep Date: Analysis Date: **11/13/2014** SeqNo: **664551** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	100	90	110			
Nitrogen, Nitrite (As N)	0.95	0.10	1.000	0	95.3	90	110			
Bromide	2.4	0.10	2.500	0	94.9	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	101	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.8	90	110			
Sulfate	10	0.50	10.00	0	99.5	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22539** RunNo: **22539**
Prep Date: Analysis Date: **11/14/2014** SeqNo: **664604** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R22539** RunNo: **22539**
Prep Date: Analysis Date: **11/14/2014** SeqNo: **664605** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	100	90	110			
Nitrogen, Nitrite (As N)	0.92	0.10	1.000	0	91.8	90	110			
Bromide	2.3	0.10	2.500	0	92.2	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	97.4	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411451**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R22539** RunNo: **22539**
Prep Date: Analysis Date: **11/14/2014** SeqNo: **664605** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.9	90	110			
Sulfate	9.5	0.50	10.00	0	95.4	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22776** RunNo: **22776**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672163** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R22776** RunNo: **22776**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672164** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000	0	92.5	90	110			
Sulfate	9.6	0.50	10.00	0	95.8	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411451**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R22653**	RunNo: **22653**			
Prep Date:	Analysis Date: **11/19/2014**	SeqNo: **668056**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411451**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **5mL-rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22653** RunNo: **22653**
Prep Date: Analysis Date: **11/19/2014** SeqNo: **668056** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		99.9	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	9.7		10.00		97.4	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22653** RunNo: **22653**
Prep Date: Analysis Date: **11/19/2014** SeqNo: **668058** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	23	1.0	20.00	0	116	80	120			
Chlorobenzene	21	1.0	20.00	0	104	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411451**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22653** RunNo: **22653**
Prep Date: Analysis Date: **11/19/2014** SeqNo: **668058** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	23	1.0	20.00	0	117	82.6	131			
Trichloroethene (TCE)	19	1.0	20.00	0	96.3	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		91.0	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.4	70	130			
Surr: Dibromofluoromethane	8.7		10.00		87.1	70	130			
Surr: Toluene-d8	9.6		10.00		96.5	70	130			

Sample ID **b2** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22653** RunNo: **22653**
Prep Date: Analysis Date: **11/19/2014** SeqNo: **668101** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411451**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **b2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R22653**	RunNo: **22653**	
Prep Date:	Analysis Date: **11/19/2014**	SeqNo: **668101**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411451**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **b2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R22653**	RunNo: **22653**
Prep Date:	Analysis Date: **11/19/2014**	SeqNo: **668101** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	9.8		10.00		98.0	70	130			
Surr: Dibromofluoromethane	9.5		10.00		94.8	70	130			
Surr: Toluene-d8	9.4		10.00		94.3	70	130			

Sample ID **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R22653**	RunNo: **22653**
Prep Date:	Analysis Date: **11/19/2014**	SeqNo: **668103** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	24	1.0	20.00	0	122	70	130			
Toluene	24	1.0	20.00	0	118	80	120			
Chlorobenzene	22	1.0	20.00	0	109	70	130			
1,1-Dichloroethene	26	1.0	20.00	0	129	82.6	131			
Trichloroethene (TCE)	22	1.0	20.00	0	109	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		99.7	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.2	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.3	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411451**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **mb-16377**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **16377**	RunNo: **22600**			
Prep Date: **11/13/2014**	Analysis Date: **11/17/2014**	SeqNo: **666318**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411451**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**mb-16377**	SampType:	**MBLK**	TestCode:	**EPA Method 8270C: Semivolatiles**		
Client ID:	**PBW**	Batch ID:	**16377**	RunNo:	**22600**		
Prep Date:	**11/13/2014**	Analysis Date:	**11/17/2014**	SeqNo:	**666318**	Units:	**µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	95		200.0		47.6	17.6	104			
Surr: Phenol-d5	96		200.0		48.2	17.7	89.9			
Surr: 2,4,6-Tribromophenol	75		200.0		37.5	16.3	122			
Surr: Nitrobenzene-d5	67		100.0		67.1	45.3	117			
Surr: 2-Fluorobiphenyl	61		100.0		61.2	43	113			
Surr: 4-Terphenyl-d14	73		100.0		72.5	47.6	122			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411451**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **lcs-16377** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **16377** RunNo: **22600**
Prep Date: **11/13/2014** Analysis Date: **11/17/2014** SeqNo: **666368** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	66	10	100.0	0	66.2	47.9	114			
4-Chloro-3-methylphenol	160	10	200.0	0	82.4	51.7	122			
2-Chlorophenol	140	10	200.0	0	69.9	40.7	113			
1,4-Dichlorobenzene	44	10	100.0	0	44.3	39.6	99.9			
2,4-Dinitrotoluene	68	10	100.0	0	68.0	40.8	113			
N-Nitrosodi-n-propylamine	74	10	100.0	0	74.3	51.2	111			
4-Nitrophenol	100	10	200.0	0	50.6	15.7	86.9			
Pentachlorophenol	130	20	200.0	0	67.5	21.6	104			
Phenol	90	10	200.0	0	44.8	28.6	71.7			
Pyrene	78	10	100.0	0	77.8	54.2	128			
1,2,4-Trichlorobenzene	50	10	100.0	0	50.0	40.9	101			
Surr: 2-Fluorophenol	94		200.0		47.0	17.6	104			
Surr: Phenol-d5	77		200.0		38.5	17.7	89.9			
Surr: 2,4,6-Tribromophenol	160		200.0		80.7	16.3	122			
Surr: Nitrobenzene-d5	69		100.0		69.3	45.3	117			
Surr: 2-Fluorobiphenyl	65		100.0		64.8	43	113			
Surr: 4-Terphenyl-d14	85		100.0		85.0	47.6	122			

Sample ID **lcsd-16377** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **16377** RunNo: **22600**
Prep Date: **11/13/2014** Analysis Date: **11/17/2014** SeqNo: **666369** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	67	10	100.0	0	67.5	47.9	114	1.98	27.2	
4-Chloro-3-methylphenol	160	10	200.0	0	81.4	51.7	122	1.26	25.9	
2-Chlorophenol	140	10	200.0	0	68.2	40.7	113	2.40	22.5	
1,4-Dichlorobenzene	49	10	100.0	0	49.0	39.6	99.9	10.2	24.6	
2,4-Dinitrotoluene	69	10	100.0	0	68.8	40.8	113	1.20	25.3	
N-Nitrosodi-n-propylamine	74	10	100.0	0	74.3	51.2	111	0.0269	23.6	
4-Nitrophenol	130	10	200.0	0	63.4	15.7	86.9	22.5	34.7	
Pentachlorophenol	130	20	200.0	0	67.5	21.6	104	0.0148	32.8	
Phenol	100	10	200.0	0	52.0	28.6	71.7	14.9	25.5	
Pyrene	77	10	100.0	0	77.4	54.2	128	0.567	31.4	
1,2,4-Trichlorobenzene	54	10	100.0	0	53.7	40.9	101	7.13	25.9	
Surr: 2-Fluorophenol	110		200.0		53.4	17.6	104	0	0	
Surr: Phenol-d5	93		200.0		46.6	17.7	89.9	0	0	
Surr: 2,4,6-Tribromophenol	160		200.0		80.9	16.3	122	0	0	
Surr: Nitrobenzene-d5	70		100.0		70.1	45.3	117	0	0	
Surr: 2-Fluorobiphenyl	70		100.0		69.5	43	113	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411451**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**lcsd-16377**	SampType:	**LCSD**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**LCSS02**	Batch ID:	**16377**	RunNo:	**22600**
Prep Date:	**11/13/2014**	Analysis Date:	**11/17/2014**	SeqNo:	**666369** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	81		100.0		81.3	47.6	122	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411451**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB-16371** SampType: **MBLK** TestCode: **SM5210B: BOD**
Client ID: **PBW** Batch ID: **16371** RunNo: **22705**
Prep Date: **11/13/2014** Analysis Date: **11/18/2014** SeqNo: **669659** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID **MB--16371** SampType: **MBLK** TestCode: **SM5210B: BOD**
Client ID: **PBW** Batch ID: **16371** RunNo: **22705**
Prep Date: **11/13/2014** Analysis Date: **11/18/2014** SeqNo: **669660** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID **LCS-16371** SampType: **LCS** TestCode: **SM5210B: BOD**
Client ID: **LCSW** Batch ID: **16371** RunNo: **22705**
Prep Date: **11/13/2014** Analysis Date: **11/18/2014** SeqNo: **669661** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	200	2.0	198.0	0	100	89.6	126			

Sample ID **LCSD-16371** SampType: **LCSD** TestCode: **SM5210B: BOD**
Client ID: **LCSS02** Batch ID: **16371** RunNo: **22705**
Prep Date: **11/13/2014** Analysis Date: **11/18/2014** SeqNo: **669662** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	220	2.0	198.0	0	111	89.6	126	10.3	31.9	

Sample ID **1411451-001CDUP** SampType: **DUP** TestCode: **SM5210B: BOD**
Client ID: **EP-1** Batch ID: **16371** RunNo: **22705**
Prep Date: **11/13/2014** Analysis Date: **11/18/2014** SeqNo: **669664** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	220	2.0						8.77	20	

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1411451 RcptNo: 1

Received by/date: 11/12/14

Logged By: **Ashley Gallegos** 11/12/2014 4:12:00 PM

Completed By: **Ashley Gallegos** 11/13/2014 8:21:13 AM

Reviewed By: 11/13/14 @ 09:35

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐ CS 11/13/14 Sample -001A (3 of 3) has a bubble.
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 16
(<2 or >12 unless noted)
Adjusted? yes
Checked by: CS (see below)

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☑ No ☐ NA ☐

Person Notified:	Cheryl Johnson	Date:	11/13/2014
By Whom:	Anne Thorne	Via:	☑ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:	E Coli Sample was rejected		
Client Instructions:	See Section 19.		

17. Additional remarks:

E. Coli Sample for -001 was rejected, sample was too dark even after dilution per Stephanie. Poured off for BOD analysis into a 500ml bottle for -002D, -003D and -004D from each BOD bottle. For metals analy added 1 ml HNO_3 to -001F and -003 for acceptable pH. -CS 11/13/14

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

2 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard ☐ Rush

Project Name:

Q4 2014

Project #:

Evaporation Ponds

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1411451	8260 + MTBE	8270 + phenols	WQCC metals - total	WQCC metals - dissolved (filtered)	BOD / COD	General Chemistry	~~ecoli~~ 11/12/14							Air Bubbles (Y or N)
11-12-14	950	Aq	EP-1	10		-001	X	X	X	X	X	X	X							
11-12-14	1055		EP-2	~~10~~ 9		-002	X	X	X	X	X	X								
11-12-14	1130		EP-3	9		-003	X	X	X	X	X	X								
11-12-14	1200		EP-4	9		-004	X	X	X	X	X	X								
11-12-14	1325		FB-111214	3		-005	X													
11-12-14	—		BD-111214	1		-006		X												
11-12-14	—		TB-102	3		-007	X													

Date:	Time:	Relinquished by:	Received by:	Date Time	Remarks:
11-12-14	1340	Pak Lawless		11/12/14 1:00	Gen. Chem. - anions, cations; pH, ec/AT 11/13/14
11-12-14	1612			11/12/14 1612	

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 27, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: Q1-2014 Groundwater Sampling OrderNo.: 1403475

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 3 sample(s) on 3/12/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1403475**
Date Reported: **3/27/2014**

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: GWM-1
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/11/2014 9:10:00 AM
Lab ID: 1403475-001
Matrix: AQUEOUS
Received Date: 3/12/2014 11:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	3.3	1.0		mg/L	1	3/13/2014 1:01:04 PM	12126
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	3/13/2014 1:01:04 PM	12126
Surr: DNOP	121	62.7-145		%REC	1	3/13/2014 1:01:04 PM	12126
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**JMP**
Gasoline Range Organics (GRO)	0.66	0.050		mg/L	1	3/13/2014 1:54:49 PM	R17305
Surr: BFB	1060	80.4-118	S	%REC	1	3/13/2014 1:54:49 PM	R17305
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	2.6	1.0		mg/L	10	3/14/2014 6:18:17 AM	R17314
Chloride	930	50		mg/L	100	3/14/2014 6:30:42 AM	R17314
Bromide	2.9	1.0		mg/L	10	3/14/2014 6:18:17 AM	R17314
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	3/14/2014 6:18:17 AM	R17314
Sulfate	180	5.0		mg/L	10	3/14/2014 6:18:17 AM	R17314
Nitrate+Nitrite as N	ND	1.0		mg/L	5	3/17/2014 6:25:54 PM	R17389
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.47	0.0020		mg/L	1	3/17/2014 3:09:04 PM	R17380
Cadmium	ND	0.0020		mg/L	1	3/17/2014 3:09:04 PM	R17380
Chromium	ND	0.0060		mg/L	1	3/17/2014 3:09:04 PM	R17380
Copper	ND	0.0060		mg/L	1	3/17/2014 4:34:45 PM	R17380
Iron	2.4	0.10	*	mg/L	5	3/17/2014 3:10:43 PM	R17380
Manganese	2.5	0.010	*	mg/L	5	3/17/2014 3:10:43 PM	R17380
Silver	ND	0.0050		mg/L	1	3/17/2014 3:09:04 PM	R17380
Zinc	0.021	0.010		mg/L	1	3/17/2014 4:34:45 PM	R17380
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.49	0.0020		mg/L	1	3/13/2014 6:53:46 PM	12161
Cadmium	ND	0.0020		mg/L	1	3/13/2014 6:53:46 PM	12161
Calcium	250	5.0		mg/L	5	3/13/2014 6:55:30 PM	12161
Chromium	ND	0.0060		mg/L	1	3/13/2014 6:53:46 PM	12161
Copper	ND	0.0060		mg/L	1	3/13/2014 6:53:46 PM	12161
Iron	14	0.40	*	mg/L	20	3/14/2014 2:47:57 PM	12161
Magnesium	58	1.0		mg/L	1	3/13/2014 6:53:46 PM	12161
Manganese	2.5	0.010	*	mg/L	5	3/13/2014 6:55:30 PM	12161
Potassium	2.5	1.0		mg/L	1	3/14/2014 2:46:11 PM	12161
Silver	ND	0.0050		mg/L	1	3/13/2014 6:53:46 PM	12161
Sodium	1200	20		mg/L	20	3/14/2014 2:47:57 PM	12161
Zinc	0.018	0.010		mg/L	1	3/13/2014 6:53:46 PM	12161
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.081	0.010	*	mg/L	10	3/21/2014 4:14:56 PM	R17500

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: GWM-1
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/11/2014 9:10:00 AM
Lab ID: 1403475-001
Matrix: AQUEOUS
Received Date: 3/12/2014 11:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.0010		mg/L	1	3/18/2014 4:21:03 PM	R17401
Selenium	ND	0.010		mg/L	10	3/21/2014 4:14:56 PM	R17500
Uranium	0.015	0.010		mg/L	10	3/21/2014 4:14:56 PM	R17500
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.12	0.010	*	mg/L	10	3/14/2014 2:59:23 PM	12161
Lead	0.0062	0.0010		mg/L	1	3/14/2014 2:52:29 PM	12161
Selenium	0.015	0.010		mg/L	10	3/14/2014 2:59:23 PM	12161
Uranium	0.015	0.0010		mg/L	1	3/14/2014 2:52:29 PM	12161
EPA METHOD 245.1: MERCURY						Analyst:	**JML**
Mercury	ND	0.00020		mg/L	1	3/24/2014 5:02:58 PM	12327
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	8.8	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
Toluene	2.2	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
Ethylbenzene	3.7	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
Methyl tert-butyl ether (MTBE)	39	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
1,2,4-Trimethylbenzene	7.0	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
Naphthalene	ND	2.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
1-Methylnaphthalene	6.8	4.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
2-Methylnaphthalene	ND	4.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
Acetone	ND	10		µg/L	1	3/13/2014 1:35:00 PM	R17299
Bromobenzene	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
Bromodichloromethane	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
Bromoform	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
Bromomethane	ND	3.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
2-Butanone	ND	10		µg/L	1	3/13/2014 1:35:00 PM	R17299
Carbon disulfide	ND	10		µg/L	1	3/13/2014 1:35:00 PM	R17299
Carbon Tetrachloride	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
Chlorobenzene	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
Chloroethane	ND	2.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
Chloroform	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
Chloromethane	ND	3.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
2-Chlorotoluene	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
4-Chlorotoluene	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
cis-1,2-DCE	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: GWM-1
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/11/2014 9:10:00 AM
Lab ID: 1403475-001
Matrix: AQUEOUS
Received Date: 3/12/2014 11:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
Dibromochloromethane	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
Dibromomethane	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
1,1-Dichloroethane	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
1,1-Dichloroethene	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
1,2-Dichloropropane	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
1,3-Dichloropropane	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
2,2-Dichloropropane	ND	2.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
1,1-Dichloropropene	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
Hexachlorobutadiene	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
2-Hexanone	ND	10		µg/L	1	3/13/2014 1:35:00 PM	R17299
Isopropylbenzene	1.1	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
4-Isopropyltoluene	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
4-Methyl-2-pentanone	ND	10		µg/L	1	3/13/2014 1:35:00 PM	R17299
Methylene Chloride	ND	3.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
n-Butylbenzene	ND	3.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
n-Propylbenzene	1.6	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
sec-Butylbenzene	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
Styrene	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
tert-Butylbenzene	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
trans-1,2-DCE	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
Trichlorofluoromethane	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
Vinyl chloride	ND	1.0		µg/L	1	3/13/2014 1:35:00 PM	R17299
Xylenes, Total	15	1.5		µg/L	1	3/13/2014 1:35:00 PM	R17299
Surr: 1,2-Dichloroethane-d4	105	70-130		%REC	1	3/13/2014 1:35:00 PM	R17299

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: GWM-1
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/11/2014 9:10:00 AM
Lab ID: 1403475-001
Matrix: AQUEOUS
Received Date: 3/12/2014 11:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Surr: 4-Bromofluorobenzene	95.6	70-130		%REC	1	3/13/2014 1:35:00 PM	R17299
Surr: Dibromofluoromethane	101	70-130		%REC	1	3/13/2014 1:35:00 PM	R17299
Surr: Toluene-d8	98.2	70-130		%REC	1	3/13/2014 1:35:00 PM	R17299

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group#2
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/11/2014 8:50:00 AM
Lab ID: 1403475-002
Matrix: AQUEOUS
Received Date: 3/12/2014 11:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
Toluene	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
Ethylbenzene	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
Naphthalene	ND	2.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
1-Methylnaphthalene	ND	4.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
2-Methylnaphthalene	ND	4.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
Acetone	ND	10		µg/L	1	3/13/2014 3:30:04 PM	R17299
Bromobenzene	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
Bromodichloromethane	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
Bromoform	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
Bromomethane	ND	3.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
2-Butanone	ND	10		µg/L	1	3/13/2014 3:30:04 PM	R17299
Carbon disulfide	ND	10		µg/L	1	3/13/2014 3:30:04 PM	R17299
Carbon Tetrachloride	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
Chlorobenzene	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
Chloroethane	ND	2.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
Chloroform	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
Chloromethane	ND	3.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
2-Chlorotoluene	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
4-Chlorotoluene	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
cis-1,2-DCE	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
Dibromochloromethane	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
Dibromomethane	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
1,1-Dichloroethane	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
1,1-Dichloroethene	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
1,2-Dichloropropane	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
1,3-Dichloropropane	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
2,2-Dichloropropane	ND	2.0		µg/L	1	3/13/2014 3:30:04 PM	R17299

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group#2
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/11/2014 8:50:00 AM
Lab ID: 1403475-002
Matrix: AQUEOUS
Received Date: 3/12/2014 11:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,1-Dichloropropene	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
Hexachlorobutadiene	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
2-Hexanone	ND	10		µg/L	1	3/13/2014 3:30:04 PM	R17299
Isopropylbenzene	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
4-Isopropyltoluene	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
4-Methyl-2-pentanone	ND	10		µg/L	1	3/13/2014 3:30:04 PM	R17299
Methylene Chloride	ND	3.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
n-Butylbenzene	ND	3.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
n-Propylbenzene	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
sec-Butylbenzene	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
Styrene	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
tert-Butylbenzene	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
trans-1,2-DCE	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
Trichlorofluoromethane	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
Vinyl chloride	ND	1.0		µg/L	1	3/13/2014 3:30:04 PM	R17299
Xylenes, Total	ND	1.5		µg/L	1	3/13/2014 3:30:04 PM	R17299
Surr: 1,2-Dichloroethane-d4	105	70-130		%REC	1	3/13/2014 3:30:04 PM	R17299
Surr: 4-Bromofluorobenzene	98.8	70-130		%REC	1	3/13/2014 3:30:04 PM	R17299
Surr: Dibromofluoromethane	101	70-130		%REC	1	3/13/2014 3:30:04 PM	R17299
Surr: Toluene-d8	100	70-130		%REC	1	3/13/2014 3:30:04 PM	R17299

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Trip Blank
Project: Q1-2014 Groundwater Sampling
Collection Date:
Lab ID: 1403475-003
Matrix: AQUEOUS
Received Date: 3/12/2014 11:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**JMP**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	3/13/2014 1:24:41 PM	R17305
Surr: BFB	104	80.4-118		%REC	1	3/13/2014 1:24:41 PM	R17305
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
Toluene	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
Ethylbenzene	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
Naphthalene	ND	2.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
1-Methylnaphthalene	ND	4.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
2-Methylnaphthalene	ND	4.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
Acetone	ND	10		µg/L	1	3/13/2014 3:58:46 PM	R17299
Bromobenzene	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
Bromodichloromethane	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
Bromoform	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
Bromomethane	ND	3.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
2-Butanone	ND	10		µg/L	1	3/13/2014 3:58:46 PM	R17299
Carbon disulfide	ND	10		µg/L	1	3/13/2014 3:58:46 PM	R17299
Carbon Tetrachloride	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
Chlorobenzene	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
Chloroethane	ND	2.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
Chloroform	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
Chloromethane	ND	3.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
2-Chlorotoluene	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
4-Chlorotoluene	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
cis-1,2-DCE	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
Dibromochloromethane	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
Dibromomethane	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
1,1-Dichloroethane	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
1,1-Dichloroethene	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Trip Blank
Project: Q1-2014 Groundwater Sampling
Collection Date:
Lab ID: 1403475-003
Matrix: AQUEOUS
Received Date: 3/12/2014 11:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dichloropropane	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
1,3-Dichloropropane	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
2,2-Dichloropropane	ND	2.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
1,1-Dichloropropene	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
Hexachlorobutadiene	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
2-Hexanone	ND	10		µg/L	1	3/13/2014 3:58:46 PM	R17299
Isopropylbenzene	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
4-Isopropyltoluene	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
4-Methyl-2-pentanone	ND	10		µg/L	1	3/13/2014 3:58:46 PM	R17299
Methylene Chloride	ND	3.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
n-Butylbenzene	ND	3.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
n-Propylbenzene	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
sec-Butylbenzene	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
Styrene	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
tert-Butylbenzene	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
trans-1,2-DCE	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
Trichlorofluoromethane	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
Vinyl chloride	ND	1.0		µg/L	1	3/13/2014 3:58:46 PM	R17299
Xylenes, Total	ND	1.5		µg/L	1	3/13/2014 3:58:46 PM	R17299
Surr: 1,2-Dichloroethane-d4	104	70-130		%REC	1	3/13/2014 3:58:46 PM	R17299
Surr: 4-Bromofluorobenzene	102	70-130		%REC	1	3/13/2014 3:58:46 PM	R17299
Surr: Dibromofluoromethane	99.7	70-130		%REC	1	3/13/2014 3:58:46 PM	R17299
Surr: Toluene-d8	100	70-130		%REC	1	3/13/2014 3:58:46 PM	R17299

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403475**
27-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17380** RunNo: **17380**
Prep Date: Analysis Date: **3/17/2014** SeqNo: **500508** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17380** RunNo: **17380**
Prep Date: Analysis Date: **3/17/2014** SeqNo: **500509** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	101	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Chromium	0.50	0.0060	0.5000	0	99.8	85	115			
Copper	0.49	0.0060	0.5000	0	98.9	85	115			
Iron	0.50	0.020	0.5000	0	100	85	115			
Manganese	0.49	0.0020	0.5000	0	98.7	85	115			
Silver	0.10	0.0050	0.1000	0	104	85	115			
Zinc	0.50	0.010	0.5000	0	101	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17380** RunNo: **17380**
Prep Date: Analysis Date: **3/17/2014** SeqNo: **500673** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403475**
27-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**			
Client ID: **LCSW**	Batch ID: **R17380**	RunNo: **17380**			
Prep Date:	Analysis Date: **3/17/2014**	SeqNo: **500674**	Units: **mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.4	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.6	85	115			
Chromium	0.49	0.0060	0.5000	0	97.2	85	115			
Copper	0.49	0.0060	0.5000	0	97.8	85	115			
Iron	0.49	0.020	0.5000	0	98.3	85	115			
Manganese	0.48	0.0020	0.5000	0	96.9	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Zinc	0.49	0.010	0.5000	0	97.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403475**
27-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **MB-12161** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **12161** RunNo: **17291**
Prep Date: **3/13/2014** Analysis Date: **3/13/2014** SeqNo: **498280** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS-12161** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **12161** RunNo: **17291**
Prep Date: **3/13/2014** Analysis Date: **3/13/2014** SeqNo: **498281** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.8	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.5	85	115			
Calcium	50	1.0	50.00	0	99.6	85	115			
Chromium	0.49	0.0060	0.5000	0	98.2	85	115			
Copper	0.49	0.0060	0.5000	0	99.0	85	115			
Iron	0.51	0.020	0.5000	0	103	85	115			
Magnesium	49	1.0	50.00	0	98.9	85	115			
Manganese	0.50	0.0020	0.5000	0	99.5	85	115			
Potassium	49	1.0	50.00	0	97.4	85	115			
Silver	0.098	0.0050	0.1000	0	97.7	85	115			
Sodium	49	1.0	50.00	0	98.3	85	115			
Zinc	0.51	0.010	0.5000	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403475**
27-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17401** RunNo: **17401**
Prep Date: Analysis Date: **3/18/2014** SeqNo: **501192** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.025	0.0010	0.02500	0	102	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17401** RunNo: **17401**
Prep Date: Analysis Date: **3/18/2014** SeqNo: **501193** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.025	0.0010	0.02500	0	101	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17401** RunNo: **17401**
Prep Date: Analysis Date: **3/18/2014** SeqNo: **501194** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17401** RunNo: **17401**
Prep Date: Analysis Date: **3/18/2014** SeqNo: **501195** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17500** RunNo: **17500**
Prep Date: Analysis Date: **3/21/2014** SeqNo: **504188** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.7	85	115			
Selenium	0.024	0.0010	0.02500	0	96.9	85	115			
Uranium	0.024	0.0010	0.02500	0	94.2	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17500** RunNo: **17500**
Prep Date: Analysis Date: **3/21/2014** SeqNo: **504189** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.022	0.0010	0.02500	0	89.7	85	115			
Selenium	0.023	0.0010	0.02500	0	93.5	85	115			
Uranium	0.023	0.0010	0.02500	0	93.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403475**
27-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID	**MB**	SampType:	**MBLK**		TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**R17500**		RunNo:	**17500**					
Prep Date:		Analysis Date:	**3/21/2014**		SeqNo:	**504190**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		ND	0.0010								
Selenium		ND	0.0010								
Uranium		ND	0.0010								

Sample ID	**MB**	SampType:	**MBLK**		TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**R17500**		RunNo:	**17500**					
Prep Date:		Analysis Date:	**3/21/2014**		SeqNo:	**504191**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		ND	0.0010								
Selenium		ND	0.0010								
Uranium		ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403475**
27-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **LLLCS-12161** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **12161** RunNo: **17331**
Prep Date: **3/13/2014** Analysis Date: **3/14/2014** SeqNo: **499089** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.6	85	115			
Lead	0.024	0.0010	0.02500	0	97.9	85	115			
Selenium	0.023	0.0010	0.02500	0	93.5	85	115			
Uranium	0.024	0.0010	0.02500	0	97.4	85	115			

Sample ID **MB-12161** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **12161** RunNo: **17331**
Prep Date: **3/13/2014** Analysis Date: **3/14/2014** SeqNo: **499090** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403475**
27-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID	**MB-12327**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**
Client ID:	**PBW**	Batch ID:	**12327**	RunNo:	**17527**
Prep Date:	**3/24/2014**	Analysis Date:	**3/24/2014**	SeqNo:	**505296** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-12327**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**
Client ID:	**LCSW**	Batch ID:	**12327**	RunNo:	**17527**
Prep Date:	**3/24/2014**	Analysis Date:	**3/24/2014**	SeqNo:	**505297** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	101	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403475**
27-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R17314** RunNo: **17314**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498585** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R17314** RunNo: **17314**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498586** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	99.6	90	110			
Chloride	4.6	0.50	5.000	0	92.5	90	110			
Bromide	2.4	0.10	2.500	0	94.7	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	95.4	90	110			
Sulfate	9.3	0.50	10.00	0	93.3	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R17389** RunNo: **17389**
Prep Date: Analysis Date: **3/17/2014** SeqNo: **500825** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R17389** RunNo: **17389**
Prep Date: Analysis Date: **3/17/2014** SeqNo: **500826** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.6	0.20	3.500	0	102	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403475**
27-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **MB-12126** SampType: **MBLK** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **PBW** Batch ID: **12126** RunNo: **17240**
Prep Date: **3/11/2014** Analysis Date: **3/12/2014** SeqNo: **497468** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		112	62.7	145			

Sample ID **LCS-12126** SampType: **LCS** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSW** Batch ID: **12126** RunNo: **17240**
Prep Date: **3/11/2014** Analysis Date: **3/12/2014** SeqNo: **497472** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.2	1.0	5.000	0	103	78.6	146			
Surr: DNOP	0.56		0.5000		111	62.7	145			

Sample ID **LCSD-12126** SampType: **LCSD** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSS02** Batch ID: **12126** RunNo: **17240**
Prep Date: **3/11/2014** Analysis Date: **3/12/2014** SeqNo: **497474** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.3	1.0	5.000	0	107	78.6	146	3.44	26.5	
Surr: DNOP	0.57		0.5000		113	62.7	145	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403475**
27-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**
Client ID:	**PBW**	Batch ID:	**R17305**	RunNo:	**17305**
Prep Date:		Analysis Date:	**3/13/2014**	SeqNo:	**498410** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	21		20.00		105	80.4	118			

Sample ID	**2.5UG GRO LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**
Client ID:	**LCSW**	Batch ID:	**R17305**	RunNo:	**17305**
Prep Date:		Analysis Date:	**3/13/2014**	SeqNo:	**498411** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.53	0.050	0.5000	0	106	80	120			
Surr: BFB	23		20.00		113	80.4	118			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403475**
27-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **5mL rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R17299**	RunNo: **17299**			
Prep Date:	Analysis Date: **3/13/2014**	SeqNo: **498323**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403475**
27-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **5mL rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R17299** RunNo: **17299**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498323** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	10		10.00		99.7	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R17299** RunNo: **17299**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498325** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	116	70	130			
Toluene	21	1.0	20.00	0	105	80	120			
Chlorobenzene	20	1.0	20.00	0	100	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403475**
27-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R17299** RunNo: **17299**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498325** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	23	1.0	20.00	0	114	90	143			
Trichloroethene (TCE)	19	1.0	20.00	0	96.0	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.9	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.5		10.00		95.3	70	130			

Sample ID **1403475-001a ms** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **GWM-1** Batch ID: **R17299** RunNo: **17299**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498342** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	25	1.0	20.00	8.777	81.3	70	130			
Toluene	17	1.0	20.00	2.210	72.6	67.5	123			
Chlorobenzene	15	1.0	20.00	0	72.6	70	130			
1,1-Dichloroethene	14	1.0	20.00	0	70.9	81.9	134			S
Trichloroethene (TCE)	13	1.0	20.00	0	65.3	70	130			S
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		95.5	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.7		10.00		97.3	70	130			

Sample ID **1403475-001a msd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **GWM-1** Batch ID: **R17299** RunNo: **17299**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498343** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	25	1.0	20.00	8.777	82.1	70	130	0.643	20	
Toluene	18	1.0	20.00	2.210	79.3	67.5	123	7.72	20	
Chlorobenzene	15	1.0	20.00	0	75.7	70	130	4.15	20	
1,1-Dichloroethene	13	1.0	20.00	0	67.0	81.9	134	5.69	20	S
Trichloroethene (TCE)	13	1.0	20.00	0	64.1	70	130	1.85	20	S
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130	0	0	
Surr: 4-Bromofluorobenzene	8.9		10.00		89.4	70	130	0	0	
Surr: Dibromofluoromethane	9.8		10.00		98.4	70	130	0	0	
Surr: Toluene-d8	10		10.00		101	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Western Refining Gallup** Work Order Number: **1403475** RcptNo: 1

Received by/date: KMS 03/12/14

Logged By: **Michelle Garcia** 3/12/2014 11:10:00 AM Michelle Garcia

Completed By: **Michelle Garcia** 3/12/2014 12:20:24 PM Michelle Garcia

Reviewed By: IO 03/12/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 3 (<2 or >12 unless noted)
Adjusted? yes
Checked by: mg

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks: Poured off from unpreserved for -001 ~~and -002~~ mg 03/15 dissolved metals. Added 0.5mL HNO3 for acceptable pH. Held in login for 24 hrs. mg 03/15

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.0	Good	Not Present			

Chain-of-Custody Record

Client: Western Refining

Mailing Address: Rt 3 Box 7
Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-722-0210

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☐ Rush

Project Name: Q1-2014 Groundwater Sampling

Project #: Quarterly Sampling

Project Manager: Cheryl Johnson

Sampler:

On Ice: ☑ Yes ☐ No

Sample Temperature: 2.0

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1403475	8260B (VOC)	8015 (GRO/DRO)	WQCC Metals (Total and Dissolved)	[illegible]	Air Bubbles (Y or N)
3/11/14	0910		GWM-1			-001	x	x	x	x	
			~~GWM-2~~				~~x~~	~~x~~		~~x~~	
			~~GWM-3~~				~~x~~	~~x~~		~~x~~	
3/11/14	0950	W	FB-Group#2-			-002	x				
			Trip Blank			-003					

Date	Time	Relinquished by	Received by	Date	Time
3/12/14	1110	Pete Sandoval	[illegible]	3/12/14	11:10
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 11, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: Q4 2014 OrderNo.: 1411601

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 11/15/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1411601**
Date Reported: **12/11/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: GWM-1
Project: Q4 2014
Collection Date: 11/13/2014 1:25:00 PM
Lab ID: 1411601-001
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**JME**
Diesel Range Organics (DRO)	2.3	1.0		mg/L	1	11/18/2014 8:44:39 PM	16415
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/18/2014 8:44:39 PM	16415
Surr: DNOP	101	59-141		%REC	1	11/18/2014 8:44:39 PM	16415
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	0.50	0.050	P	mg/L	1	11/19/2014 12:47:24 AM	R22618
Surr: BFB	693	80-120	SP	%REC	1	11/19/2014 12:47:24 AM	R22618
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	1.8	1.0		mg/L	10	11/17/2014 10:45:34 PM	R22603
Chloride	1000	50		mg/L	100	11/17/2014 10:58:00 PM	R22603
Bromide	2.7	1.0		mg/L	10	11/17/2014 10:45:34 PM	R22603
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	11/17/2014 10:45:34 PM	R22603
Sulfate	85	5.0		mg/L	10	11/17/2014 10:45:34 PM	R22603
Nitrate+Nitrite as N	ND	1.0		mg/L	5	11/26/2014 6:45:47 AM	R22809
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.45	0.0020		mg/L	1	11/24/2014 7:08:40 PM	R22755
Cadmium	ND	0.0020		mg/L	1	11/24/2014 7:08:40 PM	R22755
Calcium	250	5.0		mg/L	5	11/24/2014 7:10:25 PM	R22755
Chromium	ND	0.0060		mg/L	1	11/24/2014 7:08:40 PM	R22755
Copper	ND	0.0060		mg/L	1	11/24/2014 7:08:40 PM	R22755
Iron	15	0.40	*	mg/L	20	11/25/2014 2:41:27 PM	R22813
Magnesium	59	1.0		mg/L	1	11/24/2014 7:08:40 PM	R22755
Manganese	2.3	0.010	*	mg/L	5	11/24/2014 7:10:25 PM	R22755
Potassium	2.1	1.0		mg/L	1	11/24/2014 7:08:40 PM	R22755
Silver	ND	0.0050		mg/L	1	11/24/2014 7:08:40 PM	R22755
Sodium	1100	20		mg/L	20	11/25/2014 2:41:27 PM	R22813
Zinc	0.029	0.010		mg/L	1	11/24/2014 7:08:40 PM	R22755
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.51	0.0020		mg/L	1	11/20/2014 6:54:36 PM	16487
Cadmium	ND	0.0020		mg/L	1	11/20/2014 6:54:36 PM	16487
Chromium	ND	0.0060		mg/L	1	11/20/2014 6:54:36 PM	16487
Copper	0.0082	0.0060		mg/L	1	11/20/2014 6:54:36 PM	16487
Iron	17	1.0	*	mg/L	50	11/21/2014 6:05:21 PM	16487
Manganese	2.2	0.010	*	mg/L	5	11/21/2014 6:03:34 PM	16487
Silver	ND	0.0050		mg/L	1	11/20/2014 6:54:36 PM	16487
Zinc	0.027	0.010		mg/L	1	11/20/2014 6:54:36 PM	16487
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.14	0.010	*	mg/L	10	12/2/2014 3:53:30 PM	R22885

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: GWM-1
Project: Q4 2014
Collection Date: 11/13/2014 1:25:00 PM
Lab ID: 1411601-001
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.010		mg/L	10	12/2/2014 3:53:30 PM	R22885
Selenium	ND	0.010		mg/L	10	12/2/2014 3:53:30 PM	R22885
Uranium	0.014	0.010		mg/L	10	12/2/2014 3:53:30 PM	R22885
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.16	0.050	*	mg/L	50	12/3/2014 3:43:33 PM	16487
Lead	0.013	0.0010		mg/L	1	11/26/2014 3:25:02 PM	16487
Selenium	ND	0.050		mg/L	50	12/3/2014 3:43:33 PM	16487
Uranium	0.015	0.0010		mg/L	1	11/26/2014 3:25:02 PM	16487
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/26/2014 3:15:46 PM	16593
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	12	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
Toluene	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
Ethylbenzene	5.7	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
Methyl tert-butyl ether (MTBE)	50	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
1,2,4-Trimethylbenzene	5.7	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
1,3,5-Trimethylbenzene	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
1,2-Dichloroethane (EDC)	27	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
Naphthalene	ND	10		µg/L	5	11/20/2014 4:31:24 PM	R22685
1-Methylnaphthalene	ND	20		µg/L	5	11/20/2014 4:31:24 PM	R22685
2-Methylnaphthalene	ND	20		µg/L	5	11/20/2014 4:31:24 PM	R22685
Acetone	ND	50		µg/L	5	11/20/2014 4:31:24 PM	R22685
Bromobenzene	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
Bromodichloromethane	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
Bromoform	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
Bromomethane	ND	15		µg/L	5	11/20/2014 4:31:24 PM	R22685
2-Butanone	ND	50		µg/L	5	11/20/2014 4:31:24 PM	R22685
Carbon disulfide	ND	50		µg/L	5	11/20/2014 4:31:24 PM	R22685
Carbon Tetrachloride	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
Chlorobenzene	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
Chloroethane	ND	10		µg/L	5	11/20/2014 4:31:24 PM	R22685
Chloroform	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
Chloromethane	ND	15		µg/L	5	11/20/2014 4:31:24 PM	R22685
2-Chlorotoluene	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
4-Chlorotoluene	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
cis-1,2-DCE	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
cis-1,3-Dichloropropene	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: GWM-1
Project: Q4 2014
Collection Date: 11/13/2014 1:25:00 PM
Lab ID: 1411601-001
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dibromo-3-chloropropane	ND	10		µg/L	5	11/20/2014 4:31:24 PM	R22685
Dibromochloromethane	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
Dibromomethane	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
1,2-Dichlorobenzene	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
1,3-Dichlorobenzene	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
1,4-Dichlorobenzene	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
Dichlorodifluoromethane	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
1,1-Dichloroethane	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
1,1-Dichloroethene	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
1,2-Dichloropropane	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
1,3-Dichloropropane	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
2,2-Dichloropropane	ND	10		µg/L	5	11/20/2014 4:31:24 PM	R22685
1,1-Dichloropropene	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
Hexachlorobutadiene	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
2-Hexanone	ND	50		µg/L	5	11/20/2014 4:31:24 PM	R22685
Isopropylbenzene	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
4-Isopropyltoluene	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
4-Methyl-2-pentanone	ND	50		µg/L	5	11/20/2014 4:31:24 PM	R22685
Methylene Chloride	ND	15		µg/L	5	11/20/2014 4:31:24 PM	R22685
n-Butylbenzene	ND	15		µg/L	5	11/20/2014 4:31:24 PM	R22685
n-Propylbenzene	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
sec-Butylbenzene	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
Styrene	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
tert-Butylbenzene	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
1,1,2,2-Tetrachloroethane	ND	10		µg/L	5	11/20/2014 4:31:24 PM	R22685
Tetrachloroethene (PCE)	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
trans-1,2-DCE	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
trans-1,3-Dichloropropene	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
1,2,3-Trichlorobenzene	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
1,2,4-Trichlorobenzene	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
1,1,1-Trichloroethane	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
1,1,2-Trichloroethane	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
Trichloroethene (TCE)	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
Trichlorofluoromethane	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
1,2,3-Trichloropropane	ND	10		µg/L	5	11/20/2014 4:31:24 PM	R22685
Vinyl chloride	ND	5.0		µg/L	5	11/20/2014 4:31:24 PM	R22685
Xylenes, Total	23	7.5		µg/L	5	11/20/2014 4:31:24 PM	R22685
Surr: 1,2-Dichloroethane-d4	91.9	70-130		%REC	5	11/20/2014 4:31:24 PM	R22685

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: GWM-1
Project: Q4 2014
Collection Date: 11/13/2014 1:25:00 PM
Lab ID: 1411601-001
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Surr: 4-Bromofluorobenzene	90.6	70-130		%REC	5	11/20/2014 4:31:24 PM	R22685
Surr: Dibromofluoromethane	94.9	70-130		%REC	5	11/20/2014 4:31:24 PM	R22685
Surr: Toluene-d8	96.9	70-130		%REC	5	11/20/2014 4:31:24 PM	R22685

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TB-500
Project: Q4 2014
Collection Date: 11/14/2014
Lab ID: 1411601-002
Matrix: TRIP BLANK
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/19/2014 1:14:25 AM	R22618
Surr: BFB	90.1	80-120		%REC	1	11/19/2014 1:14:25 AM	R22618
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
Toluene	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
Ethylbenzene	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
Naphthalene	ND	2.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
1-Methylnaphthalene	ND	4.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
2-Methylnaphthalene	ND	4.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
Acetone	ND	10		µg/L	1	11/20/2014 8:16:59 AM	R22653
Bromobenzene	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
Bromodichloromethane	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
Bromoform	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
Bromomethane	ND	3.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
2-Butanone	ND	10		µg/L	1	11/20/2014 8:16:59 AM	R22653
Carbon disulfide	ND	10		µg/L	1	11/20/2014 8:16:59 AM	R22653
Carbon Tetrachloride	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
Chlorobenzene	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
Chloroethane	ND	2.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
Chloroform	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
Chloromethane	ND	3.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
2-Chlorotoluene	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
4-Chlorotoluene	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
cis-1,2-DCE	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
Dibromochloromethane	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
Dibromomethane	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
1,1-Dichloroethane	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
1,1-Dichloroethene	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TB-500
Project: Q4 2014
Collection Date: 11/14/2014
Lab ID: 1411601-002
Matrix: TRIP BLANK
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dichloropropane	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
1,3-Dichloropropane	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
2,2-Dichloropropane	ND	2.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
1,1-Dichloropropene	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
Hexachlorobutadiene	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
2-Hexanone	ND	10		µg/L	1	11/20/2014 8:16:59 AM	R22653
Isopropylbenzene	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
4-Isopropyltoluene	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
4-Methyl-2-pentanone	ND	10		µg/L	1	11/20/2014 8:16:59 AM	R22653
Methylene Chloride	ND	3.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
n-Butylbenzene	ND	3.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
n-Propylbenzene	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
sec-Butylbenzene	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
Styrene	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
tert-Butylbenzene	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
trans-1,2-DCE	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
Trichlorofluoromethane	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
Vinyl chloride	ND	1.0		µg/L	1	11/20/2014 8:16:59 AM	R22653
Xylenes, Total	ND	1.5		µg/L	1	11/20/2014 8:16:59 AM	R22653
Surr: 1,2-Dichloroethane-d4	90.7	70-130		%REC	1	11/20/2014 8:16:59 AM	R22653
Surr: 4-Bromofluorobenzene	103	70-130		%REC	1	11/20/2014 8:16:59 AM	R22653
Surr: Dibromofluoromethane	88.4	70-130		%REC	1	11/20/2014 8:16:59 AM	R22653
Surr: Toluene-d8	91.8	70-130		%REC	1	11/20/2014 8:16:59 AM	R22653

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411601**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22755** RunNo: **22755**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671448** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22755** RunNo: **22755**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671449** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.6	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.8	85	115			
Calcium	50	1.0	50.00	0	100	85	115			
Chromium	0.48	0.0060	0.5000	0	96.1	85	115			
Copper	0.49	0.0060	0.5000	0	97.6	85	115			
Magnesium	50	1.0	50.00	0	101	85	115			
Manganese	0.47	0.0020	0.5000	0	93.5	85	115			
Potassium	49	1.0	50.00	0	97.3	85	115			
Silver	0.10	0.0050	0.1000	0	104	85	115			
Zinc	0.48	0.010	0.5000	0	96.3	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22813** RunNo: **22813**
Prep Date: Analysis Date: **11/25/2014** SeqNo: **673337** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								
Sodium	ND	1.0								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22813** RunNo: **22813**
Prep Date: Analysis Date: **11/25/2014** SeqNo: **673338** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411601**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**			
Client ID: **LCSW**	Batch ID: **R22813**	RunNo: **22813**			
Prep Date:	Analysis Date: **11/25/2014**	SeqNo: **673338**	Units: **mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.50	0.020	0.5000	0	100	85	115			
Sodium	51	1.0	50.00	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411601**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB-16487** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **16487** RunNo: **22687**
Prep Date: **11/20/2014** Analysis Date: **11/20/2014** SeqNo: **669092** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-16487** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **16487** RunNo: **22687**
Prep Date: **11/20/2014** Analysis Date: **11/20/2014** SeqNo: **669093** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.0	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.0	85	115			
Chromium	0.48	0.0060	0.5000	0	96.8	85	115			
Copper	0.49	0.0060	0.5000	0	98.9	85	115			
Iron	0.51	0.020	0.5000	0	101	85	115			
Manganese	0.48	0.0020	0.5000	0	95.7	85	115			
Silver	0.11	0.0050	0.1000	0	108	85	115			
Zinc	0.48	0.010	0.5000	0	96.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411601**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22885** RunNo: **22885**
Prep Date: Analysis Date: **12/2/2014** SeqNo: **675799** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.7	85	115			
Lead	0.025	0.0010	0.02500	0	101	85	115			
Selenium	0.024	0.0010	0.02500	0	94.3	85	115			
Uranium	0.026	0.0010	0.02500	0	103	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22885** RunNo: **22885**
Prep Date: Analysis Date: **12/2/2014** SeqNo: **675800** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	100	85	115			
Lead	0.025	0.0010	0.02500	0	98.4	85	115			
Selenium	0.024	0.0010	0.02500	0	95.6	85	115			
Uranium	0.026	0.0010	0.02500	0	102	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22885** RunNo: **22885**
Prep Date: Analysis Date: **12/2/2014** SeqNo: **675801** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22885** RunNo: **22885**
Prep Date: Analysis Date: **12/2/2014** SeqNo: **675802** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411601**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LLLCS-16487** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **16487** RunNo: **22842**
Prep Date: **11/20/2014** Analysis Date: **11/26/2014** SeqNo: **674131** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0	103	85	115			
Lead	0.026	0.0010	0.02500	0	105	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.026	0.0010	0.02500	0	104	85	115			

Sample ID **MB-16487** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **16487** RunNo: **22842**
Prep Date: **11/20/2014** Analysis Date: **11/26/2014** SeqNo: **674136** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411601**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**MB-16593**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**						
Client ID:	**PBW**	Batch ID:	**16593**	RunNo:	**22825**						
Prep Date:	**11/26/2014**	Analysis Date:	**11/26/2014**	SeqNo:	**673696**	Units:	**mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		ND	0.00020								

Sample ID	**LCS-16593**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**						
Client ID:	**LCSW**	Batch ID:	**16593**	RunNo:	**22825**						
Prep Date:	**11/26/2014**	Analysis Date:	**11/26/2014**	SeqNo:	**673697**	Units:	**mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.0051	0.00020	0.005000	0	102	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411601**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22603** RunNo: **22603**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **666596** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R22603** RunNo: **22603**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **666597** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	96.7	90	110			
Chloride	4.8	0.50	5.000	0	95.8	90	110			
Bromide	2.5	0.10	2.500	0	99.7	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	97.5	90	110			
Sulfate	9.6	0.50	10.00	0	96.1	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22603** RunNo: **22603**
Prep Date: Analysis Date: **11/18/2014** SeqNo: **666650** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R22603** RunNo: **22603**
Prep Date: Analysis Date: **11/18/2014** SeqNo: **666651** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	97.4	90	110			
Chloride	4.9	0.50	5.000	0	97.5	90	110			
Bromide	2.5	0.10	2.500	0	102	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	99.7	90	110			
Sulfate	9.8	0.50	10.00	0	98.2	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411601**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22809** RunNo: **22809**
Prep Date: Analysis Date: **11/25/2014** SeqNo: **673181** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R22809** RunNo: **22809**
Prep Date: Analysis Date: **11/25/2014** SeqNo: **673182** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.5	0.20	3.500	0	101	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22809** RunNo: **22809**
Prep Date: Analysis Date: **11/26/2014** SeqNo: **673237** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R22809** RunNo: **22809**
Prep Date: Analysis Date: **11/26/2014** SeqNo: **673238** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.5	0.20	3.500	0	100	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411601**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**MB-16415**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Diesel Range**					
Client ID:	**PBW**	Batch ID:	**16415**	RunNo:	**22594**					
Prep Date:	**11/17/2014**	Analysis Date:	**11/18/2014**	SeqNo:	**666747**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.0		1.000		101	59	141			

Sample ID	**LCS-16415**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Diesel Range**					
Client ID:	**LCSW**	Batch ID:	**16415**	RunNo:	**22594**					
Prep Date:	**11/17/2014**	Analysis Date:	**11/18/2014**	SeqNo:	**666748**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.7	1.0	5.000	0	93.6	69.7	142			
Surr: DNOP	0.60		0.5000		119	59	141			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411601**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBW**	Batch ID:	**R22618**	RunNo:	**22618**					
Prep Date:		Analysis Date:	**11/18/2014**	SeqNo:	**667070**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		ND	0.050								
Surr: BFB		18		20.00		88.4	80	120			

Sample ID	**2.5UG GRO LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSW**	Batch ID:	**R22618**	RunNo:	**22618**					
Prep Date:		Analysis Date:	**11/18/2014**	SeqNo:	**667071**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		0.46	0.050	0.5000	0	91.8	80	120			
Surr: BFB		19		20.00		94.0	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411601**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R22653**	RunNo: **22653**			
Prep Date:	Analysis Date: **11/19/2014**	SeqNo: **668056**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411601**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **5mL-rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22653** RunNo: **22653**
Prep Date: Analysis Date: **11/19/2014** SeqNo: **668056** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		99.9	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	9.7		10.00		97.4	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22653** RunNo: **22653**
Prep Date: Analysis Date: **11/19/2014** SeqNo: **668058** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	23	1.0	20.00	0	116	80	120			
Chlorobenzene	21	1.0	20.00	0	104	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411601**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22653** RunNo: **22653**
Prep Date: Analysis Date: **11/19/2014** SeqNo: **668058** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	23	1.0	20.00	0	117	82.6	131			
Trichloroethene (TCE)	19	1.0	20.00	0	96.3	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		91.0	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.4	70	130			
Surr: Dibromofluoromethane	8.7		10.00		87.1	70	130			
Surr: Toluene-d8	9.6		10.00		96.5	70	130			

Sample ID **b2** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22653** RunNo: **22653**
Prep Date: Analysis Date: **11/19/2014** SeqNo: **668101** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411601**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **b2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R22653**	RunNo: **22653**	
Prep Date:	Analysis Date: **11/19/2014**	SeqNo: **668101**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411601**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **b2** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22653** RunNo: **22653**
Prep Date: Analysis Date: **11/19/2014** SeqNo: **668101** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	9.8		10.00		98.0	70	130			
Surr: Dibromofluoromethane	9.5		10.00		94.8	70	130			
Surr: Toluene-d8	9.4		10.00		94.3	70	130			

Sample ID **100ng lcs2** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22653** RunNo: **22653**
Prep Date: Analysis Date: **11/19/2014** SeqNo: **668103** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	24	1.0	20.00	0	122	70	130			
Toluene	24	1.0	20.00	0	118	80	120			
Chlorobenzene	22	1.0	20.00	0	109	70	130			
1,1-Dichloroethene	26	1.0	20.00	0	129	82.6	131			
Trichloroethene (TCE)	22	1.0	20.00	0	109	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		99.7	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.2	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.3	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID **5mL-rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22685** RunNo: **22685**
Prep Date: Analysis Date: **11/20/2014** SeqNo: **668946** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411601**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R22685**	RunNo: **22685**			
Prep Date:	Analysis Date: **11/20/2014**	SeqNo: **668946**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411601**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **5mL-rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22685** RunNo: **22685**
Prep Date: Analysis Date: **11/20/2014** SeqNo: **668946** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.0		10.00		90.3	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	8.9		10.00		89.4	70	130			
Surr: Toluene-d8	9.1		10.00		91.5	70	130			

Sample ID **100ng Lcs200ngAnn** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22685** RunNo: **22685**
Prep Date: Analysis Date: **11/20/2014** SeqNo: **668948** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	22	1.0	20.00	0	111	80	120			
Chlorobenzene	21	1.0	20.00	0	103	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	109	82.6	131			
Trichloroethene (TCE)	20	1.0	20.00	0	100	70	130			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.0	70	130			
Surr: 4-Bromofluorobenzene	9.0		10.00		90.4	70	130			
Surr: Dibromofluoromethane	9.4		10.00		93.5	70	130			
Surr: Toluene-d8	9.9		10.00		98.7	70	130			

Sample ID **b2** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22685** RunNo: **22685**
Prep Date: Analysis Date: **11/20/2014** SeqNo: **668977** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411601**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **b2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R22685**	RunNo: **22685**			
Prep Date:	Analysis Date: **11/20/2014**	SeqNo: **668977**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411601**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **b2** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22685** RunNo: **22685**
Prep Date: Analysis Date: **11/20/2014** SeqNo: **668977** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		91.2	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.7	70	130			
Surr: Toluene-d8	8.8		10.00		88.3	70	130			

Sample ID **100ng lcs2** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22685** RunNo: **22685**
Prep Date: Analysis Date: **11/21/2014** SeqNo: **668979** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	22	1.0	20.00	0	109	80	120			
Chlorobenzene	20	1.0	20.00	0	101	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	116	82.6	131			
Trichloroethene (TCE)	21	1.0	20.00	0	105	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		99.7	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.9	70	130			
Surr: Dibromofluoromethane	9.2		10.00		92.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411601**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**100ng lcs2**	SampType:	**LCS**		TestCode:	**EPA Method 8260B: VOLATILES**					
Client ID:	**LCSW**	Batch ID:	**R22685**		RunNo:	**22685**					
Prep Date:		Analysis Date:	**11/21/2014**		SeqNo:	**668979**	Units:	**µg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Toluene-d8		10		10.00		99.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1411601 RcptNo: 1

Received by/date: SM 11/15/14

Logged By: **Ashley Gallegos** 11/15/2014 9:15:00 AM

Completed By: **Ashley Gallegos** 11/17/2014 9:57:19 AM

Reviewed By: CS 11/17/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☑
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? ~~Yes~~ ☑ No ☐
9. Was preservative added to bottles? Yes ☐ ~~No~~ ☑ NA ☐

*METALS ANALYSIS: ADDED 1mL HNO3 TO 100 ml + 0.4 mL HNO3 TO 100 ml FOR ACCEPTABLE pH.

10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

11/17/14 1530

# of preserved bottles checked for pH: 31 (<2 or >12 unless noted)
Adjusted? YES
Checked by:

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.9	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

? Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ Rush _____

Project Name:

Q4 2014

Project #:

East/West/Oil LDUs, GWM-1,-2,-3,and OAPIS-1

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.9°C

HALL ENVIRONI
ANALYSIS LABO
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 8
Tel. 505-345-3975 Fax 505-345-410

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1411L001	8260 + MTBE	8021 + MTBE	8015B extended	8270 + phenoles	WQCC metals - total	WQCC metals - dissolved (filtered)	major cations/anions	cyanide		
11-13-14	1325	Aq	GWM-1	10		-001	X		X		X	X	X			
11-14-14	—	Aq	TB-500	3		-002	X									

Date:	Time:	Relinquished by:	Received by:	Date	Time
11-15-14	845	Pat Sanders / Pat Sanders	Stacey McCoy	11/15/14	9:15
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 10, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: 2014 2nd Quarter OrderNo.: 1406362

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/6/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1406362**
Date Reported: **7/10/2014**

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: GWM-1
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 11:12:00 AM
Lab ID: 1406362-001
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	3.4	1.0		mg/L	1	6/11/2014 5:03:49 AM	13583
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	6/11/2014 5:03:49 AM	13583
Surr: DNOP	97.8	62.7-145		%REC	1	6/11/2014 5:03:49 AM	13583
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	0.56	0.050		mg/L	1	6/12/2014 11:46:20 PM	R19229
Surr: BFB	909	70.9-130	S	%REC	1	6/12/2014 11:46:20 PM	R19229
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	2.2	0.50		mg/L	5	6/9/2014 5:14:45 PM	R19165
Chloride	890	50		mg/L	100	6/11/2014 1:28:27 AM	R19191
Bromide	2.5	0.50		mg/L	5	6/9/2014 5:14:45 PM	R19165
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	6/9/2014 5:14:45 PM	R19165
Sulfate	94	2.5		mg/L	5	6/9/2014 5:14:45 PM	R19165
Nitrate+Nitrite as N	ND	1.0		mg/L	5	6/10/2014 12:54:02 AM	R19165
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.56	0.0020		mg/L	1	6/10/2014 5:37:35 PM	R19167
Cadmium	ND	0.0020		mg/L	1	6/10/2014 5:37:35 PM	R19167
Chromium	ND	0.0060		mg/L	1	6/10/2014 5:37:35 PM	R19167
Copper	ND	0.0060		mg/L	1	6/10/2014 5:37:35 PM	R19167
Iron	12	0.40	*	mg/L	20	6/12/2014 4:24:32 PM	R19227
Manganese	2.6	0.010	*	mg/L	5	6/10/2014 5:39:21 PM	R19167
Silver	ND	0.0050		mg/L	1	6/12/2014 4:22:48 PM	R19227
Zinc	0.065	0.010		mg/L	1	6/10/2014 5:37:35 PM	R19167
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.54	0.010		mg/L	5	6/18/2014 12:29:38 PM	13717
Cadmium	ND	0.0020		mg/L	1	6/17/2014 1:58:53 PM	13717
Calcium	260	5.0		mg/L	5	6/18/2014 12:29:38 PM	13717
Chromium	ND	0.0060		mg/L	1	6/17/2014 1:58:53 PM	13717
Copper	ND	0.0060		mg/L	1	6/17/2014 1:58:53 PM	13717
Iron	13	0.40	*B	mg/L	20	6/18/2014 12:34:01 PM	13717
Magnesium	61	5.0		mg/L	5	6/18/2014 12:29:38 PM	13717
Manganese	2.5	0.010	*	mg/L	5	6/18/2014 12:29:38 PM	13717
Potassium	7.3	1.0		mg/L	1	6/17/2014 1:58:53 PM	13717
Silver	ND	0.0050		mg/L	1	6/18/2014 5:33:38 PM	13717
Sodium	1100	20		mg/L	20	6/18/2014 5:39:09 PM	13717
Zinc	0.021	0.010		mg/L	1	6/18/2014 12:25:10 PM	13717
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.13	0.0050	*	mg/L	5	6/18/2014 2:48:18 PM	R19364

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: GWM-1
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 11:12:00 AM
Lab ID: 1406362-001
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.0050		mg/L	5	6/18/2014 2:48:18 PM	R19364
Selenium	0.018	0.0050		mg/L	5	6/18/2014 2:48:18 PM	R19364
Uranium	0.011	0.0050		mg/L	5	6/19/2014 5:24:22 PM	R19391
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.13	0.0050	*	mg/L	5	6/17/2014 3:34:36 PM	13717
Lead	0.0080	0.0050		mg/L	5	6/17/2014 3:34:36 PM	13717
Selenium	0.019	0.0050		mg/L	5	6/17/2014 3:34:36 PM	13717
Uranium	0.012	0.0050		mg/L	5	6/17/2014 3:34:36 PM	13717
EPA METHOD 245.1: MERCURY						Analyst:	**DBD**
Mercury	ND	0.00020		mg/L	1	6/17/2014 10:54:08 AM	13722
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	11	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
Toluene	2.1	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
Ethylbenzene	4.8	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
Methyl tert-butyl ether (MTBE)	51	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
1,2,4-Trimethylbenzene	11	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
1,3,5-Trimethylbenzene	1.2	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
Naphthalene	ND	2.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
1-Methylnaphthalene	12	4.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
2-Methylnaphthalene	ND	4.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
Acetone	20	10		µg/L	1	6/11/2014 3:59:04 PM	R19204
Bromobenzene	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
Bromodichloromethane	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
Bromoform	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
Bromomethane	ND	3.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
2-Butanone	ND	10		µg/L	1	6/11/2014 3:59:04 PM	R19204
Carbon disulfide	ND	10		µg/L	1	6/11/2014 3:59:04 PM	R19204
Carbon Tetrachloride	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
Chlorobenzene	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
Chloroethane	ND	2.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
Chloroform	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
Chloromethane	ND	3.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
2-Chlorotoluene	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
4-Chlorotoluene	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
cis-1,2-DCE	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: GWM-1
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 11:12:00 AM
Lab ID: 1406362-001
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
Dibromochloromethane	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
Dibromomethane	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
1,1-Dichloroethane	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
1,1-Dichloroethene	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
1,2-Dichloropropane	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
1,3-Dichloropropane	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
2,2-Dichloropropane	ND	2.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
1,1-Dichloropropene	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
Hexachlorobutadiene	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
2-Hexanone	ND	10		µg/L	1	6/11/2014 3:59:04 PM	R19204
Isopropylbenzene	1.7	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
4-Isopropyltoluene	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
4-Methyl-2-pentanone	ND	10		µg/L	1	6/11/2014 3:59:04 PM	R19204
Methylene Chloride	ND	3.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
n-Butylbenzene	ND	3.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
n-Propylbenzene	2.1	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
sec-Butylbenzene	1.0	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
Styrene	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
tert-Butylbenzene	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
trans-1,2-DCE	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
Trichlorofluoromethane	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
Vinyl chloride	ND	1.0		µg/L	1	6/11/2014 3:59:04 PM	R19204
Xylenes, Total	19	1.5		µg/L	1	6/11/2014 3:59:04 PM	R19204
Surr: 1,2-Dichloroethane-d4	89.0	70-130		%REC	1	6/11/2014 3:59:04 PM	R19204

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: GWM-1
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 11:12:00 AM
Lab ID: 1406362-001
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Surr: 4-Bromofluorobenzene	94.6	70-130		%REC	1	6/11/2014 3:59:04 PM	R19204
Surr: Dibromofluoromethane	105	70-130		%REC	1	6/11/2014 3:59:04 PM	R19204
Surr: Toluene-d8	94.4	70-130		%REC	1	6/11/2014 3:59:04 PM	R19204

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 10:30:00 AM
Lab ID: 1406362-002
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	11	1.0		mg/L	1	6/11/2014 10:38:54 PM	13583
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	6/11/2014 10:38:54 PM	13583
Surr: DNOP	111	62.7-145		%REC	1	6/11/2014 10:38:54 PM	13583
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	0.70	0.050		mg/L	1	6/13/2014 12:16:33 AM	R19229
Surr: BFB	238	70.9-130	S	%REC	1	6/13/2014 12:16:33 AM	R19229
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	1.3	0.50		mg/L	5	6/9/2014 5:39:35 PM	R19165
Chloride	1400	250		mg/L	500	6/11/2014 1:40:52 AM	R19191
Bromide	6.1	0.50		mg/L	5	6/9/2014 5:39:35 PM	R19165
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	6/9/2014 5:39:35 PM	R19165
Sulfate	22	2.5		mg/L	5	6/9/2014 5:39:35 PM	R19165
Nitrate+Nitrite as N	ND	2.0		mg/L	10	6/24/2014 8:07:53 PM	R19500
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.80	0.0020		mg/L	1	6/10/2014 5:41:02 PM	R19167
Cadmium	ND	0.0020		mg/L	1	6/10/2014 5:41:02 PM	R19167
Chromium	0.0082	0.0060		mg/L	1	6/10/2014 5:41:02 PM	R19167
Copper	0.025	0.0060		mg/L	1	6/10/2014 5:41:02 PM	R19167
Iron	10	0.40	*	mg/L	20	6/12/2014 4:28:06 PM	R19227
Manganese	2.2	0.010	*	mg/L	5	6/10/2014 5:42:47 PM	R19167
Silver	ND	0.0050		mg/L	1	6/12/2014 4:26:24 PM	R19227
Zinc	0.10	0.010		mg/L	1	6/10/2014 5:41:02 PM	R19167
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.93	0.0020		mg/L	1	6/17/2014 2:05:59 PM	13717
Cadmium	ND	0.0020		mg/L	1	6/17/2014 2:05:59 PM	13717
Calcium	180	5.0		mg/L	5	6/18/2014 12:37:14 PM	13717
Chromium	0.022	0.0060		mg/L	1	6/17/2014 2:05:59 PM	13717
Copper	0.060	0.0060		mg/L	1	6/17/2014 2:05:59 PM	13717
Iron	12	1.0	*B	mg/L	50	6/18/2014 12:38:42 PM	13717
Magnesium	33	1.0		mg/L	1	6/17/2014 2:05:59 PM	13717
Manganese	2.4	0.010	*	mg/L	5	6/18/2014 12:37:14 PM	13717
Potassium	11	1.0		mg/L	1	6/17/2014 2:05:59 PM	13717
Silver	ND	0.0050		mg/L	1	6/18/2014 5:41:02 PM	13717
Sodium	1300	50		mg/L	50	6/18/2014 5:42:57 PM	13717
Zinc	0.15	0.010		mg/L	1	6/18/2014 12:35:37 PM	13717
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.011	0.010	*	mg/L	10	7/8/2014 5:14:59 PM	R19751

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 10:30:00 AM
Lab ID: 1406362-002
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	0.020	0.0050	*	mg/L	5	6/18/2014 2:58:16 PM	R19364
Selenium	0.014	0.010		mg/L	10	7/8/2014 5:14:59 PM	R19751
Uranium	0.039	0.010	*	mg/L	10	7/8/2014 5:14:59 PM	R19751
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.016	0.0050	*	mg/L	5	6/17/2014 3:39:35 PM	13717
Lead	0.029	0.0050	*	mg/L	5	6/17/2014 3:39:35 PM	13717
Selenium	0.035	0.0050		mg/L	5	6/17/2014 3:39:35 PM	13717
Uranium	0.034	0.0050	*	mg/L	5	6/17/2014 3:39:35 PM	13717
EPA METHOD 245.1: MERCURY						Analyst:	**DBD**
Mercury	ND	0.00020		mg/L	1	6/17/2014 10:55:55 AM	13722
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Acenaphthylene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Aniline	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Anthracene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Azobenzene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Benz(a)anthracene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Benzo(a)pyrene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Benzo(b)fluoranthene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Benzo(g,h,i)perylene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Benzo(k)fluoranthene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Benzoic acid	ND	20		µg/L	1	6/10/2014 7:44:23 PM	13597
Benzyl alcohol	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Bis(2-chloroethyl)ether	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
4-Bromophenyl phenyl ether	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Butyl benzyl phthalate	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Carbazole	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
4-Chloro-3-methylphenol	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
4-Chloroaniline	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
2-Chloronaphthalene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
2-Chlorophenol	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Chrysene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Di-n-butyl phthalate	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Di-n-octyl phthalate	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 10:30:00 AM
Lab ID: 1406362-002
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Dibenzofuran	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
1,2-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
1,3-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
1,4-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
3,3´-Dichlorobenzidine	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Diethyl phthalate	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Dimethyl phthalate	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
2,4-Dichlorophenol	ND	20		µg/L	1	6/10/2014 7:44:23 PM	13597
2,4-Dimethylphenol	32	10		µg/L	1	6/10/2014 7:44:23 PM	13597
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	6/10/2014 7:44:23 PM	13597
2,4-Dinitrophenol	ND	20		µg/L	1	6/10/2014 7:44:23 PM	13597
2,4-Dinitrotoluene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
2,6-Dinitrotoluene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Fluoranthene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Fluorene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Hexachlorobenzene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Hexachlorobutadiene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Hexachlorocyclopentadiene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Hexachloroethane	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Isophorone	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
1-Methylnaphthalene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
2-Methylnaphthalene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
2-Methylphenol	ND	20		µg/L	1	6/10/2014 7:44:23 PM	13597
3+4-Methylphenol	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
N-Nitrosodimethylamine	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
N-Nitrosodiphenylamine	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Naphthalene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
2-Nitroaniline	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
3-Nitroaniline	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
4-Nitroaniline	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Nitrobenzene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
2-Nitrophenol	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
4-Nitrophenol	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Pentachlorophenol	ND	20		µg/L	1	6/10/2014 7:44:23 PM	13597
Phenanthrene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Phenol	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 10:30:00 AM
Lab ID: 1406362-002
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyrene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Pyridine	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
1,2,4-Trichlorobenzene	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
2,4,5-Trichlorophenol	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
2,4,6-Trichlorophenol	ND	10		µg/L	1	6/10/2014 7:44:23 PM	13597
Surr: 2-Fluorophenol	45.1	12.1-85.8		%REC	1	6/10/2014 7:44:23 PM	13597
Surr: Phenol-d5	40.3	17.7-65.8		%REC	1	6/10/2014 7:44:23 PM	13597
Surr: 2,4,6-Tribromophenol	70.6	26-138		%REC	1	6/10/2014 7:44:23 PM	13597
Surr: Nitrobenzene-d5	79.6	47.5-119		%REC	1	6/10/2014 7:44:23 PM	13597
Surr: 2-Fluorobiphenyl	73.3	48.1-106		%REC	1	6/10/2014 7:44:23 PM	13597
Surr: 4-Terphenyl-d14	74.0	44-113		%REC	1	6/10/2014 7:44:23 PM	13597
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	96	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
Toluene	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
Ethylbenzene	10	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
Methyl tert-butyl ether (MTBE)	360	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
1,2,4-Trimethylbenzene	6.6	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
1,3,5-Trimethylbenzene	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
1,2-Dichloroethane (EDC)	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
1,2-Dibromoethane (EDB)	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
Naphthalene	ND	4.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
1-Methylnaphthalene	30	8.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
2-Methylnaphthalene	ND	8.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
Acetone	ND	20		µg/L	2	6/11/2014 12:15:11 PM	R19204
Bromobenzene	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
Bromodichloromethane	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
Bromoform	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
Bromomethane	ND	6.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
2-Butanone	ND	20		µg/L	2	6/11/2014 12:15:11 PM	R19204
Carbon disulfide	ND	20		µg/L	2	6/11/2014 12:15:11 PM	R19204
Carbon Tetrachloride	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
Chlorobenzene	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
Chloroethane	ND	4.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
Chloroform	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
Chloromethane	ND	6.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
2-Chlorotoluene	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
4-Chlorotoluene	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
cis-1,2-DCE	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
cis-1,3-Dichloropropene	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 10:30:00 AM
Lab ID: 1406362-002
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dibromo-3-chloropropane	ND	4.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
Dibromochloromethane	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
Dibromomethane	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
1,2-Dichlorobenzene	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
1,3-Dichlorobenzene	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
1,4-Dichlorobenzene	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
Dichlorodifluoromethane	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
1,1-Dichloroethane	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
1,1-Dichloroethene	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
1,2-Dichloropropane	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
1,3-Dichloropropane	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
2,2-Dichloropropane	ND	4.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
1,1-Dichloropropene	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
Hexachlorobutadiene	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
2-Hexanone	ND	20		µg/L	2	6/11/2014 12:15:11 PM	R19204
Isopropylbenzene	2.2	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
4-Isopropyltoluene	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
4-Methyl-2-pentanone	ND	20		µg/L	2	6/11/2014 12:15:11 PM	R19204
Methylene Chloride	ND	6.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
n-Butylbenzene	ND	6.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
n-Propylbenzene	2.3	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
sec-Butylbenzene	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
Styrene	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
tert-Butylbenzene	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
1,1,2,2-Tetrachloroethane	ND	4.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
Tetrachloroethene (PCE)	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
trans-1,2-DCE	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
trans-1,3-Dichloropropene	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
1,2,3-Trichlorobenzene	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
1,2,4-Trichlorobenzene	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
1,1,1-Trichloroethane	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
1,1,2-Trichloroethane	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
Trichloroethene (TCE)	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
Trichlorofluoromethane	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
1,2,3-Trichloropropane	ND	4.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
Vinyl chloride	ND	2.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
Xylenes, Total	4.9	3.0		µg/L	2	6/11/2014 12:15:11 PM	R19204
Surr: 1,2-Dichloroethane-d4	91.5	70-130		%REC	2	6/11/2014 12:15:11 PM	R19204

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 10:30:00 AM
Lab ID: 1406362-002
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Surr: 4-Bromofluorobenzene	95.7	70-130		%REC	2	6/11/2014 12:15:11 PM	R19204
Surr: Dibromofluoromethane	108	70-130		%REC	2	6/11/2014 12:15:11 PM	R19204
Surr: Toluene-d8	88.5	70-130		%REC	2	6/11/2014 12:15:11 PM	R19204

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-GROUP2-6/5/14
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 12:20:00 PM
Lab ID: 1406362-003
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
Toluene	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
Ethylbenzene	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
Naphthalene	ND	2.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
1-Methylnaphthalene	ND	4.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
2-Methylnaphthalene	ND	4.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
Acetone	ND	10		µg/L	1	6/11/2014 4:26:59 PM	R19204
Bromobenzene	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
Bromodichloromethane	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
Bromoform	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
Bromomethane	ND	3.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
2-Butanone	ND	10		µg/L	1	6/11/2014 4:26:59 PM	R19204
Carbon disulfide	ND	10		µg/L	1	6/11/2014 4:26:59 PM	R19204
Carbon Tetrachloride	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
Chlorobenzene	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
Chloroethane	ND	2.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
Chloroform	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
Chloromethane	ND	3.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
2-Chlorotoluene	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
4-Chlorotoluene	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
cis-1,2-DCE	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
Dibromochloromethane	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
Dibromomethane	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
1,1-Dichloroethane	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
1,1-Dichloroethene	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
1,2-Dichloropropane	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
1,3-Dichloropropane	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
2,2-Dichloropropane	ND	2.0		µg/L	1	6/11/2014 4:26:59 PM	R19204

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-GROUP2-6/5/14
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 12:20:00 PM
Lab ID: 1406362-003
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
Hexachlorobutadiene	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
2-Hexanone	ND	10		µg/L	1	6/11/2014 4:26:59 PM	R19204
Isopropylbenzene	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
4-Isopropyltoluene	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
4-Methyl-2-pentanone	ND	10		µg/L	1	6/11/2014 4:26:59 PM	R19204
Methylene Chloride	ND	3.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
n-Butylbenzene	ND	3.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
n-Propylbenzene	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
sec-Butylbenzene	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
Styrene	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
tert-Butylbenzene	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
trans-1,2-DCE	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
Trichlorofluoromethane	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
Vinyl chloride	ND	1.0		µg/L	1	6/11/2014 4:26:59 PM	R19204
Xylenes, Total	ND	1.5		µg/L	1	6/11/2014 4:26:59 PM	R19204
Surr: 1,2-Dichloroethane-d4	90.1	70-130		%REC	1	6/11/2014 4:26:59 PM	R19204
Surr: 4-Bromofluorobenzene	93.4	70-130		%REC	1	6/11/2014 4:26:59 PM	R19204
Surr: Dibromofluoromethane	99.0	70-130		%REC	1	6/11/2014 4:26:59 PM	R19204
Surr: Toluene-d8	87.9	70-130		%REC	1	6/11/2014 4:26:59 PM	R19204

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TB #1
Project: 2014 2nd Quarter
Collection Date:
Lab ID: 1406362-004
Matrix: TRIP BLANK
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	6/13/2014 12:46:40 AM	R19229
Surr: BFB	103	70.9-130		%REC	1	6/13/2014 12:46:40 AM	R19229
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
Toluene	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
Ethylbenzene	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
Naphthalene	ND	2.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
1-Methylnaphthalene	ND	4.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
2-Methylnaphthalene	ND	4.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
Acetone	ND	10		µg/L	1	6/11/2014 5:51:03 PM	R19204
Bromobenzene	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
Bromodichloromethane	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
Bromoform	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
Bromomethane	ND	3.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
2-Butanone	ND	10		µg/L	1	6/11/2014 5:51:03 PM	R19204
Carbon disulfide	ND	10		µg/L	1	6/11/2014 5:51:03 PM	R19204
Carbon Tetrachloride	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
Chlorobenzene	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
Chloroethane	ND	2.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
Chloroform	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
Chloromethane	ND	3.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
2-Chlorotoluene	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
4-Chlorotoluene	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
cis-1,2-DCE	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
Dibromochloromethane	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
Dibromomethane	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
1,1-Dichloroethane	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
1,1-Dichloroethene	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup **Client Sample ID:** TB #1
Project: 2014 2nd Quarter **Collection Date:**
Lab ID: 1406362-004 **Matrix:** TRIP BLANK **Received Date:** 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dichloropropane	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
1,3-Dichloropropane	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
2,2-Dichloropropane	ND	2.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
1,1-Dichloropropene	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
Hexachlorobutadiene	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
2-Hexanone	ND	10		µg/L	1	6/11/2014 5:51:03 PM	R19204
Isopropylbenzene	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
4-Isopropyltoluene	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
4-Methyl-2-pentanone	ND	10		µg/L	1	6/11/2014 5:51:03 PM	R19204
Methylene Chloride	ND	3.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
n-Butylbenzene	ND	3.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
n-Propylbenzene	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
sec-Butylbenzene	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
Styrene	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
tert-Butylbenzene	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
trans-1,2-DCE	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
Trichlorofluoromethane	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
Vinyl chloride	ND	1.0		µg/L	1	6/11/2014 5:51:03 PM	R19204
Xylenes, Total	ND	1.5		µg/L	1	6/11/2014 5:51:03 PM	R19204
Surr: 1,2-Dichloroethane-d4	90.5	70-130		%REC	1	6/11/2014 5:51:03 PM	R19204
Surr: 4-Bromofluorobenzene	89.8	70-130		%REC	1	6/11/2014 5:51:03 PM	R19204
Surr: Dibromofluoromethane	103	70-130		%REC	1	6/11/2014 5:51:03 PM	R19204
Surr: Toluene-d8	86.2	70-130		%REC	1	6/11/2014 5:51:03 PM	R19204

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	140611023
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1406362
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	140611023-001	**Sampling Date**	6/5/2014	**Date/Time Received**	6/10/2014	1:15 PM
Client Sample ID	1406362-002H / OAPIS-1	**Sampling Time**	10:30 AM			
Matrix	Water					
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	0.0753	mg/L	0.01	6/12/2014	CRW	EPA 335.4	

Authorized Signature

John Coddington, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406362**
10-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19167** RunNo: **19167**
Prep Date: Analysis Date: **6/10/2014** SeqNo: **554043** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Manganese	ND	0.0020								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19167** RunNo: **19167**
Prep Date: Analysis Date: **6/10/2014** SeqNo: **554044** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.4	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.8	85	115			
Chromium	0.50	0.0060	0.5000	0	99.6	85	115			
Copper	0.49	0.0060	0.5000	0	97.1	85	115			
Manganese	0.50	0.0020	0.5000	0	100	85	115			
Zinc	0.53	0.010	0.5000	0	106	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19227** RunNo: **19227**
Prep Date: Analysis Date: **6/12/2014** SeqNo: **555952** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								
Silver	ND	0.0050								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19227** RunNo: **19227**
Prep Date: Analysis Date: **6/12/2014** SeqNo: **555953** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.52	0.020	0.5000	0	104	85	115			
Silver	0.099	0.0050	0.1000	0	98.8	85	115			

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406362**
10-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **1406362-001FMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **GWM-1** Batch ID: **13717** RunNo: **19331**
Prep Date: **6/16/2014** Analysis Date: **6/17/2014** SeqNo: **558722** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.53	0.0020	0.5000	0	105	70	130			
Chromium	0.49	0.0060	0.5000	0.003110	97.2	70	130			
Copper	0.52	0.0060	0.5000	0	104	70	130			
Potassium	64	1.0	50.00	7.281	113	70	130			

Sample ID **1406362-001FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **GWM-1** Batch ID: **13717** RunNo: **19331**
Prep Date: **6/16/2014** Analysis Date: **6/17/2014** SeqNo: **558723** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.51	0.0020	0.5000	0	103	70	130	2.74	20	
Chromium	0.47	0.0060	0.5000	0.003110	94.3	70	130	2.99	20	
Copper	0.51	0.0060	0.5000	0	102	70	130	2.10	20	
Potassium	63	1.0	50.00	7.281	111	70	130	1.41	20	

Sample ID **MB-13717** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **13717** RunNo: **19331**
Prep Date: **6/16/2014** Analysis Date: **6/17/2014** SeqNo: **558754** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS-13717** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **13717** RunNo: **19331**
Prep Date: **6/16/2014** Analysis Date: **6/17/2014** SeqNo: **558755** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.6	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.4	85	115			
Calcium	51	1.0	50.00	0	101	85	115			
Chromium	0.49	0.0060	0.5000	0	97.5	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406362**
10-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **LCS-13717** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **13717** RunNo: **19331**
Prep Date: **6/16/2014** Analysis Date: **6/17/2014** SeqNo: **558755** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.49	0.0060	0.5000	0	97.9	85	115			
Magnesium	51	1.0	50.00	0	101	85	115			
Manganese	0.51	0.0020	0.5000	0	101	85	115			
Silver	0.098	0.0050	0.1000	0	98.0	85	115			
Sodium	50	1.0	50.00	0	99.8	85	115			
Zinc	0.51	0.010	0.5000	0	103	85	115			

Sample ID **MB-13717** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **13717** RunNo: **19331**
Prep Date: **6/16/2014** Analysis Date: **6/17/2014** SeqNo: **558756** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	ND	1.0								

Sample ID **LCS-13717** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **13717** RunNo: **19331**
Prep Date: **6/16/2014** Analysis Date: **6/17/2014** SeqNo: **558757** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	50	1.0	50.00	0	99.7	85	115			

Sample ID **1406362-001FMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **GWM-1** Batch ID: **13717** RunNo: **19357**
Prep Date: **6/16/2014** Analysis Date: **6/18/2014** SeqNo: **559758** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.51	0.010	0.5000	0.02140	97.5	70	130			

Sample ID **1406362-001FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **GWM-1** Batch ID: **13717** RunNo: **19357**
Prep Date: **6/16/2014** Analysis Date: **6/18/2014** SeqNo: **559759** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.50	0.010	0.5000	0.02140	95.4	70	130	2.13	20	

Sample ID **1406362-001FMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **GWM-1** Batch ID: **13717** RunNo: **19357**
Prep Date: **6/16/2014** Analysis Date: **6/18/2014** SeqNo: **559761** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406362**
10-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **1406362-001FMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **GWM-1** Batch ID: **13717** RunNo: **19357**
Prep Date: **6/16/2014** Analysis Date: **6/18/2014** SeqNo: **559761** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	1.1	0.010	0.5000	0.5388	105	70	130			
Calcium	310	5.0	50.00	263.5	98.4	70	130			
Magnesium	110	5.0	50.00	60.59	93.1	70	130			
Manganese	3.0	0.010	0.5000	2.489	94.4	70	130			

Sample ID **1406362-001FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **GWM-1** Batch ID: **13717** RunNo: **19357**
Prep Date: **6/16/2014** Analysis Date: **6/18/2014** SeqNo: **559762** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	1.0	0.010	0.5000	0.5388	99.7	70	130	2.52	20	
Calcium	300	5.0	50.00	263.5	80.8	70	130	2.85	20	
Magnesium	100	5.0	50.00	60.59	87.6	70	130	2.59	20	
Manganese	2.9	0.010	0.5000	2.489	82.5	70	130	2.04	20	

Sample ID **MB-13717** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **13717** RunNo: **19357**
Prep Date: **6/16/2014** Analysis Date: **6/18/2014** SeqNo: **559813** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.021	0.020								

Sample ID **LCS-13717** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **13717** RunNo: **19357**
Prep Date: **6/16/2014** Analysis Date: **6/18/2014** SeqNo: **559814** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.53	0.020	0.5000	0	107	85	115			B

Sample ID **1406362-001FMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **GWM-1** Batch ID: **13717** RunNo: **19365**
Prep Date: **6/16/2014** Analysis Date: **6/18/2014** SeqNo: **560142** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.11	0.0050	0.1000	0	109	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406362**
10-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **1406362-001FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **GWM-1** Batch ID: **13717** RunNo: **19365**
Prep Date: **6/16/2014** Analysis Date: **6/18/2014** SeqNo: **560143** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.11	0.0050	0.1000	0	106	70	130	2.78	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406362**
10-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **1406362-001GMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **GWM-1** Batch ID: **R19364** RunNo: **19364**
Prep Date: Analysis Date: **6/18/2014** SeqNo: **560064** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.25	0.0050	0.1250	0.1336	91.1	70	130			
Lead	0.12	0.0050	0.1250	0.004431	96.0	70	130			
Selenium	0.13	0.0050	0.1250	0.01846	85.8	70	130			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19364** RunNo: **19364**
Prep Date: Analysis Date: **6/18/2014** SeqNo: **560092** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.5	85	115			
Lead	0.024	0.0010	0.02500	0	94.8	85	115			
Selenium	0.024	0.0010	0.02500	0	97.6	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19364** RunNo: **19364**
Prep Date: Analysis Date: **6/18/2014** SeqNo: **560093** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.022	0.0010	0.02500	0	89.7	85	115			
Lead	0.023	0.0010	0.02500	0	93.9	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19364** RunNo: **19364**
Prep Date: Analysis Date: **6/18/2014** SeqNo: **560094** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19364** RunNo: **19364**
Prep Date: Analysis Date: **6/18/2014** SeqNo: **560095** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406362**
10-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **1406362-001GMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **GWM-1** Batch ID: **R19391** RunNo: **19391**
Prep Date: Analysis Date: **6/19/2014** SeqNo: **561027** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.14	0.0050	0.1250	0.01063	104	70	130			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19391** RunNo: **19391**
Prep Date: Analysis Date: **6/19/2014** SeqNo: **561037** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.024	0.0010	0.02500	0	96.0	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19391** RunNo: **19391**
Prep Date: Analysis Date: **6/19/2014** SeqNo: **561038** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.0010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19751** RunNo: **19751**
Prep Date: Analysis Date: **7/8/2014** SeqNo: **573741** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	93.7	85	115			
Selenium	0.021	0.0010	0.02500	0	85.2	85	115			
Uranium	0.026	0.0010	0.02500	0	103	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19751** RunNo: **19751**
Prep Date: Analysis Date: **7/8/2014** SeqNo: **573742** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406362**
10-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **1406362-002FMSLL** SampType: **MSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **OAPIS-1** Batch ID: **13717** RunNo: **19343**
Prep Date: **6/16/2014** Analysis Date: **6/17/2014** SeqNo: **559177** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.041	0.0050	0.02500	0.01573	100	70	130			
Lead	0.050	0.0050	0.02500	0.02910	81.7	70	130			
Selenium	0.057	0.0050	0.02500	0.03513	87.4	70	130			
Uranium	0.061	0.0050	0.02500	0.03434	107	70	130			

Sample ID **LLLCS-13717** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **13717** RunNo: **19343**
Prep Date: **6/16/2014** Analysis Date: **6/17/2014** SeqNo: **559197** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	101	85	115			
Lead	0.025	0.0010	0.02500	0	98.4	85	115			
Selenium	0.025	0.0010	0.02500	0	100	85	115			
Uranium	0.023	0.0010	0.02500	0	93.0	85	115			

Sample ID **MB-13717** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **13717** RunNo: **19343**
Prep Date: **6/16/2014** Analysis Date: **6/17/2014** SeqNo: **559199** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406362**
10-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID	**MB-13722**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**
Client ID:	**PBW**	Batch ID:	**13722**	RunNo:	**19315**
Prep Date:	**6/16/2014**	Analysis Date:	**6/17/2014**	SeqNo:	**558343** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-13722**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**
Client ID:	**LCSW**	Batch ID:	**13722**	RunNo:	**19315**
Prep Date:	**6/16/2014**	Analysis Date:	**6/17/2014**	SeqNo:	**558344** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	98.8	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406362**
10-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R19165** RunNo: **19165**
Prep Date: Analysis Date: **6/9/2014** SeqNo: **553915** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R19165** RunNo: **19165**
Prep Date: Analysis Date: **6/9/2014** SeqNo: **553916** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	97.4	90	110			
Bromide	2.4	0.10	2.500	0	96.2	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.9	90	110			
Sulfate	9.4	0.50	10.00	0	93.5	90	110			
Nitrate+Nitrite as N	3.3	0.20	3.500	0	95.7	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R19191** RunNo: **19191**
Prep Date: Analysis Date: **6/10/2014** SeqNo: **554760** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R19191** RunNo: **19191**
Prep Date: Analysis Date: **6/10/2014** SeqNo: **554761** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000	0	91.7	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R19500** RunNo: **19500**
Prep Date: Analysis Date: **6/24/2014** SeqNo: **564242** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406362**
10-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**			
Client ID: **LCSW**	Batch ID: **R19500**	RunNo: **19500**			
Prep Date:	Analysis Date: **6/24/2014**	SeqNo: **564243**	Units: **mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.5	0.20	3.500	0	100	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406362**
10-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **MB-13583** SampType: **MBLK** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **PBW** Batch ID: **13583** RunNo: **19152**
Prep Date: **6/9/2014** Analysis Date: **6/11/2014** SeqNo: **554465** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.0		1.000		103	62.7	145			

Sample ID **LCS-13583** SampType: **LCS** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSW** Batch ID: **13583** RunNo: **19152**
Prep Date: **6/9/2014** Analysis Date: **6/11/2014** SeqNo: **554466** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.9	1.0	5.000	0	97.4	78.6	146			
Surr: DNOP	0.46		0.5000		91.3	62.7	145			

Sample ID **LCSD-13583** SampType: **LCSD** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSS02** Batch ID: **13583** RunNo: **19152**
Prep Date: **6/9/2014** Analysis Date: **6/11/2014** SeqNo: **554468** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.4	1.0	5.000	0	89.0	78.6	146	9.06	26.5	
Surr: DNOP	0.44		0.5000		88.0	62.7	145	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406362**
10-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**
Client ID:	**PBW**	Batch ID:	**R19229**	RunNo:	**19229**
Prep Date:		Analysis Date:	**6/12/2014**	SeqNo:	**556148** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		94.8	70.9	130			

Sample ID	**2.5UG GRO LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**
Client ID:	**LCSW**	Batch ID:	**R19229**	RunNo:	**19229**
Prep Date:		Analysis Date:	**6/12/2014**	SeqNo:	**556149** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.47	0.050	0.5000	0	93.6	80	120			
Surr: BFB	21		20.00		105	70.9	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406362**
10-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R19204**	RunNo: **19204**	
Prep Date:	Analysis Date: **6/11/2014**	SeqNo: **555320**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406362**
10-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **5mL-rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R19204** RunNo: **19204**
Prep Date: Analysis Date: **6/11/2014** SeqNo: **555320** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.3		10.00		92.7	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		91.8	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	8.8		10.00		87.8	70	130			

Sample ID **100ng lcsb** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R19204** RunNo: **19204**
Prep Date: Analysis Date: **6/11/2014** SeqNo: **555350** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	20	1.0	20.00	0	102	80	120			
Chlorobenzene	21	1.0	20.00	0	105	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406362**
10-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **100ng lcsb** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R19204** RunNo: **19204**
Prep Date: Analysis Date: **6/11/2014** SeqNo: **555350** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	21	1.0	20.00	0	104	82.6	131			
Trichloroethene (TCE)	20	1.0	20.00	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.7	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		91.1	70	130			
Surr: Dibromofluoromethane	10		10.00		100	70	130			
Surr: Toluene-d8	8.8		10.00		88.3	70	130			

Sample ID **1406362-003a ms** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **FB-GROUP2-6/5/14** Batch ID: **R19204** RunNo: **19204**
Prep Date: Analysis Date: **6/11/2014** SeqNo: **555356** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	70	130			
Toluene	19	1.0	20.00	0	93.1	67.5	123			
Chlorobenzene	19	1.0	20.00	0	97.2	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	103	81.9	134			
Trichloroethene (TCE)	23	1.0	20.00	0	114	70	130			
Surr: 1,2-Dichloroethane-d4	9.0		10.00		89.6	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		90.9	70	130			
Surr: Dibromofluoromethane	11		10.00		106	70	130			
Surr: Toluene-d8	8.7		10.00		86.6	70	130			

Sample ID **1406362-003a msd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **FB-GROUP2-6/5/14** Batch ID: **R19204** RunNo: **19204**
Prep Date: Analysis Date: **6/11/2014** SeqNo: **555357** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	70	130	3.62	20	
Toluene	19	1.0	20.00	0	97.0	67.5	123	4.04	20	
Chlorobenzene	20	1.0	20.00	0	101	70	130	4.02	20	
1,1-Dichloroethene	20	1.0	20.00	0	101	81.9	134	1.88	20	
Trichloroethene (TCE)	22	1.0	20.00	0	110	70	130	4.30	20	
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.9	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.3		10.00		93.4	70	130	0	0	
Surr: Dibromofluoromethane	10		10.00		101	70	130	0	0	
Surr: Toluene-d8	8.8		10.00		88.0	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406362**
10-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **mb-13597**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **13597**	RunNo: **19174**			
Prep Date: **6/10/2014**	Analysis Date: **6/10/2014**	SeqNo: **554254**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406362**
10-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **mb-13597**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **13597**	RunNo: **19174**	
Prep Date: **6/10/2014**	Analysis Date: **6/10/2014**	SeqNo: **554254**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	130		200.0		62.8	12.1	85.8			
Surr: Phenol-d5	110		200.0		54.1	17.7	65.8			
Surr: 2,4,6-Tribromophenol	180		200.0		88.5	26	138			
Surr: Nitrobenzene-d5	98		100.0		98.1	47.5	119			
Surr: 2-Fluorobiphenyl	97		100.0		96.7	48.1	106			
Surr: 4-Terphenyl-d14	96		100.0		96.2	44	113			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406362**
10-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **lcs-13597** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **13597** RunNo: **19174**
Prep Date: **6/10/2014** Analysis Date: **6/10/2014** SeqNo: **554255** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	74	10	100.0	0	74.1	50.3	109			
4-Chloro-3-methylphenol	140	10	200.0	0	67.6	51.2	113			
2-Chlorophenol	120	10	200.0	0	57.6	48.5	104			
1,4-Dichlorobenzene	69	10	100.0	0	68.8	39.5	106			
2,4-Dinitrotoluene	69	10	100.0	0	68.7	45.4	107			
N-Nitrosodi-n-propylamine	77	10	100.0	0	77.1	50.4	119			
4-Nitrophenol	70	10	200.0	0	35.1	15.5	62.2			
Pentachlorophenol	71	20	200.0	0	35.5	23.5	93.5			
Phenol	97	10	200.0	0	48.7	26.8	65.6			
Pyrene	81	10	100.0	0	81.4	54.4	108			
1,2,4-Trichlorobenzene	67	10	100.0	0	66.7	39.9	106			
Surr: 2-Fluorophenol	88		200.0		43.8	12.1	85.8			
Surr: Phenol-d5	110		200.0		53.2	17.7	65.8			
Surr: 2,4,6-Tribromophenol	93		200.0		46.5	26	138			
Surr: Nitrobenzene-d5	75		100.0		74.8	47.5	119			
Surr: 2-Fluorobiphenyl	72		100.0		72.0	48.1	106			
Surr: 4-Terphenyl-d14	75		100.0		75.4	44	113			

Sample ID **lcsd-13597** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **13597** RunNo: **19174**
Prep Date: **6/10/2014** Analysis Date: **6/10/2014** SeqNo: **554256** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	67	10	100.0	0	66.7	50.3	109	10.4	27.2	
4-Chloro-3-methylphenol	140	10	200.0	0	68.5	51.2	113	1.34	25.9	
2-Chlorophenol	100	10	200.0	0	51.9	48.5	104	10.5	22.5	
1,4-Dichlorobenzene	60	10	100.0	0	60.2	39.5	106	13.3	24.6	
2,4-Dinitrotoluene	65	10	100.0	0	65.2	45.4	107	5.17	25.3	
N-Nitrosodi-n-propylamine	65	10	100.0	0	64.6	50.4	119	17.6	23.6	
4-Nitrophenol	73	10	200.0	0	36.3	15.5	62.2	3.33	34.7	
Pentachlorophenol	66	20	200.0	0	33.1	23.5	93.5	7.12	32.8	
Phenol	93	10	200.0	0	46.3	26.8	65.6	5.03	25.5	
Pyrene	91	10	100.0	0	91.4	54.4	108	11.6	31.4	
1,2,4-Trichlorobenzene	58	10	100.0	0	58.0	39.9	106	13.9	25.9	
Surr: 2-Fluorophenol	84		200.0		41.9	12.1	85.8	0	0	
Surr: Phenol-d5	99		200.0		49.7	17.7	65.8	0	0	
Surr: 2,4,6-Tribromophenol	82		200.0		40.8	26	138	0	0	
Surr: Nitrobenzene-d5	66		100.0		65.8	47.5	119	0	0	
Surr: 2-Fluorobiphenyl	64		100.0		63.7	48.1	106	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406362**
10-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID	**lcsd-13597**	SampType:	**LCSD**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**LCSS02**	Batch ID:	**13597**	RunNo:	**19174**
Prep Date:	**6/10/2014**	Analysis Date:	**6/10/2014**	SeqNo:	**554256** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	74		100.0		73.9	44	113	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1406362 RcptNo: 1

Received by/date: MG 06/06/14

Logged By: **Michelle Garcia** 6/6/2014 3:50:00 PM Michelle Garcia

Completed By: **Michelle Garcia** 6/9/2014 8:56:17 AM Michelle Garcia

Reviewed By: 06/09/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☑ CS 06/09/14
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐ CS 06/09/14
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☑
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
   For metals analysis: Added 1 ml HNO_3 to -001F for an acceptable pH. Held in login for 24 hours.
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 6, 1 (<2 or >12 unless noted)
Adjusted? yes
Checked by: CS

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Not Present			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

2014 2nd Quarter

Project #:

GWM / OAPIS

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1406362	8260+MTBE	8015B extended	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major Cations/Anions	Cyanide									Air Bubbles (Y or N)
6/5/14	1112	H20	GWM-1			-001	X	X		X	X	X										
		H20	GWM-2				X	X		X	X	X										
		H20	GWM-3				X	X		X	X	X										
6/5/14	1030	H20	OAPIS-1			-002	X	X	X	X	X	X	X									
06/5/14	1220	H20	FB-GROUP2-6/5/14			-003	X	X	X	X	X	X	X	no air	06/09/14							
		H20	TB #1			-004	X	X														
		H2O	~~TB #2~~ A 06/09/14				X	X														
		H2O	~~TB#3~~				X	X														
		H2O	~~TB#4~~				X	X														
		H2O	~~TB#5~~				X	X														
		H2O	~~TB#6~~				X	X														

Date:	Time:	Relinquished by:	Received by:	Date	Time
6/6/14	1550	Rox Lander	Michelle Gp.	06/06/14	1550
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 04, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: Q4 2014 OrderNo.: 1411472

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 6 sample(s) on 11/12/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1411472**
Date Reported: **12/4/2014**

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: KA-3
Project: Q4 2014
Collection Date: 11/11/2014 1:13:00 PM
Lab ID: 1411472-001
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/14/2014 11:23:14 PM	16356
Surr: DNOP	93.7	59-141		%REC	1	11/14/2014 11:23:14 PM	16356
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/13/2014 12:52:31 PM	R22533
Surr: BFB	87.5	80-120		%REC	1	11/13/2014 12:52:31 PM	R22533
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Methyl tert-butyl ether (MTBE)	13	2.5		µg/L	1	11/13/2014 12:52:31 PM	R22533
Benzene	ND	1.0		µg/L	1	11/13/2014 12:52:31 PM	R22533
Toluene	ND	1.0		µg/L	1	11/13/2014 12:52:31 PM	R22533
Ethylbenzene	ND	1.0		µg/L	1	11/13/2014 12:52:31 PM	R22533
Xylenes, Total	ND	2.0		µg/L	1	11/13/2014 12:52:31 PM	R22533
Surr: 4-Bromofluorobenzene	103	66.6-167		%REC	1	11/13/2014 12:52:31 PM	R22533
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	1.1	0.10		mg/L	1	11/13/2014 8:39:49 PM	R22539
Chloride	160	10		mg/L	20	11/13/2014 8:52:14 PM	R22539
Bromide	1.2	0.10		mg/L	1	11/13/2014 8:39:49 PM	R22539
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	11/13/2014 8:39:49 PM	R22539
Sulfate	54	10		mg/L	20	11/13/2014 8:52:14 PM	R22539
Nitrate+Nitrite as N	ND	1.0		mg/L	5	11/24/2014 9:24:11 PM	R22782
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Calcium	67	1.0		mg/L	1	11/16/2014 8:34:55 PM	R22599
Magnesium	11	1.0		mg/L	1	11/16/2014 8:34:55 PM	R22599
Potassium	ND	1.0		mg/L	1	11/16/2014 8:34:55 PM	R22599
Sodium	310	5.0		mg/L	5	11/16/2014 8:36:43 PM	R22599
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Acenaphthylene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Aniline	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Anthracene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Azobenzene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Benz(a)anthracene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Benzo(a)pyrene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Benzo(b)fluoranthene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Benzo(k)fluoranthene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Benzoic acid	ND	20		µg/L	1	11/17/2014 6:53:35 PM	16377
Benzyl alcohol	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: KA-3
Project: Q4 2014
Collection Date: 11/11/2014 1:13:00 PM
Lab ID: 1411472-001
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Butyl benzyl phthalate	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Carbazole	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
4-Chloroaniline	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
2-Chloronaphthalene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
2-Chlorophenol	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Chrysene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Di-n-butyl phthalate	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Di-n-octyl phthalate	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Dibenzofuran	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
1,2-Dichlorobenzene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
1,3-Dichlorobenzene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
1,4-Dichlorobenzene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Diethyl phthalate	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Dimethyl phthalate	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
2,4-Dichlorophenol	ND	20		µg/L	1	11/17/2014 6:53:35 PM	16377
2,4-Dimethylphenol	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/17/2014 6:53:35 PM	16377
2,4-Dinitrophenol	ND	20		µg/L	1	11/17/2014 6:53:35 PM	16377
2,4-Dinitrotoluene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
2,6-Dinitrotoluene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Fluoranthene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Fluorene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Hexachlorobenzene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Hexachlorobutadiene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Hexachloroethane	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Isophorone	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
1-Methylnaphthalene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
2-Methylnaphthalene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: KA-3
Project: Q4 2014
Collection Date: 11/11/2014 1:13:00 PM
Lab ID: 1411472-001
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2-Methylphenol	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
3+4-Methylphenol	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
N-Nitrosodimethylamine	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Naphthalene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
2-Nitroaniline	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
3-Nitroaniline	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
4-Nitroaniline	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Nitrobenzene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
2-Nitrophenol	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
4-Nitrophenol	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Pentachlorophenol	ND	20		µg/L	1	11/17/2014 6:53:35 PM	16377
Phenanthrene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Phenol	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Pyrene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Pyridine	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/17/2014 6:53:35 PM	16377
Surr: 2-Fluorophenol	52.1	17.6-104		%REC	1	11/17/2014 6:53:35 PM	16377
Surr: Phenol-d5	43.0	17.7-89.9		%REC	1	11/17/2014 6:53:35 PM	16377
Surr: 2,4,6-Tribromophenol	74.5	16.3-122		%REC	1	11/17/2014 6:53:35 PM	16377
Surr: Nitrobenzene-d5	72.6	45.3-117		%REC	1	11/17/2014 6:53:35 PM	16377
Surr: 2-Fluorobiphenyl	71.8	43-113		%REC	1	11/17/2014 6:53:35 PM	16377
Surr: 4-Terphenyl-d14	80.9	47.6-122		%REC	1	11/17/2014 6:53:35 PM	16377

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-2
Project: Q4 2014
Collection Date: 11/11/2014 1:50:00 PM
Lab ID: 1411472-002
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**JME**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/18/2014 10:14:16 PM	16415
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/18/2014 10:14:16 PM	16415
Surr: DNOP	100	59-141		%REC	1	11/18/2014 10:14:16 PM	16415
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	0.60	0.050		mg/L	1	11/13/2014 2:14:02 PM	R22533
Surr: BFB	134	80-120	S	%REC	1	11/13/2014 2:14:02 PM	R22533
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Methyl tert-butyl ether (MTBE)	340	25		µg/L	10	11/17/2014 11:16:19 AM	R22597
Benzene	16	1.0		µg/L	1	11/13/2014 2:14:02 PM	R22533
Toluene	ND	1.0		µg/L	1	11/13/2014 2:14:02 PM	R22533
Ethylbenzene	5.2	1.0		µg/L	1	11/13/2014 2:14:02 PM	R22533
Xylenes, Total	ND	2.0		µg/L	1	11/13/2014 2:14:02 PM	R22533
Surr: 4-Bromofluorobenzene	125	66.6-167		%REC	1	11/13/2014 2:14:02 PM	R22533
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	1.6	0.50		mg/L	5	11/13/2014 9:29:28 PM	R22539
Chloride	330	10		mg/L	20	11/13/2014 9:41:52 PM	R22539
Bromide	1.4	0.50		mg/L	5	11/13/2014 9:29:28 PM	R22539
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	11/13/2014 9:29:28 PM	R22539
Sulfate	11	2.5		mg/L	5	11/13/2014 9:29:28 PM	R22539
Nitrate+Nitrite as N	ND	1.0		mg/L	5	11/24/2014 9:36:36 PM	R22782
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.27	0.0020		mg/L	1	11/16/2014 8:38:34 PM	R22599
Cadmium	ND	0.0020		mg/L	1	11/16/2014 8:38:34 PM	R22599
Calcium	99	1.0		mg/L	1	11/16/2014 8:38:34 PM	R22599
Chromium	ND	0.0060		mg/L	1	11/16/2014 8:38:34 PM	R22599
Copper	ND	0.0060		mg/L	1	11/16/2014 8:38:34 PM	R22599
Iron	1.8	0.10	*	mg/L	5	11/16/2014 8:40:09 PM	R22599
Magnesium	18	1.0		mg/L	1	11/16/2014 8:38:34 PM	R22599
Manganese	1.3	0.010	*	mg/L	5	11/16/2014 8:40:09 PM	R22599
Potassium	ND	1.0		mg/L	1	11/16/2014 8:38:34 PM	R22599
Silver	ND	0.0050		mg/L	1	11/16/2014 8:38:34 PM	R22599
Sodium	410	5.0		mg/L	5	11/16/2014 8:40:09 PM	R22599
Zinc	0.019	0.010		mg/L	1	11/16/2014 8:38:34 PM	R22599
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	1.7	0.010		mg/L	5	11/18/2014 3:39:52 PM	16416
Cadmium	ND	0.0020		mg/L	1	11/18/2014 3:38:14 PM	16416
Chromium	ND	0.0060		mg/L	1	11/18/2014 3:38:14 PM	16416

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-2
Project: Q4 2014
Collection Date: 11/11/2014 1:50:00 PM
Lab ID: 1411472-002
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Copper	ND	0.0060		mg/L	1	11/18/2014 3:38:14 PM	16416
Iron	2.9	0.10	*	mg/L	5	11/18/2014 3:39:52 PM	16416
Manganese	1.4	0.010	*	mg/L	5	11/18/2014 3:39:52 PM	16416
Silver	ND	0.0050		mg/L	1	11/18/2014 3:38:14 PM	16416
Zinc	0.013	0.010		mg/L	1	11/20/2014 4:01:14 PM	16416
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0076	0.0050		mg/L	5	11/25/2014 1:05:21 PM	R22788
Lead	ND	0.0010		mg/L	1	11/24/2014 5:32:42 PM	R22774
Selenium	0.0062	0.0050		mg/L	5	11/25/2014 1:05:21 PM	R22788
Uranium	ND	0.0010		mg/L	1	11/24/2014 5:32:42 PM	R22774
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	11/26/2014 6:03:22 PM	16416
Lead	ND	0.0010		mg/L	1	11/18/2014 2:38:32 PM	16416
Selenium	ND	0.010		mg/L	10	11/26/2014 6:03:22 PM	16416
Uranium	ND	0.0010		mg/L	1	11/18/2014 2:38:32 PM	16416
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/21/2014 3:08:01 PM	16511
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Acenaphthylene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Aniline	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Anthracene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Azobenzene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Benz(a)anthracene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Benzo(a)pyrene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Benzo(b)fluoranthene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Benzo(g,h,i)perylene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Benzo(k)fluoranthene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Benzoic acid	ND	100		µg/L	1	11/17/2014 7:20:48 PM	16377
Benzyl alcohol	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Bis(2-chloroethoxy)methane	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Bis(2-chloroethyl)ether	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Bis(2-chloroisopropyl)ether	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Bis(2-ethylhexyl)phthalate	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
4-Bromophenyl phenyl ether	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Butyl benzyl phthalate	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Carbazole	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-2
Project: Q4 2014
Collection Date: 11/11/2014 1:50:00 PM
Lab ID: 1411472-002
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
4-Chloro-3-methylphenol	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
4-Chloroaniline	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
2-Chloronaphthalene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
2-Chlorophenol	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
4-Chlorophenyl phenyl ether	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Chrysene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Di-n-butyl phthalate	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Di-n-octyl phthalate	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Dibenz(a,h)anthracene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Dibenzofuran	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
1,2-Dichlorobenzene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
1,3-Dichlorobenzene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
1,4-Dichlorobenzene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
3,3´-Dichlorobenzidine	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Diethyl phthalate	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Dimethyl phthalate	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
2,4-Dichlorophenol	ND	100		µg/L	1	11/17/2014 7:20:48 PM	16377
2,4-Dimethylphenol	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
4,6-Dinitro-2-methylphenol	ND	100		µg/L	1	11/17/2014 7:20:48 PM	16377
2,4-Dinitrophenol	ND	100		µg/L	1	11/17/2014 7:20:48 PM	16377
2,4-Dinitrotoluene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
2,6-Dinitrotoluene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Fluoranthene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Fluorene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Hexachlorobenzene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Hexachlorobutadiene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Hexachlorocyclopentadiene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Hexachloroethane	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Isophorone	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
1-Methylnaphthalene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
2-Methylnaphthalene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
2-Methylphenol	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
3+4-Methylphenol	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
N-Nitrosodi-n-propylamine	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
N-Nitrosodimethylamine	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
N-Nitrosodiphenylamine	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Naphthalene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
2-Nitroaniline	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-2
Project: Q4 2014
Collection Date: 11/11/2014 1:50:00 PM
Lab ID: 1411472-002
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
3-Nitroaniline	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
4-Nitroaniline	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Nitrobenzene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
2-Nitrophenol	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
4-Nitrophenol	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Pentachlorophenol	ND	100		µg/L	1	11/17/2014 7:20:48 PM	16377
Phenanthrene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Phenol	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Pyrene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Pyridine	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
1,2,4-Trichlorobenzene	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
2,4,5-Trichlorophenol	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
2,4,6-Trichlorophenol	ND	50		µg/L	1	11/17/2014 7:20:48 PM	16377
Surr: 2-Fluorophenol	48.2	17.6-104		%REC	1	11/17/2014 7:20:48 PM	16377
Surr: Phenol-d5	39.7	17.7-89.9		%REC	1	11/17/2014 7:20:48 PM	16377
Surr: 2,4,6-Tribromophenol	73.0	16.3-122		%REC	1	11/17/2014 7:20:48 PM	16377
Surr: Nitrobenzene-d5	63.7	45.3-117		%REC	1	11/17/2014 7:20:48 PM	16377
Surr: 2-Fluorobiphenyl	61.9	43-113		%REC	1	11/17/2014 7:20:48 PM	16377
Surr: 4-Terphenyl-d14	72.3	47.6-122		%REC	1	11/17/2014 7:20:48 PM	16377

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-1
Project: Q4 2014
Collection Date: 11/11/2014 3:10:00 PM
Lab ID: 1411472-003
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/15/2014 12:06:01 AM	16356
Surr: DNOP	109	59-141		%REC	1	11/15/2014 12:06:01 AM	16356
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/13/2014 4:02:41 PM	R22533
Surr: BFB	88.8	80-120		%REC	1	11/13/2014 4:02:41 PM	R22533
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	11/13/2014 4:02:41 PM	R22533
Benzene	ND	1.0		µg/L	1	11/13/2014 4:02:41 PM	R22533
Toluene	ND	1.0		µg/L	1	11/13/2014 4:02:41 PM	R22533
Ethylbenzene	ND	1.0		µg/L	1	11/13/2014 4:02:41 PM	R22533
Xylenes, Total	ND	2.0		µg/L	1	11/13/2014 4:02:41 PM	R22533
Surr: 4-Bromofluorobenzene	105	66.6-167		%REC	1	11/13/2014 4:02:41 PM	R22533
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	0.69	0.10		mg/L	1	11/13/2014 9:54:17 PM	R22539
Chloride	110	10		mg/L	20	11/13/2014 10:06:42 PM	R22539
Bromide	1.5	0.10		mg/L	1	11/13/2014 9:54:17 PM	R22539
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	11/13/2014 9:54:17 PM	R22539
Sulfate	130	10		mg/L	20	11/13/2014 10:06:42 PM	R22539
Nitrate+Nitrite as N	5.1	1.0		mg/L	5	11/24/2014 9:49:01 PM	R22782
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.12	0.0020		mg/L	1	11/16/2014 8:41:58 PM	R22599
Cadmium	ND	0.0020		mg/L	1	11/16/2014 8:41:58 PM	R22599
Calcium	93	1.0		mg/L	1	11/16/2014 8:41:58 PM	R22599
Chromium	ND	0.0060		mg/L	1	11/16/2014 8:41:58 PM	R22599
Copper	ND	0.0060		mg/L	1	11/16/2014 8:41:58 PM	R22599
Iron	ND	0.020		mg/L	1	11/16/2014 8:41:58 PM	R22599
Magnesium	16	1.0		mg/L	1	11/16/2014 8:41:58 PM	R22599
Manganese	0.065	0.0020	*	mg/L	1	11/16/2014 8:41:58 PM	R22599
Potassium	ND	1.0		mg/L	1	11/16/2014 8:41:58 PM	R22599
Silver	ND	0.0050		mg/L	1	11/16/2014 8:41:58 PM	R22599
Sodium	320	5.0		mg/L	5	11/16/2014 8:43:50 PM	R22599
Zinc	0.050	0.010		mg/L	1	11/16/2014 8:41:58 PM	R22599
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.13	0.0020		mg/L	1	11/18/2014 3:41:46 PM	16416
Cadmium	ND	0.0020		mg/L	1	11/18/2014 3:41:46 PM	16416
Chromium	ND	0.0060		mg/L	1	11/18/2014 3:41:46 PM	16416
Copper	ND	0.0060		mg/L	1	11/18/2014 3:41:46 PM	16416

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-1
Project: Q4 2014
Collection Date: 11/11/2014 3:10:00 PM
Lab ID: 1411472-003
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Iron	0.79	0.020	*	mg/L	1	11/18/2014 3:41:46 PM	16416
Manganese	0.24	0.0020	*	mg/L	1	11/18/2014 3:41:46 PM	16416
Silver	ND	0.0050		mg/L	1	11/18/2014 3:41:46 PM	16416
Zinc	0.010	0.010		mg/L	1	11/20/2014 4:02:52 PM	16416
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	11/25/2014 1:42:42 PM	R22788
Lead	ND	0.0010		mg/L	1	11/24/2014 5:35:48 PM	R22774
Selenium	ND	0.010		mg/L	10	11/25/2014 1:42:42 PM	R22788
Uranium	0.012	0.0010		mg/L	1	11/24/2014 5:35:48 PM	R22774
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	11/26/2014 6:06:51 PM	16416
Lead	0.0010	0.0010		mg/L	1	11/18/2014 2:42:01 PM	16416
Selenium	ND	0.010		mg/L	10	11/26/2014 6:06:51 PM	16416
Uranium	0.022	0.0010		mg/L	1	11/18/2014 2:42:01 PM	16416
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/21/2014 3:09:47 PM	16511
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Acenaphthylene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Aniline	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Anthracene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Azobenzene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Benz(a)anthracene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Benzo(a)pyrene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Benzo(b)fluoranthene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Benzo(k)fluoranthene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Benzoic acid	ND	20		µg/L	1	11/17/2014 7:48:03 PM	16377
Benzyl alcohol	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Butyl benzyl phthalate	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Carbazole	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-1
Project: Q4 2014
Collection Date: 11/11/2014 3:10:00 PM
Lab ID: 1411472-003
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
4-Chloroaniline	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
2-Chloronaphthalene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
2-Chlorophenol	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Chrysene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Di-n-butyl phthalate	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Di-n-octyl phthalate	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Dibenzofuran	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
1,2-Dichlorobenzene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
1,3-Dichlorobenzene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
1,4-Dichlorobenzene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Diethyl phthalate	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Dimethyl phthalate	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
2,4-Dichlorophenol	ND	20		µg/L	1	11/17/2014 7:48:03 PM	16377
2,4-Dimethylphenol	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/17/2014 7:48:03 PM	16377
2,4-Dinitrophenol	ND	20		µg/L	1	11/17/2014 7:48:03 PM	16377
2,4-Dinitrotoluene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
2,6-Dinitrotoluene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Fluoranthene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Fluorene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Hexachlorobenzene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Hexachlorobutadiene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Hexachloroethane	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Isophorone	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
1-Methylnaphthalene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
2-Methylnaphthalene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
2-Methylphenol	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
3+4-Methylphenol	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
N-Nitrosodimethylamine	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Naphthalene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
2-Nitroaniline	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
3-Nitroaniline	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-1
Project: Q4 2014
Collection Date: 11/11/2014 3:10:00 PM
Lab ID: 1411472-003
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
4-Nitroaniline	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Nitrobenzene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
2-Nitrophenol	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
4-Nitrophenol	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Pentachlorophenol	ND	20		µg/L	1	11/17/2014 7:48:03 PM	16377
Phenanthrene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Phenol	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Pyrene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Pyridine	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/17/2014 7:48:03 PM	16377
Surr: 2-Fluorophenol	59.1	17.6-104		%REC	1	11/17/2014 7:48:03 PM	16377
Surr: Phenol-d5	48.6	17.7-89.9		%REC	1	11/17/2014 7:48:03 PM	16377
Surr: 2,4,6-Tribromophenol	78.9	16.3-122		%REC	1	11/17/2014 7:48:03 PM	16377
Surr: Nitrobenzene-d5	79.6	45.3-117		%REC	1	11/17/2014 7:48:03 PM	16377
Surr: 2-Fluorobiphenyl	74.0	43-113		%REC	1	11/17/2014 7:48:03 PM	16377
Surr: 4-Terphenyl-d14	81.3	47.6-122		%REC	1	11/17/2014 7:48:03 PM	16377

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BD-111114
Project: Q4 2014
Collection Date: 11/11/2014
Lab ID: 1411472-004
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Acenaphthylene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Aniline	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Anthracene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Azobenzene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Benz(a)anthracene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Benzo(a)pyrene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Benzo(b)fluoranthene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Benzo(g,h,i)perylene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Benzo(k)fluoranthene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Benzoic acid	ND	100		µg/L	1	11/17/2014 8:15:22 PM	16377
Benzyl alcohol	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Bis(2-chloroethoxy)methane	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Bis(2-chloroethyl)ether	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Bis(2-chloroisopropyl)ether	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Bis(2-ethylhexyl)phthalate	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
4-Bromophenyl phenyl ether	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Butyl benzyl phthalate	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Carbazole	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
4-Chloro-3-methylphenol	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
4-Chloroaniline	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
2-Chloronaphthalene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
2-Chlorophenol	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
4-Chlorophenyl phenyl ether	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Chrysene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Di-n-butyl phthalate	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Di-n-octyl phthalate	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Dibenz(a,h)anthracene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Dibenzofuran	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
1,2-Dichlorobenzene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
1,3-Dichlorobenzene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
1,4-Dichlorobenzene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
3,3´-Dichlorobenzidine	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Diethyl phthalate	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Dimethyl phthalate	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
2,4-Dichlorophenol	ND	100		µg/L	1	11/17/2014 8:15:22 PM	16377
2,4-Dimethylphenol	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
4,6-Dinitro-2-methylphenol	ND	100		µg/L	1	11/17/2014 8:15:22 PM	16377
2,4-Dinitrophenol	ND	100		µg/L	1	11/17/2014 8:15:22 PM	16377

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BD-111114
Project: Q4 2014
Collection Date: 11/11/2014
Lab ID: 1411472-004
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2,4-Dinitrotoluene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
2,6-Dinitrotoluene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Fluoranthene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Fluorene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Hexachlorobenzene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Hexachlorobutadiene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Hexachlorocyclopentadiene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Hexachloroethane	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Isophorone	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
1-Methylnaphthalene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
2-Methylnaphthalene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
2-Methylphenol	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
3+4-Methylphenol	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
N-Nitrosodi-n-propylamine	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
N-Nitrosodimethylamine	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
N-Nitrosodiphenylamine	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Naphthalene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
2-Nitroaniline	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
3-Nitroaniline	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
4-Nitroaniline	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Nitrobenzene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
2-Nitrophenol	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
4-Nitrophenol	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Pentachlorophenol	ND	100		µg/L	1	11/17/2014 8:15:22 PM	16377
Phenanthrene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Phenol	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Pyrene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Pyridine	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
1,2,4-Trichlorobenzene	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
2,4,5-Trichlorophenol	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
2,4,6-Trichlorophenol	ND	50		µg/L	1	11/17/2014 8:15:22 PM	16377
Surr: 2-Fluorophenol	59.2	17.6-104		%REC	1	11/17/2014 8:15:22 PM	16377
Surr: Phenol-d5	44.9	17.7-89.9		%REC	1	11/17/2014 8:15:22 PM	16377
Surr: 2,4,6-Tribromophenol	81.0	16.3-122		%REC	1	11/17/2014 8:15:22 PM	16377
Surr: Nitrobenzene-d5	77.8	45.3-117		%REC	1	11/17/2014 8:15:22 PM	16377
Surr: 2-Fluorobiphenyl	73.1	43-113		%REC	1	11/17/2014 8:15:22 PM	16377
Surr: 4-Terphenyl-d14	81.0	47.6-122		%REC	1	11/17/2014 8:15:22 PM	16377

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TB-101
Project: Q4 2014
Collection Date: 11/11/2014
Lab ID: 1411472-005
Matrix: TRIP BLANK
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	11/13/2014 4:29:48 PM	R22533
Benzene	ND	1.0		µg/L	1	11/13/2014 4:29:48 PM	R22533
Toluene	ND	1.0		µg/L	1	11/13/2014 4:29:48 PM	R22533
Ethylbenzene	ND	1.0		µg/L	1	11/13/2014 4:29:48 PM	R22533
Xylenes, Total	ND	2.0		µg/L	1	11/13/2014 4:29:48 PM	R22533
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/13/2014 4:29:48 PM	R22533
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/13/2014 4:29:48 PM	R22533
Surr: 4-Bromofluorobenzene	104	66.6-167		%REC	1	11/13/2014 4:29:48 PM	R22533

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-111114
Project: Q4 2014
Collection Date: 11/11/2014 1:00:00 PM
Lab ID: 1411472-006
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
Toluene	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
Ethylbenzene	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
Naphthalene	ND	2.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
1-Methylnaphthalene	ND	4.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
2-Methylnaphthalene	ND	4.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
Acetone	ND	10		µg/L	1	11/13/2014 5:18:19 PM	R22531
Bromobenzene	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
Bromodichloromethane	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
Bromoform	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
Bromomethane	ND	3.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
2-Butanone	ND	10		µg/L	1	11/13/2014 5:18:19 PM	R22531
Carbon disulfide	ND	10		µg/L	1	11/13/2014 5:18:19 PM	R22531
Carbon Tetrachloride	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
Chlorobenzene	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
Chloroethane	ND	2.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
Chloroform	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
Chloromethane	ND	3.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
2-Chlorotoluene	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
4-Chlorotoluene	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
cis-1,2-DCE	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
Dibromochloromethane	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
Dibromomethane	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
1,1-Dichloroethane	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
1,1-Dichloroethene	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
1,2-Dichloropropane	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
1,3-Dichloropropane	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
2,2-Dichloropropane	ND	2.0		µg/L	1	11/13/2014 5:18:19 PM	R22531

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-111114
Project: Q4 2014
Collection Date: 11/11/2014 1:00:00 PM
Lab ID: 1411472-006
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
Hexachlorobutadiene	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
2-Hexanone	ND	10		µg/L	1	11/13/2014 5:18:19 PM	R22531
Isopropylbenzene	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
4-Isopropyltoluene	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
4-Methyl-2-pentanone	ND	10		µg/L	1	11/13/2014 5:18:19 PM	R22531
Methylene Chloride	ND	3.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
n-Butylbenzene	ND	3.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
n-Propylbenzene	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
sec-Butylbenzene	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
Styrene	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
tert-Butylbenzene	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
trans-1,2-DCE	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
Trichlorofluoromethane	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
Vinyl chloride	ND	1.0		µg/L	1	11/13/2014 5:18:19 PM	R22531
Xylenes, Total	ND	1.5		µg/L	1	11/13/2014 5:18:19 PM	R22531
Surr: 1,2-Dichloroethane-d4	84.7	70-130		%REC	1	11/13/2014 5:18:19 PM	R22531
Surr: 4-Bromofluorobenzene	78.2	70-130		%REC	1	11/13/2014 5:18:19 PM	R22531
Surr: Dibromofluoromethane	92.4	70-130		%REC	1	11/13/2014 5:18:19 PM	R22531
Surr: Toluene-d8	89.1	70-130		%REC	1	11/13/2014 5:18:19 PM	R22531

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411472**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22599** RunNo: **22599**
Prep Date: Analysis Date: **11/16/2014** SeqNo: **666147** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22599** RunNo: **22599**
Prep Date: Analysis Date: **11/16/2014** SeqNo: **666149** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22599** RunNo: **22599**
Prep Date: Analysis Date: **11/16/2014** SeqNo: **666151** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.2	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.5	85	115			
Calcium	45	1.0	50.00	0	90.8	85	115			
Chromium	0.48	0.0060	0.5000	0	96.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411472**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22599** RunNo: **22599**
Prep Date: Analysis Date: **11/16/2014** SeqNo: **666151** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.49	0.0060	0.5000	0	98.1	85	115			
Iron	0.48	0.020	0.5000	0	95.4	85	115			
Magnesium	45	1.0	50.00	0	89.1	85	115			
Manganese	0.47	0.0020	0.5000	0	94.7	85	115			
Potassium	43	1.0	50.00	0	86.4	85	115			
Silver	0.11	0.0050	0.1000	0	105	85	115			
Sodium	44	1.0	50.00	0	87.9	85	115			
Zinc	0.50	0.010	0.5000	0	99.2	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22599** RunNo: **22599**
Prep Date: Analysis Date: **11/16/2014** SeqNo: **666152** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.55	0.0020	0.5000	0	109	85	115			
Cadmium	0.55	0.0020	0.5000	0	110	85	115			
Calcium	56	1.0	50.00	0	113	85	115			
Chromium	0.54	0.0060	0.5000	0	108	85	115			
Copper	0.55	0.0060	0.5000	0	109	85	115			
Iron	0.53	0.020	0.5000	0	107	85	115			
Magnesium	56	1.0	50.00	0	112	85	115			
Manganese	0.52	0.0020	0.5000	0	104	85	115			
Potassium	54	1.0	50.00	0	109	85	115			
Silver	0.12	0.0050	0.1000	0	117	85	115			S
Sodium	55	1.0	50.00	0	111	85	115			
Zinc	0.54	0.010	0.5000	0	109	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411472**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB-16416** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **16416** RunNo: **22614**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666852** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-16416** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **16416** RunNo: **22614**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666853** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	101	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Copper	0.51	0.0060	0.5000	0	101	85	115			
Iron	0.50	0.020	0.5000	0	101	85	115			
Manganese	0.49	0.0020	0.5000	0	98.1	85	115			
Silver	0.11	0.0050	0.1000	0	111	85	115			
Zinc	0.50	0.010	0.5000	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411472**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22774** RunNo: **22774**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672122** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.024	0.0010	0.02500	0	94.4	85	115			
Uranium	0.024	0.0010	0.02500	0	95.2	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22774** RunNo: **22774**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672123** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.024	0.0010	0.02500	0	97.3	85	115			
Uranium	0.024	0.0010	0.02500	0	94.8	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22774** RunNo: **22774**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672124** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22774** RunNo: **22774**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672125** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22788** RunNo: **22788**
Prep Date: Analysis Date: **11/25/2014** SeqNo: **672517** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.1	85	115			
Selenium	0.024	0.0010	0.02500	0	96.5	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22788** RunNo: **22788**
Prep Date: Analysis Date: **11/25/2014** SeqNo: **672518** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411472**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**MB**	SampType:	**MBLK**		TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**R22788**		RunNo:	**22788**					
Prep Date:		Analysis Date:	**11/25/2014**		SeqNo:	**672518**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		ND	0.0010								
Selenium		ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411472**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LLLCS-16416** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **16416** RunNo: **22609**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666765** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.5	85	115			
Lead	0.026	0.0010	0.02500	0	106	85	115			
Selenium	0.024	0.0010	0.02500	0	96.6	85	115			
Uranium	0.026	0.0010	0.02500	0	106	85	115			

Sample ID **MB-16416** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **16416** RunNo: **22609**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666767** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411472**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**MB-16511**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**		
Client ID:	**PBW**	Batch ID:	**16511**	RunNo:	**22710**		
Prep Date:	**11/21/2014**	Analysis Date:	**11/21/2014**	SeqNo:	**669836**	Units:	**mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-16511**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**		
Client ID:	**LCSW**	Batch ID:	**16511**	RunNo:	**22710**		
Prep Date:	**11/21/2014**	Analysis Date:	**11/21/2014**	SeqNo:	**669837**	Units:	**mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0	102	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411472**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22539** RunNo: **22539**
Prep Date: Analysis Date: **11/13/2014** SeqNo: **664550** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R22539** RunNo: **22539**
Prep Date: Analysis Date: **11/13/2014** SeqNo: **664551** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	100	90	110			
Chloride	4.8	0.50	5.000	0	96.6	90	110			
Bromide	2.4	0.10	2.500	0	94.9	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.8	90	110			
Sulfate	10	0.50	10.00	0	99.5	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22539** RunNo: **22539**
Prep Date: Analysis Date: **11/14/2014** SeqNo: **664604** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R22539** RunNo: **22539**
Prep Date: Analysis Date: **11/14/2014** SeqNo: **664605** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	100	90	110			
Chloride	4.7	0.50	5.000	0	93.3	90	110			
Bromide	2.3	0.10	2.500	0	92.2	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.9	90	110			
Sulfate	9.5	0.50	10.00	0	95.4	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411472**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB**	SampType: **MBLK**			TestCode: **EPA Method 300.0: Anions**						
Client ID: **PBW**	Batch ID: **R22782**			RunNo: **22782**						
Prep Date:	Analysis Date: **11/24/2014**			SeqNo: **672326**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **LCS**			TestCode: **EPA Method 300.0: Anions**						
Client ID: **LCSW**	Batch ID: **R22782**			RunNo: **22782**						
Prep Date:	Analysis Date: **11/24/2014**			SeqNo: **672327**		Units: **mg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.3	0.20	3.500	0	94.6	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411472**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB-16356** SampType: **MBLK** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **PBW** Batch ID: **16356** RunNo: **22538**
Prep Date: **11/12/2014** Analysis Date: **11/14/2014** SeqNo: **665412** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.2		1.000		122	59	141			

Sample ID **LCS-16356** SampType: **LCS** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSW** Batch ID: **16356** RunNo: **22538**
Prep Date: **11/12/2014** Analysis Date: **11/14/2014** SeqNo: **665425** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.0	1.0	5.000	0	121	69.7	142			
Surr: DNOP	0.73		0.5000		145	59	141			S

Sample ID **MB-16415** SampType: **MBLK** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **PBW** Batch ID: **16415** RunNo: **22594**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666747** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.0		1.000		101	59	141			

Sample ID **LCS-16415** SampType: **LCS** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSW** Batch ID: **16415** RunNo: **22594**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666748** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.7	1.0	5.000	0	93.6	69.7	142			
Surr: DNOP	0.60		0.5000		119	59	141			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411472**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW** Batch ID: **R22533** RunNo: **22533**
Prep Date: Analysis Date: **11/13/2014** SeqNo: **664414** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	17		20.00		86.0	80	120			

Sample ID **2.5UG GRO LCS** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW** Batch ID: **R22533** RunNo: **22533**
Prep Date: Analysis Date: **11/13/2014** SeqNo: **664415** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.48	0.050	0.5000	0	95.0	80	120			
Surr: BFB	19		20.00		93.2	80	120			

Sample ID **1411472-001AMS** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **KA-3** Batch ID: **R22533** RunNo: **22533**
Prep Date: Analysis Date: **11/13/2014** SeqNo: **664428** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.49	0.050	0.5000	0	98.7	70.4	127			
Surr: BFB	20		20.00		98.2	80	120			

Sample ID **1411472-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **KA-3** Batch ID: **R22533** RunNo: **22533**
Prep Date: Analysis Date: **11/13/2014** SeqNo: **664438** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.48	0.050	0.5000	0	96.7	70.4	127	2.09	20	
Surr: BFB	19		20.00		96.1	80	120	0	0	

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW** Batch ID: **R22597** RunNo: **22597**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **666073** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	17		20.00		85.8	80	120			

Sample ID **2.5UG GRO LCS** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW** Batch ID: **R22597** RunNo: **22597**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **666074** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	19		20.00		93.0	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411472**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW** Batch ID: **R22533** RunNo: **22533**
Prep Date: Analysis Date: **11/13/2014** SeqNo: **664457** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5								
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Surr: 4-Bromofluorobenzene	21		20.00		104	66.6	167			

Sample ID **100NG BTEX LCS** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW** Batch ID: **R22533** RunNo: **22533**
Prep Date: Analysis Date: **11/13/2014** SeqNo: **664458** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	21	2.5	20.00	0	105	67.4	147			
Benzene	21	1.0	20.00	0	105	80	120			
Toluene	21	1.0	20.00	0	106	80	120			
Ethylbenzene	21	1.0	20.00	0	107	80	120			
Xylenes, Total	65	2.0	60.00	0	108	80	120			
1,2,4-Trimethylbenzene	21	1.0	20.00	0	107	80	120			
1,3,5-Trimethylbenzene	22	1.0	20.00	0	108	80	120			
Surr: 4-Bromofluorobenzene	21		20.00		103	66.6	167			

Sample ID **1411472-002AMS** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **NAPIS-2** Batch ID: **R22533** RunNo: **22533**
Prep Date: Analysis Date: **11/13/2014** SeqNo: **664461** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	300	2.5	20.00	281.5	117	45.4	143			E
Benzene	34	1.0	20.00	16.30	90.2	80	120			
Toluene	22	1.0	20.00	0.6200	108	80	120			
Ethylbenzene	27	1.0	20.00	5.178	107	79.7	126			
Xylenes, Total	68	2.0	60.00	1.756	110	80	120			
1,2,4-Trimethylbenzene	23	1.0	20.00	1.442	108	80.3	122			
1,3,5-Trimethylbenzene	22	1.0	20.00	0.4160	109	80	120			
Surr: 4-Bromofluorobenzene	25		20.00		126	66.6	167			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411472**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **1411472-002AMSD** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **NAPIS-2** Batch ID: **R22533** RunNo: **22533**
Prep Date: Analysis Date: **11/13/2014** SeqNo: **664462** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	300	2.5	20.00	281.5	101	45.4	143	1.04	20	E
Benzene	33	1.0	20.00	16.30	85.8	80	120	2.62	20	
Toluene	22	1.0	20.00	0.6200	105	80	120	3.17	20	
Ethylbenzene	26	1.0	20.00	5.178	104	79.7	126	1.65	20	
Xylenes, Total	67	2.0	60.00	1.756	108	80	120	1.85	20	
1,2,4-Trimethylbenzene	23	1.0	20.00	1.442	107	80.3	122	1.38	20	
1,3,5-Trimethylbenzene	22	1.0	20.00	0.4160	108	80	120	0.901	20	
Surr: 4-Bromofluorobenzene	25		20.00		125	66.6	167	0	0	

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW** Batch ID: **R22597** RunNo: **22597**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **666092** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5								
Surr: 4-Bromofluorobenzene	21		20.00		106	66.6	167			

Sample ID **100NG BTEX LCS** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW** Batch ID: **R22597** RunNo: **22597**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **666093** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	21	2.5	20.00	0	105	67.4	147			
Surr: 4-Bromofluorobenzene	21		20.00		105	66.6	167			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411472**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **5ml rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R22531**	RunNo: **22531**			
Prep Date:	Analysis Date: **11/13/2014**	SeqNo: **664345**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411472**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **5ml rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22531** RunNo: **22531**
Prep Date: Analysis Date: **11/13/2014** SeqNo: **664345** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.5		10.00		85.1	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		86.6	70	130			
Surr: Dibromofluoromethane	9.1		10.00		91.0	70	130			
Surr: Toluene-d8	9.1		10.00		91.4	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22531** RunNo: **22531**
Prep Date: Analysis Date: **11/13/2014** SeqNo: **664347** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	117	70	130			
Toluene	22	1.0	20.00	0	110	80	120			
Chlorobenzene	19	1.0	20.00	0	95.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411472**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **100ng lcs**	SampType: **LCS**		TestCode: **EPA Method 8260B: VOLATILES**		
Client ID: **LCSW**	Batch ID: **R22531**		RunNo: **22531**		
Prep Date:	Analysis Date: **11/13/2014**		SeqNo: **664347**	Units: **µg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22	1.0	20.00	0	111	82.6	131			
Trichloroethene (TCE)	20	1.0	20.00	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	8.2		10.00		82.0	70	130			
Surr: 4-Bromofluorobenzene	8.1		10.00		80.7	70	130			
Surr: Dibromofluoromethane	9.0		10.00		90.5	70	130			
Surr: Toluene-d8	9.1		10.00		90.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411472**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **mb-16377**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **16377**	RunNo: **22600**			
Prep Date: **11/13/2014**	Analysis Date: **11/17/2014**	SeqNo: **666318**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411472**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **mb-16377**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **16377**	RunNo: **22600**			
Prep Date: **11/13/2014**	Analysis Date: **11/17/2014**	SeqNo: **666318**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	95		200.0		47.6	17.6	104			
Surr: Phenol-d5	96		200.0		48.2	17.7	89.9			
Surr: 2,4,6-Tribromophenol	75		200.0		37.5	16.3	122			
Surr: Nitrobenzene-d5	67		100.0		67.1	45.3	117			
Surr: 2-Fluorobiphenyl	61		100.0		61.2	43	113			
Surr: 4-Terphenyl-d14	73		100.0		72.5	47.6	122			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411472**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **lcs-16377** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **16377** RunNo: **22600**
Prep Date: **11/13/2014** Analysis Date: **11/17/2014** SeqNo: **666368** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	66	10	100.0	0	66.2	47.9	114			
4-Chloro-3-methylphenol	160	10	200.0	0	82.4	51.7	122			
2-Chlorophenol	140	10	200.0	0	69.9	40.7	113			
1,4-Dichlorobenzene	44	10	100.0	0	44.3	39.6	99.9			
2,4-Dinitrotoluene	68	10	100.0	0	68.0	40.8	113			
N-Nitrosodi-n-propylamine	74	10	100.0	0	74.3	51.2	111			
4-Nitrophenol	100	10	200.0	0	50.6	15.7	86.9			
Pentachlorophenol	130	20	200.0	0	67.5	21.6	104			
Phenol	90	10	200.0	0	44.8	28.6	71.7			
Pyrene	78	10	100.0	0	77.8	54.2	128			
1,2,4-Trichlorobenzene	50	10	100.0	0	50.0	40.9	101			
Surr: 2-Fluorophenol	94		200.0		47.0	17.6	104			
Surr: Phenol-d5	77		200.0		38.5	17.7	89.9			
Surr: 2,4,6-Tribromophenol	160		200.0		80.7	16.3	122			
Surr: Nitrobenzene-d5	69		100.0		69.3	45.3	117			
Surr: 2-Fluorobiphenyl	65		100.0		64.8	43	113			
Surr: 4-Terphenyl-d14	85		100.0		85.0	47.6	122			

Sample ID **lcsd-16377** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **16377** RunNo: **22600**
Prep Date: **11/13/2014** Analysis Date: **11/17/2014** SeqNo: **666369** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	67	10	100.0	0	67.5	47.9	114	1.98	27.2	
4-Chloro-3-methylphenol	160	10	200.0	0	81.4	51.7	122	1.26	25.9	
2-Chlorophenol	140	10	200.0	0	68.2	40.7	113	2.40	22.5	
1,4-Dichlorobenzene	49	10	100.0	0	49.0	39.6	99.9	10.2	24.6	
2,4-Dinitrotoluene	69	10	100.0	0	68.8	40.8	113	1.20	25.3	
N-Nitrosodi-n-propylamine	74	10	100.0	0	74.3	51.2	111	0.0269	23.6	
4-Nitrophenol	130	10	200.0	0	63.4	15.7	86.9	22.5	34.7	
Pentachlorophenol	130	20	200.0	0	67.5	21.6	104	0.0148	32.8	
Phenol	100	10	200.0	0	52.0	28.6	71.7	14.9	25.5	
Pyrene	77	10	100.0	0	77.4	54.2	128	0.567	31.4	
1,2,4-Trichlorobenzene	54	10	100.0	0	53.7	40.9	101	7.13	25.9	
Surr: 2-Fluorophenol	110		200.0		53.4	17.6	104	0	0	
Surr: Phenol-d5	93		200.0		46.6	17.7	89.9	0	0	
Surr: 2,4,6-Tribromophenol	160		200.0		80.9	16.3	122	0	0	
Surr: Nitrobenzene-d5	70		100.0		70.1	45.3	117	0	0	
Surr: 2-Fluorobiphenyl	70		100.0		69.5	43	113	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411472**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**lcsd-16377**	SampType:	**LCSD**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**LCSS02**	Batch ID:	**16377**	RunNo:	**22600**
Prep Date:	**11/13/2014**	Analysis Date:	**11/17/2014**	SeqNo:	**666369** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	81		100.0		81.3	47.6	122	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1411472 RcptNo: 1

Received by/date: 11/12/14

Logged By: **Ashley Gallegos** 11/12/2014 4:12:00 PM

Completed By: **Ashley Gallegos** 11/13/2014 8:53:00 AM

Reviewed By: 11/13/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐ CS 11/13/14
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
   dissolved metals analysis, added 0.4ml HNO3 to -001D, -002D, + -003D for an acceptab pH. Held in login for 24 hours. -CS 11/13/14
10. VOA vials have zero headspace? CS 11/13/14 Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
    yes -001A (5 of 6), -002A (all vials), -003A (4 and 5 of 6) and -005A (all vials) have bubbles -CS 11/13/14
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH:	7 (<2 or >12 unless noted)
Adjusted?	yes
Checked by:	CS

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☑ No ☐ NA ☐

Person Notified:	Cheryl Johnson	Date:	11/13/2014
By Whom:	Anne Thorne	Via:	☑ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:	E Coli Sample was rejected		
Client Instructions:	See Section 19.		

17. Additional remarks:

    E. Coli Sample for -001 was rejected, sample was too dark even after dilution per Stephanie

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

? Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard ☐ Rush

Project Name:

Q4 2014

Project #:

NAPIS-1,-2,-3,KA-3

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	11/13/14 Matrix AQ	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1411472	8021 + MTBE	8015B extended	8270 + phenols	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	Major Cations/Anions	8260							Air Bubbles (Y or N)
11-11-14	1313	AQ	KA-3	9		-001	X	X	X			X								
11-11-14	1350		NAPIS-2	11		-002	X	X	X	X	X	X								
11-11-14	1510		NAPIS-1	11		-003	X	X	X	X	X	X								
			~~NAPIS-3~~																	
11-11-14	—		BD-111114	1		-004			X											
11-11-14	—		TB-101	3		-005	X													
11-11-14	1300	↓	FB-111114	3		-006							X							

Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
11-12-14	0630	Rick Lawrence / Rick Lawrence	[illegible]	11-12-14	1:00	
Date:	Time:	Relinquished by:	Received by:	Date	Time	
11-12-14	1612	[illegible]	[illegible]	11/12/14	1612	

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 21, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: Q1-2014 Groundwater Sampling OrderNo.: 1403355

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 3/10/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1403355**
Date Reported: **3/21/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: East LDU
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/10/2014 8:50:00 AM
Lab ID: 1403355-001
Matrix: AQUEOUS
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	310	10		mg/L	10	3/12/2014 12:45:06 PM	12114
Motor Oil Range Organics (MRO)	ND	50		mg/L	10	3/12/2014 12:45:06 PM	12114
Surr: DNOP	0	62.7-145	S	%REC	10	3/12/2014 12:45:06 PM	12114
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**JMP**
Gasoline Range Organics (GRO)	200	10		mg/L	200	3/12/2014 4:21:18 PM	R17271
Surr: BFB	147	80.4-118	S	%REC	200	3/12/2014 4:21:18 PM	R17271
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Methyl tert-butyl ether (MTBE)	ND	500		µg/L	200	3/17/2014 4:11:42 PM	R17360
Benzene	9800	200		µg/L	200	3/12/2014 4:21:18 PM	R17271
Toluene	27000	2000		µg/L	2E	3/17/2014 3:41:40 PM	R17360
Ethylbenzene	3800	200		µg/L	200	3/12/2014 4:21:18 PM	R17271
Xylenes, Total	25000	400		µg/L	200	3/12/2014 4:21:18 PM	R17271
1,2,4-Trimethylbenzene	5800	200		µg/L	200	3/12/2014 4:21:18 PM	R17271
1,3,5-Trimethylbenzene	1900	200		µg/L	200	3/12/2014 4:21:18 PM	R17271
Surr: 4-Bromofluorobenzene	121	82.9-139		%REC	200	3/12/2014 4:21:18 PM	R17271
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.19	0.0020		mg/L	1	3/13/2014 1:58:50 PM	R17289
Cadmium	ND	0.0020		mg/L	1	3/13/2014 1:58:50 PM	R17289
Chromium	0.71	0.0060	*	mg/L	1	3/13/2014 1:58:50 PM	R17289
Copper	ND	0.0060		mg/L	1	3/13/2014 1:58:50 PM	R17289
Iron	2.9	0.10	*	mg/L	5	3/13/2014 2:00:25 PM	R17289
Manganese	3.0	0.010	*	mg/L	5	3/13/2014 2:00:25 PM	R17289
Silver	ND	0.0050		mg/L	1	3/17/2014 2:08:37 PM	R17380
Zinc	0.11	0.010		mg/L	1	3/13/2014 1:58:50 PM	R17289
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.20	0.0020		mg/L	1	3/13/2014 6:31:33 PM	12161
Cadmium	ND	0.0020		mg/L	1	3/13/2014 6:31:33 PM	12161
Chromium	0.71	0.0060	*	mg/L	1	3/13/2014 6:31:33 PM	12161
Copper	ND	0.0060		mg/L	1	3/13/2014 6:31:33 PM	12161
Iron	4.4	0.10	*	mg/L	5	3/13/2014 6:33:13 PM	12161
Manganese	3.1	0.010	*	mg/L	5	3/13/2014 6:33:13 PM	12161
Silver	ND	0.0050		mg/L	1	3/13/2014 6:31:33 PM	12161
Zinc	0.12	0.010		mg/L	1	3/13/2014 6:31:33 PM	12161
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	3/19/2014 2:39:13 PM	R17423
Lead	ND	0.010		mg/L	10	3/18/2014 3:22:49 PM	R17401
Selenium	0.051	0.010	*	mg/L	10	3/19/2014 2:39:13 PM	R17423

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: East LDU
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/10/2014 8:50:00 AM
Lab ID: 1403355-001
Matrix: AQUEOUS
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Uranium	ND	0.010		mg/L	10	3/18/2014 3:22:49 PM	R17401
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0093	0.0050		mg/L	5	3/14/2014 2:14:24 PM	12161
Lead	ND	0.0050		mg/L	5	3/14/2014 2:14:24 PM	12161
Selenium	ND	0.0050		mg/L	5	3/14/2014 2:14:24 PM	12161
Uranium	ND	0.0050		mg/L	5	3/14/2014 2:14:24 PM	12161
EPA METHOD 245.1: MERCURY						Analyst:	**JML**
Mercury	0.00022	0.00020		mg/L	1	3/12/2014 12:56:47 PM	12133

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: West LDU
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/10/2014 9:10:00 AM
Lab ID: 1403355-002
Matrix: AQUEOUS
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	14	1.0		mg/L	1	3/12/2014 7:48:21 PM	12114
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	3/12/2014 7:48:21 PM	12114
Surr: DNOP	125	62.7-145		%REC	1	3/12/2014 7:48:21 PM	12114
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**JMP**
Gasoline Range Organics (GRO)	13	5.0		mg/L	100	3/12/2014 4:51:22 PM	R17271
Surr: BFB	103	80.4-118		%REC	100	3/12/2014 4:51:22 PM	R17271
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Methyl tert-butyl ether (MTBE)	ND	250		µg/L	100	3/18/2014 5:17:07 PM	R17409
Benzene	700	100		µg/L	100	3/12/2014 4:51:22 PM	R17271
Toluene	140	100		µg/L	100	3/12/2014 4:51:22 PM	R17271
Ethylbenzene	170	100		µg/L	100	3/12/2014 4:51:22 PM	R17271
Xylenes, Total	3300	200		µg/L	100	3/12/2014 4:51:22 PM	R17271
1,2,4-Trimethylbenzene	570	100		µg/L	100	3/12/2014 4:51:22 PM	R17271
1,3,5-Trimethylbenzene	190	100		µg/L	100	3/12/2014 4:51:22 PM	R17271
Surr: 4-Bromofluorobenzene	116	82.9-139		%REC	100	3/12/2014 4:51:22 PM	R17271
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.061	0.0020		mg/L	1	3/13/2014 2:02:19 PM	R17289
Cadmium	ND	0.0020		mg/L	1	3/13/2014 2:02:19 PM	R17289
Chromium	0.11	0.0060	*	mg/L	1	3/13/2014 2:02:19 PM	R17289
Copper	ND	0.0060		mg/L	1	3/13/2014 2:02:19 PM	R17289
Iron	2.6	0.10	*	mg/L	5	3/13/2014 2:10:41 PM	R17289
Manganese	3.6	0.010	*	mg/L	5	3/13/2014 2:10:41 PM	R17289
Silver	ND	0.0050		mg/L	1	3/17/2014 2:10:12 PM	R17380
Zinc	0.088	0.010		mg/L	1	3/13/2014 2:02:19 PM	R17289
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.069	0.0020		mg/L	1	3/13/2014 6:35:14 PM	12161
Cadmium	ND	0.0020		mg/L	1	3/13/2014 6:35:14 PM	12161
Chromium	0.15	0.0060	*	mg/L	1	3/13/2014 6:35:14 PM	12161
Copper	ND	0.0060		mg/L	1	3/13/2014 6:35:14 PM	12161
Iron	9.0	0.20	*	mg/L	10	3/14/2014 2:40:31 PM	12161
Manganese	3.8	0.010	*	mg/L	5	3/13/2014 6:36:54 PM	12161
Silver	ND	0.0050		mg/L	1	3/13/2014 6:35:14 PM	12161
Zinc	0.68	0.010		mg/L	1	3/13/2014 6:35:14 PM	12161
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0010		mg/L	1	3/19/2014 2:41:59 PM	R17423
Lead	ND	0.0010		mg/L	1	3/18/2014 3:27:32 PM	R17401
Selenium	0.0023	0.0010		mg/L	1	3/19/2014 2:41:59 PM	R17423

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: West LDU
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/10/2014 9:10:00 AM
Lab ID: 1403355-002
Matrix: AQUEOUS
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Uranium	ND	0.0010		mg/L	1	3/18/2014 3:27:32 PM	R17401
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	3/14/2014 2:28:11 PM	12161
Lead	ND	0.0010		mg/L	1	3/14/2014 2:17:51 PM	12161
Selenium	ND	0.0050		mg/L	5	3/14/2014 2:28:11 PM	12161
Uranium	ND	0.0010		mg/L	1	3/14/2014 2:17:51 PM	12161
EPA METHOD 245.1: MERCURY						Analyst:	**JML**
Mercury	ND	0.00020		mg/L	1	3/12/2014 12:58:32 PM	12133

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group#1-
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/10/2014 8:20:00 AM
Lab ID: 1403355-003
Matrix: AQUEOUS
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
Toluene	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
Ethylbenzene	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
Naphthalene	ND	2.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
1-Methylnaphthalene	ND	4.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
2-Methylnaphthalene	ND	4.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
Acetone	ND	10		µg/L	1	3/11/2014 9:47:44 PM	R17242
Bromobenzene	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
Bromodichloromethane	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
Bromoform	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
Bromomethane	ND	3.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
2-Butanone	ND	10		µg/L	1	3/11/2014 9:47:44 PM	R17242
Carbon disulfide	ND	10		µg/L	1	3/11/2014 9:47:44 PM	R17242
Carbon Tetrachloride	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
Chlorobenzene	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
Chloroethane	ND	2.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
Chloroform	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
Chloromethane	ND	3.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
2-Chlorotoluene	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
4-Chlorotoluene	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
cis-1,2-DCE	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
Dibromochloromethane	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
Dibromomethane	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
1,1-Dichloroethane	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
1,1-Dichloroethene	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
1,2-Dichloropropane	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
1,3-Dichloropropane	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
2,2-Dichloropropane	ND	2.0		µg/L	1	3/11/2014 9:47:44 PM	R17242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group#1-
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/10/2014 8:20:00 AM
Lab ID: 1403355-003
Matrix: AQUEOUS
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
Hexachlorobutadiene	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
2-Hexanone	ND	10		µg/L	1	3/11/2014 9:47:44 PM	R17242
Isopropylbenzene	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
4-Isopropyltoluene	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
4-Methyl-2-pentanone	ND	10		µg/L	1	3/11/2014 9:47:44 PM	R17242
Methylene Chloride	ND	3.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
n-Butylbenzene	ND	3.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
n-Propylbenzene	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
sec-Butylbenzene	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
Styrene	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
tert-Butylbenzene	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
trans-1,2-DCE	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
Trichlorofluoromethane	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
Vinyl chloride	ND	1.0		µg/L	1	3/11/2014 9:47:44 PM	R17242
Xylenes, Total	ND	1.5		µg/L	1	3/11/2014 9:47:44 PM	R17242
Surr: 1,2-Dichloroethane-d4	94.6	70-130		%REC	1	3/11/2014 9:47:44 PM	R17242
Surr: 4-Bromofluorobenzene	97.6	70-130		%REC	1	3/11/2014 9:47:44 PM	R17242
Surr: Dibromofluoromethane	99.1	70-130		%REC	1	3/11/2014 9:47:44 PM	R17242
Surr: Toluene-d8	91.7	70-130		%REC	1	3/11/2014 9:47:44 PM	R17242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Trip Blank
Project: Q1-2014 Groundwater Sampling
Collection Date:
Lab ID: 1403355-004
Matrix:
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
Toluene	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
Ethylbenzene	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
Naphthalene	ND	2.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
1-Methylnaphthalene	ND	4.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
2-Methylnaphthalene	ND	4.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
Acetone	ND	10		µg/L	1	3/11/2014 10:15:31 PM	R17242
Bromobenzene	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
Bromodichloromethane	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
Bromoform	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
Bromomethane	ND	3.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
2-Butanone	ND	10		µg/L	1	3/11/2014 10:15:31 PM	R17242
Carbon disulfide	ND	10		µg/L	1	3/11/2014 10:15:31 PM	R17242
Carbon Tetrachloride	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
Chlorobenzene	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
Chloroethane	ND	2.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
Chloroform	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
Chloromethane	ND	3.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
2-Chlorotoluene	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
4-Chlorotoluene	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
cis-1,2-DCE	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
Dibromochloromethane	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
Dibromomethane	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
1,1-Dichloroethane	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
1,1-Dichloroethene	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
1,2-Dichloropropane	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
1,3-Dichloropropane	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
2,2-Dichloropropane	ND	2.0		µg/L	1	3/11/2014 10:15:31 PM	R17242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Trip Blank
Project: Q1-2014 Groundwater Sampling
Collection Date:
Lab ID: 1403355-004
Matrix:
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
Hexachlorobutadiene	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
2-Hexanone	ND	10		µg/L	1	3/11/2014 10:15:31 PM	R17242
Isopropylbenzene	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
4-Isopropyltoluene	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
4-Methyl-2-pentanone	ND	10		µg/L	1	3/11/2014 10:15:31 PM	R17242
Methylene Chloride	ND	3.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
n-Butylbenzene	ND	3.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
n-Propylbenzene	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
sec-Butylbenzene	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
Styrene	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
tert-Butylbenzene	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
trans-1,2-DCE	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
Trichlorofluoromethane	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
Vinyl chloride	ND	1.0		µg/L	1	3/11/2014 10:15:31 PM	R17242
Xylenes, Total	ND	1.5		µg/L	1	3/11/2014 10:15:31 PM	R17242
Surr: 1,2-Dichloroethane-d4	93.4	70-130		%REC	1	3/11/2014 10:15:31 PM	R17242
Surr: 4-Bromofluorobenzene	95.2	70-130		%REC	1	3/11/2014 10:15:31 PM	R17242
Surr: Dibromofluoromethane	98.3	70-130		%REC	1	3/11/2014 10:15:31 PM	R17242
Surr: Toluene-d8	90.8	70-130		%REC	1	3/11/2014 10:15:31 PM	R17242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403355**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17289** RunNo: **17289**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498058** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17289** RunNo: **17289**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498059** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.9	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.4	85	115			
Chromium	0.48	0.0060	0.5000	0	96.2	85	115			
Copper	0.48	0.0060	0.5000	0	96.5	85	115			
Iron	0.48	0.020	0.5000	0	95.5	85	115			
Manganese	0.48	0.0020	0.5000	0	95.4	85	115			
Zinc	0.49	0.010	0.5000	0	97.2	85	115			

Sample ID **1403420-008AMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17289** RunNo: **17289**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498099** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	3.7	0.050	2.500	1.186	102	70	130			

Sample ID **1403420-008AMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17289** RunNo: **17289**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498100** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	3.7	0.050	2.500	1.186	99.3	70	130	1.98	20	

Sample ID **1403477-001BMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17289** RunNo: **17289**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498102** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403355**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **1403477-001BMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17289** RunNo: **17289**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498102** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.55	0.020	0.5000	0.1063	88.6	70	130			

Sample ID **1403477-001BMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17289** RunNo: **17289**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498103** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.57	0.020	0.5000	0.1063	92.0	70	130	3.10	20	

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17380** RunNo: **17380**
Prep Date: Analysis Date: **3/17/2014** SeqNo: **500508** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17380** RunNo: **17380**
Prep Date: Analysis Date: **3/17/2014** SeqNo: **500509** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	104	85	115			

Sample ID **1403615-002AMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17380** RunNo: **17380**
Prep Date: Analysis Date: **3/17/2014** SeqNo: **500562** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.092	0.0050	0.1000	0	92.4	70	130			

Sample ID **1403615-002AMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17380** RunNo: **17380**
Prep Date: Analysis Date: **3/17/2014** SeqNo: **500563** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.093	0.0050	0.1000	0	92.6	70	130	0.205	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403355**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **1403615-014AMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17380** RunNo: **17380**
Prep Date: Analysis Date: **3/17/2014** SeqNo: **500614** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.090	0.0050	0.1000	0	90.4	70	130			

Sample ID **1403615-014AMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17380** RunNo: **17380**
Prep Date: Analysis Date: **3/17/2014** SeqNo: **500616** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.095	0.0050	0.1000	0	95.0	70	130	4.94	20	

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17380** RunNo: **17380**
Prep Date: Analysis Date: **3/17/2014** SeqNo: **500673** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17380** RunNo: **17380**
Prep Date: Analysis Date: **3/17/2014** SeqNo: **500674** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403355**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **1403477-001CMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC** Batch ID: **12161** RunNo: **17291**
Prep Date: **3/13/2014** Analysis Date: **3/13/2014** SeqNo: **498270** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.57	0.0060	0.5000	0.07530	98.8	70	130			
Iron	0.61	0.020	0.5000	0.2546	70.8	70	130			
Manganese	0.52	0.0020	0.5000	0.007770	102	70	130			

Sample ID **1403477-001CMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC** Batch ID: **12161** RunNo: **17291**
Prep Date: **3/13/2014** Analysis Date: **3/13/2014** SeqNo: **498271** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.58	0.0060	0.5000	0.07530	101	70	130	2.01	20	
Iron	0.63	0.020	0.5000	0.2546	74.8	70	130	3.25	20	
Manganese	0.52	0.0020	0.5000	0.007770	102	70	130	0.815	20	

Sample ID **MB-12161** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **12161** RunNo: **17291**
Prep Date: **3/13/2014** Analysis Date: **3/13/2014** SeqNo: **498280** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-12161** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **12161** RunNo: **17291**
Prep Date: **3/13/2014** Analysis Date: **3/13/2014** SeqNo: **498281** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.8	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.5	85	115			
Chromium	0.49	0.0060	0.5000	0	98.2	85	115			
Copper	0.49	0.0060	0.5000	0	99.0	85	115			
Iron	0.51	0.020	0.5000	0	103	85	115			
Manganese	0.50	0.0020	0.5000	0	99.5	85	115			
Silver	0.098	0.0050	0.1000	0	97.7	85	115			
Zinc	0.51	0.010	0.5000	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403355**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **1403420-008AMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17401** RunNo: **17401**
Prep Date: Analysis Date: **3/18/2014** SeqNo: **501189** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.026	0.0010	0.02500	0.0003984	104	70	130			

Sample ID **1403420-008AMSD** SampType: **MSD** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17401** RunNo: **17401**
Prep Date: Analysis Date: **3/18/2014** SeqNo: **501190** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.027	0.0010	0.02500	0.0003984	105	70	130	0.894	20	

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17401** RunNo: **17401**
Prep Date: Analysis Date: **3/18/2014** SeqNo: **501192** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.025	0.0010	0.02500	0	102	85	115			
Uranium	0.025	0.0010	0.02500	0	100	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17401** RunNo: **17401**
Prep Date: Analysis Date: **3/18/2014** SeqNo: **501193** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.028	0.0010	0.02500	0	110	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17401** RunNo: **17401**
Prep Date: Analysis Date: **3/18/2014** SeqNo: **501194** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17401** RunNo: **17401**
Prep Date: Analysis Date: **3/18/2014** SeqNo: **501195** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403355**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **1403273-002AMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17423** RunNo: **17423**
Prep Date: Analysis Date: **3/19/2014** SeqNo: **501959** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.12	0.0050	0.1250	0.003578	94.3	70	130			

Sample ID **1403420-008AMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17423** RunNo: **17423**
Prep Date: Analysis Date: **3/19/2014** SeqNo: **501996** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.13	0.0050	0.1250	0.0009073	101	70	130			
Selenium	0.13	0.0050	0.1250	0.001602	99.9	70	130			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17423** RunNo: **17423**
Prep Date: Analysis Date: **3/19/2014** SeqNo: **502016** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.7	85	115			
Selenium	0.024	0.0010	0.02500	0	97.2	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17423** RunNo: **17423**
Prep Date: Analysis Date: **3/19/2014** SeqNo: **502017** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.1	85	115			
Selenium	0.024	0.0010	0.02500	0	97.2	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17423** RunNo: **17423**
Prep Date: Analysis Date: **3/19/2014** SeqNo: **502018** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17423** RunNo: **17423**
Prep Date: Analysis Date: **3/19/2014** SeqNo: **502019** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403355**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID	**MB**	SampType:	**MBLK**		TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**R17423**		RunNo:	**17423**					
Prep Date:		Analysis Date:	**3/19/2014**		SeqNo:	**502019**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium		ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403355**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **LLLCS-12161** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **12161** RunNo: **17331**
Prep Date: **3/13/2014** Analysis Date: **3/14/2014** SeqNo: **499089** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.6	85	115			
Lead	0.024	0.0010	0.02500	0	97.9	85	115			
Selenium	0.023	0.0010	0.02500	0	93.5	85	115			
Uranium	0.024	0.0010	0.02500	0	97.4	85	115			

Sample ID **MB-12161** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **12161** RunNo: **17331**
Prep Date: **3/13/2014** Analysis Date: **3/14/2014** SeqNo: **499090** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403355**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **MB-12133** SampType: **MBLK** TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW** Batch ID: **12133** RunNo: **17250**
Prep Date: **3/11/2014** Analysis Date: **3/12/2014** SeqNo: **496787** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID **LCS-12133** SampType: **LCS** TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW** Batch ID: **12133** RunNo: **17250**
Prep Date: **3/11/2014** Analysis Date: **3/12/2014** SeqNo: **496788** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0053	0.00020	0.005000	0	106	80	120			

Sample ID **1403329-004AMS** SampType: **MS** TestCode: **EPA Method 245.1: Mercury**
Client ID: **BatchQC** Batch ID: **12133** RunNo: **17250**
Prep Date: **3/11/2014** Analysis Date: **3/12/2014** SeqNo: **496797** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0054	0.00020	0.005000	0	107	75	125			

Sample ID **1403329-004AMSD** SampType: **MSD** TestCode: **EPA Method 245.1: Mercury**
Client ID: **BatchQC** Batch ID: **12133** RunNo: **17250**
Prep Date: **3/11/2014** Analysis Date: **3/12/2014** SeqNo: **496798** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0053	0.00020	0.005000	0	107	75	125	0.541	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403355**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID	**MB-12114**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Diesel Range**					
Client ID:	**PBW**	Batch ID:	**12114**	RunNo:	**17227**					
Prep Date:	**3/11/2014**	Analysis Date:	**3/12/2014**	SeqNo:	**496413**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.0		1.000		99.8	62.7	145			

Sample ID	**LCSD-12114**	SampType:	**LCSD**	TestCode:	**EPA Method 8015D: Diesel Range**					
Client ID:	**LCSS02**	Batch ID:	**12114**	RunNo:	**17227**					
Prep Date:	**3/11/2014**	Analysis Date:	**3/12/2014**	SeqNo:	**496415**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.6	1.0	5.000	0	112	78.6	146	34.2	26.5	R
Surr: DNOP	0.62		0.5000		123	62.7	145	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403355**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW** Batch ID: **R17271** RunNo: **17271**
Prep Date: Analysis Date: **3/12/2014** SeqNo: **497471** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		95.6	80.4	118			

Sample ID **2.5UG GRO LCS** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW** Batch ID: **R17271** RunNo: **17271**
Prep Date: Analysis Date: **3/12/2014** SeqNo: **497473** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	91.1	80	120			
Surr: BFB	21		20.00		104	80.4	118			

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW** Batch ID: **R17409** RunNo: **17409**
Prep Date: Analysis Date: **3/18/2014** SeqNo: **501470** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	18		20.00		90.7	80.4	118			

Sample ID **2.5UG GRO LCS** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW** Batch ID: **R17409** RunNo: **17409**
Prep Date: Analysis Date: **3/18/2014** SeqNo: **501483** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	20		20.00		98.0	80.4	118			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403355**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW** Batch ID: **R17271** RunNo: **17271**
Prep Date: Analysis Date: **3/12/2014** SeqNo: **497509** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Surr: 4-Bromofluorobenzene	22		20.00		108	82.9	139			

Sample ID **100NG BTEX LCS** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW** Batch ID: **R17271** RunNo: **17271**
Prep Date: Analysis Date: **3/12/2014** SeqNo: **497510** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	80	120			
Toluene	20	1.0	20.00	0	102	80	120			
Ethylbenzene	20	1.0	20.00	0	101	80	120			
Xylenes, Total	61	2.0	60.00	0	101	80	120			
1,2,4-Trimethylbenzene	19	1.0	20.00	0	96.0	80	120			
1,3,5-Trimethylbenzene	20	1.0	20.00	0	99.7	80	120			
Surr: 4-Bromofluorobenzene	23		20.00		116	82.9	139			

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW** Batch ID: **R17360** RunNo: **17360**
Prep Date: Analysis Date: **3/17/2014** SeqNo: **500230** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5								
Toluene	ND	1.0								
Surr: 4-Bromofluorobenzene	20		20.00		99.2	82.9	139			

Sample ID **100NG BTEX LCS** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW** Batch ID: **R17360** RunNo: **17360**
Prep Date: Analysis Date: **3/17/2014** SeqNo: **500231** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	22	2.5	20.00	0	108	71.1	128			
Toluene	21	1.0	20.00	0	105	80	120			
Surr: 4-Bromofluorobenzene	14		20.00		71.2	82.9	139			S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403355**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**
Client ID:	**PBW**	Batch ID:	**R17409**	RunNo:	**17409**
Prep Date:		Analysis Date:	**3/18/2014**	SeqNo:	**501509** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5								
Surr: 4-Bromofluorobenzene	20		20.00		99.0	82.9	139			

Sample ID	**100NG BTEX LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**
Client ID:	**LCSW**	Batch ID:	**R17409**	RunNo:	**17409**
Prep Date:		Analysis Date:	**3/18/2014**	SeqNo:	**501510** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	19	2.5	20.00	0	96.4	71.1	128			
Surr: 4-Bromofluorobenzene	19		20.00		93.3	82.9	139			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403355**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **5ml-rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R17242**	RunNo: **17242**			
Prep Date:	Analysis Date: **3/11/2014**	SeqNo: **496423**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403355**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **5ml-rb2** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R17242** RunNo: **17242**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496423** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.0	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		94.4	70	130			
Surr: Dibromofluoromethane	8.1		10.00		80.5	70	130			
Surr: Toluene-d8	9.3		10.00		93.0	70	130			

Sample ID **1403257-002A MS** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **BatchQC** Batch ID: **R17242** RunNo: **17242**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496441** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	120	1.0	20.00	129.6	-29.2	70	130			ES
Toluene	23	1.0	20.00	0.7750	109	67.5	123			
Chlorobenzene	22	1.0	20.00	0	110	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403355**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **1403257-002A MS** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **BatchQC** Batch ID: **R17242** RunNo: **17242**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496441** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	24	1.0	20.00	0	119	81.9	134			
Trichloroethene (TCE)	22	1.0	20.00	0	110	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		91.1	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		94.6	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.3	70	130			
Surr: Toluene-d8	9.3		10.00		93.1	70	130			

Sample ID **1403257-002A MSD** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **BatchQC** Batch ID: **R17242** RunNo: **17242**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496442** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	120	1.0	20.00	129.6	-31.5	70	130	0.381	20	ES
Toluene	22	1.0	20.00	0.7750	108	67.5	123	0.677	20	
Chlorobenzene	21	1.0	20.00	0	107	70	130	2.67	20	
1,1-Dichloroethene	22	1.0	20.00	0	112	81.9	134	5.96	20	
Trichloroethene (TCE)	22	1.0	20.00	0	111	70	130	0.261	20	
Surr: 1,2-Dichloroethane-d4	9.4		10.00		93.7	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.4		10.00		94.0	70	130	0	0	
Surr: Dibromofluoromethane	9.8		10.00		98.0	70	130	0	0	
Surr: Toluene-d8	9.4		10.00		94.2	70	130	0	0	

Sample ID **100ngLCS200ngAnn** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R17242** RunNo: **17242**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496454** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	110	70	130			
Toluene	19	1.0	20.00	0	96.9	80	120			
Chlorobenzene	19	1.0	20.00	0	94.8	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	109	90	143			
Trichloroethene (TCE)	20	1.0	20.00	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		93.7	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		91.2	70	130			
Surr: Dibromofluoromethane	8.6		10.00		85.8	70	130			
Surr: Toluene-d8	9.0		10.00		90.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1403355 RcptNo: 1

Received by/date: 03/10/14

Logged By: **Lindsay Mangin** 3/10/2014 4:10:00 PM

Completed By: **Lindsay Mangin** 3/10/2014 4:50:33 PM

Reviewed By: MG 03/11/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ~~☑~~ No ☑
9. Was preservative added to bottles? Yes ☑ ~~No ☑~~ NA ☐

metales analysis: Added 1mL HNO3 to -001D for acceptable pH. 03/11/14

10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 4 (<2 or >12 unless noted)
Adjusted? YES
Checked by:

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.6	Good	Not Present			

Chain-of-Custody Record

Client: Western Refining

Mailing Address: Rt 3 Box 7
Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-722-0210

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other _____
☐ EDD (Type) _____

Turn-Around Time:
☐ Standard ☐ Rush _____

Project Name: Q1-2014 Groundwater Sampling

Project #: Quarterly Sampling

Project Manager: Cheryl Johnson

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 4.5

www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1403355		8015B (DRO/GRO)	WQCC Metals (Total and Dissolved)												Air Bubbles (Y or N)
3/10/14	0850		East LDU			-001	x	x	x												
3/10/14	0910		West LDU			-002	x	x	x												
~~3/10/14~~			~~Oil Sump LDU~~				~~x~~	~~x~~	~~x~~												
3/10/14	0820	W	FB-Group#1-			-003				x											
			Trip Blank		03/11/14	-004	x			X											

Date	Time	Relinquished by	Received by	Date	Time
3/10/14	1610	Tom Kearns		03/10/14	1610
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 03, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: 2014 3rd QUARTER-RESAMPLE OrderNo.: 1409D07

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 3 sample(s) on 9/25/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1409D07**
Date Reported: **10/3/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-04
Project: 2014 3rd QUARTER-RESAMPLE
Collection Date: 9/24/2014 8:15:00 AM
Lab ID: 1409D07-001
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
Acenaphthene	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Acenaphthylene	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Aniline	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Anthracene	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Azobenzene	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Benz(a)anthracene	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Benzo(a)pyrene	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Benzo(b)fluoranthene	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Benzo(k)fluoranthene	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Benzoic acid	ND	20		µg/L	1	9/30/2014 1:42:49 AM	15566
Benzyl alcohol	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Butyl benzyl phthalate	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Carbazole	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
4-Chloroaniline	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
2-Chloronaphthalene	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
2-Chlorophenol	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Chrysene	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Di-n-butyl phthalate	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Di-n-octyl phthalate	ND	20		µg/L	1	9/30/2014 1:42:49 AM	15566
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Dibenzofuran	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
1,2-Dichlorobenzene	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
1,3-Dichlorobenzene	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
1,4-Dichlorobenzene	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Diethyl phthalate	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Dimethyl phthalate	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
2,4-Dichlorophenol	ND	20		µg/L	1	9/30/2014 1:42:49 AM	15566
2,4-Dimethylphenol	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/30/2014 1:42:49 AM	15566
2,4-Dinitrophenol	ND	20		µg/L	1	9/30/2014 1:42:49 AM	15566

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-04
Project: 2014 3rd QUARTER-RESAMPLE
Collection Date: 9/24/2014 8:15:00 AM
Lab ID: 1409D07-001
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
2,4-Dinitrotoluene	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
2,6-Dinitrotoluene	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Fluoranthene	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Fluorene	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Hexachlorobenzene	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Hexachlorobutadiene	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Hexachloroethane	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Isophorone	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
1-Methylnaphthalene	130	10		µg/L	1	9/30/2014 1:42:49 AM	15566
2-Methylnaphthalene	160	10		µg/L	1	9/30/2014 1:42:49 AM	15566
2-Methylphenol	ND	20		µg/L	1	9/30/2014 1:42:49 AM	15566
3+4-Methylphenol	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
N-Nitrosodimethylamine	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Naphthalene	190	10		µg/L	1	9/30/2014 1:42:49 AM	15566
2-Nitroaniline	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
3-Nitroaniline	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
4-Nitroaniline	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Nitrobenzene	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
2-Nitrophenol	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
4-Nitrophenol	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Pentachlorophenol	ND	20		µg/L	1	9/30/2014 1:42:49 AM	15566
Phenanthrene	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Phenol	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Pyrene	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Pyridine	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/30/2014 1:42:49 AM	15566
Surr: 2-Fluorophenol	68.8	12.1-85.8		%REC	1	9/30/2014 1:42:49 AM	15566
Surr: Phenol-d5	65.6	17.7-65.8		%REC	1	9/30/2014 1:42:49 AM	15566
Surr: 2,4,6-Tribromophenol	97.0	26-138		%REC	1	9/30/2014 1:42:49 AM	15566
Surr: Nitrobenzene-d5	86.1	47.5-119		%REC	1	9/30/2014 1:42:49 AM	15566
Surr: 2-Fluorobiphenyl	85.3	48.1-106		%REC	1	9/30/2014 1:42:49 AM	15566
Surr: 4-Terphenyl-d14	90.1	44-113		%REC	1	9/30/2014 1:42:49 AM	15566

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-11
Project: 2014 3rd QUARTER-RESAMPLE
Collection Date: 9/24/2014 8:45:00 AM
Lab ID: 1409D07-002
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
Acenaphthene	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Acenaphthylene	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Aniline	27	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Anthracene	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Azobenzene	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Benz(a)anthracene	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Benzo(a)pyrene	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Benzo(b)fluoranthene	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Benzo(k)fluoranthene	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Benzoic acid	ND	20		µg/L	1	9/30/2014 2:10:16 AM	15566
Benzyl alcohol	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Butyl benzyl phthalate	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Carbazole	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
4-Chloroaniline	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
2-Chloronaphthalene	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
2-Chlorophenol	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Chrysene	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Di-n-butyl phthalate	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Di-n-octyl phthalate	ND	20		µg/L	1	9/30/2014 2:10:16 AM	15566
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Dibenzofuran	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
1,2-Dichlorobenzene	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
1,3-Dichlorobenzene	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
1,4-Dichlorobenzene	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Diethyl phthalate	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Dimethyl phthalate	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
2,4-Dichlorophenol	ND	20		µg/L	1	9/30/2014 2:10:16 AM	15566
2,4-Dimethylphenol	190	10		µg/L	1	9/30/2014 2:10:16 AM	15566
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/30/2014 2:10:16 AM	15566
2,4-Dinitrophenol	ND	20		µg/L	1	9/30/2014 2:10:16 AM	15566

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-11
Project: 2014 3rd QUARTER-RESAMPLE
Collection Date: 9/24/2014 8:45:00 AM
Lab ID: 1409D07-002
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
2,4-Dinitrotoluene	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
2,6-Dinitrotoluene	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Fluoranthene	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Fluorene	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Hexachlorobenzene	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Hexachlorobutadiene	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Hexachloroethane	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Isophorone	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
1-Methylnaphthalene	24	10		µg/L	1	9/30/2014 2:10:16 AM	15566
2-Methylnaphthalene	22	10		µg/L	1	9/30/2014 2:10:16 AM	15566
2-Methylphenol	350	40		µg/L	2	9/30/2014 2:08:45 PM	15566
3+4-Methylphenol	240	20		µg/L	2	9/30/2014 2:08:45 PM	15566
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
N-Nitrosodimethylamine	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Naphthalene	67	10		µg/L	1	9/30/2014 2:10:16 AM	15566
2-Nitroaniline	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
3-Nitroaniline	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
4-Nitroaniline	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Nitrobenzene	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
2-Nitrophenol	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
4-Nitrophenol	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Pentachlorophenol	ND	20		µg/L	1	9/30/2014 2:10:16 AM	15566
Phenanthrene	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Phenol	78	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Pyrene	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Pyridine	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/30/2014 2:10:16 AM	15566
Surr: 2-Fluorophenol	50.9	12.1-85.8		%REC	1	9/30/2014 2:10:16 AM	15566
Surr: Phenol-d5	66.7	17.7-65.8	S	%REC	1	9/30/2014 2:10:16 AM	15566
Surr: 2,4,6-Tribromophenol	87.3	26-138		%REC	1	9/30/2014 2:10:16 AM	15566
Surr: Nitrobenzene-d5	97.4	47.5-119		%REC	1	9/30/2014 2:10:16 AM	15566
Surr: 2-Fluorobiphenyl	88.6	48.1-106		%REC	1	9/30/2014 2:10:16 AM	15566
Surr: 4-Terphenyl-d14	92.8	44-113		%REC	1	9/30/2014 2:10:16 AM	15566

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BD-MKTF RE-SAMPLE
Project: 2014 3rd QUARTER-RESAMPLE
Collection Date: 9/24/2014 8:00:00 AM
Lab ID: 1409D07-003
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
Acenaphthene	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Acenaphthylene	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Aniline	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Anthracene	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Azobenzene	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Benz(a)anthracene	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Benzo(a)pyrene	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Benzo(b)fluoranthene	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Benzo(k)fluoranthene	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Benzoic acid	ND	20		µg/L	1	9/30/2014 2:37:43 AM	15566
Benzyl alcohol	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Butyl benzyl phthalate	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Carbazole	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
4-Chloroaniline	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
2-Chloronaphthalene	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
2-Chlorophenol	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Chrysene	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Di-n-butyl phthalate	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Di-n-octyl phthalate	ND	20		µg/L	1	9/30/2014 2:37:43 AM	15566
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Dibenzofuran	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
1,2-Dichlorobenzene	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
1,3-Dichlorobenzene	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
1,4-Dichlorobenzene	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Diethyl phthalate	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Dimethyl phthalate	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
2,4-Dichlorophenol	ND	20		µg/L	1	9/30/2014 2:37:43 AM	15566
2,4-Dimethylphenol	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/30/2014 2:37:43 AM	15566
2,4-Dinitrophenol	ND	20		µg/L	1	9/30/2014 2:37:43 AM	15566

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BD-MKTF RE-SAMPLE
Project: 2014 3rd QUARTER-RESAMPLE
Collection Date: 9/24/2014 8:00:00 AM
Lab ID: 1409D07-003
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
2,4-Dinitrotoluene	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
2,6-Dinitrotoluene	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Fluoranthene	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Fluorene	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Hexachlorobenzene	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Hexachlorobutadiene	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Hexachloroethane	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Isophorone	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
1-Methylnaphthalene	120	10		µg/L	1	9/30/2014 2:37:43 AM	15566
2-Methylnaphthalene	150	10		µg/L	1	9/30/2014 2:37:43 AM	15566
2-Methylphenol	ND	20		µg/L	1	9/30/2014 2:37:43 AM	15566
3+4-Methylphenol	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
N-Nitrosodimethylamine	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Naphthalene	170	10		µg/L	1	9/30/2014 2:37:43 AM	15566
2-Nitroaniline	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
3-Nitroaniline	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
4-Nitroaniline	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Nitrobenzene	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
2-Nitrophenol	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
4-Nitrophenol	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Pentachlorophenol	ND	20		µg/L	1	9/30/2014 2:37:43 AM	15566
Phenanthrene	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Phenol	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Pyrene	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Pyridine	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/30/2014 2:37:43 AM	15566
Surr: 2-Fluorophenol	62.0	12.1-85.8		%REC	1	9/30/2014 2:37:43 AM	15566
Surr: Phenol-d5	60.1	17.7-65.8		%REC	1	9/30/2014 2:37:43 AM	15566
Surr: 2,4,6-Tribromophenol	95.7	26-138		%REC	1	9/30/2014 2:37:43 AM	15566
Surr: Nitrobenzene-d5	80.1	47.5-119		%REC	1	9/30/2014 2:37:43 AM	15566
Surr: 2-Fluorobiphenyl	79.7	48.1-106		%REC	1	9/30/2014 2:37:43 AM	15566
Surr: 4-Terphenyl-d14	86.4	44-113		%REC	1	9/30/2014 2:37:43 AM	15566

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409D07**
03-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 3rd QUARTER-RESAMPLE

Sample ID **mb-15566**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **15566**	RunNo: **21529**			
Prep Date: **9/29/2014**	Analysis Date: **9/29/2014**	SeqNo: **630020**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409D07**
03-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 3rd QUARTER-RESAMPLE

Sample ID **mb-15566**	SampType: **MBLK**		TestCode: **EPA Method 8270C: Semivolatiles**		
Client ID: **PBW**	Batch ID: **15566**		RunNo: **21529**		
Prep Date: **9/29/2014**	Analysis Date: **9/29/2014**		SeqNo: **630020**	Units: **µg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	130		200.0		66.1	12.1	85.8			
Surr: Phenol-d5	110		200.0		57.0	17.7	65.8			
Surr: 2,4,6-Tribromophenol	170		200.0		83.4	26	138			
Surr: Nitrobenzene-d5	76		100.0		76.4	47.5	119			
Surr: 2-Fluorobiphenyl	72		100.0		72.5	48.1	106			
Surr: 4-Terphenyl-d14	86		100.0		85.8	44	113			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409D07**
03-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 3rd QUARTER-RESAMPLE

Sample ID **lcs-15566** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **15566** RunNo: **21529**
Prep Date: **9/29/2014** Analysis Date: **9/29/2014** SeqNo: **630021** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	80	10	100.0	0	80.2	47.9	114			
4-Chloro-3-methylphenol	170	10	200.0	0	86.9	51.7	122			
2-Chlorophenol	160	10	200.0	0	79.9	40.7	113			
1,4-Dichlorobenzene	68	10	100.0	0	67.6	39.6	99.9			
2,4-Dinitrotoluene	82	10	100.0	0	81.6	40.8	113			
N-Nitrosodi-n-propylamine	76	10	100.0	0	75.7	51.2	111			
4-Nitrophenol	140	10	200.0	0	69.3	15.7	86.9			
Pentachlorophenol	140	20	200.0	0	69.9	21.6	104			
Phenol	130	10	200.0	0	65.2	28.6	71.7			
Pyrene	89	10	100.0	0	89.4	54.2	128			
1,2,4-Trichlorobenzene	75	10	100.0	0	75.3	40.9	101			
Surr: 2-Fluorophenol	120		200.0		61.2	12.1	85.8			
Surr: Phenol-d5	110		200.0		55.4	17.7	65.8			
Surr: 2,4,6-Tribromophenol	170		200.0		86.0	26	138			
Surr: Nitrobenzene-d5	81		100.0		80.6	47.5	119			
Surr: 2-Fluorobiphenyl	76		100.0		75.9	48.1	106			
Surr: 4-Terphenyl-d14	92		100.0		92.1	44	113			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1409D07 RcptNo: 1

Received by/date: MG 09/25/14

Logged By: **Lindsay Mangin** 9/25/2014 4:00:00 PM

Completed By: **Lindsay Mangin** 9/26/2014 7:37:40 AM

Reviewed By: mg 09/26/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

92 GIANT CROSSING ROAD, GALLUP, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

2014 3rd QUARTER - RESAMPLE

MKTF-04 / MKTF-11 / BLIND DUPLICATE

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler: C. JOHNSON

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.0°

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1409D07	8260+MTBE	8015B EXTENDED	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major Cations/Anions										Air Bubbles (Y or N)
9/24/2014	0815	H20	MKTF-04	MISC	MISC	-001			X													
9/24/2014	0845	H20	MKTF-11	MISC	MISC	-002			X													
				1-L AMBER	NONE																	
9/24/2014	0800	H20	BD - MKTF RE-SAMPLE			-003			X													
	09/26/14																					

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/25/2014	1030			9/25/14	1030
9/25/14	1600			09/25/14	1600

Remarks: 8270 RE-SAMPLED. Original samples exceeded holding time.

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 06, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX: (505) 722-0210

RE: 2014 3rd QUARTER MKTF WELLS OrderNo.: 1409D05

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 8 sample(s) on 9/25/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-23
Project: 2014 3rd QUARTER MKTF WELLS
Collection Date: 9/23/2014 2:00:00 PM
Lab ID: 1409D05-001
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	14	1.0		mg/L	1	9/27/2014 4:31:50 AM	15542
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/27/2014 4:31:50 AM	15542
Surr: DNOP	108	59-141		%REC	1	9/27/2014 4:31:50 AM	15542
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	23	5.0		mg/L	100	10/3/2014 5:17:52 PM	R21651
Surr: BFB	94.2	70.9-130		%REC	100	10/3/2014 5:17:52 PM	R21651
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
Acenaphthene	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Acenaphthylene	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Aniline	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Anthracene	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Azobenzene	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Benz(a)anthracene	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Benzo(a)pyrene	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Benzo(b)fluoranthene	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Benzo(k)fluoranthene	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Benzoic acid	ND	20		µg/L	1	9/29/2014 10:56:57 PM	15566
Benzyl alcohol	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Butyl benzyl phthalate	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Carbazole	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
4-Chloroaniline	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
2-Chloronaphthalene	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
2-Chlorophenol	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Chrysene	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Di-n-butyl phthalate	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Di-n-octyl phthalate	ND	20		µg/L	1	9/29/2014 10:56:57 PM	15566
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Dibenzofuran	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
1,2-Dichlorobenzene	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
1,3-Dichlorobenzene	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-23
Project: 2014 3rd QUARTER MKTF WELLS
Collection Date: 9/23/2014 2:00:00 PM
Lab ID: 1409D05-001
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
1,4-Dichlorobenzene	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Diethyl phthalate	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Dimethyl phthalate	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
2,4-Dichlorophenol	ND	20		µg/L	1	9/29/2014 10:56:57 PM	15566
2,4-Dimethylphenol	27	10		µg/L	1	9/29/2014 10:56:57 PM	15566
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/29/2014 10:56:57 PM	15566
2,4-Dinitrophenol	ND	20		µg/L	1	9/29/2014 10:56:57 PM	15566
2,4-Dinitrotoluene	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
2,6-Dinitrotoluene	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Fluoranthene	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Fluorene	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Hexachlorobenzene	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Hexachlorobutadiene	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Hexachloroethane	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Isophorone	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
1-Methylnaphthalene	75	10		µg/L	1	9/29/2014 10:56:57 PM	15566
2-Methylnaphthalene	79	10		µg/L	1	9/29/2014 10:56:57 PM	15566
2-Methylphenol	34	20		µg/L	1	9/29/2014 10:56:57 PM	15566
3+4-Methylphenol	25	10		µg/L	1	9/29/2014 10:56:57 PM	15566
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
N-Nitrosodimethylamine	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Naphthalene	130	10		µg/L	1	9/29/2014 10:56:57 PM	15566
2-Nitroaniline	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
3-Nitroaniline	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
4-Nitroaniline	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Nitrobenzene	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
2-Nitrophenol	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
4-Nitrophenol	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Pentachlorophenol	ND	20		µg/L	1	9/29/2014 10:56:57 PM	15566
Phenanthrene	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Phenol	22	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Pyrene	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Pyridine	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-23
Project: 2014 3rd QUARTER MKTF WELLS
Collection Date: 9/23/2014 2:00:00 PM
Lab ID: 1409D05-001
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/29/2014 10:56:57 PM	15566
Surr: 2-Fluorophenol	60.2	12.1-85.8		%REC	1	9/29/2014 10:56:57 PM	15566
Surr: Phenol-d5	56.6	17.7-65.8		%REC	1	9/29/2014 10:56:57 PM	15566
Surr: 2,4,6-Tribromophenol	105	26-138		%REC	1	9/29/2014 10:56:57 PM	15566
Surr: Nitrobenzene-d5	89.4	47.5-119		%REC	1	9/29/2014 10:56:57 PM	15566
Surr: 2-Fluorobiphenyl	88.5	48.1-106		%REC	1	9/29/2014 10:56:57 PM	15566
Surr: 4-Terphenyl-d14	94.7	44-113		%REC	1	9/29/2014 10:56:57 PM	15566
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	2700	100		µg/L	100	10/3/2014 12:17:51 PM	R21646
Toluene	1400	100		µg/L	100	10/3/2014 12:17:51 PM	R21646
Ethylbenzene	340	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
Methyl tert-butyl ether (MTBE)	480	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
1,2,4-Trimethylbenzene	540	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
1,3,5-Trimethylbenzene	150	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
Naphthalene	100	20		µg/L	10	10/3/2014 12:47:26 PM	R21646
1-Methylnaphthalene	ND	40		µg/L	10	10/3/2014 12:47:26 PM	R21646
2-Methylnaphthalene	41	40		µg/L	10	10/3/2014 12:47:26 PM	R21646
Acetone	ND	100		µg/L	10	10/3/2014 12:47:26 PM	R21646
Bromobenzene	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
Bromodichloromethane	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
Bromoform	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
Bromomethane	ND	30		µg/L	10	10/3/2014 12:47:26 PM	R21646
2-Butanone	ND	100		µg/L	10	10/3/2014 12:47:26 PM	R21646
Carbon disulfide	ND	100		µg/L	10	10/3/2014 12:47:26 PM	R21646
Carbon Tetrachloride	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
Chlorobenzene	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
Chloroethane	ND	20		µg/L	10	10/3/2014 12:47:26 PM	R21646
Chloroform	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
Chloromethane	ND	30		µg/L	10	10/3/2014 12:47:26 PM	R21646
2-Chlorotoluene	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
4-Chlorotoluene	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
cis-1,2-DCE	29	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
cis-1,3-Dichloropropene	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	10/3/2014 12:47:26 PM	R21646
Dibromochloromethane	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
Dibromomethane	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
1,2-Dichlorobenzene	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-23
Project: 2014 3rd QUARTER MKTF WELLS
Collection Date: 9/23/2014 2:00:00 PM
Lab ID: 1409D05-001
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,3-Dichlorobenzene	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
1,4-Dichlorobenzene	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
Dichlorodifluoromethane	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
1,1-Dichloroethane	92	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
1,1-Dichloroethene	47	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
1,2-Dichloropropane	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
1,3-Dichloropropane	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
2,2-Dichloropropane	ND	20		µg/L	10	10/3/2014 12:47:26 PM	R21646
1,1-Dichloropropene	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
Hexachlorobutadiene	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
2-Hexanone	ND	100		µg/L	10	10/3/2014 12:47:26 PM	R21646
Isopropylbenzene	26	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
4-Isopropyltoluene	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
4-Methyl-2-pentanone	ND	100		µg/L	10	10/3/2014 12:47:26 PM	R21646
Methylene Chloride	ND	30		µg/L	10	10/3/2014 12:47:26 PM	R21646
n-Butylbenzene	ND	30		µg/L	10	10/3/2014 12:47:26 PM	R21646
n-Propylbenzene	58	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
sec-Butylbenzene	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
Styrene	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
tert-Butylbenzene	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	10/3/2014 12:47:26 PM	R21646
Tetrachloroethene (PCE)	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
trans-1,2-DCE	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
trans-1,3-Dichloropropene	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
1,2,3-Trichlorobenzene	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
1,2,4-Trichlorobenzene	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
1,1,1-Trichloroethane	24	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
1,1,2-Trichloroethane	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
Trichloroethene (TCE)	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
Trichlorofluoromethane	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
1,2,3-Trichloropropane	ND	20		µg/L	10	10/3/2014 12:47:26 PM	R21646
Vinyl chloride	ND	10		µg/L	10	10/3/2014 12:47:26 PM	R21646
Xylenes, Total	1600	15		µg/L	10	10/3/2014 12:47:26 PM	R21646
Surr: 1,2-Dichloroethane-d4	93.9	70-130		%REC	10	10/3/2014 12:47:26 PM	R21646
Surr: 4-Bromofluorobenzene	109	70-130		%REC	10	10/3/2014 12:47:26 PM	R21646
Surr: Dibromofluoromethane	92.9	70-130		%REC	10	10/3/2014 12:47:26 PM	R21646
Surr: Toluene-d8	94.7	70-130		%REC	10	10/3/2014 12:47:26 PM	R21646

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-33
Project: 2014 3rd QUARTER MKTF WELLS
Collection Date: 9/23/2014 2:30:00 PM
Lab ID: 1409D05-002
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/27/2014 5:01:50 AM	15542
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/27/2014 5:01:50 AM	15542
Surr: DNOP	117	59-141		%REC	1	9/27/2014 5:01:50 AM	15542
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	0.25	0.050		mg/L	1	10/3/2014 5:48:07 PM	R21651
Surr: BFB	84.0	70.9-130		%REC	1	10/3/2014 5:48:07 PM	R21651
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
Acenaphthene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Acenaphthylene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Aniline	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Anthracene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Azobenzene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Benz(a)anthracene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Benzo(a)pyrene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Benzo(b)fluoranthene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Benzo(k)fluoranthene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Benzoic acid	ND	20		µg/L	1	9/29/2014 11:24:42 PM	15566
Benzyl alcohol	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Butyl benzyl phthalate	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Carbazole	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
4-Chloroaniline	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
2-Chloronaphthalene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
2-Chlorophenol	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Chrysene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Di-n-butyl phthalate	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Di-n-octyl phthalate	ND	20		µg/L	1	9/29/2014 11:24:42 PM	15566
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Dibenzofuran	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
1,2-Dichlorobenzene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
1,3-Dichlorobenzene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-33
Project: 2014 3rd QUARTER MKTF WELLS
Collection Date: 9/23/2014 2:30:00 PM
Lab ID: 1409D05-002
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
1,4-Dichlorobenzene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Diethyl phthalate	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Dimethyl phthalate	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
2,4-Dichlorophenol	ND	20		µg/L	1	9/29/2014 11:24:42 PM	15566
2,4-Dimethylphenol	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/29/2014 11:24:42 PM	15566
2,4-Dinitrophenol	ND	20		µg/L	1	9/29/2014 11:24:42 PM	15566
2,4-Dinitrotoluene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
2,6-Dinitrotoluene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Fluoranthene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Fluorene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Hexachlorobenzene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Hexachlorobutadiene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Hexachloroethane	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Isophorone	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
1-Methylnaphthalene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
2-Methylnaphthalene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
2-Methylphenol	ND	20		µg/L	1	9/29/2014 11:24:42 PM	15566
3+4-Methylphenol	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
N-Nitrosodimethylamine	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Naphthalene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
2-Nitroaniline	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
3-Nitroaniline	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
4-Nitroaniline	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Nitrobenzene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
2-Nitrophenol	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
4-Nitrophenol	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Pentachlorophenol	ND	20		µg/L	1	9/29/2014 11:24:42 PM	15566
Phenanthrene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Phenol	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Pyrene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Pyridine	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-33
Project: 2014 3rd QUARTER MKTF WELLS
Collection Date: 9/23/2014 2:30:00 PM
Lab ID: 1409D05-002
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/29/2014 11:24:42 PM	15566
Surr: 2-Fluorophenol	70.7	12.1-85.8		%REC	1	9/29/2014 11:24:42 PM	15566
Surr: Phenol-d5	64.8	17.7-65.8		%REC	1	9/29/2014 11:24:42 PM	15566
Surr: 2,4,6-Tribromophenol	79.1	26-138		%REC	1	9/29/2014 11:24:42 PM	15566
Surr: Nitrobenzene-d5	89.5	47.5-119		%REC	1	9/29/2014 11:24:42 PM	15566
Surr: 2-Fluorobiphenyl	83.1	48.1-106		%REC	1	9/29/2014 11:24:42 PM	15566
Surr: 4-Terphenyl-d14	85.2	44-113		%REC	1	9/29/2014 11:24:42 PM	15566
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
Toluene	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
Ethylbenzene	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
Methyl tert-butyl ether (MTBE)	450	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
1,2,4-Trimethylbenzene	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
1,3,5-Trimethylbenzene	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
Naphthalene	ND	10		µg/L	5	10/3/2014 1:46:37 PM	R21646
1-Methylnaphthalene	ND	20		µg/L	5	10/3/2014 1:46:37 PM	R21646
2-Methylnaphthalene	ND	20		µg/L	5	10/3/2014 1:46:37 PM	R21646
Acetone	ND	50		µg/L	5	10/3/2014 1:46:37 PM	R21646
Bromobenzene	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
Bromodichloromethane	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
Bromoform	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
Bromomethane	ND	15		µg/L	5	10/3/2014 1:46:37 PM	R21646
2-Butanone	ND	50		µg/L	5	10/3/2014 1:46:37 PM	R21646
Carbon disulfide	ND	50		µg/L	5	10/3/2014 1:46:37 PM	R21646
Carbon Tetrachloride	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
Chlorobenzene	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
Chloroethane	ND	10		µg/L	5	10/3/2014 1:46:37 PM	R21646
Chloroform	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
Chloromethane	ND	15		µg/L	5	10/3/2014 1:46:37 PM	R21646
2-Chlorotoluene	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
4-Chlorotoluene	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
cis-1,2-DCE	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
cis-1,3-Dichloropropene	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
1,2-Dibromo-3-chloropropane	ND	10		µg/L	5	10/3/2014 1:46:37 PM	R21646
Dibromochloromethane	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
Dibromomethane	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
1,2-Dichlorobenzene	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-33
Project: 2014 3rd QUARTER MKTF WELLS
Collection Date: 9/23/2014 2:30:00 PM
Lab ID: 1409D05-002
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,3-Dichlorobenzene	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
1,4-Dichlorobenzene	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
Dichlorodifluoromethane	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
1,1-Dichloroethane	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
1,1-Dichloroethene	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
1,2-Dichloropropane	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
1,3-Dichloropropane	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
2,2-Dichloropropane	ND	10		µg/L	5	10/3/2014 1:46:37 PM	R21646
1,1-Dichloropropene	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
Hexachlorobutadiene	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
2-Hexanone	ND	50		µg/L	5	10/3/2014 1:46:37 PM	R21646
Isopropylbenzene	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
4-Isopropyltoluene	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
4-Methyl-2-pentanone	ND	50		µg/L	5	10/3/2014 1:46:37 PM	R21646
Methylene Chloride	ND	15		µg/L	5	10/3/2014 1:46:37 PM	R21646
n-Butylbenzene	ND	15		µg/L	5	10/3/2014 1:46:37 PM	R21646
n-Propylbenzene	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
sec-Butylbenzene	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
Styrene	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
tert-Butylbenzene	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
1,1,2,2-Tetrachloroethane	ND	10		µg/L	5	10/3/2014 1:46:37 PM	R21646
Tetrachloroethene (PCE)	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
trans-1,2-DCE	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
trans-1,3-Dichloropropene	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
1,2,3-Trichlorobenzene	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
1,2,4-Trichlorobenzene	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
1,1,1-Trichloroethane	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
1,1,2-Trichloroethane	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
Trichloroethene (TCE)	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
Trichlorofluoromethane	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
1,2,3-Trichloropropane	ND	10		µg/L	5	10/3/2014 1:46:37 PM	R21646
Vinyl chloride	ND	5.0		µg/L	5	10/3/2014 1:46:37 PM	R21646
Xylenes, Total	ND	7.5		µg/L	5	10/3/2014 1:46:37 PM	R21646
Surr: 1,2-Dichloroethane-d4	87.4	70-130		%REC	5	10/3/2014 1:46:37 PM	R21646
Surr: 4-Bromofluorobenzene	106	70-130		%REC	5	10/3/2014 1:46:37 PM	R21646
Surr: Dibromofluoromethane	89.3	70-130		%REC	5	10/3/2014 1:46:37 PM	R21646
Surr: Toluene-d8	96.7	70-130		%REC	5	10/3/2014 1:46:37 PM	R21646

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-32
Project: 2014 3rd QUARTER MKTF WELLS
Collection Date: 9/23/2014 2:55:00 PM
Lab ID: 1409D05-003
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/27/2014 5:31:17 AM	15542
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/27/2014 5:31:17 AM	15542
Surr: DNOP	120	59-141		%REC	1	9/27/2014 5:31:17 AM	15542
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	0.23	0.050		mg/L	1	10/3/2014 6:18:13 PM	R21651
Surr: BFB	104	70.9-130		%REC	1	10/3/2014 6:18:13 PM	R21651
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
Acenaphthene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Acenaphthylene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Aniline	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Anthracene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Azobenzene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Benz(a)anthracene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Benzo(a)pyrene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Benzo(b)fluoranthene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Benzo(k)fluoranthene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Benzoic acid	ND	20		µg/L	1	9/29/2014 11:52:26 PM	15566
Benzyl alcohol	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Butyl benzyl phthalate	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Carbazole	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
4-Chloroaniline	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
2-Chloronaphthalene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
2-Chlorophenol	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Chrysene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Di-n-butyl phthalate	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Di-n-octyl phthalate	ND	20		µg/L	1	9/29/2014 11:52:26 PM	15566
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Dibenzofuran	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
1,2-Dichlorobenzene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
1,3-Dichlorobenzene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-32
Project: 2014 3rd QUARTER MKTF WELLS
Collection Date: 9/23/2014 2:55:00 PM
Lab ID: 1409D05-003
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
1,4-Dichlorobenzene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Diethyl phthalate	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Dimethyl phthalate	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
2,4-Dichlorophenol	ND	20		µg/L	1	9/29/2014 11:52:26 PM	15566
2,4-Dimethylphenol	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/29/2014 11:52:26 PM	15566
2,4-Dinitrophenol	ND	20		µg/L	1	9/29/2014 11:52:26 PM	15566
2,4-Dinitrotoluene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
2,6-Dinitrotoluene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Fluoranthene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Fluorene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Hexachlorobenzene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Hexachlorobutadiene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Hexachloroethane	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Isophorone	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
1-Methylnaphthalene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
2-Methylnaphthalene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
2-Methylphenol	ND	20		µg/L	1	9/29/2014 11:52:26 PM	15566
3+4-Methylphenol	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
N-Nitrosodimethylamine	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Naphthalene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
2-Nitroaniline	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
3-Nitroaniline	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
4-Nitroaniline	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Nitrobenzene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
2-Nitrophenol	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
4-Nitrophenol	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Pentachlorophenol	ND	20		µg/L	1	9/29/2014 11:52:26 PM	15566
Phenanthrene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Phenol	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Pyrene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Pyridine	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-32
Project: 2014 3rd QUARTER MKTF WELLS
Collection Date: 9/23/2014 2:55:00 PM
Lab ID: 1409D05-003
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/29/2014 11:52:26 PM	15566
Surr: 2-Fluorophenol	69.8	12.1-85.8		%REC	1	9/29/2014 11:52:26 PM	15566
Surr: Phenol-d5	62.5	17.7-65.8		%REC	1	9/29/2014 11:52:26 PM	15566
Surr: 2,4,6-Tribromophenol	73.7	26-138		%REC	1	9/29/2014 11:52:26 PM	15566
Surr: Nitrobenzene-d5	84.0	47.5-119		%REC	1	9/29/2014 11:52:26 PM	15566
Surr: 2-Fluorobiphenyl	76.1	48.1-106		%REC	1	9/29/2014 11:52:26 PM	15566
Surr: 4-Terphenyl-d14	76.9	44-113		%REC	1	9/29/2014 11:52:26 PM	15566
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
Toluene	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
Ethylbenzene	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
Methyl tert-butyl ether (MTBE)	320	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
1,2,4-Trimethylbenzene	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
1,3,5-Trimethylbenzene	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
1,2-Dichloroethane (EDC)	29	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
Naphthalene	ND	10		µg/L	5	10/3/2014 3:15:25 PM	R21646
1-Methylnaphthalene	ND	20		µg/L	5	10/3/2014 3:15:25 PM	R21646
2-Methylnaphthalene	ND	20		µg/L	5	10/3/2014 3:15:25 PM	R21646
Acetone	ND	50		µg/L	5	10/3/2014 3:15:25 PM	R21646
Bromobenzene	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
Bromodichloromethane	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
Bromoform	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
Bromomethane	ND	15		µg/L	5	10/3/2014 3:15:25 PM	R21646
2-Butanone	ND	50		µg/L	5	10/3/2014 3:15:25 PM	R21646
Carbon disulfide	ND	50		µg/L	5	10/3/2014 3:15:25 PM	R21646
Carbon Tetrachloride	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
Chlorobenzene	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
Chloroethane	ND	10		µg/L	5	10/3/2014 3:15:25 PM	R21646
Chloroform	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
Chloromethane	ND	15		µg/L	5	10/3/2014 3:15:25 PM	R21646
2-Chlorotoluene	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
4-Chlorotoluene	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
cis-1,2-DCE	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
cis-1,3-Dichloropropene	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
1,2-Dibromo-3-chloropropane	ND	10		µg/L	5	10/3/2014 3:15:25 PM	R21646
Dibromochloromethane	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
Dibromomethane	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
1,2-Dichlorobenzene	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-32
Project: 2014 3rd QUARTER MKTF WELLS
Collection Date: 9/23/2014 2:55:00 PM
Lab ID: 1409D05-003
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,3-Dichlorobenzene	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
1,4-Dichlorobenzene	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
Dichlorodifluoromethane	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
1,1-Dichloroethane	23	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
1,1-Dichloroethene	54	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
1,2-Dichloropropane	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
1,3-Dichloropropane	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
2,2-Dichloropropane	ND	10		µg/L	5	10/3/2014 3:15:25 PM	R21646
1,1-Dichloropropene	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
Hexachlorobutadiene	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
2-Hexanone	ND	50		µg/L	5	10/3/2014 3:15:25 PM	R21646
Isopropylbenzene	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
4-Isopropyltoluene	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
4-Methyl-2-pentanone	ND	50		µg/L	5	10/3/2014 3:15:25 PM	R21646
Methylene Chloride	ND	15		µg/L	5	10/3/2014 3:15:25 PM	R21646
n-Butylbenzene	ND	15		µg/L	5	10/3/2014 3:15:25 PM	R21646
n-Propylbenzene	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
sec-Butylbenzene	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
Styrene	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
tert-Butylbenzene	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
1,1,2,2-Tetrachloroethane	ND	10		µg/L	5	10/3/2014 3:15:25 PM	R21646
Tetrachloroethene (PCE)	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
trans-1,2-DCE	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
trans-1,3-Dichloropropene	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
1,2,3-Trichlorobenzene	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
1,2,4-Trichlorobenzene	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
1,1,1-Trichloroethane	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
1,1,2-Trichloroethane	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
Trichloroethene (TCE)	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
Trichlorofluoromethane	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
1,2,3-Trichloropropane	ND	10		µg/L	5	10/3/2014 3:15:25 PM	R21646
Vinyl chloride	ND	5.0		µg/L	5	10/3/2014 3:15:25 PM	R21646
Xylenes, Total	ND	7.5		µg/L	5	10/3/2014 3:15:25 PM	R21646
Surr: 1,2-Dichloroethane-d4	91.0	70-130		%REC	5	10/3/2014 3:15:25 PM	R21646
Surr: 4-Bromofluorobenzene	102	70-130		%REC	5	10/3/2014 3:15:25 PM	R21646
Surr: Dibromofluoromethane	87.9	70-130		%REC	5	10/3/2014 3:15:25 PM	R21646
Surr: Toluene-d8	93.8	70-130		%REC	5	10/3/2014 3:15:25 PM	R21646

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-31
Project: 2014 3rd QUARTER MKTF WELLS
Collection Date: 9/23/2014 3:10:00 PM
Lab ID: 1409D05-004
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/27/2014 6:00:44 AM	15542
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/27/2014 6:00:44 AM	15542
Surr: DNOP	126	59-141		%REC	1	9/27/2014 6:00:44 AM	15542
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	0.061	0.050		mg/L	1	10/3/2014 6:48:15 PM	R21651
Surr: BFB	93.4	70.9-130		%REC	1	10/3/2014 6:48:15 PM	R21651
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
Acenaphthene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Acenaphthylene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Aniline	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Anthracene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Azobenzene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Benz(a)anthracene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Benzo(a)pyrene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Benzo(b)fluoranthene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Benzo(g,h,i)perylene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Benzo(k)fluoranthene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Benzoic acid	ND	25		µg/L	1	9/30/2014 4:32:53 PM	15605
Benzyl alcohol	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Bis(2-chloroethoxy)methane	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Bis(2-chloroethyl)ether	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Bis(2-chloroisopropyl)ether	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Bis(2-ethylhexyl)phthalate	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
4-Bromophenyl phenyl ether	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Butyl benzyl phthalate	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Carbazole	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
4-Chloro-3-methylphenol	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
4-Chloroaniline	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
2-Chloronaphthalene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
2-Chlorophenol	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
4-Chlorophenyl phenyl ether	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Chrysene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Di-n-butyl phthalate	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Di-n-octyl phthalate	ND	25		µg/L	1	9/30/2014 4:32:53 PM	15605
Dibenz(a,h)anthracene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Dibenzofuran	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
1,2-Dichlorobenzene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
1,3-Dichlorobenzene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-31
Project: 2014 3rd QUARTER MKTF WELLS
Collection Date: 9/23/2014 3:10:00 PM
Lab ID: 1409D05-004
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
1,4-Dichlorobenzene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
3,3´-Dichlorobenzidine	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Diethyl phthalate	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Dimethyl phthalate	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
2,4-Dichlorophenol	ND	25		µg/L	1	9/30/2014 4:32:53 PM	15605
2,4-Dimethylphenol	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
4,6-Dinitro-2-methylphenol	ND	25		µg/L	1	9/30/2014 4:32:53 PM	15605
2,4-Dinitrophenol	ND	25		µg/L	1	9/30/2014 4:32:53 PM	15605
2,4-Dinitrotoluene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
2,6-Dinitrotoluene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Fluoranthene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Fluorene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Hexachlorobenzene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Hexachlorobutadiene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Hexachlorocyclopentadiene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Hexachloroethane	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Indeno(1,2,3-cd)pyrene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Isophorone	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
1-Methylnaphthalene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
2-Methylnaphthalene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
2-Methylphenol	ND	25		µg/L	1	9/30/2014 4:32:53 PM	15605
3+4-Methylphenol	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
N-Nitrosodi-n-propylamine	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
N-Nitrosodimethylamine	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
N-Nitrosodiphenylamine	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Naphthalene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
2-Nitroaniline	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
3-Nitroaniline	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
4-Nitroaniline	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Nitrobenzene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
2-Nitrophenol	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
4-Nitrophenol	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Pentachlorophenol	ND	25		µg/L	1	9/30/2014 4:32:53 PM	15605
Phenanthrene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Phenol	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Pyrene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Pyridine	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
1,2,4-Trichlorobenzene	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
2,4,5-Trichlorophenol	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-31
Project: 2014 3rd QUARTER MKTF WELLS
Collection Date: 9/23/2014 3:10:00 PM
Lab ID: 1409D05-004
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
2,4,6-Trichlorophenol	ND	12		µg/L	1	9/30/2014 4:32:53 PM	15605
Surr: 2-Fluorophenol	47.9	12.1-85.8		%REC	1	9/30/2014 4:32:53 PM	15605
Surr: Phenol-d5	53.2	17.7-65.8		%REC	1	9/30/2014 4:32:53 PM	15605
Surr: 2,4,6-Tribromophenol	33.3	26-138		%REC	1	9/30/2014 4:32:53 PM	15605
Surr: Nitrobenzene-d5	83.1	47.5-119		%REC	1	9/30/2014 4:32:53 PM	15605
Surr: 2-Fluorobiphenyl	71.6	48.1-106		%REC	1	9/30/2014 4:32:53 PM	15605
Surr: 4-Terphenyl-d14	79.5	44-113		%REC	1	9/30/2014 4:32:53 PM	15605
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
Toluene	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
Ethylbenzene	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
Methyl tert-butyl ether (MTBE)	55	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
1,2-Dichloroethane (EDC)	13	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
Naphthalene	ND	2.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
1-Methylnaphthalene	ND	4.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
2-Methylnaphthalene	ND	4.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
Acetone	ND	10		µg/L	1	10/3/2014 3:45:04 PM	R21646
Bromobenzene	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
Bromodichloromethane	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
Bromoform	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
Bromomethane	ND	3.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
2-Butanone	ND	10		µg/L	1	10/3/2014 3:45:04 PM	R21646
Carbon disulfide	ND	10		µg/L	1	10/3/2014 3:45:04 PM	R21646
Carbon Tetrachloride	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
Chlorobenzene	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
Chloroethane	ND	2.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
Chloroform	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
Chloromethane	ND	3.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
2-Chlorotoluene	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
4-Chlorotoluene	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
cis-1,2-DCE	1.8	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
Dibromochloromethane	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
Dibromomethane	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-31
Project: 2014 3rd QUARTER MKTF WELLS
Collection Date: 9/23/2014 3:10:00 PM
Lab ID: 1409D05-004
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
1,1-Dichloroethane	22	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
1,1-Dichloroethene	41	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
1,2-Dichloropropane	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
1,3-Dichloropropane	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
2,2-Dichloropropane	ND	2.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
1,1-Dichloropropene	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
Hexachlorobutadiene	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
2-Hexanone	ND	10		µg/L	1	10/3/2014 3:45:04 PM	R21646
Isopropylbenzene	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
4-Isopropyltoluene	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
4-Methyl-2-pentanone	ND	10		µg/L	1	10/3/2014 3:45:04 PM	R21646
Methylene Chloride	ND	3.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
n-Butylbenzene	ND	3.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
n-Propylbenzene	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
sec-Butylbenzene	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
Styrene	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
tert-Butylbenzene	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
trans-1,2-DCE	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
1,1,1-Trichloroethane	3.7	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
1,1,2-Trichloroethane	1.6	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
Trichloroethene (TCE)	2.4	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
Trichlorofluoromethane	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
Vinyl chloride	ND	1.0		µg/L	1	10/3/2014 3:45:04 PM	R21646
Xylenes, Total	ND	1.5		µg/L	1	10/3/2014 3:45:04 PM	R21646
Surr: 1,2-Dichloroethane-d4	92.1	70-130		%REC	1	10/3/2014 3:45:04 PM	R21646
Surr: 4-Bromofluorobenzene	107	70-130		%REC	1	10/3/2014 3:45:04 PM	R21646
Surr: Dibromofluoromethane	87.9	70-130		%REC	1	10/3/2014 3:45:04 PM	R21646
Surr: Toluene-d8	92.7	70-130		%REC	1	10/3/2014 3:45:04 PM	R21646

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-25
Project: 2014 3rd QUARTER MKTF WELLS
Collection Date: 9/23/2014 3:30:00 PM
Lab ID: 1409D05-005
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/27/2014 6:30:19 AM	15542
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/27/2014 6:30:19 AM	15542
Surr: DNOP	125	59-141		%REC	1	9/27/2014 6:30:19 AM	15542
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	5.8	1.0		mg/L	20	10/4/2014 1:19:58 AM	R21651
Surr: BFB	105	70.9-130		%REC	20	10/4/2014 1:19:58 AM	R21651
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
Acenaphthene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Acenaphthylene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Aniline	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Anthracene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Azobenzene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Benz(a)anthracene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Benzo(a)pyrene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Benzo(b)fluoranthene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Benzo(k)fluoranthene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Benzoic acid	ND	20		µg/L	1	9/30/2014 12:47:41 AM	15566
Benzyl alcohol	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Butyl benzyl phthalate	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Carbazole	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
4-Chloroaniline	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
2-Chloronaphthalene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
2-Chlorophenol	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Chrysene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Di-n-butyl phthalate	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Di-n-octyl phthalate	ND	20		µg/L	1	9/30/2014 12:47:41 AM	15566
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Dibenzofuran	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
1,2-Dichlorobenzene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
1,3-Dichlorobenzene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-25
Project: 2014 3rd QUARTER MKTF WELLS
Collection Date: 9/23/2014 3:30:00 PM
Lab ID: 1409D05-005
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
1,4-Dichlorobenzene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Diethyl phthalate	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Dimethyl phthalate	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
2,4-Dichlorophenol	ND	20		µg/L	1	9/30/2014 12:47:41 AM	15566
2,4-Dimethylphenol	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/30/2014 12:47:41 AM	15566
2,4-Dinitrophenol	ND	20		µg/L	1	9/30/2014 12:47:41 AM	15566
2,4-Dinitrotoluene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
2,6-Dinitrotoluene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Fluoranthene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Fluorene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Hexachlorobenzene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Hexachlorobutadiene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Hexachloroethane	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Isophorone	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
1-Methylnaphthalene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
2-Methylnaphthalene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
2-Methylphenol	ND	20		µg/L	1	9/30/2014 12:47:41 AM	15566
3+4-Methylphenol	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
N-Nitrosodimethylamine	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Naphthalene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
2-Nitroaniline	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
3-Nitroaniline	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
4-Nitroaniline	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Nitrobenzene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
2-Nitrophenol	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
4-Nitrophenol	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Pentachlorophenol	ND	20		µg/L	1	9/30/2014 12:47:41 AM	15566
Phenanthrene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Phenol	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Pyrene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Pyridine	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-25
Project: 2014 3rd QUARTER MKTF WELLS
Collection Date: 9/23/2014 3:30:00 PM
Lab ID: 1409D05-005
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/30/2014 12:47:41 AM	15566
Surr: 2-Fluorophenol	85.6	12.1-85.8		%REC	1	9/30/2014 12:47:41 AM	15566
Surr: Phenol-d5	81.9	17.7-65.8	S	%REC	1	9/30/2014 12:47:41 AM	15566
Surr: 2,4,6-Tribromophenol	99.6	26-138		%REC	1	9/30/2014 12:47:41 AM	15566
Surr: Nitrobenzene-d5	107	47.5-119		%REC	1	9/30/2014 12:47:41 AM	15566
Surr: 2-Fluorobiphenyl	101	48.1-106		%REC	1	9/30/2014 12:47:41 AM	15566
Surr: 4-Terphenyl-d14	97.0	44-113		%REC	1	9/30/2014 12:47:41 AM	15566
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	530	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
Toluene	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
Ethylbenzene	12	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
Methyl tert-butyl ether (MTBE)	230	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
1,2,4-Trimethylbenzene	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
1,3,5-Trimethylbenzene	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
Naphthalene	ND	20		µg/L	10	10/3/2014 4:14:45 PM	R21646
1-Methylnaphthalene	ND	40		µg/L	10	10/3/2014 4:14:45 PM	R21646
2-Methylnaphthalene	ND	40		µg/L	10	10/3/2014 4:14:45 PM	R21646
Acetone	ND	100		µg/L	10	10/3/2014 4:14:45 PM	R21646
Bromobenzene	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
Bromodichloromethane	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
Bromoform	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
Bromomethane	ND	30		µg/L	10	10/3/2014 4:14:45 PM	R21646
2-Butanone	ND	100		µg/L	10	10/3/2014 4:14:45 PM	R21646
Carbon disulfide	ND	100		µg/L	10	10/3/2014 4:14:45 PM	R21646
Carbon Tetrachloride	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
Chlorobenzene	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
Chloroethane	ND	20		µg/L	10	10/3/2014 4:14:45 PM	R21646
Chloroform	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
Chloromethane	ND	30		µg/L	10	10/3/2014 4:14:45 PM	R21646
2-Chlorotoluene	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
4-Chlorotoluene	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
cis-1,2-DCE	46	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
cis-1,3-Dichloropropene	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	10/3/2014 4:14:45 PM	R21646
Dibromochloromethane	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
Dibromomethane	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
1,2-Dichlorobenzene	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-25
Project: 2014 3rd QUARTER MKTF WELLS
Collection Date: 9/23/2014 3:30:00 PM
Lab ID: 1409D05-005
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,3-Dichlorobenzene	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
1,4-Dichlorobenzene	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
Dichlorodifluoromethane	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
1,1-Dichloroethane	250	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
1,1-Dichloroethene	100	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
1,2-Dichloropropane	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
1,3-Dichloropropane	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
2,2-Dichloropropane	ND	20		µg/L	10	10/3/2014 4:14:45 PM	R21646
1,1-Dichloropropene	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
Hexachlorobutadiene	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
2-Hexanone	ND	100		µg/L	10	10/3/2014 4:14:45 PM	R21646
Isopropylbenzene	38	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
4-Isopropyltoluene	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
4-Methyl-2-pentanone	ND	100		µg/L	10	10/3/2014 4:14:45 PM	R21646
Methylene Chloride	ND	30		µg/L	10	10/3/2014 4:14:45 PM	R21646
n-Butylbenzene	ND	30		µg/L	10	10/3/2014 4:14:45 PM	R21646
n-Propylbenzene	41	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
sec-Butylbenzene	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
Styrene	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
tert-Butylbenzene	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	10/3/2014 4:14:45 PM	R21646
Tetrachloroethene (PCE)	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
trans-1,2-DCE	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
trans-1,3-Dichloropropene	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
1,2,3-Trichlorobenzene	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
1,2,4-Trichlorobenzene	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
1,1,1-Trichloroethane	30	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
1,1,2-Trichloroethane	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
Trichloroethene (TCE)	24	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
Trichlorofluoromethane	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
1,2,3-Trichloropropane	ND	20		µg/L	10	10/3/2014 4:14:45 PM	R21646
Vinyl chloride	ND	10		µg/L	10	10/3/2014 4:14:45 PM	R21646
Xylenes, Total	ND	15		µg/L	10	10/3/2014 4:14:45 PM	R21646
Surr: 1,2-Dichloroethane-d4	92.1	70-130		%REC	10	10/3/2014 4:14:45 PM	R21646
Surr: 4-Bromofluorobenzene	104	70-130		%REC	10	10/3/2014 4:14:45 PM	R21646
Surr: Dibromofluoromethane	96.2	70-130		%REC	10	10/3/2014 4:14:45 PM	R21646
Surr: Toluene-d8	90.0	70-130		%REC	10	10/3/2014 4:14:45 PM	R21646

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Trip Blank
Project: 2014 3rd QUARTER MKTF WELLS
Collection Date: 9/23/2014 1:00:00 PM
Lab ID: 1409D05-006
Matrix: TRIP BLANK
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	10/4/2014 1:49:46 AM	R21651
Surr: BFB	87.8	70.9-130		%REC	1	10/4/2014 1:49:46 AM	R21651
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
Toluene	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
Ethylbenzene	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
Naphthalene	ND	2.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
1-Methylnaphthalene	ND	4.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
2-Methylnaphthalene	ND	4.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
Acetone	ND	10		µg/L	1	10/3/2014 4:44:24 PM	R21646
Bromobenzene	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
Bromodichloromethane	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
Bromoform	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
Bromomethane	ND	3.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
2-Butanone	ND	10		µg/L	1	10/3/2014 4:44:24 PM	R21646
Carbon disulfide	ND	10		µg/L	1	10/3/2014 4:44:24 PM	R21646
Carbon Tetrachloride	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
Chlorobenzene	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
Chloroethane	ND	2.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
Chloroform	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
Chloromethane	ND	3.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
2-Chlorotoluene	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
4-Chlorotoluene	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
cis-1,2-DCE	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
Dibromochloromethane	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
Dibromomethane	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
1,1-Dichloroethane	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
1,1-Dichloroethene	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Trip Blank
Project: 2014 3rd QUARTER MKTF WELLS
Collection Date: 9/23/2014 1:00:00 PM
Lab ID: 1409D05-006
Matrix: TRIP BLANK
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dichloropropane	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
1,3-Dichloropropane	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
2,2-Dichloropropane	ND	2.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
1,1-Dichloropropene	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
Hexachlorobutadiene	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
2-Hexanone	ND	10		µg/L	1	10/3/2014 4:44:24 PM	R21646
Isopropylbenzene	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
4-Isopropyltoluene	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
4-Methyl-2-pentanone	ND	10		µg/L	1	10/3/2014 4:44:24 PM	R21646
Methylene Chloride	ND	3.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
n-Butylbenzene	ND	3.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
n-Propylbenzene	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
sec-Butylbenzene	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
Styrene	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
tert-Butylbenzene	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
trans-1,2-DCE	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
Trichlorofluoromethane	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
Vinyl chloride	ND	1.0		µg/L	1	10/3/2014 4:44:24 PM	R21646
Xylenes, Total	ND	1.5		µg/L	1	10/3/2014 4:44:24 PM	R21646
Surr: 1,2-Dichloroethane-d4	88.8	70-130		%REC	1	10/3/2014 4:44:24 PM	R21646
Surr: 4-Bromofluorobenzene	103	70-130		%REC	1	10/3/2014 4:44:24 PM	R21646
Surr: Dibromofluoromethane	88.8	70-130		%REC	1	10/3/2014 4:44:24 PM	R21646
Surr: Toluene-d8	97.7	70-130		%REC	1	10/3/2014 4:44:24 PM	R21646

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Field Blank
Project: 2014 3rd QUARTER MKTF WELLS
Collection Date: 9/23/2014 1:00:00 PM
Lab ID: 1409D05-007
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
Toluene	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
Ethylbenzene	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
Naphthalene	ND	2.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
1-Methylnaphthalene	ND	4.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
2-Methylnaphthalene	ND	4.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
Acetone	ND	10		µg/L	1	10/3/2014 5:14:01 PM	R21646
Bromobenzene	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
Bromodichloromethane	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
Bromoform	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
Bromomethane	ND	3.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
2-Butanone	ND	10		µg/L	1	10/3/2014 5:14:01 PM	R21646
Carbon disulfide	ND	10		µg/L	1	10/3/2014 5:14:01 PM	R21646
Carbon Tetrachloride	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
Chlorobenzene	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
Chloroethane	ND	2.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
Chloroform	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
Chloromethane	ND	3.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
2-Chlorotoluene	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
4-Chlorotoluene	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
cis-1,2-DCE	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
Dibromochloromethane	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
Dibromomethane	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
1,2-Dichlorobenzene	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
1,3-Dichlorobenzene	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
1,4-Dichlorobenzene	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
Dichlorodifluoromethane	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
1,1-Dichloroethane	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
1,1-Dichloroethene	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
1,2-Dichloropropane	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
1,3-Dichloropropane	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
2,2-Dichloropropane	ND	2.0		µg/L	1	10/3/2014 5:14:01 PM	R21646

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Field Blank
Project: 2014 3rd QUARTER MKTF WELLS
Collection Date: 9/23/2014 1:00:00 PM
Lab ID: 1409D05-007
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
Hexachlorobutadiene	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
2-Hexanone	ND	10		µg/L	1	10/3/2014 5:14:01 PM	R21646
Isopropylbenzene	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
4-Isopropyltoluene	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
4-Methyl-2-pentanone	ND	10		µg/L	1	10/3/2014 5:14:01 PM	R21646
Methylene Chloride	ND	3.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
n-Butylbenzene	ND	3.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
n-Propylbenzene	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
sec-Butylbenzene	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
Styrene	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
tert-Butylbenzene	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
trans-1,2-DCE	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
1,1,1-Trichloroethane	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
1,1,2-Trichloroethane	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
Trichloroethene (TCE)	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
Trichlorofluoromethane	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
1,2,3-Trichloropropane	ND	2.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
Vinyl chloride	ND	1.0		µg/L	1	10/3/2014 5:14:01 PM	R21646
Xylenes, Total	ND	1.5		µg/L	1	10/3/2014 5:14:01 PM	R21646
Surr: 1,2-Dichloroethane-d4	85.3	70-130		%REC	1	10/3/2014 5:14:01 PM	R21646
Surr: 4-Bromofluorobenzene	93.5	70-130		%REC	1	10/3/2014 5:14:01 PM	R21646
Surr: Dibromofluoromethane	88.0	70-130		%REC	1	10/3/2014 5:14:01 PM	R21646
Surr: Toluene-d8	91.8	70-130		%REC	1	10/3/2014 5:14:01 PM	R21646

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BD-MKTF-9/23/14
Project: 2014 3rd QUARTER MKTF WELLS
Collection Date: 9/23/2014
Lab ID: 1409D05-008
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
Acenaphthene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Acenaphthylene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Aniline	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Anthracene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Azobenzene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Benz(a)anthracene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Benzo(a)pyrene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Benzo(b)fluoranthene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Benzo(k)fluoranthene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Benzoic acid	ND	20		µg/L	1	9/30/2014 1:15:17 AM	15566
Benzyl alcohol	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Butyl benzyl phthalate	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Carbazole	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
4-Chloroaniline	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
2-Chloronaphthalene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
2-Chlorophenol	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Chrysene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Di-n-butyl phthalate	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Di-n-octyl phthalate	ND	20		µg/L	1	9/30/2014 1:15:17 AM	15566
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Dibenzofuran	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
1,2-Dichlorobenzene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
1,3-Dichlorobenzene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
1,4-Dichlorobenzene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Diethyl phthalate	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Dimethyl phthalate	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
2,4-Dichlorophenol	ND	20		µg/L	1	9/30/2014 1:15:17 AM	15566
2,4-Dimethylphenol	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/30/2014 1:15:17 AM	15566
2,4-Dinitrophenol	ND	20		µg/L	1	9/30/2014 1:15:17 AM	15566

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BD-MKTF-9/23/14
Project: 2014 3rd QUARTER MKTF WELLS
Collection Date: 9/23/2014
Lab ID: 1409D05-008
Matrix: AQUEOUS
Received Date: 9/25/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
2,4-Dinitrotoluene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
2,6-Dinitrotoluene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Fluoranthene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Fluorene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Hexachlorobenzene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Hexachlorobutadiene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Hexachloroethane	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Isophorone	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
1-Methylnaphthalene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
2-Methylnaphthalene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
2-Methylphenol	ND	20		µg/L	1	9/30/2014 1:15:17 AM	15566
3+4-Methylphenol	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
N-Nitrosodimethylamine	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Naphthalene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
2-Nitroaniline	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
3-Nitroaniline	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
4-Nitroaniline	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Nitrobenzene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
2-Nitrophenol	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
4-Nitrophenol	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Pentachlorophenol	ND	20		µg/L	1	9/30/2014 1:15:17 AM	15566
Phenanthrene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Phenol	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Pyrene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Pyridine	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/30/2014 1:15:17 AM	15566
Surr: 2-Fluorophenol	67.1	12.1-85.8		%REC	1	9/30/2014 1:15:17 AM	15566
Surr: Phenol-d5	64.8	17.7-65.8		%REC	1	9/30/2014 1:15:17 AM	15566
Surr: 2,4,6-Tribromophenol	78.8	26-138		%REC	1	9/30/2014 1:15:17 AM	15566
Surr: Nitrobenzene-d5	82.3	47.5-119		%REC	1	9/30/2014 1:15:17 AM	15566
Surr: 2-Fluorobiphenyl	79.3	48.1-106		%REC	1	9/30/2014 1:15:17 AM	15566
Surr: 4-Terphenyl-d14	80.3	44-113		%REC	1	9/30/2014 1:15:17 AM	15566

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409D05**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 3rd QUARTER MKTF WELLS

Sample ID: **MB-15542** SampType: **MBLK** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **PBW** Batch ID: **15542** RunNo: **21478**
Prep Date: **9/26/2014** Analysis Date: **9/26/2014** SeqNo: **629535** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.76		1.000		76.0	59	141			

Sample ID: **LCS-15542** SampType: **LCS** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSW** Batch ID: **15542** RunNo: **21478**
Prep Date: **9/26/2014** Analysis Date: **9/26/2014** SeqNo: **629536** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.5	1.0	5.000	0	90.9	69.7	142			
Surr: DNOP	0.45		0.5000		89.5	59	141			

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409D05**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 3rd QUARTER MKTF WELLS

Sample ID: **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW** Batch ID: **R21651** RunNo: **21651**
Prep Date: Analysis Date: **10/3/2014** SeqNo: **635933** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		88.3	70.9	130			

Sample ID: **2.5UG GRO LCS** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW** Batch ID: **R21651** RunNo: **21651**
Prep Date: Analysis Date: **10/3/2014** SeqNo: **635934** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	91.4	80	120			
Surr: BFB	20		20.00		101	70.9	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409D05**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 3rd QUARTER MKTF WELLS

Sample ID: **5mL-rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R21646** RunNo: **21646**
Prep Date: Analysis Date: **10/3/2014** SeqNo: **635260** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409D05**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 3rd QUARTER MKTF WELLS

Sample ID: **5mL-rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R21646** RunNo: **21646**
Prep Date: Analysis Date: **10/3/2014** SeqNo: **635260** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.7	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	9.3		10.00		93.1	70	130			
Surr: Toluene-d8	9.1		10.00		90.7	70	130			

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R21646** RunNo: **21646**
Prep Date: Analysis Date: **10/3/2014** SeqNo: **635262** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.4	70	130			
Toluene	19	1.0	20.00	0	96.4	80	120			
Chlorobenzene	20	1.0	20.00	0	102	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409D05**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 3rd QUARTER MKTF WELLS

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R21646** RunNo: **21646**
Prep Date: Analysis Date: **10/3/2014** SeqNo: **635262** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22	1.0	20.00	0	109	82.6	131			
Trichloroethene (TCE)	19	1.0	20.00	0	92.8	70	130			
Surr: 1,2-Dichloroethane-d4	5.1		10.00		51.1	70	130			S
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	8.7		10.00		87.5	70	130			
Surr: Toluene-d8	9.6		10.00		95.6	70	130			

Sample ID: **100ng lcs2** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R21646** RunNo: **21646**
Prep Date: Analysis Date: **10/3/2014** SeqNo: **635612** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.9	70	130			
Toluene	19	1.0	20.00	0	95.9	80	120			
Chlorobenzene	19	1.0	20.00	0	96.2	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	112	82.6	131			
Trichloroethene (TCE)	19	1.0	20.00	0	95.6	70	130			
Surr: 1,2-Dichloroethane-d4	9.2		10.00		91.6	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		99.6	70	130			
Surr: Dibromofluoromethane	8.8		10.00		87.8	70	130			
Surr: Toluene-d8	9.3		10.00		93.3	70	130			

Sample ID: **b3** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R21646** RunNo: **21646**
Prep Date: Analysis Date: **10/3/2014** SeqNo: **635614** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409D05**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 3rd QUARTER MKTF WELLS

Sample ID: **b3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R21646**	RunNo: **21646**	
Prep Date:	Analysis Date: **10/3/2014**	SeqNo: **635614**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409D05**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 3rd QUARTER MKTF WELLS

Sample ID: **b3** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R21646** RunNo: **21646**
Prep Date: Analysis Date: **10/3/2014** SeqNo: **635614** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.7		10.00		96.6	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	9.4		10.00		94.1	70	130			
Surr: Toluene-d8	9.7		10.00		97.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409D05**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 3rd QUARTER MKTF WELLS

Sample ID: **mb-15566**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **15566**	RunNo: **21529**			
Prep Date: **9/29/2014**	Analysis Date: **9/29/2014**	SeqNo: **630020**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409D05**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 3rd QUARTER MKTF WELLS

Sample ID: **mb-15566** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **15566** RunNo: **21529**
Prep Date: **9/29/2014** Analysis Date: **9/29/2014** SeqNo: **630020** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	130		200.0		66.1	12.1	85.8			
Surr: Phenol-d5	110		200.0		57.0	17.7	65.8			
Surr: 2,4,6-Tribromophenol	170		200.0		83.4	26	138			
Surr: Nitrobenzene-d5	76		100.0		76.4	47.5	119			
Surr: 2-Fluorobiphenyl	72		100.0		72.5	48.1	106			
Surr: 4-Terphenyl-d14	86		100.0		85.8	44	113			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409D05**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 3rd QUARTER MKTF WELLS

Sample ID: **lcs-15566** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **15566** RunNo: **21529**
Prep Date: **9/29/2014** Analysis Date: **9/29/2014** SeqNo: **630021** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	80	10	100.0	0	80.2	47.9	114			
4-Chloro-3-methylphenol	170	10	200.0	0	86.9	51.7	122			
2-Chlorophenol	160	10	200.0	0	79.9	40.7	113			
1,4-Dichlorobenzene	68	10	100.0	0	67.6	39.6	99.9			
2,4-Dinitrotoluene	82	10	100.0	0	81.6	40.8	113			
N-Nitrosodi-n-propylamine	76	10	100.0	0	75.7	51.2	111			
4-Nitrophenol	140	10	200.0	0	69.3	15.7	86.9			
Pentachlorophenol	140	20	200.0	0	69.9	21.6	104			
Phenol	130	10	200.0	0	65.2	28.6	71.7			
Pyrene	89	10	100.0	0	89.4	54.2	128			
1,2,4-Trichlorobenzene	75	10	100.0	0	75.3	40.9	101			
Surr: 2-Fluorophenol	120		200.0		61.2	12.1	85.8			
Surr: Phenol-d5	110		200.0		55.4	17.7	65.8			
Surr: 2,4,6-Tribromophenol	170		200.0		86.0	26	138			
Surr: Nitrobenzene-d5	81		100.0		80.6	47.5	119			
Surr: 2-Fluorobiphenyl	76		100.0		75.9	48.1	106			
Surr: 4-Terphenyl-d14	92		100.0		92.1	44	113			

Sample ID: **mb-15605** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **15605** RunNo: **21556**
Prep Date: **9/30/2014** Analysis Date: **9/30/2014** SeqNo: **631137** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409D05**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 3rd QUARTER MKTF WELLS

Sample ID: **mb-15605** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **15605** RunNo: **21556**
Prep Date: **9/30/2014** Analysis Date: **9/30/2014** SeqNo: **631137** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409D05**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 3rd QUARTER MKTF WELLS

Sample ID: **mb-15605** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **15605** RunNo: **21556**
Prep Date: **9/30/2014** Analysis Date: **9/30/2014** SeqNo: **631137** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	130		200.0		66.8	12.1	85.8			
Surr: Phenol-d5	120		200.0		59.1	17.7	65.8			
Surr: 2,4,6-Tribromophenol	140		200.0		72.2	26	138			
Surr: Nitrobenzene-d5	83		100.0		82.8	47.5	119			
Surr: 2-Fluorobiphenyl	72		100.0		71.7	48.1	106			
Surr: 4-Terphenyl-d14	91		100.0		91.3	44	113			

Sample ID: **lcs-15605** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **15605** RunNo: **21556**
Prep Date: **9/30/2014** Analysis Date: **9/30/2014** SeqNo: **631138** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	71	10	100.0	0	70.8	47.9	114			
4-Chloro-3-methylphenol	160	10	200.0	0	78.9	51.7	122			
2-Chlorophenol	140	10	200.0	0	69.5	40.7	113			
1,4-Dichlorobenzene	68	10	100.0	0	67.5	39.6	99.9			
2,4-Dinitrotoluene	61	10	100.0	0	60.7	40.8	113			
N-Nitrosodi-n-propylamine	68	10	100.0	0	67.5	51.2	111			
4-Nitrophenol	87	10	200.0	0	43.3	15.7	86.9			
Pentachlorophenol	88	20	200.0	0	44.0	21.6	104			
Phenol	110	10	200.0	0	53.6	28.6	71.7			
Pyrene	76	10	100.0	0	76.1	54.2	128			
1,2,4-Trichlorobenzene	74	10	100.0	0	74.4	40.9	101			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409D05**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 3rd QUARTER MKTF WELLS

Sample ID: **lcs-15605** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **15605** RunNo: **21556**
Prep Date: **9/30/2014** Analysis Date: **9/30/2014** SeqNo: **631138** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	100		200.0		51.2	12.1	85.8			
Surr: Phenol-d5	95		200.0		47.3	17.7	65.8			
Surr: 2,4,6-Tribromophenol	150		200.0		73.2	26	138			
Surr: Nitrobenzene-d5	73		100.0		72.9	47.5	119			
Surr: 2-Fluorobiphenyl	73		100.0		73.3	48.1	106			
Surr: 4-Terphenyl-d14	84		100.0		83.7	44	113			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1409D05 RcptNo: 1

Received by/date: MG 09/25/14

Logged By: **Lindsay Mangin** 9/25/2014 4:00:00 PM

Completed By: **Lindsay Mangin** 9/26/2014 7:13:41 AM

Reviewed By: IO/CS 09/26/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

92 GIANT CROSSING ROAD, GALLUP, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

2014 3rd QUARTER MKTF WELLS

(MKTF - 23, 33, 32, 31, 25)

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler: C. JOHNSON

On Ice: ✓Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1409D05	8260+MTBE	8015B EXTENDED	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major Cations/Anions									Air Bubbles (Y or N)
9/23/2014	1400	H20	MKTF-23	MISC	MISC	-001	X	X	X												
9/23/2014	1430	H20	MKTF-33	MISC	MISC	-002	X	X	X												
9/23/2014	1455	H20	MKTF-32	MISC	NONE	-003	X	X	X												
9/23/2014	1510	H20	MKTF-31	MISC		-004	X	X	X												
9/23/2014	1530	H20	MKTF-25	MISC		-005	X	X	X												
9/23/2014	1300	H20	TRIP BLANK			-006	X														
9/23/2014	1300	H20	FIELD BLANK			-007	X														
9/23/2014		H20	BD-MKTF-9/23/14	1L AMBER	NONE	-008			X												

Date	Time	Relinquished by:	Received by:	Date	Time
9/25/2014	1030	[signature]	[signature]	9-25-14	1030
9/25/14	1600	[signature]	Michelle Gonzales	09/25/14	1600

Remarks: 8270 RE-SAMPLED. Original samples exceeded holding time.

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 11, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: Q4 2014 OrderNo.: 1411590

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 16 sample(s) on 11/15/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1411590**
Date Reported: **12/11/2014**

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-10
Project: Q4 2014
Collection Date: 11/14/2014 10:10:00 AM
Lab ID: 1411590-001
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**JME**
Diesel Range Organics (DRO)	74	10		mg/L	10	11/18/2014 11:43:11 PM	16415
Motor Oil Range Organics (MRO)	ND	50		mg/L	10	11/18/2014 11:43:11 PM	16415
Surr: DNOP	0	59-141	S	%REC	10	11/18/2014 11:43:11 PM	16415
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	84	2.5	P	mg/L	50	11/17/2014 6:07:14 PM	R22597
Surr: BFB	106	80-120	P	%REC	50	11/17/2014 6:07:14 PM	R22597
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	270	10	*	mg/L	100	11/17/2014 4:20:46 PM	R22603
Chloride	260	50		mg/L	100	11/17/2014 4:20:46 PM	R22603
Bromide	ND	1.0		mg/L	10	11/17/2014 4:08:21 PM	R22603
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	11/17/2014 4:08:21 PM	R22603
Sulfate	ND	5.0		mg/L	10	11/17/2014 4:08:21 PM	R22603
Nitrate+Nitrite as N	ND	2.0		mg/L	10	12/1/2014 10:17:27 PM	R22875
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	17	0.20	*	mg/L	100	11/25/2014 2:18:12 PM	R22813
Cadmium	ND	0.0020		mg/L	1	11/24/2014 6:11:29 PM	R22755
Calcium	780	10		mg/L	10	11/25/2014 2:16:23 PM	R22813
Chromium	ND	0.0060		mg/L	1	11/24/2014 6:11:29 PM	R22755
Copper	ND	0.0060		mg/L	1	11/24/2014 6:11:29 PM	R22755
Iron	67	2.0	*	mg/L	100	11/25/2014 2:18:12 PM	R22813
Magnesium	220	5.0		mg/L	5	11/24/2014 6:13:16 PM	R22755
Manganese	24	0.20	*	mg/L	100	11/25/2014 2:18:12 PM	R22813
Potassium	2.5	1.0		mg/L	1	11/24/2014 6:11:29 PM	R22755
Silver	ND	0.0050		mg/L	1	11/24/2014 6:11:29 PM	R22755
Sodium	550	10		mg/L	10	11/25/2014 2:16:23 PM	R22813
Zinc	0.018	0.010		mg/L	1	11/24/2014 6:11:29 PM	R22755
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	45	0.40	*	mg/L	100	11/21/2014 5:03:16 PM	16487
Cadmium	ND	0.0040		mg/L	1	11/20/2014 6:11:36 PM	16487
Chromium	0.099	0.012		mg/L	1	11/20/2014 6:11:36 PM	16487
Copper	0.24	0.012		mg/L	1	11/20/2014 6:11:36 PM	16487
Iron	250	8.0	*	mg/L	200	11/24/2014 11:38:56 AM	16487
Manganese	49	0.40	*	mg/L	100	11/21/2014 5:03:16 PM	16487
Silver	ND	0.010		mg/L	1	11/20/2014 6:11:36 PM	16487
Zinc	0.31	0.020		mg/L	1	11/20/2014 6:11:36 PM	16487
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	12/1/2014 3:49:28 PM	R22871

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-10
Project: Q4 2014
Collection Date: 11/14/2014 10:10:00 AM
Lab ID: 1411590-001
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.010		mg/L	10	12/1/2014 3:49:28 PM	R22871
Selenium	ND	0.010		mg/L	10	12/1/2014 3:49:28 PM	R22871
Uranium	ND	0.010		mg/L	10	12/1/2014 5:25:40 PM	R22871
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.040	*	mg/L	20	12/3/2014 3:06:29 PM	16487
Lead	0.58	0.040	*	mg/L	20	12/3/2014 3:06:29 PM	16487
Selenium	ND	0.040		mg/L	20	12/3/2014 3:06:29 PM	16487
Uranium	0.052	0.040	*	mg/L	20	12/3/2014 3:06:29 PM	16487
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00040		mg/L	1	11/26/2014 3:28:18 PM	16593
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Acenaphthylene	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Aniline	54	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Anthracene	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Azobenzene	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Benz(a)anthracene	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Benzo(a)pyrene	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Benzo(b)fluoranthene	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Benzo(k)fluoranthene	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Benzoic acid	ND	20		µg/L	1	11/19/2014 5:48:20 PM	16427
Benzyl alcohol	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Bis(2-ethylhexyl)phthalate	10	10		µg/L	1	11/19/2014 5:48:20 PM	16427
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Butyl benzyl phthalate	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Carbazole	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
4-Chloroaniline	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
2-Chloronaphthalene	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
2-Chlorophenol	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Chrysene	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Di-n-butyl phthalate	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Di-n-octyl phthalate	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-10
Project: Q4 2014
Collection Date: 11/14/2014 10:10:00 AM
Lab ID: 1411590-001
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Dibenzofuran	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
1,2-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
1,3-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
1,4-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Diethyl phthalate	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Dimethyl phthalate	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
2,4-Dichlorophenol	ND	20		µg/L	1	11/19/2014 5:48:20 PM	16427
2,4-Dimethylphenol	63	10		µg/L	1	11/19/2014 5:48:20 PM	16427
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/19/2014 5:48:20 PM	16427
2,4-Dinitrophenol	ND	20		µg/L	1	11/19/2014 5:48:20 PM	16427
2,4-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
2,6-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Fluoranthene	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Fluorene	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Hexachlorobenzene	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Hexachlorobutadiene	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Hexachloroethane	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Isophorone	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
1-Methylnaphthalene	46	10		µg/L	1	11/19/2014 5:48:20 PM	16427
2-Methylnaphthalene	51	10		µg/L	1	11/19/2014 5:48:20 PM	16427
2-Methylphenol	330	50		µg/L	5	11/20/2014 12:02:04 PM	16427
3+4-Methylphenol	400	50		µg/L	5	11/20/2014 12:02:04 PM	16427
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
N-Nitrosodimethylamine	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Naphthalene	99	10		µg/L	1	11/19/2014 5:48:20 PM	16427
2-Nitroaniline	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
3-Nitroaniline	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
4-Nitroaniline	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Nitrobenzene	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
2-Nitrophenol	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
4-Nitrophenol	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Pentachlorophenol	ND	20		µg/L	1	11/19/2014 5:48:20 PM	16427
Phenanthrene	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Phenol	290	50		µg/L	5	11/20/2014 12:02:04 PM	16427

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-10
Project: Q4 2014
Collection Date: 11/14/2014 10:10:00 AM
Lab ID: 1411590-001
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyrene	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Pyridine	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/19/2014 5:48:20 PM	16427
Surr: 2-Fluorophenol	23.4	17.6-104		%REC	1	11/19/2014 5:48:20 PM	16427
Surr: Phenol-d5	48.6	17.7-89.9		%REC	1	11/19/2014 5:48:20 PM	16427
Surr: 2,4,6-Tribromophenol	68.3	16.3-122		%REC	1	11/19/2014 5:48:20 PM	16427
Surr: Nitrobenzene-d5	67.8	45.3-117		%REC	1	11/19/2014 5:48:20 PM	16427
Surr: 2-Fluorobiphenyl	65.8	43-113		%REC	1	11/19/2014 5:48:20 PM	16427
Surr: 4-Terphenyl-d14	60.7	47.6-122		%REC	1	11/19/2014 5:48:20 PM	16427
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	11000	200	P	µg/L	200	11/17/2014 7:05:41 PM	R22601
Toluene	20000	500	P	µg/L	500	11/18/2014 11:22:33 AM	R22619
Ethylbenzene	1700	200	P	µg/L	200	11/17/2014 7:05:41 PM	R22601
Methyl tert-butyl ether (MTBE)	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
1,2,4-Trimethylbenzene	1500	200	P	µg/L	200	11/17/2014 7:05:41 PM	R22601
1,3,5-Trimethylbenzene	570	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
1,2-Dichloroethane (EDC)	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
1,2-Dibromoethane (EDB)	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
Naphthalene	360	40	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
1-Methylnaphthalene	240	80	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
2-Methylnaphthalene	380	80	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
Acetone	ND	200	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
Bromobenzene	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
Bromodichloromethane	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
Bromoform	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
Bromomethane	ND	60	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
2-Butanone	ND	200	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
Carbon disulfide	ND	200	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
Carbon Tetrachloride	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
Chlorobenzene	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
Chloroethane	ND	40	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
Chloroform	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
Chloromethane	ND	60	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
2-Chlorotoluene	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
4-Chlorotoluene	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
cis-1,2-DCE	66	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
cis-1,3-Dichloropropene	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-10
Project: Q4 2014
Collection Date: 11/14/2014 10:10:00 AM
Lab ID: 1411590-001
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dibromo-3-chloropropane	ND	40	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
Dibromochloromethane	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
Dibromomethane	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
1,2-Dichlorobenzene	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
1,3-Dichlorobenzene	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
1,4-Dichlorobenzene	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
Dichlorodifluoromethane	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
1,1-Dichloroethane	39	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
1,1-Dichloroethene	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
1,2-Dichloropropane	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
1,3-Dichloropropane	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
2,2-Dichloropropane	ND	40	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
1,1-Dichloropropene	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
Hexachlorobutadiene	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
2-Hexanone	ND	200	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
Isopropylbenzene	120	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
4-Isopropyltoluene	34	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
4-Methyl-2-pentanone	ND	200	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
Methylene Chloride	ND	60	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
n-Butylbenzene	84	60	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
n-Propylbenzene	360	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
sec-Butylbenzene	40	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
Styrene	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
tert-Butylbenzene	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
1,1,1,2-Tetrachloroethane	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
1,1,2,2-Tetrachloroethane	ND	40	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
Tetrachloroethene (PCE)	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
trans-1,2-DCE	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
trans-1,3-Dichloropropene	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
1,2,3-Trichlorobenzene	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
1,2,4-Trichlorobenzene	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
1,1,1-Trichloroethane	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
1,1,2-Trichloroethane	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
Trichloroethene (TCE)	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
Trichlorofluoromethane	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
1,2,3-Trichloropropane	ND	40	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
Vinyl chloride	ND	20	P	µg/L	20	11/17/2014 7:32:28 PM	R22601
Xylenes, Total	7600	300	P	µg/L	200	11/17/2014 7:05:41 PM	R22601
Surr: 1,2-Dichloroethane-d4	99.3	70-130	P	%REC	20	11/17/2014 7:32:28 PM	R22601

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-10
Project: Q4 2014
Collection Date: 11/14/2014 10:10:00 AM
Lab ID: 1411590-001
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Surr: 4-Bromofluorobenzene	92.2	70-130	P	%REC	20	11/17/2014 7:32:28 PM	R22601
Surr: Dibromofluoromethane	81.3	70-130	P	%REC	20	11/17/2014 7:32:28 PM	R22601
Surr: Toluene-d8	95.5	70-130	P	%REC	20	11/17/2014 7:32:28 PM	R22601

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-09
Project: Q4 2014
Collection Date: 11/14/2014 10:13:00 AM
Lab ID: 1411590-002
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**JME**
Diesel Range Organics (DRO)	2.1	1.0		mg/L	1	11/19/2014 12:12:35 AM	16415
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/19/2014 12:12:35 AM	16415
Surr: DNOP	109	59-141		%REC	1	11/19/2014 12:12:35 AM	16415
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	4.4	0.50		mg/L	10	11/17/2014 7:29:15 PM	R22597
Surr: BFB	98.2	80-120		%REC	10	11/17/2014 7:29:15 PM	R22597
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	ND	1.0		mg/L	10	11/17/2014 4:33:12 PM	R22603
Chloride	180	50		mg/L	100	11/17/2014 5:10:26 PM	R22603
Bromide	1.2	1.0		mg/L	10	11/17/2014 4:33:12 PM	R22603
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	11/17/2014 4:33:12 PM	R22603
Sulfate	140	5.0		mg/L	10	11/17/2014 4:33:12 PM	R22603
Nitrate+Nitrite as N	ND	1.0		mg/L	5	11/26/2014 10:29:10 AM	R22848
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.34	0.0020		mg/L	1	11/24/2014 6:14:52 PM	R22755
Cadmium	ND	0.0020		mg/L	1	11/24/2014 6:14:52 PM	R22755
Calcium	160	5.0		mg/L	5	11/24/2014 6:16:29 PM	R22755
Chromium	ND	0.0060		mg/L	1	11/24/2014 6:14:52 PM	R22755
Copper	ND	0.030		mg/L	5	11/24/2014 6:16:29 PM	R22755
Iron	2.4	0.10	*	mg/L	5	11/24/2014 6:16:29 PM	R22755
Magnesium	30	1.0		mg/L	1	11/24/2014 6:14:52 PM	R22755
Manganese	2.8	0.010	*	mg/L	5	11/24/2014 6:16:29 PM	R22755
Potassium	ND	1.0		mg/L	1	11/24/2014 6:14:52 PM	R22755
Silver	ND	0.0050		mg/L	1	11/24/2014 6:14:52 PM	R22755
Sodium	240	5.0		mg/L	5	11/24/2014 6:16:29 PM	R22755
Zinc	0.017	0.010		mg/L	1	11/24/2014 6:14:52 PM	R22755
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.39	0.0020		mg/L	1	11/20/2014 6:22:30 PM	16487
Cadmium	ND	0.0020		mg/L	1	11/20/2014 6:22:30 PM	16487
Chromium	ND	0.0060		mg/L	1	11/20/2014 6:22:30 PM	16487
Copper	ND	0.0060		mg/L	1	11/20/2014 6:22:30 PM	16487
Iron	4.5	0.20	*	mg/L	10	11/21/2014 5:29:32 PM	16487
Manganese	2.7	0.010	*	mg/L	5	11/21/2014 5:24:02 PM	16487
Silver	ND	0.0050		mg/L	1	11/20/2014 6:22:30 PM	16487
Zinc	0.013	0.010		mg/L	1	11/20/2014 6:22:30 PM	16487
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	12/1/2014 3:52:34 PM	R22871

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Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-09
Project: Q4 2014
Collection Date: 11/14/2014 10:13:00 AM
Lab ID: 1411590-002
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.010		mg/L	10	12/1/2014 3:52:34 PM	R22871
Selenium	ND	0.010		mg/L	10	12/1/2014 3:52:34 PM	R22871
Uranium	ND	0.010		mg/L	10	12/1/2014 5:28:46 PM	R22871
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	11/26/2014 6:13:52 PM	16487
Lead	0.0053	0.0050		mg/L	5	11/26/2014 6:13:52 PM	16487
Selenium	ND	0.010		mg/L	10	12/3/2014 3:09:35 PM	16487
Uranium	0.010	0.010		mg/L	10	12/3/2014 3:09:35 PM	16487
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/26/2014 2:50:05 PM	16593
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Acenaphthylene	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Aniline	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Anthracene	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Azobenzene	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Benz(a)anthracene	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Benzo(a)pyrene	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Benzo(b)fluoranthene	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Benzo(k)fluoranthene	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Benzoic acid	ND	20		µg/L	1	11/19/2014 6:15:53 PM	16427
Benzyl alcohol	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Bis(2-ethylhexyl)phthalate	11	10		µg/L	1	11/19/2014 6:15:53 PM	16427
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Butyl benzyl phthalate	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Carbazole	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
4-Chloroaniline	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
2-Chloronaphthalene	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
2-Chlorophenol	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Chrysene	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Di-n-butyl phthalate	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Di-n-octyl phthalate	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-09
Project: Q4 2014
Collection Date: 11/14/2014 10:13:00 AM
Lab ID: 1411590-002
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Dibenzofuran	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
1,2-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
1,3-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
1,4-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Diethyl phthalate	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Dimethyl phthalate	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
2,4-Dichlorophenol	ND	20		µg/L	1	11/19/2014 6:15:53 PM	16427
2,4-Dimethylphenol	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/19/2014 6:15:53 PM	16427
2,4-Dinitrophenol	ND	20		µg/L	1	11/19/2014 6:15:53 PM	16427
2,4-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
2,6-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Fluoranthene	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Fluorene	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Hexachlorobenzene	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Hexachlorobutadiene	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Hexachloroethane	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Isophorone	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
1-Methylnaphthalene	49	10		µg/L	1	11/19/2014 6:15:53 PM	16427
2-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
2-Methylphenol	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
3+4-Methylphenol	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
N-Nitrosodimethylamine	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Naphthalene	21	10		µg/L	1	11/19/2014 6:15:53 PM	16427
2-Nitroaniline	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
3-Nitroaniline	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
4-Nitroaniline	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Nitrobenzene	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
2-Nitrophenol	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
4-Nitrophenol	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Pentachlorophenol	ND	20		µg/L	1	11/19/2014 6:15:53 PM	16427
Phenanthrene	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Phenol	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-09
Project: Q4 2014
Collection Date: 11/14/2014 10:13:00 AM
Lab ID: 1411590-002
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyrene	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Pyridine	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/19/2014 6:15:53 PM	16427
Surr: 2-Fluorophenol	74.6	17.6-104		%REC	1	11/19/2014 6:15:53 PM	16427
Surr: Phenol-d5	65.2	17.7-89.9		%REC	1	11/19/2014 6:15:53 PM	16427
Surr: 2,4,6-Tribromophenol	95.7	16.3-122		%REC	1	11/19/2014 6:15:53 PM	16427
Surr: Nitrobenzene-d5	84.3	45.3-117		%REC	1	11/19/2014 6:15:53 PM	16427
Surr: 2-Fluorobiphenyl	85.2	43-113		%REC	1	11/19/2014 6:15:53 PM	16427
Surr: 4-Terphenyl-d14	91.2	47.6-122		%REC	1	11/19/2014 6:15:53 PM	16427
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	810	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
Toluene	33	10		µg/L	10	11/18/2014 11:49:20 AM	R22619
Ethylbenzene	150	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
Methyl tert-butyl ether (MTBE)	770	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
1,2,4-Trimethylbenzene	87	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
1,3,5-Trimethylbenzene	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
Naphthalene	43	20		µg/L	10	11/17/2014 9:46:35 PM	R22601
1-Methylnaphthalene	110	40		µg/L	10	11/17/2014 9:46:35 PM	R22601
2-Methylnaphthalene	ND	40		µg/L	10	11/17/2014 9:46:35 PM	R22601
Acetone	ND	100		µg/L	10	11/17/2014 9:46:35 PM	R22601
Bromobenzene	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
Bromodichloromethane	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
Bromoform	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
Bromomethane	ND	30		µg/L	10	11/17/2014 9:46:35 PM	R22601
2-Butanone	ND	100		µg/L	10	11/17/2014 9:46:35 PM	R22601
Carbon disulfide	ND	100		µg/L	10	11/17/2014 9:46:35 PM	R22601
Carbon Tetrachloride	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
Chlorobenzene	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
Chloroethane	ND	20		µg/L	10	11/17/2014 9:46:35 PM	R22601
Chloroform	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
Chloromethane	ND	30		µg/L	10	11/17/2014 9:46:35 PM	R22601
2-Chlorotoluene	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
4-Chlorotoluene	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
cis-1,2-DCE	24	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-09
Project: Q4 2014
Collection Date: 11/14/2014 10:13:00 AM
Lab ID: 1411590-002
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/17/2014 9:46:35 PM	R22601
Dibromochloromethane	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
Dibromomethane	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
1,2-Dichlorobenzene	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
1,3-Dichlorobenzene	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
1,4-Dichlorobenzene	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
Dichlorodifluoromethane	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
1,1-Dichloroethane	35	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
1,1-Dichloroethene	68	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
1,2-Dichloropropane	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
1,3-Dichloropropane	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
2,2-Dichloropropane	ND	20		µg/L	10	11/17/2014 9:46:35 PM	R22601
1,1-Dichloropropene	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
Hexachlorobutadiene	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
2-Hexanone	ND	100		µg/L	10	11/17/2014 9:46:35 PM	R22601
Isopropylbenzene	14	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
4-Isopropyltoluene	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
4-Methyl-2-pentanone	ND	100		µg/L	10	11/17/2014 9:46:35 PM	R22601
Methylene Chloride	ND	30		µg/L	10	11/17/2014 9:46:35 PM	R22601
n-Butylbenzene	ND	30		µg/L	10	11/17/2014 9:46:35 PM	R22601
n-Propylbenzene	30	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
sec-Butylbenzene	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
Styrene	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
tert-Butylbenzene	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	11/17/2014 9:46:35 PM	R22601
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
trans-1,2-DCE	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
1,1,1-Trichloroethane	96	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
1,1,2-Trichloroethane	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
Trichloroethene (TCE)	11	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
Trichlorofluoromethane	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
1,2,3-Trichloropropane	ND	20		µg/L	10	11/17/2014 9:46:35 PM	R22601
Vinyl chloride	ND	10		µg/L	10	11/17/2014 9:46:35 PM	R22601
Xylenes, Total	110	15		µg/L	10	11/17/2014 9:46:35 PM	R22601
Surr: 1,2-Dichloroethane-d4	104	70-130		%REC	10	11/17/2014 9:46:35 PM	R22601

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-09
Project: Q4 2014
Collection Date: 11/14/2014 10:13:00 AM
Lab ID: 1411590-002
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Surr: 4-Bromofluorobenzene	94.3	70-130		%REC	10	11/17/2014 9:46:35 PM	R22601
Surr: Dibromofluoromethane	93.9	70-130		%REC	10	11/17/2014 9:46:35 PM	R22601
Surr: Toluene-d8	98.1	70-130		%REC	10	11/17/2014 9:46:35 PM	R22601

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-02
Project: Q4 2014
Collection Date: 11/14/2014 11:45:00 AM
Lab ID: 1411590-003
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**JME**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/17/2014 6:02:42 PM	16411
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/17/2014 6:02:42 PM	16411
Surr: DNOP	125	59-141		%REC	1	11/17/2014 6:02:42 PM	16411
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	0.61	0.050		mg/L	1	11/18/2014 12:32:38 PM	R22618
Surr: BFB	95.0	80-120		%REC	1	11/18/2014 12:32:38 PM	R22618
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	ND	1.0		mg/L	10	11/17/2014 5:22:51 PM	R22603
Chloride	830	50		mg/L	100	11/17/2014 5:35:16 PM	R22603
Bromide	1.2	1.0		mg/L	10	11/17/2014 5:22:51 PM	R22603
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	11/17/2014 5:22:51 PM	R22603
Sulfate	230	5.0		mg/L	10	11/17/2014 5:22:51 PM	R22603
Nitrate+Nitrite as N	ND	1.0		mg/L	5	11/26/2014 10:41:35 AM	R22848
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.13	0.0020		mg/L	1	11/24/2014 6:18:28 PM	R22755
Cadmium	ND	0.0020		mg/L	1	11/24/2014 6:18:28 PM	R22755
Calcium	100	5.0		mg/L	5	11/24/2014 6:20:25 PM	R22755
Chromium	ND	0.0060		mg/L	1	11/24/2014 6:18:28 PM	R22755
Copper	ND	0.0060		mg/L	1	11/24/2014 6:18:28 PM	R22755
Iron	2.2	0.10	*	mg/L	5	11/24/2014 6:20:25 PM	R22755
Magnesium	16	1.0		mg/L	1	11/24/2014 6:18:28 PM	R22755
Manganese	0.51	0.0020	*	mg/L	1	11/24/2014 6:18:28 PM	R22755
Potassium	4.2	1.0		mg/L	1	11/24/2014 6:18:28 PM	R22755
Silver	ND	0.0050		mg/L	1	11/24/2014 6:18:28 PM	R22755
Sodium	760	10		mg/L	10	11/25/2014 2:20:19 PM	R22813
Zinc	0.027	0.010		mg/L	1	11/24/2014 6:18:28 PM	R22755
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.22	0.0020		mg/L	1	11/20/2014 6:27:53 PM	16487
Cadmium	ND	0.0020		mg/L	1	11/20/2014 6:27:53 PM	16487
Chromium	ND	0.0060		mg/L	1	11/20/2014 6:27:53 PM	16487
Copper	0.012	0.0060		mg/L	1	11/20/2014 6:27:53 PM	16487
Iron	7.0	0.20	*	mg/L	10	11/21/2014 5:31:27 PM	16487
Manganese	0.68	0.0020	*	mg/L	1	11/20/2014 6:27:53 PM	16487
Silver	ND	0.0050		mg/L	1	11/20/2014 6:27:53 PM	16487
Zinc	0.030	0.010		mg/L	1	11/20/2014 6:27:53 PM	16487
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	12/1/2014 3:55:40 PM	R22871

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-02
Project: Q4 2014
Collection Date: 11/14/2014 11:45:00 AM
Lab ID: 1411590-003
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.010		mg/L	10	12/1/2014 3:55:40 PM	R22871
Selenium	ND	0.010		mg/L	10	12/1/2014 3:55:40 PM	R22871
Uranium	0.059	0.010	*	mg/L	10	12/1/2014 5:31:52 PM	R22871
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0059	0.0050		mg/L	5	11/26/2014 6:17:22 PM	16487
Lead	0.0079	0.0050		mg/L	5	11/26/2014 6:17:22 PM	16487
Selenium	ND	0.010		mg/L	10	12/3/2014 3:12:41 PM	16487
Uranium	0.073	0.010	*	mg/L	10	12/3/2014 3:12:41 PM	16487
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/26/2014 2:51:52 PM	16593
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Acenaphthylene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Aniline	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Anthracene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Azobenzene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Benz(a)anthracene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Benzo(a)pyrene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Benzo(b)fluoranthene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Benzo(k)fluoranthene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Benzoic acid	ND	20		µg/L	1	11/19/2014 6:43:21 PM	16427
Benzyl alcohol	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Bis(2-ethylhexyl)phthalate	11	10		µg/L	1	11/19/2014 6:43:21 PM	16427
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Butyl benzyl phthalate	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Carbazole	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
4-Chloroaniline	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
2-Chloronaphthalene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
2-Chlorophenol	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Chrysene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Di-n-butyl phthalate	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Di-n-octyl phthalate	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427

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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-02
Project: Q4 2014
Collection Date: 11/14/2014 11:45:00 AM
Lab ID: 1411590-003
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Dibenzofuran	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
1,2-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
1,3-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
1,4-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Diethyl phthalate	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Dimethyl phthalate	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
2,4-Dichlorophenol	ND	20		µg/L	1	11/19/2014 6:43:21 PM	16427
2,4-Dimethylphenol	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/19/2014 6:43:21 PM	16427
2,4-Dinitrophenol	ND	20		µg/L	1	11/19/2014 6:43:21 PM	16427
2,4-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
2,6-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Fluoranthene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Fluorene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Hexachlorobenzene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Hexachlorobutadiene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Hexachloroethane	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Isophorone	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
1-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
2-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
2-Methylphenol	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
3+4-Methylphenol	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
N-Nitrosodimethylamine	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Naphthalene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
2-Nitroaniline	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
3-Nitroaniline	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
4-Nitroaniline	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Nitrobenzene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
2-Nitrophenol	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
4-Nitrophenol	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Pentachlorophenol	ND	20		µg/L	1	11/19/2014 6:43:21 PM	16427
Phenanthrene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Phenol	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-02
Project: Q4 2014
Collection Date: 11/14/2014 11:45:00 AM
Lab ID: 1411590-003
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Pyrene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Pyridine	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/19/2014 6:43:21 PM	16427
Surr: 2-Fluorophenol	73.5	17.6-104		%REC	1	11/19/2014 6:43:21 PM	16427
Surr: Phenol-d5	64.8	17.7-89.9		%REC	1	11/19/2014 6:43:21 PM	16427
Surr: 2,4,6-Tribromophenol	90.6	16.3-122		%REC	1	11/19/2014 6:43:21 PM	16427
Surr: Nitrobenzene-d5	88.7	45.3-117		%REC	1	11/19/2014 6:43:21 PM	16427
Surr: 2-Fluorobiphenyl	84.7	43-113		%REC	1	11/19/2014 6:43:21 PM	16427
Surr: 4-Terphenyl-d14	94.4	47.6-122		%REC	1	11/19/2014 6:43:21 PM	16427
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	200	10		µg/L	10	11/17/2014 10:13:25 PM	R22601
Toluene	2.2	1.0		µg/L	1	11/18/2014 12:16:04 PM	R22619
Ethylbenzene	2.9	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
Methyl tert-butyl ether (MTBE)	59	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
1,2,4-Trimethylbenzene	2.1	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
1,2-Dichloroethane (EDC)	16	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
Naphthalene	ND	2.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
1-Methylnaphthalene	ND	4.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
2-Methylnaphthalene	ND	4.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
Acetone	ND	10		µg/L	1	11/17/2014 10:40:11 PM	R22601
Bromobenzene	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
Bromodichloromethane	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
Bromoform	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
Bromomethane	ND	3.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
2-Butanone	ND	10		µg/L	1	11/17/2014 10:40:11 PM	R22601
Carbon disulfide	ND	10		µg/L	1	11/17/2014 10:40:11 PM	R22601
Carbon Tetrachloride	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
Chlorobenzene	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
Chloroethane	ND	2.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
Chloroform	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
Chloromethane	ND	3.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
2-Chlorotoluene	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
4-Chlorotoluene	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
cis-1,2-DCE	11	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-02
Project: Q4 2014
Collection Date: 11/14/2014 11:45:00 AM
Lab ID: 1411590-003
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
Dibromochloromethane	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
Dibromomethane	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
1,1-Dichloroethane	75	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
1,1-Dichloroethene	78	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
1,2-Dichloropropane	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
1,3-Dichloropropane	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
2,2-Dichloropropane	ND	2.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
1,1-Dichloropropene	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
Hexachlorobutadiene	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
2-Hexanone	ND	10		µg/L	1	11/17/2014 10:40:11 PM	R22601
Isopropylbenzene	1.6	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
4-Isopropyltoluene	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
4-Methyl-2-pentanone	ND	10		µg/L	1	11/17/2014 10:40:11 PM	R22601
Methylene Chloride	ND	3.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
n-Butylbenzene	ND	3.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
n-Propylbenzene	1.2	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
sec-Butylbenzene	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
Styrene	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
tert-Butylbenzene	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
trans-1,2-DCE	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
1,1,1-Trichloroethane	3.6	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
1,1,2-Trichloroethane	2.4	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
Trichloroethene (TCE)	7.1	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
Trichlorofluoromethane	ND	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
Vinyl chloride	9.7	1.0		µg/L	1	11/17/2014 10:40:11 PM	R22601
Xylenes, Total	1.6	1.5		µg/L	1	11/17/2014 10:40:11 PM	R22601
Surr: 1,2-Dichloroethane-d4	102	70-130		%REC	1	11/17/2014 10:40:11 PM	R22601

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-02
Project: Q4 2014
Collection Date: 11/14/2014 11:45:00 AM
Lab ID: 1411590-003
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Surr: 4-Bromofluorobenzene	99.4	70-130		%REC	1	11/17/2014 10:40:11 PM	R22601
Surr: Dibromofluoromethane	95.3	70-130		%REC	1	11/17/2014 10:40:11 PM	R22601
Surr: Toluene-d8	98.2	70-130		%REC	1	11/17/2014 10:40:11 PM	R22601

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BD-111414
Project: Q4 2014
Collection Date: 11/14/2014
Lab ID: 1411590-004
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Acenaphthylene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Aniline	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Anthracene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Azobenzene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Benz(a)anthracene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Benzo(a)pyrene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Benzo(b)fluoranthene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Benzo(k)fluoranthene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Benzoic acid	ND	20		µg/L	1	11/19/2014 7:10:35 PM	16427
Benzyl alcohol	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Butyl benzyl phthalate	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Carbazole	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
4-Chloroaniline	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
2-Chloronaphthalene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
2-Chlorophenol	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Chrysene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Di-n-butyl phthalate	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Di-n-octyl phthalate	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Dibenzofuran	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
1,2-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
1,3-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
1,4-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Diethyl phthalate	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Dimethyl phthalate	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
2,4-Dichlorophenol	ND	20		µg/L	1	11/19/2014 7:10:35 PM	16427
2,4-Dimethylphenol	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/19/2014 7:10:35 PM	16427
2,4-Dinitrophenol	ND	20		µg/L	1	11/19/2014 7:10:35 PM	16427

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BD-111414
Project: Q4 2014
Collection Date: 11/14/2014
Lab ID: 1411590-004
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2,4-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
2,6-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Fluoranthene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Fluorene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Hexachlorobenzene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Hexachlorobutadiene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Hexachloroethane	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Isophorone	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
1-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
2-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
2-Methylphenol	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
3+4-Methylphenol	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
N-Nitrosodimethylamine	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Naphthalene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
2-Nitroaniline	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
3-Nitroaniline	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
4-Nitroaniline	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Nitrobenzene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
2-Nitrophenol	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
4-Nitrophenol	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Pentachlorophenol	ND	20		µg/L	1	11/19/2014 7:10:35 PM	16427
Phenanthrene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Phenol	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Pyrene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Pyridine	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/19/2014 7:10:35 PM	16427
Surr: 2-Fluorophenol	85.6	17.6-104		%REC	1	11/19/2014 7:10:35 PM	16427
Surr: Phenol-d5	71.0	17.7-89.9		%REC	1	11/19/2014 7:10:35 PM	16427
Surr: 2,4,6-Tribromophenol	108	16.3-122		%REC	1	11/19/2014 7:10:35 PM	16427
Surr: Nitrobenzene-d5	94.4	45.3-117		%REC	1	11/19/2014 7:10:35 PM	16427
Surr: 2-Fluorobiphenyl	89.3	43-113		%REC	1	11/19/2014 7:10:35 PM	16427
Surr: 4-Terphenyl-d14	110	47.6-122		%REC	1	11/19/2014 7:10:35 PM	16427

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BD-111414
Project: Q4 2014
Collection Date: 11/14/2014
Lab ID: 1411590-005
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Acenaphthylene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Aniline	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Anthracene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Azobenzene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Benz(a)anthracene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Benzo(a)pyrene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Benzo(b)fluoranthene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Benzo(k)fluoranthene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Benzoic acid	ND	20		µg/L	1	11/19/2014 7:38:01 PM	16427
Benzyl alcohol	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Butyl benzyl phthalate	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Carbazole	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
4-Chloroaniline	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
2-Chloronaphthalene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
2-Chlorophenol	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Chrysene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Di-n-butyl phthalate	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Di-n-octyl phthalate	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Dibenzofuran	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
1,2-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
1,3-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
1,4-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Diethyl phthalate	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Dimethyl phthalate	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
2,4-Dichlorophenol	ND	20		µg/L	1	11/19/2014 7:38:01 PM	16427
2,4-Dimethylphenol	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/19/2014 7:38:01 PM	16427
2,4-Dinitrophenol	ND	20		µg/L	1	11/19/2014 7:38:01 PM	16427

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BD-111414
Project: Q4 2014
Collection Date: 11/14/2014
Lab ID: 1411590-005
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2,4-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
2,6-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Fluoranthene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Fluorene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Hexachlorobenzene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Hexachlorobutadiene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Hexachloroethane	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Isophorone	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
1-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
2-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
2-Methylphenol	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
3+4-Methylphenol	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
N-Nitrosodimethylamine	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Naphthalene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
2-Nitroaniline	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
3-Nitroaniline	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
4-Nitroaniline	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Nitrobenzene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
2-Nitrophenol	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
4-Nitrophenol	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Pentachlorophenol	ND	20		µg/L	1	11/19/2014 7:38:01 PM	16427
Phenanthrene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Phenol	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Pyrene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Pyridine	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/19/2014 7:38:01 PM	16427
Surr: 2-Fluorophenol	76.0	17.6-104		%REC	1	11/19/2014 7:38:01 PM	16427
Surr: Phenol-d5	65.2	17.7-89.9		%REC	1	11/19/2014 7:38:01 PM	16427
Surr: 2,4,6-Tribromophenol	79.5	16.3-122		%REC	1	11/19/2014 7:38:01 PM	16427
Surr: Nitrobenzene-d5	88.7	45.3-117		%REC	1	11/19/2014 7:38:01 PM	16427
Surr: 2-Fluorobiphenyl	84.0	43-113		%REC	1	11/19/2014 7:38:01 PM	16427
Surr: 4-Terphenyl-d14	82.8	47.6-122		%REC	1	11/19/2014 7:38:01 PM	16427

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Hall Environmental Analysis Laboratory, Inc.

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Project: Q4 2014
Collection Date: 11/14/2014 12:48:00 PM
Lab ID: 1411590-006
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**JME**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/17/2014 6:23:50 PM	16411
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/17/2014 6:23:50 PM	16411
Surr: DNOP	133	59-141		%REC	1	11/17/2014 6:23:50 PM	16411
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	2.0	0.25		mg/L	5	11/18/2014 12:29:17 AM	R22597
Surr: BFB	92.0	80-120		%REC	5	11/18/2014 12:29:17 AM	R22597
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	ND	1.0		mg/L	10	11/17/2014 5:47:40 PM	R22603
Chloride	1500	50		mg/L	100	11/17/2014 6:00:04 PM	R22603
Bromide	1.2	1.0		mg/L	10	11/17/2014 5:47:40 PM	R22603
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	11/17/2014 5:47:40 PM	R22603
Sulfate	160	5.0		mg/L	10	11/17/2014 5:47:40 PM	R22603
Nitrate+Nitrite as N	ND	2.0		mg/L	10	11/26/2014 10:53:59 AM	R22848
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.13	0.0020		mg/L	1	11/24/2014 6:22:52 PM	R22755
Cadmium	ND	0.0020		mg/L	1	11/24/2014 6:22:52 PM	R22755
Calcium	190	5.0		mg/L	5	11/24/2014 6:24:44 PM	R22755
Chromium	ND	0.0060		mg/L	1	11/24/2014 6:22:52 PM	R22755
Copper	ND	0.0060		mg/L	1	11/24/2014 6:22:52 PM	R22755
Iron	0.18	0.020		mg/L	1	11/24/2014 6:22:52 PM	R22755
Magnesium	31	1.0		mg/L	1	11/24/2014 6:22:52 PM	R22755
Manganese	1.4	0.010	*	mg/L	5	11/24/2014 6:24:44 PM	R22755
Potassium	4.3	1.0		mg/L	1	11/24/2014 6:22:52 PM	R22755
Silver	ND	0.0050		mg/L	1	11/24/2014 6:22:52 PM	R22755
Sodium	920	20		mg/L	20	11/25/2014 2:22:12 PM	R22813
Zinc	0.014	0.010		mg/L	1	11/24/2014 6:22:52 PM	R22755
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.15	0.0020		mg/L	1	11/20/2014 6:29:54 PM	16487
Cadmium	ND	0.0020		mg/L	1	11/20/2014 6:29:54 PM	16487
Chromium	ND	0.0060		mg/L	1	11/20/2014 6:29:54 PM	16487
Copper	ND	0.0060		mg/L	1	11/20/2014 6:29:54 PM	16487
Iron	1.3	0.10	*	mg/L	5	11/21/2014 5:33:25 PM	16487
Manganese	1.4	0.010	*	mg/L	5	11/21/2014 5:33:25 PM	16487
Silver	ND	0.0050		mg/L	1	11/20/2014 6:29:54 PM	16487
Zinc	0.014	0.010		mg/L	1	11/20/2014 6:29:54 PM	16487
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	12/1/2014 3:58:46 PM	R22871

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Hall Environmental Analysis Laboratory, Inc.

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Project: Q4 2014
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Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.010		mg/L	10	12/1/2014 3:58:46 PM	R22871
Selenium	ND	0.010		mg/L	10	12/1/2014 3:58:46 PM	R22871
Uranium	0.066	0.010	*	mg/L	10	12/1/2014 5:34:58 PM	R22871
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	11/26/2014 6:20:52 PM	16487
Lead	ND	0.0050		mg/L	5	11/26/2014 6:20:52 PM	16487
Selenium	ND	0.010		mg/L	10	12/3/2014 3:15:46 PM	16487
Uranium	0.077	0.010	*	mg/L	10	12/3/2014 3:15:46 PM	16487
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/26/2014 2:53:39 PM	16593
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Acenaphthylene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Aniline	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Anthracene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Azobenzene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Benz(a)anthracene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Benzo(a)pyrene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Benzo(b)fluoranthene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Benzo(k)fluoranthene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Benzoic acid	ND	20		µg/L	1	11/19/2014 8:05:26 PM	16427
Benzyl alcohol	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Butyl benzyl phthalate	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Carbazole	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
4-Chloroaniline	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
2-Chloronaphthalene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
2-Chlorophenol	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Chrysene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Di-n-butyl phthalate	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Di-n-octyl phthalate	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427

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Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Dibenzofuran	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
1,2-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
1,3-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
1,4-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Diethyl phthalate	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Dimethyl phthalate	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
2,4-Dichlorophenol	ND	20		µg/L	1	11/19/2014 8:05:26 PM	16427
2,4-Dimethylphenol	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/19/2014 8:05:26 PM	16427
2,4-Dinitrophenol	ND	20		µg/L	1	11/19/2014 8:05:26 PM	16427
2,4-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
2,6-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Fluoranthene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Fluorene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Hexachlorobenzene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Hexachlorobutadiene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Hexachloroethane	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Isophorone	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
1-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
2-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
2-Methylphenol	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
3+4-Methylphenol	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
N-Nitrosodimethylamine	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Naphthalene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
2-Nitroaniline	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
3-Nitroaniline	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
4-Nitroaniline	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Nitrobenzene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
2-Nitrophenol	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
4-Nitrophenol	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Pentachlorophenol	ND	20		µg/L	1	11/19/2014 8:05:26 PM	16427
Phenanthrene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Phenol	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427

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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyrene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Pyridine	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/19/2014 8:05:26 PM	16427
Surr: 2-Fluorophenol	49.8	17.6-104		%REC	1	11/19/2014 8:05:26 PM	16427
Surr: Phenol-d5	48.4	17.7-89.9		%REC	1	11/19/2014 8:05:26 PM	16427
Surr: 2,4,6-Tribromophenol	76.8	16.3-122		%REC	1	11/19/2014 8:05:26 PM	16427
Surr: Nitrobenzene-d5	59.5	45.3-117		%REC	1	11/19/2014 8:05:26 PM	16427
Surr: 2-Fluorobiphenyl	64.8	43-113		%REC	1	11/19/2014 8:05:26 PM	16427
Surr: 4-Terphenyl-d14	86.8	47.6-122		%REC	1	11/19/2014 8:05:26 PM	16427
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	970	50		µg/L	50	11/18/2014 1:47:54 AM	R22601
Toluene	11	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
Ethylbenzene	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
Methyl tert-butyl ether (MTBE)	94	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
1,2,4-Trimethylbenzene	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
1,3,5-Trimethylbenzene	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
1,2-Dichloroethane (EDC)	9.3	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
Naphthalene	ND	10		µg/L	5	11/18/2014 12:42:56 PM	R22619
1-Methylnaphthalene	ND	20		µg/L	5	11/18/2014 12:42:56 PM	R22619
2-Methylnaphthalene	ND	20		µg/L	5	11/18/2014 12:42:56 PM	R22619
Acetone	ND	50		µg/L	5	11/18/2014 12:42:56 PM	R22619
Bromobenzene	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
Bromodichloromethane	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
Bromoform	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
Bromomethane	ND	15		µg/L	5	11/18/2014 12:42:56 PM	R22619
2-Butanone	ND	50		µg/L	5	11/18/2014 12:42:56 PM	R22619
Carbon disulfide	ND	50		µg/L	5	11/18/2014 12:42:56 PM	R22619
Carbon Tetrachloride	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
Chlorobenzene	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
Chloroethane	ND	10		µg/L	5	11/18/2014 12:42:56 PM	R22619
Chloroform	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
Chloromethane	ND	15		µg/L	5	11/18/2014 12:42:56 PM	R22619
2-Chlorotoluene	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
4-Chlorotoluene	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
cis-1,2-DCE	11	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
cis-1,3-Dichloropropene	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619

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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dibromo-3-chloropropane	ND	10		µg/L	5	11/18/2014 12:42:56 PM	R22619
Dibromochloromethane	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
Dibromomethane	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
1,2-Dichlorobenzene	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
1,3-Dichlorobenzene	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
1,4-Dichlorobenzene	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
Dichlorodifluoromethane	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
1,1-Dichloroethane	83	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
1,1-Dichloroethene	43	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
1,2-Dichloropropane	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
1,3-Dichloropropane	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
2,2-Dichloropropane	ND	10		µg/L	5	11/18/2014 12:42:56 PM	R22619
1,1-Dichloropropene	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
Hexachlorobutadiene	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
2-Hexanone	ND	50		µg/L	5	11/18/2014 12:42:56 PM	R22619
Isopropylbenzene	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
4-Isopropyltoluene	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
4-Methyl-2-pentanone	ND	50		µg/L	5	11/18/2014 12:42:56 PM	R22619
Methylene Chloride	ND	15		µg/L	5	11/18/2014 12:42:56 PM	R22619
n-Butylbenzene	ND	15		µg/L	5	11/18/2014 12:42:56 PM	R22619
n-Propylbenzene	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
sec-Butylbenzene	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
Styrene	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
tert-Butylbenzene	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
1,1,2,2-Tetrachloroethane	ND	10		µg/L	5	11/18/2014 12:42:56 PM	R22619
Tetrachloroethene (PCE)	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
trans-1,2-DCE	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
trans-1,3-Dichloropropene	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
1,2,3-Trichlorobenzene	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
1,2,4-Trichlorobenzene	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
1,1,1-Trichloroethane	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
1,1,2-Trichloroethane	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
Trichloroethene (TCE)	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
Trichlorofluoromethane	ND	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
1,2,3-Trichloropropane	ND	10		µg/L	5	11/18/2014 12:42:56 PM	R22619
Vinyl chloride	17	5.0		µg/L	5	11/18/2014 12:42:56 PM	R22619
Xylenes, Total	ND	7.5		µg/L	5	11/18/2014 12:42:56 PM	R22619
Surr: 1,2-Dichloroethane-d4	112	70-130		%REC	5	11/18/2014 12:42:56 PM	R22619

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-26
Project: Q4 2014
Collection Date: 11/14/2014 12:48:00 PM
Lab ID: 1411590-006
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Surr: 4-Bromofluorobenzene	124	70-130		%REC	5	11/18/2014 12:42:56 PM	R22619
Surr: Dibromofluoromethane	102	70-130		%REC	5	11/18/2014 12:42:56 PM	R22619
Surr: Toluene-d8	101	70-130		%REC	5	11/18/2014 12:42:56 PM	R22619

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-27
Project: Q4 2014
Collection Date: 11/14/2014 12:21:00 PM
Lab ID: 1411590-007
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**JME**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/17/2014 6:44:47 PM	16411
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/17/2014 6:44:47 PM	16411
Surr: DNOP	135	59-141		%REC	1	11/17/2014 6:44:47 PM	16411
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/18/2014 12:56:37 AM	R22597
Surr: BFB	85.0	80-120		%REC	1	11/18/2014 12:56:37 AM	R22597
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	ND	1.0		mg/L	10	11/17/2014 6:37:18 PM	R22603
Chloride	2500	100		mg/L	200	12/1/2014 9:27:48 PM	R22875
Bromide	1.8	1.0		mg/L	10	11/17/2014 6:37:18 PM	R22603
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	11/17/2014 6:37:18 PM	R22603
Sulfate	470	50		mg/L	100	11/17/2014 6:49:42 PM	R22603
Nitrate+Nitrite as N	ND	2.0		mg/L	10	11/26/2014 11:06:24 AM	R22848
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.094	0.0020		mg/L	1	11/24/2014 6:34:24 PM	R22755
Cadmium	ND	0.0020		mg/L	1	11/24/2014 6:34:24 PM	R22755
Calcium	160	5.0		mg/L	5	11/24/2014 6:36:23 PM	R22755
Chromium	ND	0.0060		mg/L	1	11/24/2014 6:34:24 PM	R22755
Copper	ND	0.0060		mg/L	1	11/24/2014 6:34:24 PM	R22755
Iron	0.55	0.020	*	mg/L	1	11/24/2014 6:34:24 PM	R22755
Magnesium	26	1.0		mg/L	1	11/24/2014 6:34:24 PM	R22755
Manganese	0.28	0.0020	*	mg/L	1	11/24/2014 6:34:24 PM	R22755
Potassium	12	1.0		mg/L	1	11/24/2014 6:34:24 PM	R22755
Silver	ND	0.0050		mg/L	1	11/24/2014 6:34:24 PM	R22755
Sodium	1800	50		mg/L	50	11/25/2014 2:24:03 PM	R22813
Zinc	0.030	0.010		mg/L	1	11/24/2014 6:34:24 PM	R22755
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.13	0.0020		mg/L	1	11/20/2014 6:31:35 PM	16487
Cadmium	ND	0.0020		mg/L	1	11/20/2014 6:31:35 PM	16487
Chromium	ND	0.0060		mg/L	1	11/20/2014 6:31:35 PM	16487
Copper	ND	0.0060		mg/L	1	11/20/2014 6:31:35 PM	16487
Iron	3.4	0.20	*	mg/L	10	11/21/2014 5:35:24 PM	16487
Manganese	0.50	0.0020	*	mg/L	1	11/20/2014 6:31:35 PM	16487
Silver	ND	0.0050		mg/L	1	11/20/2014 6:31:35 PM	16487
Zinc	0.024	0.010		mg/L	1	11/20/2014 6:31:35 PM	16487
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	12/1/2014 4:01:51 PM	R22871

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Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-27
Project: Q4 2014
Collection Date: 11/14/2014 12:21:00 PM
Lab ID: 1411590-007
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.010		mg/L	10	12/1/2014 4:01:51 PM	R22871
Selenium	ND	0.010		mg/L	10	12/1/2014 4:01:51 PM	R22871
Uranium	0.075	0.010	*	mg/L	10	12/1/2014 5:38:03 PM	R22871
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	11/26/2014 6:24:21 PM	16487
Lead	ND	0.0050		mg/L	5	11/26/2014 6:24:21 PM	16487
Selenium	ND	0.010		mg/L	10	12/3/2014 3:18:51 PM	16487
Uranium	0.087	0.010	*	mg/L	10	12/3/2014 3:18:51 PM	16487
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/26/2014 2:59:07 PM	16593
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Acenaphthylene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Aniline	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Anthracene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Azobenzene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Benz(a)anthracene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Benzo(a)pyrene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Benzo(b)fluoranthene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Benzo(k)fluoranthene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Benzoic acid	ND	20		µg/L	1	11/19/2014 8:32:51 PM	16427
Benzyl alcohol	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Butyl benzyl phthalate	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Carbazole	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
4-Chloroaniline	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
2-Chloronaphthalene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
2-Chlorophenol	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Chrysene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Di-n-butyl phthalate	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Di-n-octyl phthalate	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-27
Project: Q4 2014
Collection Date: 11/14/2014 12:21:00 PM
Lab ID: 1411590-007
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Dibenzofuran	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
1,2-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
1,3-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
1,4-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Diethyl phthalate	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Dimethyl phthalate	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
2,4-Dichlorophenol	ND	20		µg/L	1	11/19/2014 8:32:51 PM	16427
2,4-Dimethylphenol	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/19/2014 8:32:51 PM	16427
2,4-Dinitrophenol	ND	20		µg/L	1	11/19/2014 8:32:51 PM	16427
2,4-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
2,6-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Fluoranthene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Fluorene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Hexachlorobenzene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Hexachlorobutadiene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Hexachloroethane	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Isophorone	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
1-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
2-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
2-Methylphenol	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
3+4-Methylphenol	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
N-Nitrosodimethylamine	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Naphthalene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
2-Nitroaniline	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
3-Nitroaniline	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
4-Nitroaniline	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Nitrobenzene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
2-Nitrophenol	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
4-Nitrophenol	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Pentachlorophenol	ND	20		µg/L	1	11/19/2014 8:32:51 PM	16427
Phenanthrene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Phenol	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427

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Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
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S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-27
Project: Q4 2014
Collection Date: 11/14/2014 12:21:00 PM
Lab ID: 1411590-007
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyrene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Pyridine	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/19/2014 8:32:51 PM	16427
Surr: 2-Fluorophenol	72.2	17.6-104		%REC	1	11/19/2014 8:32:51 PM	16427
Surr: Phenol-d5	64.9	17.7-89.9		%REC	1	11/19/2014 8:32:51 PM	16427
Surr: 2,4,6-Tribromophenol	92.0	16.3-122		%REC	1	11/19/2014 8:32:51 PM	16427
Surr: Nitrobenzene-d5	92.3	45.3-117		%REC	1	11/19/2014 8:32:51 PM	16427
Surr: 2-Fluorobiphenyl	85.7	43-113		%REC	1	11/19/2014 8:32:51 PM	16427
Surr: 4-Terphenyl-d14	89.2	47.6-122		%REC	1	11/19/2014 8:32:51 PM	16427
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
Toluene	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
Ethylbenzene	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
Methyl tert-butyl ether (MTBE)	19	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
Naphthalene	ND	2.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
1-Methylnaphthalene	ND	4.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
2-Methylnaphthalene	ND	4.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
Acetone	ND	10		µg/L	1	11/18/2014 2:14:46 AM	R22601
Bromobenzene	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
Bromodichloromethane	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
Bromoform	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
Bromomethane	ND	3.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
2-Butanone	ND	10		µg/L	1	11/18/2014 2:14:46 AM	R22601
Carbon disulfide	ND	10		µg/L	1	11/18/2014 2:14:46 AM	R22601
Carbon Tetrachloride	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
Chlorobenzene	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
Chloroethane	ND	2.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
Chloroform	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
Chloromethane	ND	3.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
2-Chlorotoluene	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
4-Chlorotoluene	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
cis-1,2-DCE	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-27
Project: Q4 2014
Collection Date: 11/14/2014 12:21:00 PM
Lab ID: 1411590-007
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
Dibromochloromethane	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
Dibromomethane	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
1,1-Dichloroethane	2.8	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
1,1-Dichloroethene	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
1,2-Dichloropropane	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
1,3-Dichloropropane	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
2,2-Dichloropropane	ND	2.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
1,1-Dichloropropene	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
Hexachlorobutadiene	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
2-Hexanone	ND	10		µg/L	1	11/18/2014 2:14:46 AM	R22601
Isopropylbenzene	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
4-Isopropyltoluene	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
4-Methyl-2-pentanone	ND	10		µg/L	1	11/18/2014 2:14:46 AM	R22601
Methylene Chloride	ND	3.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
n-Butylbenzene	ND	3.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
n-Propylbenzene	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
sec-Butylbenzene	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
Styrene	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
tert-Butylbenzene	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
trans-1,2-DCE	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
Trichlorofluoromethane	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
Vinyl chloride	ND	1.0		µg/L	1	11/18/2014 2:14:46 AM	R22601
Xylenes, Total	ND	1.5		µg/L	1	11/18/2014 2:14:46 AM	R22601
Surr: 1,2-Dichloroethane-d4	111	70-130		%REC	1	11/18/2014 2:14:46 AM	R22601

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-27
Project: Q4 2014
Collection Date: 11/14/2014 12:21:00 PM
Lab ID: 1411590-007
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Surr: 4-Bromofluorobenzene	134	70-130	S	%REC	1	11/18/2014 2:14:46 AM	R22601
Surr: Dibromofluoromethane	114	70-130		%REC	1	11/18/2014 2:14:46 AM	R22601
Surr: Toluene-d8	99.0	70-130		%REC	1	11/18/2014 2:14:46 AM	R22601

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-28
Project: Q4 2014
Collection Date: 11/14/2014 1:55:00 PM
Lab ID: 1411590-008
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**JME**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/17/2014 7:05:52 PM	16411
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/17/2014 7:05:52 PM	16411
Surr: DNOP	131	59-141		%REC	1	11/17/2014 7:05:52 PM	16411
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/18/2014 1:23:55 AM	R22597
Surr: BFB	88.1	80-120		%REC	1	11/18/2014 1:23:55 AM	R22597
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	ND	1.0		mg/L	10	11/17/2014 7:02:07 PM	R22603
Chloride	540	50		mg/L	100	11/17/2014 7:14:32 PM	R22603
Bromide	2.7	1.0		mg/L	10	11/17/2014 7:02:07 PM	R22603
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	11/17/2014 7:02:07 PM	R22603
Sulfate	260	5.0		mg/L	10	11/17/2014 7:02:07 PM	R22603
Nitrate+Nitrite as N	ND	1.0		mg/L	5	11/26/2014 11:18:48 AM	R22848
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.099	0.0020		mg/L	1	11/24/2014 6:38:23 PM	R22755
Cadmium	ND	0.0020		mg/L	1	11/24/2014 6:38:23 PM	R22755
Calcium	50	1.0		mg/L	1	11/24/2014 6:38:23 PM	R22755
Chromium	ND	0.0060		mg/L	1	11/24/2014 6:38:23 PM	R22755
Copper	ND	0.0060		mg/L	1	11/24/2014 6:38:23 PM	R22755
Iron	0.63	0.020	*	mg/L	1	11/24/2014 6:38:23 PM	R22755
Magnesium	9.2	1.0		mg/L	1	11/24/2014 6:38:23 PM	R22755
Manganese	0.32	0.0020	*	mg/L	1	11/24/2014 6:38:23 PM	R22755
Potassium	3.2	1.0		mg/L	1	11/24/2014 6:38:23 PM	R22755
Silver	ND	0.0050		mg/L	1	11/24/2014 6:38:23 PM	R22755
Sodium	640	10		mg/L	10	11/25/2014 2:31:54 PM	R22813
Zinc	0.038	0.010		mg/L	1	11/24/2014 6:38:23 PM	R22755
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.12	0.0020		mg/L	1	11/20/2014 6:33:24 PM	16487
Cadmium	ND	0.0020		mg/L	1	11/20/2014 6:33:24 PM	16487
Chromium	ND	0.0060		mg/L	1	11/20/2014 6:33:24 PM	16487
Copper	ND	0.0060		mg/L	1	11/20/2014 6:33:24 PM	16487
Iron	2.0	0.10	*	mg/L	5	11/21/2014 5:37:22 PM	16487
Manganese	0.38	0.0020	*	mg/L	1	11/20/2014 6:33:24 PM	16487
Silver	ND	0.0050		mg/L	1	11/20/2014 6:33:24 PM	16487
Zinc	0.015	0.010		mg/L	1	11/20/2014 6:33:24 PM	16487
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	12/2/2014 5:47:35 PM	R22885

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-28
Project: Q4 2014
Collection Date: 11/14/2014 1:55:00 PM
Lab ID: 1411590-008
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.0050		mg/L	5	12/2/2014 5:47:35 PM	R22885
Selenium	ND	0.020		mg/L	20	12/4/2014 11:58:45 AM	R22933
Uranium	0.12	0.0050	*	mg/L	5	12/2/2014 5:47:35 PM	R22885
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0054	0.0050		mg/L	5	11/26/2014 6:27:51 PM	16487
Lead	ND	0.0050		mg/L	5	11/26/2014 6:27:51 PM	16487
Selenium	ND	0.050		mg/L	5	11/26/2014 6:27:51 PM	16487
Uranium	0.11	0.010	*	mg/L	10	12/3/2014 3:28:07 PM	16487
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/26/2014 3:01:00 PM	16593
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Acenaphthylene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Aniline	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Anthracene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Azobenzene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Benz(a)anthracene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Benzo(a)pyrene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Benzo(b)fluoranthene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Benzo(k)fluoranthene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Benzoic acid	ND	20		µg/L	1	11/19/2014 9:00:24 PM	16427
Benzyl alcohol	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Butyl benzyl phthalate	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Carbazole	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
4-Chloroaniline	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
2-Chloronaphthalene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
2-Chlorophenol	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Chrysene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Di-n-butyl phthalate	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Di-n-octyl phthalate	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427

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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-28
Project: Q4 2014
Collection Date: 11/14/2014 1:55:00 PM
Lab ID: 1411590-008
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Dibenzofuran	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
1,2-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
1,3-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
1,4-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Diethyl phthalate	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Dimethyl phthalate	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
2,4-Dichlorophenol	ND	20		µg/L	1	11/19/2014 9:00:24 PM	16427
2,4-Dimethylphenol	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/19/2014 9:00:24 PM	16427
2,4-Dinitrophenol	ND	20		µg/L	1	11/19/2014 9:00:24 PM	16427
2,4-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
2,6-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Fluoranthene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Fluorene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Hexachlorobenzene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Hexachlorobutadiene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Hexachloroethane	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Isophorone	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
1-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
2-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
2-Methylphenol	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
3+4-Methylphenol	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
N-Nitrosodimethylamine	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Naphthalene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
2-Nitroaniline	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
3-Nitroaniline	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
4-Nitroaniline	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Nitrobenzene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
2-Nitrophenol	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
4-Nitrophenol	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Pentachlorophenol	ND	20		µg/L	1	11/19/2014 9:00:24 PM	16427
Phenanthrene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Phenol	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-28
Project: Q4 2014
Collection Date: 11/14/2014 1:55:00 PM
Lab ID: 1411590-008
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyrene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Pyridine	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/19/2014 9:00:24 PM	16427
Surr: 2-Fluorophenol	70.2	17.6-104		%REC	1	11/19/2014 9:00:24 PM	16427
Surr: Phenol-d5	60.2	17.7-89.9		%REC	1	11/19/2014 9:00:24 PM	16427
Surr: 2,4,6-Tribromophenol	99.7	16.3-122		%REC	1	11/19/2014 9:00:24 PM	16427
Surr: Nitrobenzene-d5	91.8	45.3-117		%REC	1	11/19/2014 9:00:24 PM	16427
Surr: 2-Fluorobiphenyl	90.4	43-113		%REC	1	11/19/2014 9:00:24 PM	16427
Surr: 4-Terphenyl-d14	93.9	47.6-122		%REC	1	11/19/2014 9:00:24 PM	16427
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
Toluene	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
Ethylbenzene	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
Methyl tert-butyl ether (MTBE)	13	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
Naphthalene	ND	2.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
1-Methylnaphthalene	ND	4.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
2-Methylnaphthalene	ND	4.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
Acetone	ND	10		µg/L	1	11/18/2014 2:41:33 AM	R22601
Bromobenzene	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
Bromodichloromethane	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
Bromoform	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
Bromomethane	ND	3.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
2-Butanone	ND	10		µg/L	1	11/18/2014 2:41:33 AM	R22601
Carbon disulfide	ND	10		µg/L	1	11/18/2014 2:41:33 AM	R22601
Carbon Tetrachloride	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
Chlorobenzene	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
Chloroethane	ND	2.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
Chloroform	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
Chloromethane	ND	3.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
2-Chlorotoluene	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
4-Chlorotoluene	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
cis-1,2-DCE	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601

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Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-28
Project: Q4 2014
Collection Date: 11/14/2014 1:55:00 PM
Lab ID: 1411590-008
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
Dibromochloromethane	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
Dibromomethane	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
1,1-Dichloroethane	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
1,1-Dichloroethene	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
1,2-Dichloropropane	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
1,3-Dichloropropane	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
2,2-Dichloropropane	ND	2.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
1,1-Dichloropropene	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
Hexachlorobutadiene	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
2-Hexanone	ND	10		µg/L	1	11/18/2014 2:41:33 AM	R22601
Isopropylbenzene	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
4-Isopropyltoluene	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
4-Methyl-2-pentanone	ND	10		µg/L	1	11/18/2014 2:41:33 AM	R22601
Methylene Chloride	ND	3.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
n-Butylbenzene	ND	3.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
n-Propylbenzene	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
sec-Butylbenzene	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
Styrene	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
tert-Butylbenzene	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
trans-1,2-DCE	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
Trichlorofluoromethane	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
Vinyl chloride	ND	1.0		µg/L	1	11/18/2014 2:41:33 AM	R22601
Xylenes, Total	ND	1.5		µg/L	1	11/18/2014 2:41:33 AM	R22601
Surr: 1,2-Dichloroethane-d4	105	70-130		%REC	1	11/18/2014 2:41:33 AM	R22601

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-28
Project: Q4 2014
Collection Date: 11/14/2014 1:55:00 PM
Lab ID: 1411590-008
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Surr: 4-Bromofluorobenzene	139	70-130	S	%REC	1	11/18/2014 2:41:33 AM	R22601
Surr: Dibromofluoromethane	101	70-130		%REC	1	11/18/2014 2:41:33 AM	R22601
Surr: Toluene-d8	104	70-130		%REC	1	11/18/2014 2:41:33 AM	R22601

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-24
Project: Q4 2014
Collection Date: 11/14/2014 3:40:00 PM
Lab ID: 1411590-009
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**JME**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/17/2014 7:26:50 PM	16411
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/17/2014 7:26:50 PM	16411
Surr: DNOP	140	59-141		%REC	1	11/17/2014 7:26:50 PM	16411
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	5.7	0.50		mg/L	10	11/18/2014 1:51:30 AM	R22597
Surr: BFB	97.8	80-120		%REC	10	11/18/2014 1:51:30 AM	R22597
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	ND	1.0		mg/L	10	11/17/2014 7:26:56 PM	R22603
Chloride	630	50		mg/L	100	11/17/2014 7:39:21 PM	R22603
Bromide	1.4	1.0		mg/L	10	11/17/2014 7:26:56 PM	R22603
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	11/17/2014 7:26:56 PM	R22603
Sulfate	72	5.0		mg/L	10	11/17/2014 7:26:56 PM	R22603
Nitrate+Nitrite as N	ND	1.0		mg/L	5	11/26/2014 12:08:26 PM	R22848
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.29	0.0020		mg/L	1	11/24/2014 6:42:12 PM	R22755
Cadmium	ND	0.0020		mg/L	1	11/24/2014 6:42:12 PM	R22755
Calcium	120	5.0		mg/L	5	11/24/2014 6:43:47 PM	R22755
Chromium	ND	0.0060		mg/L	1	11/24/2014 6:42:12 PM	R22755
Copper	ND	0.0060		mg/L	1	11/24/2014 6:42:12 PM	R22755
Iron	4.4	0.10	*	mg/L	5	11/24/2014 6:43:47 PM	R22755
Magnesium	22	1.0		mg/L	1	11/24/2014 6:42:12 PM	R22755
Manganese	1.6	0.010	*	mg/L	5	11/24/2014 6:43:47 PM	R22755
Potassium	5.4	1.0		mg/L	1	11/24/2014 6:42:12 PM	R22755
Silver	ND	0.0050		mg/L	1	11/24/2014 6:42:12 PM	R22755
Sodium	550	10		mg/L	10	11/25/2014 2:33:50 PM	R22813
Zinc	0.018	0.010		mg/L	1	11/24/2014 6:42:12 PM	R22755
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.48	0.0020		mg/L	1	11/20/2014 6:35:07 PM	16487
Cadmium	ND	0.0020		mg/L	1	11/20/2014 6:35:07 PM	16487
Chromium	0.0098	0.0060		mg/L	1	11/20/2014 6:35:07 PM	16487
Copper	0.015	0.0060		mg/L	1	11/20/2014 6:35:07 PM	16487
Iron	6.9	0.20	*	mg/L	10	11/21/2014 5:48:14 PM	16487
Manganese	1.9	0.020	*	mg/L	10	11/21/2014 5:48:14 PM	16487
Silver	ND	0.0050		mg/L	1	11/20/2014 6:35:07 PM	16487
Zinc	0.026	0.010		mg/L	1	11/20/2014 6:35:07 PM	16487
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	12/2/2014 5:50:34 PM	R22885

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-24
Project: Q4 2014
Collection Date: 11/14/2014 3:40:00 PM
Lab ID: 1411590-009
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.0050		mg/L	5	12/2/2014 5:50:34 PM	R22885
Selenium	ND	0.0050		mg/L	5	12/2/2014 5:50:34 PM	R22885
Uranium	0.038	0.0050	*	mg/L	5	12/2/2014 5:50:34 PM	R22885
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	11/26/2014 6:41:53 PM	16487
Lead	0.012	0.0050		mg/L	5	11/26/2014 6:41:53 PM	16487
Selenium	ND	0.010		mg/L	10	12/3/2014 3:31:12 PM	16487
Uranium	0.038	0.010	*	mg/L	10	12/3/2014 3:31:12 PM	16487
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/26/2014 3:06:32 PM	16593
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Acenaphthylene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Aniline	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Anthracene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Azobenzene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Benz(a)anthracene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Benzo(a)pyrene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Benzo(b)fluoranthene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Benzo(k)fluoranthene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Benzoic acid	ND	20		µg/L	1	11/19/2014 9:27:49 PM	16427
Benzyl alcohol	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Bis(2-ethylhexyl)phthalate	11	10		µg/L	1	11/19/2014 9:27:49 PM	16427
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Butyl benzyl phthalate	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Carbazole	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
4-Chloroaniline	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
2-Chloronaphthalene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
2-Chlorophenol	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Chrysene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Di-n-butyl phthalate	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Di-n-octyl phthalate	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-24
Project: Q4 2014
Collection Date: 11/14/2014 3:40:00 PM
Lab ID: 1411590-009
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Dibenzofuran	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
1,2-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
1,3-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
1,4-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Diethyl phthalate	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Dimethyl phthalate	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
2,4-Dichlorophenol	ND	20		µg/L	1	11/19/2014 9:27:49 PM	16427
2,4-Dimethylphenol	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/19/2014 9:27:49 PM	16427
2,4-Dinitrophenol	ND	20		µg/L	1	11/19/2014 9:27:49 PM	16427
2,4-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
2,6-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Fluoranthene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Fluorene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Hexachlorobenzene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Hexachlorobutadiene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Hexachloroethane	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Isophorone	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
1-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
2-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
2-Methylphenol	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
3+4-Methylphenol	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
N-Nitrosodimethylamine	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Naphthalene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
2-Nitroaniline	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
3-Nitroaniline	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
4-Nitroaniline	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Nitrobenzene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
2-Nitrophenol	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
4-Nitrophenol	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Pentachlorophenol	ND	20		µg/L	1	11/19/2014 9:27:49 PM	16427
Phenanthrene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Phenol	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-24
Project: Q4 2014
Collection Date: 11/14/2014 3:40:00 PM
Lab ID: 1411590-009
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyrene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Pyridine	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/19/2014 9:27:49 PM	16427
Surr: 2-Fluorophenol	67.8	17.6-104		%REC	1	11/19/2014 9:27:49 PM	16427
Surr: Phenol-d5	60.9	17.7-89.9		%REC	1	11/19/2014 9:27:49 PM	16427
Surr: 2,4,6-Tribromophenol	87.6	16.3-122		%REC	1	11/19/2014 9:27:49 PM	16427
Surr: Nitrobenzene-d5	84.2	45.3-117		%REC	1	11/19/2014 9:27:49 PM	16427
Surr: 2-Fluorobiphenyl	79.9	43-113		%REC	1	11/19/2014 9:27:49 PM	16427
Surr: 4-Terphenyl-d14	85.2	47.6-122		%REC	1	11/19/2014 9:27:49 PM	16427
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	1600	50		µg/L	50	11/21/2014 2:11:57 PM	R22714
Toluene	9.5	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
Ethylbenzene	49	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
Methyl tert-butyl ether (MTBE)	63	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
1,2,4-Trimethylbenzene	2.7	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
1,2-Dichloroethane (EDC)	9.6	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
Naphthalene	ND	2.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
1-Methylnaphthalene	4.6	4.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
2-Methylnaphthalene	ND	4.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
Acetone	ND	10		µg/L	1	11/18/2014 3:34:59 AM	R22601
Bromobenzene	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
Bromodichloromethane	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
Bromoform	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
Bromomethane	ND	3.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
2-Butanone	ND	10		µg/L	1	11/18/2014 3:34:59 AM	R22601
Carbon disulfide	ND	10		µg/L	1	11/18/2014 3:34:59 AM	R22601
Carbon Tetrachloride	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
Chlorobenzene	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
Chloroethane	ND	2.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
Chloroform	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
Chloromethane	ND	3.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
2-Chlorotoluene	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
4-Chlorotoluene	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
cis-1,2-DCE	39	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-24
Project: Q4 2014
Collection Date: 11/14/2014 3:40:00 PM
Lab ID: 1411590-009
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
Dibromochloromethane	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
Dibromomethane	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
1,1-Dichloroethane	150	10		µg/L	10	11/18/2014 3:08:13 AM	R22601
1,1-Dichloroethene	58	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
1,2-Dichloropropane	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
1,3-Dichloropropane	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
2,2-Dichloropropane	ND	2.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
1,1-Dichloropropene	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
Hexachlorobutadiene	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
2-Hexanone	ND	10		µg/L	1	11/18/2014 3:34:59 AM	R22601
Isopropylbenzene	18	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
4-Isopropyltoluene	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
4-Methyl-2-pentanone	ND	10		µg/L	1	11/18/2014 3:34:59 AM	R22601
Methylene Chloride	ND	3.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
n-Butylbenzene	5.8	3.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
n-Propylbenzene	28	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
sec-Butylbenzene	4.0	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
Styrene	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
tert-Butylbenzene	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
trans-1,2-DCE	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
1,1,1-Trichloroethane	4.6	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
1,1,2-Trichloroethane	1.1	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
Trichloroethene (TCE)	4.9	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
Trichlorofluoromethane	ND	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
Vinyl chloride	14	1.0		µg/L	1	11/18/2014 3:34:59 AM	R22601
Xylenes, Total	2.9	1.5		µg/L	1	11/18/2014 3:34:59 AM	R22601
Surr: 1,2-Dichloroethane-d4	103	70-130		%REC	1	11/18/2014 3:34:59 AM	R22601

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-24
Project: Q4 2014
Collection Date: 11/14/2014 3:40:00 PM
Lab ID: 1411590-009
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Surr: 4-Bromofluorobenzene	93.9	70-130		%REC	1	11/18/2014 3:34:59 AM	R22601
Surr: Dibromofluoromethane	100	70-130		%REC	1	11/18/2014 3:34:59 AM	R22601
Surr: Toluene-d8	96.9	70-130		%REC	1	11/18/2014 3:34:59 AM	R22601

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-25
Project: Q4 2014
Collection Date: 11/14/2014 3:33:00 PM
Lab ID: 1411590-010
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**JME**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/19/2014 12:42:06 AM	16415
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/19/2014 12:42:06 AM	16415
Surr: DNOP	99.4	59-141		%REC	1	11/19/2014 12:42:06 AM	16415
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	4.8	0.50		mg/L	10	11/18/2014 2:18:38 AM	R22597
Surr: BFB	111	80-120		%REC	10	11/18/2014 2:18:38 AM	R22597
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	ND	1.0		mg/L	10	11/17/2014 7:51:46 PM	R22603
Chloride	880	50		mg/L	100	11/17/2014 8:04:10 PM	R22603
Bromide	1.4	1.0		mg/L	10	11/17/2014 7:51:46 PM	R22603
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	11/17/2014 7:51:46 PM	R22603
Sulfate	35	5.0		mg/L	10	11/17/2014 7:51:46 PM	R22603
Nitrate+Nitrite as N	ND	1.0		mg/L	5	11/26/2014 12:20:50 PM	R22848
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.28	0.0020		mg/L	1	11/24/2014 6:45:42 PM	R22755
Cadmium	ND	0.0020		mg/L	1	11/24/2014 6:45:42 PM	R22755
Calcium	150	5.0		mg/L	5	11/24/2014 6:47:36 PM	R22755
Chromium	ND	0.0060		mg/L	1	11/24/2014 6:45:42 PM	R22755
Copper	ND	0.0060		mg/L	1	11/24/2014 6:45:42 PM	R22755
Iron	0.21	0.020		mg/L	1	11/24/2014 6:45:42 PM	R22755
Magnesium	27	1.0		mg/L	1	11/24/2014 6:45:42 PM	R22755
Manganese	3.1	0.010	*	mg/L	5	11/24/2014 6:47:36 PM	R22755
Potassium	1.2	1.0		mg/L	1	11/24/2014 6:45:42 PM	R22755
Silver	ND	0.0050		mg/L	1	11/24/2014 6:45:42 PM	R22755
Sodium	640	10		mg/L	10	11/25/2014 2:35:46 PM	R22813
Zinc	0.10	0.010		mg/L	1	11/24/2014 6:45:42 PM	R22755
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.37	0.0020		mg/L	1	11/20/2014 6:36:48 PM	16487
Cadmium	ND	0.0020		mg/L	1	11/20/2014 6:36:48 PM	16487
Chromium	ND	0.0060		mg/L	1	11/20/2014 6:36:48 PM	16487
Copper	0.011	0.0060		mg/L	1	11/20/2014 6:36:48 PM	16487
Iron	2.7	0.20	*	mg/L	10	11/21/2014 5:50:11 PM	16487
Manganese	3.6	0.020	*	mg/L	10	11/21/2014 5:50:11 PM	16487
Silver	ND	0.0050		mg/L	1	11/20/2014 6:36:48 PM	16487
Zinc	0.013	0.010		mg/L	1	11/20/2014 6:36:48 PM	16487
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	12/2/2014 5:53:33 PM	R22885

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-25
Project: Q4 2014
Collection Date: 11/14/2014 3:33:00 PM
Lab ID: 1411590-010
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.0050		mg/L	5	12/2/2014 5:53:33 PM	R22885
Selenium	ND	0.0050		mg/L	5	12/2/2014 5:53:33 PM	R22885
Uranium	0.030	0.0050	*	mg/L	5	12/2/2014 5:53:33 PM	R22885
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	11/26/2014 6:45:22 PM	16487
Lead	0.0074	0.0050		mg/L	5	11/26/2014 6:45:22 PM	16487
Selenium	ND	0.010		mg/L	10	12/3/2014 3:34:17 PM	16487
Uranium	0.030	0.010	*	mg/L	10	12/3/2014 3:34:17 PM	16487
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/26/2014 3:08:22 PM	16593
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Acenaphthylene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Aniline	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Anthracene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Azobenzene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Benz(a)anthracene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Benzo(a)pyrene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Benzo(b)fluoranthene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Benzo(k)fluoranthene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Benzoic acid	ND	20		µg/L	1	11/19/2014 9:55:09 PM	16427
Benzyl alcohol	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Butyl benzyl phthalate	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Carbazole	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
4-Chloroaniline	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
2-Chloronaphthalene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
2-Chlorophenol	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Chrysene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Di-n-butyl phthalate	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Di-n-octyl phthalate	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427

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Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-25
Project: Q4 2014
Collection Date: 11/14/2014 3:33:00 PM
Lab ID: 1411590-010
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Dibenzofuran	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
1,2-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
1,3-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
1,4-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Diethyl phthalate	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Dimethyl phthalate	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
2,4-Dichlorophenol	ND	20		µg/L	1	11/19/2014 9:55:09 PM	16427
2,4-Dimethylphenol	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/19/2014 9:55:09 PM	16427
2,4-Dinitrophenol	ND	20		µg/L	1	11/19/2014 9:55:09 PM	16427
2,4-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
2,6-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Fluoranthene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Fluorene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Hexachlorobenzene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Hexachlorobutadiene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Hexachloroethane	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Isophorone	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
1-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
2-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
2-Methylphenol	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
3+4-Methylphenol	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
N-Nitrosodimethylamine	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Naphthalene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
2-Nitroaniline	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
3-Nitroaniline	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
4-Nitroaniline	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Nitrobenzene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
2-Nitrophenol	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
4-Nitrophenol	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Pentachlorophenol	ND	20		µg/L	1	11/19/2014 9:55:09 PM	16427
Phenanthrene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Phenol	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-25
Project: Q4 2014
Collection Date: 11/14/2014 3:33:00 PM
Lab ID: 1411590-010
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyrene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Pyridine	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/19/2014 9:55:09 PM	16427
Surr: 2-Fluorophenol	46.2	17.6-104		%REC	1	11/19/2014 9:55:09 PM	16427
Surr: Phenol-d5	44.2	17.7-89.9		%REC	1	11/19/2014 9:55:09 PM	16427
Surr: 2,4,6-Tribromophenol	75.8	16.3-122		%REC	1	11/19/2014 9:55:09 PM	16427
Surr: Nitrobenzene-d5	61.7	45.3-117		%REC	1	11/19/2014 9:55:09 PM	16427
Surr: 2-Fluorobiphenyl	58.3	43-113		%REC	1	11/19/2014 9:55:09 PM	16427
Surr: 4-Terphenyl-d14	79.3	47.6-122		%REC	1	11/19/2014 9:55:09 PM	16427
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	580	50		µg/L	50	11/18/2014 1:09:49 PM	R22619
Toluene	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
Ethylbenzene	23	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
Methyl tert-butyl ether (MTBE)	180	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
1,2,4-Trimethylbenzene	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
1,3,5-Trimethylbenzene	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
1,2-Dichloroethane (EDC)	12	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
Naphthalene	ND	10		µg/L	5	11/18/2014 4:28:29 AM	R22601
1-Methylnaphthalene	ND	20		µg/L	5	11/18/2014 4:28:29 AM	R22601
2-Methylnaphthalene	ND	20		µg/L	5	11/18/2014 4:28:29 AM	R22601
Acetone	ND	50		µg/L	5	11/18/2014 4:28:29 AM	R22601
Bromobenzene	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
Bromodichloromethane	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
Bromoform	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
Bromomethane	ND	15		µg/L	5	11/18/2014 4:28:29 AM	R22601
2-Butanone	ND	50		µg/L	5	11/18/2014 4:28:29 AM	R22601
Carbon disulfide	ND	50		µg/L	5	11/18/2014 4:28:29 AM	R22601
Carbon Tetrachloride	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
Chlorobenzene	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
Chloroethane	ND	10		µg/L	5	11/18/2014 4:28:29 AM	R22601
Chloroform	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
Chloromethane	ND	15		µg/L	5	11/18/2014 4:28:29 AM	R22601
2-Chlorotoluene	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
4-Chlorotoluene	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
cis-1,2-DCE	44	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
cis-1,3-Dichloropropene	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-25
Project: Q4 2014
Collection Date: 11/14/2014 3:33:00 PM
Lab ID: 1411590-010
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dibromo-3-chloropropane	ND	10		µg/L	5	11/18/2014 4:28:29 AM	R22601
Dibromochloromethane	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
Dibromomethane	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
1,2-Dichlorobenzene	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
1,3-Dichlorobenzene	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
1,4-Dichlorobenzene	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
Dichlorodifluoromethane	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
1,1-Dichloroethane	230	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
1,1-Dichloroethene	98	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
1,2-Dichloropropane	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
1,3-Dichloropropane	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
2,2-Dichloropropane	ND	10		µg/L	5	11/18/2014 4:28:29 AM	R22601
1,1-Dichloropropene	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
Hexachlorobutadiene	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
2-Hexanone	ND	50		µg/L	5	11/18/2014 4:28:29 AM	R22601
Isopropylbenzene	40	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
4-Isopropyltoluene	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
4-Methyl-2-pentanone	ND	50		µg/L	5	11/18/2014 4:28:29 AM	R22601
Methylene Chloride	ND	15		µg/L	5	11/18/2014 4:28:29 AM	R22601
n-Butylbenzene	ND	15		µg/L	5	11/18/2014 4:28:29 AM	R22601
n-Propylbenzene	37	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
sec-Butylbenzene	6.6	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
Styrene	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
tert-Butylbenzene	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
1,1,2,2-Tetrachloroethane	ND	10		µg/L	5	11/18/2014 4:28:29 AM	R22601
Tetrachloroethene (PCE)	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
trans-1,2-DCE	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
trans-1,3-Dichloropropene	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
1,2,3-Trichlorobenzene	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
1,2,4-Trichlorobenzene	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
1,1,1-Trichloroethane	23	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
1,1,2-Trichloroethane	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
Trichloroethene (TCE)	27	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
Trichlorofluoromethane	ND	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
1,2,3-Trichloropropane	ND	10		µg/L	5	11/18/2014 4:28:29 AM	R22601
Vinyl chloride	46	5.0		µg/L	5	11/18/2014 4:28:29 AM	R22601
Xylenes, Total	ND	7.5		µg/L	5	11/18/2014 4:28:29 AM	R22601
Surr: 1,2-Dichloroethane-d4	108	70-130		%REC	5	11/18/2014 4:28:29 AM	R22601

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-25
Project: Q4 2014
Collection Date: 11/14/2014 3:33:00 PM
Lab ID: 1411590-010
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Surr: 4-Bromofluorobenzene	103	70-130		%REC	5	11/18/2014 4:28:29 AM	R22601
Surr: Dibromofluoromethane	97.3	70-130		%REC	5	11/18/2014 4:28:29 AM	R22601
Surr: Toluene-d8	96.7	70-130		%REC	5	11/18/2014 4:28:29 AM	R22601

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TB-501
Project: Q4 2014
Collection Date: 11/14/2014
Lab ID: 1411590-011
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/18/2014 2:45:45 AM	R22597
Surr: BFB	88.0	80-120		%REC	1	11/18/2014 2:45:45 AM	R22597
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
Toluene	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
Ethylbenzene	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
Naphthalene	ND	2.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
1-Methylnaphthalene	ND	4.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
2-Methylnaphthalene	ND	4.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
Acetone	ND	10		µg/L	1	11/18/2014 4:55:14 AM	R22601
Bromobenzene	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
Bromodichloromethane	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
Bromoform	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
Bromomethane	ND	3.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
2-Butanone	ND	10		µg/L	1	11/18/2014 4:55:14 AM	R22601
Carbon disulfide	ND	10		µg/L	1	11/18/2014 4:55:14 AM	R22601
Carbon Tetrachloride	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
Chlorobenzene	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
Chloroethane	ND	2.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
Chloroform	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
Chloromethane	ND	3.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
2-Chlorotoluene	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
4-Chlorotoluene	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
cis-1,2-DCE	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
Dibromochloromethane	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
Dibromomethane	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
1,1-Dichloroethane	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
1,1-Dichloroethene	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TB-501
Project: Q4 2014
Collection Date: 11/14/2014
Lab ID: 1411590-011
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dichloropropane	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
1,3-Dichloropropane	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
2,2-Dichloropropane	ND	2.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
1,1-Dichloropropene	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
Hexachlorobutadiene	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
2-Hexanone	ND	10		µg/L	1	11/18/2014 4:55:14 AM	R22601
Isopropylbenzene	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
4-Isopropyltoluene	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
4-Methyl-2-pentanone	ND	10		µg/L	1	11/18/2014 4:55:14 AM	R22601
Methylene Chloride	ND	3.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
n-Butylbenzene	ND	3.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
n-Propylbenzene	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
sec-Butylbenzene	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
Styrene	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
tert-Butylbenzene	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
trans-1,2-DCE	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
Trichlorofluoromethane	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
Vinyl chloride	ND	1.0		µg/L	1	11/18/2014 4:55:14 AM	R22601
Xylenes, Total	ND	1.5		µg/L	1	11/18/2014 4:55:14 AM	R22601
Surr: 1,2-Dichloroethane-d4	104	70-130		%REC	1	11/18/2014 4:55:14 AM	R22601
Surr: 4-Bromofluorobenzene	138	70-130	S	%REC	1	11/18/2014 4:55:14 AM	R22601
Surr: Dibromofluoromethane	94.6	70-130		%REC	1	11/18/2014 4:55:14 AM	R22601
Surr: Toluene-d8	102	70-130		%REC	1	11/18/2014 4:55:14 AM	R22601

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-04
Project: Q4 2014
Collection Date: 11/13/2014 3:45:00 PM
Lab ID: 1411590-012
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**JME**
Diesel Range Organics (DRO)	2.0	1.0		mg/L	1	11/19/2014 1:41:00 AM	16415
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/19/2014 1:41:00 AM	16415
Surr: DNOP	102	59-141		%REC	1	11/19/2014 1:41:00 AM	16415
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	4.2	0.50		mg/L	10	11/18/2014 3:12:52 AM	R22597
Surr: BFB	93.6	80-120		%REC	10	11/18/2014 3:12:52 AM	R22597
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	ND	1.0		mg/L	10	11/17/2014 8:16:35 PM	R22603
Chloride	250	50		mg/L	100	11/17/2014 8:29:00 PM	R22603
Bromide	2.1	1.0		mg/L	10	11/17/2014 8:16:35 PM	R22603
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	11/17/2014 8:16:35 PM	R22603
Sulfate	26	5.0		mg/L	10	11/17/2014 8:16:35 PM	R22603
Nitrate+Nitrite as N	ND	1.0		mg/L	5	11/26/2014 12:33:14 PM	R22848
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	1.3	0.010		mg/L	5	11/24/2014 6:51:14 PM	R22755
Cadmium	ND	0.0020		mg/L	1	11/24/2014 6:49:35 PM	R22755
Calcium	110	5.0		mg/L	5	11/24/2014 6:51:14 PM	R22755
Chromium	ND	0.0060		mg/L	1	11/24/2014 6:49:35 PM	R22755
Copper	ND	0.0060		mg/L	1	11/24/2014 6:49:35 PM	R22755
Iron	4.7	0.10	*	mg/L	5	11/24/2014 6:51:14 PM	R22755
Magnesium	27	1.0		mg/L	1	11/24/2014 6:49:35 PM	R22755
Manganese	1.8	0.010	*	mg/L	5	11/24/2014 6:51:14 PM	R22755
Potassium	1.4	1.0		mg/L	1	11/24/2014 6:49:35 PM	R22755
Silver	ND	0.0050		mg/L	1	11/24/2014 6:49:35 PM	R22755
Sodium	370	5.0		mg/L	5	11/24/2014 6:51:14 PM	R22755
Zinc	0.010	0.010		mg/L	1	11/24/2014 6:49:35 PM	R22755
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	1.9	0.010		mg/L	5	11/21/2014 5:52:07 PM	16487
Cadmium	ND	0.0020		mg/L	1	11/20/2014 6:38:35 PM	16487
Chromium	0.0086	0.0060		mg/L	1	11/20/2014 6:38:35 PM	16487
Copper	0.015	0.0060		mg/L	1	11/20/2014 6:38:35 PM	16487
Iron	15	1.0	*	mg/L	50	11/21/2014 5:53:51 PM	16487
Manganese	2.5	0.010	*	mg/L	5	11/21/2014 5:52:07 PM	16487
Silver	ND	0.0050		mg/L	1	11/20/2014 6:38:35 PM	16487
Zinc	0.030	0.010		mg/L	1	11/20/2014 6:38:35 PM	16487
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0060	0.0050		mg/L	5	12/2/2014 5:56:32 PM	R22885

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Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-04
Project: Q4 2014
Collection Date: 11/13/2014 3:45:00 PM
Lab ID: 1411590-012
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.0050		mg/L	5	12/2/2014 5:56:32 PM	R22885
Selenium	ND	0.0050		mg/L	5	12/2/2014 5:56:32 PM	R22885
Uranium	0.013	0.0050		mg/L	5	12/2/2014 5:56:32 PM	R22885
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0079	0.0050		mg/L	5	11/26/2014 6:48:51 PM	16487
Lead	0.023	0.0050	*	mg/L	5	11/26/2014 6:48:51 PM	16487
Selenium	ND	0.050		mg/L	5	11/26/2014 6:48:51 PM	16487
Uranium	0.013	0.010		mg/L	10	12/3/2014 3:37:22 PM	16487
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/26/2014 3:10:12 PM	16593
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Acenaphthylene	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Aniline	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Anthracene	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Azobenzene	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Benz(a)anthracene	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Benzo(a)pyrene	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Benzo(b)fluoranthene	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Benzo(k)fluoranthene	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Benzoic acid	ND	20		µg/L	1	11/19/2014 10:22:27 PM	16427
Benzyl alcohol	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Butyl benzyl phthalate	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Carbazole	17	10		µg/L	1	11/19/2014 10:22:27 PM	16427
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
4-Chloroaniline	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
2-Chloronaphthalene	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
2-Chlorophenol	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Chrysene	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Di-n-butyl phthalate	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Di-n-octyl phthalate	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-04
Project: Q4 2014
Collection Date: 11/13/2014 3:45:00 PM
Lab ID: 1411590-012
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Dibenzofuran	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
1,2-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
1,3-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
1,4-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Diethyl phthalate	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Dimethyl phthalate	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
2,4-Dichlorophenol	ND	20		µg/L	1	11/19/2014 10:22:27 PM	16427
2,4-Dimethylphenol	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/19/2014 10:22:27 PM	16427
2,4-Dinitrophenol	ND	20		µg/L	1	11/19/2014 10:22:27 PM	16427
2,4-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
2,6-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Fluoranthene	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Fluorene	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Hexachlorobenzene	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Hexachlorobutadiene	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Hexachloroethane	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Isophorone	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
1-Methylnaphthalene	61	10		µg/L	1	11/19/2014 10:22:27 PM	16427
2-Methylnaphthalene	47	10		µg/L	1	11/19/2014 10:22:27 PM	16427
2-Methylphenol	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
3+4-Methylphenol	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
N-Nitrosodimethylamine	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Naphthalene	80	10		µg/L	1	11/19/2014 10:22:27 PM	16427
2-Nitroaniline	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
3-Nitroaniline	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
4-Nitroaniline	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Nitrobenzene	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
2-Nitrophenol	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
4-Nitrophenol	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Pentachlorophenol	ND	20		µg/L	1	11/19/2014 10:22:27 PM	16427
Phenanthrene	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Phenol	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427

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R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-04
Project: Q4 2014
Collection Date: 11/13/2014 3:45:00 PM
Lab ID: 1411590-012
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Pyrene	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Pyridine	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/19/2014 10:22:27 PM	16427
Surr: 2-Fluorophenol	73.3	17.6-104		%REC	1	11/19/2014 10:22:27 PM	16427
Surr: Phenol-d5	67.3	17.7-89.9		%REC	1	11/19/2014 10:22:27 PM	16427
Surr: 2,4,6-Tribromophenol	94.2	16.3-122		%REC	1	11/19/2014 10:22:27 PM	16427
Surr: Nitrobenzene-d5	82.5	45.3-117		%REC	1	11/19/2014 10:22:27 PM	16427
Surr: 2-Fluorobiphenyl	84.7	43-113		%REC	1	11/19/2014 10:22:27 PM	16427
Surr: 4-Terphenyl-d14	86.7	47.6-122		%REC	1	11/19/2014 10:22:27 PM	16427
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	180	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
Toluene	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
Ethylbenzene	280	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
Methyl tert-butyl ether (MTBE)	1400	50		µg/L	50	11/18/2014 1:36:32 PM	R22619
1,2,4-Trimethylbenzene	200	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
1,3,5-Trimethylbenzene	19	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
Naphthalene	130	20		µg/L	10	11/18/2014 5:22:00 AM	R22601
1-Methylnaphthalene	95	40		µg/L	10	11/18/2014 5:22:00 AM	R22601
2-Methylnaphthalene	80	40		µg/L	10	11/18/2014 5:22:00 AM	R22601
Acetone	ND	100		µg/L	10	11/18/2014 5:22:00 AM	R22601
Bromobenzene	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
Bromodichloromethane	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
Bromoform	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
Bromomethane	ND	30		µg/L	10	11/18/2014 5:22:00 AM	R22601
2-Butanone	ND	100		µg/L	10	11/18/2014 5:22:00 AM	R22601
Carbon disulfide	ND	100		µg/L	10	11/18/2014 5:22:00 AM	R22601
Carbon Tetrachloride	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
Chlorobenzene	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
Chloroethane	ND	20		µg/L	10	11/18/2014 5:22:00 AM	R22601
Chloroform	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
Chloromethane	ND	30		µg/L	10	11/18/2014 5:22:00 AM	R22601
2-Chlorotoluene	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
4-Chlorotoluene	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
cis-1,2-DCE	14	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601

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Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-04
Project: Q4 2014
Collection Date: 11/13/2014 3:45:00 PM
Lab ID: 1411590-012
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/18/2014 5:22:00 AM	R22601
Dibromochloromethane	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
Dibromomethane	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
1,2-Dichlorobenzene	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
1,3-Dichlorobenzene	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
1,4-Dichlorobenzene	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
Dichlorodifluoromethane	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
1,1-Dichloroethane	37	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
1,1-Dichloroethene	59	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
1,2-Dichloropropane	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
1,3-Dichloropropane	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
2,2-Dichloropropane	ND	20		µg/L	10	11/18/2014 5:22:00 AM	R22601
1,1-Dichloropropene	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
Hexachlorobutadiene	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
2-Hexanone	ND	100		µg/L	10	11/18/2014 5:22:00 AM	R22601
Isopropylbenzene	16	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
4-Isopropyltoluene	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
4-Methyl-2-pentanone	ND	100		µg/L	10	11/18/2014 5:22:00 AM	R22601
Methylene Chloride	ND	30		µg/L	10	11/18/2014 5:22:00 AM	R22601
n-Butylbenzene	ND	30		µg/L	10	11/18/2014 5:22:00 AM	R22601
n-Propylbenzene	29	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
sec-Butylbenzene	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
Styrene	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
tert-Butylbenzene	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	11/18/2014 5:22:00 AM	R22601
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
trans-1,2-DCE	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
1,1,1-Trichloroethane	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
1,1,2-Trichloroethane	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
Trichloroethene (TCE)	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
Trichlorofluoromethane	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
1,2,3-Trichloropropane	ND	20		µg/L	10	11/18/2014 5:22:00 AM	R22601
Vinyl chloride	ND	10		µg/L	10	11/18/2014 5:22:00 AM	R22601
Xylenes, Total	260	15		µg/L	10	11/18/2014 5:22:00 AM	R22601
Surr: 1,2-Dichloroethane-d4	99.8	70-130		%REC	10	11/18/2014 5:22:00 AM	R22601

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
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S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-04
Project: Q4 2014
Collection Date: 11/13/2014 3:45:00 PM
Lab ID: 1411590-012
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Surr: 4-Bromofluorobenzene	91.4	70-130		%REC	10	11/18/2014 5:22:00 AM	R22601
Surr: Dibromofluoromethane	93.9	70-130		%REC	10	11/18/2014 5:22:00 AM	R22601
Surr: Toluene-d8	103	70-130		%REC	10	11/18/2014 5:22:00 AM	R22601

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-11
Project: Q4 2014
Collection Date: 11/13/2014 4:42:00 PM
Lab ID: 1411590-013
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**JME**
Diesel Range Organics (DRO)	1.8	1.0		mg/L	1	11/19/2014 2:10:46 AM	16415
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/19/2014 2:10:46 AM	16415
Surr: DNOP	109	59-141		%REC	1	11/19/2014 2:10:46 AM	16415
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	35	2.5		mg/L	50	11/18/2014 3:40:00 AM	R22597
Surr: BFB	90.9	80-120		%REC	50	11/18/2014 3:40:00 AM	R22597
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	6.5	1.0	*	mg/L	10	11/17/2014 9:06:15 PM	R22603
Chloride	780	50		mg/L	100	11/17/2014 9:18:40 PM	R22603
Bromide	ND	1.0		mg/L	10	11/17/2014 9:06:15 PM	R22603
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	11/17/2014 9:06:15 PM	R22603
Sulfate	ND	5.0		mg/L	10	11/17/2014 9:06:15 PM	R22603
Nitrate+Nitrite as N	ND	1.0		mg/L	5	11/26/2014 12:45:39 PM	R22848
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	1.5	0.010		mg/L	5	11/24/2014 7:02:56 PM	R22755
Cadmium	ND	0.0020		mg/L	1	11/24/2014 7:01:06 PM	R22755
Calcium	120	5.0		mg/L	5	11/24/2014 7:02:56 PM	R22755
Chromium	ND	0.0060		mg/L	1	11/24/2014 7:01:06 PM	R22755
Copper	ND	0.0060		mg/L	1	11/24/2014 7:01:06 PM	R22755
Iron	3.4	0.10	*	mg/L	5	11/24/2014 7:02:56 PM	R22755
Magnesium	34	1.0		mg/L	1	11/24/2014 7:01:06 PM	R22755
Manganese	3.2	0.010	*	mg/L	5	11/24/2014 7:02:56 PM	R22755
Potassium	1.3	1.0		mg/L	1	11/24/2014 7:01:06 PM	R22755
Silver	ND	0.0050		mg/L	1	11/24/2014 7:01:06 PM	R22755
Sodium	660	10		mg/L	10	11/25/2014 2:37:39 PM	R22813
Zinc	0.019	0.010		mg/L	1	11/24/2014 7:01:06 PM	R22755
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	1.7	0.020		mg/L	10	11/21/2014 5:55:52 PM	16487
Cadmium	ND	0.0020		mg/L	1	11/20/2014 6:47:22 PM	16487
Chromium	ND	0.0060		mg/L	1	11/20/2014 6:47:22 PM	16487
Copper	ND	0.0060		mg/L	1	11/20/2014 6:47:22 PM	16487
Iron	5.8	0.20	*	mg/L	10	11/21/2014 5:55:52 PM	16487
Manganese	3.4	0.020	*	mg/L	10	11/21/2014 5:55:52 PM	16487
Silver	ND	0.0050		mg/L	1	11/20/2014 6:47:22 PM	16487
Zinc	0.012	0.010		mg/L	1	11/20/2014 6:47:22 PM	16487
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	1	12/4/2014 11:43:48 AM	R22933

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S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-11
Project: Q4 2014
Collection Date: 11/13/2014 4:42:00 PM
Lab ID: 1411590-013
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.0010		mg/L	1	12/4/2014 11:43:48 AM	R22933
Selenium	0.0051	0.0010		mg/L	1	12/4/2014 11:43:48 AM	R22933
Uranium	0.0033	0.0010		mg/L	1	12/4/2014 11:43:48 AM	R22933
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0087	0.0050		mg/L	5	11/26/2014 3:14:31 PM	16487
Lead	ND	0.0050		mg/L	5	11/26/2014 3:14:31 PM	16487
Selenium	ND	0.0050		mg/L	5	11/26/2014 3:14:31 PM	16487
Uranium	ND	0.0050		mg/L	5	11/26/2014 3:14:31 PM	16487
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/26/2014 3:12:03 PM	16593
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Acenaphthylene	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Aniline	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Anthracene	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Azobenzene	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Benz(a)anthracene	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Benzo(a)pyrene	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Benzo(b)fluoranthene	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Benzo(k)fluoranthene	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Benzoic acid	ND	20		µg/L	1	11/19/2014 10:49:55 PM	16427
Benzyl alcohol	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Bis(2-ethylhexyl)phthalate	14	10		µg/L	1	11/19/2014 10:49:55 PM	16427
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Butyl benzyl phthalate	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Carbazole	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
4-Chloroaniline	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
2-Chloronaphthalene	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
2-Chlorophenol	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Chrysene	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Di-n-butyl phthalate	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Di-n-octyl phthalate	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427

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Hall Environmental Analysis Laboratory, Inc.

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Client Sample ID: MKTF-11
Project: Q4 2014
Collection Date: 11/13/2014 4:42:00 PM
Lab ID: 1411590-013
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Dibenzofuran	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
1,2-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
1,3-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
1,4-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Diethyl phthalate	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Dimethyl phthalate	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
2,4-Dichlorophenol	ND	20		µg/L	1	11/19/2014 10:49:55 PM	16427
2,4-Dimethylphenol	12	10		µg/L	1	11/19/2014 10:49:55 PM	16427
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/19/2014 10:49:55 PM	16427
2,4-Dinitrophenol	ND	20		µg/L	1	11/19/2014 10:49:55 PM	16427
2,4-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
2,6-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Fluoranthene	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Fluorene	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Hexachlorobenzene	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Hexachlorobutadiene	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Hexachloroethane	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Isophorone	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
1-Methylnaphthalene	15	10		µg/L	1	11/19/2014 10:49:55 PM	16427
2-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
2-Methylphenol	70	10		µg/L	1	11/19/2014 10:49:55 PM	16427
3+4-Methylphenol	46	10		µg/L	1	11/19/2014 10:49:55 PM	16427
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
N-Nitrosodimethylamine	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Naphthalene	31	10		µg/L	1	11/19/2014 10:49:55 PM	16427
2-Nitroaniline	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
3-Nitroaniline	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
4-Nitroaniline	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Nitrobenzene	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
2-Nitrophenol	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
4-Nitrophenol	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Pentachlorophenol	ND	20		µg/L	1	11/19/2014 10:49:55 PM	16427
Phenanthrene	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Phenol	20	10		µg/L	1	11/19/2014 10:49:55 PM	16427

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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Pyrene	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Pyridine	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/19/2014 10:49:55 PM	16427
Surr: 2-Fluorophenol	47.8	17.6-104		%REC	1	11/19/2014 10:49:55 PM	16427
Surr: Phenol-d5	56.2	17.7-89.9		%REC	1	11/19/2014 10:49:55 PM	16427
Surr: 2,4,6-Tribromophenol	70.0	16.3-122		%REC	1	11/19/2014 10:49:55 PM	16427
Surr: Nitrobenzene-d5	77.0	45.3-117		%REC	1	11/19/2014 10:49:55 PM	16427
Surr: 2-Fluorobiphenyl	80.6	43-113		%REC	1	11/19/2014 10:49:55 PM	16427
Surr: 4-Terphenyl-d14	63.1	47.6-122		%REC	1	11/19/2014 10:49:55 PM	16427
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	9500	200		µg/L	200	11/18/2014 5:48:44 AM	R22601
Toluene	8200	200		µg/L	200	11/18/2014 5:48:44 AM	R22601
Ethylbenzene	770	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
Methyl tert-butyl ether (MTBE)	80	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
1,2,4-Trimethylbenzene	400	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
1,3,5-Trimethylbenzene	60	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
1,2-Dichloroethane (EDC)	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
1,2-Dibromoethane (EDB)	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
Naphthalene	58	40		µg/L	20	11/18/2014 6:15:29 AM	R22601
1-Methylnaphthalene	ND	80		µg/L	20	11/18/2014 6:15:29 AM	R22601
2-Methylnaphthalene	ND	80		µg/L	20	11/18/2014 6:15:29 AM	R22601
Acetone	ND	200		µg/L	20	11/18/2014 6:15:29 AM	R22601
Bromobenzene	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
Bromodichloromethane	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
Bromoform	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
Bromomethane	ND	60		µg/L	20	11/18/2014 6:15:29 AM	R22601
2-Butanone	ND	200		µg/L	20	11/18/2014 6:15:29 AM	R22601
Carbon disulfide	ND	200		µg/L	20	11/18/2014 6:15:29 AM	R22601
Carbon Tetrachloride	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
Chlorobenzene	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
Chloroethane	ND	40		µg/L	20	11/18/2014 6:15:29 AM	R22601
Chloroform	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
Chloromethane	ND	60		µg/L	20	11/18/2014 6:15:29 AM	R22601
2-Chlorotoluene	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
4-Chlorotoluene	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
cis-1,2-DCE	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
cis-1,3-Dichloropropene	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601

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Hall Environmental Analysis Laboratory, Inc.

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Client Sample ID: MKTF-11
Project: Q4 2014
Collection Date: 11/13/2014 4:42:00 PM
Lab ID: 1411590-013
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dibromo-3-chloropropane	ND	40		µg/L	20	11/18/2014 6:15:29 AM	R22601
Dibromochloromethane	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
Dibromomethane	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
1,2-Dichlorobenzene	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
1,3-Dichlorobenzene	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
1,4-Dichlorobenzene	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
Dichlorodifluoromethane	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
1,1-Dichloroethane	47	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
1,1-Dichloroethene	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
1,2-Dichloropropane	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
1,3-Dichloropropane	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
2,2-Dichloropropane	ND	40		µg/L	20	11/18/2014 6:15:29 AM	R22601
1,1-Dichloropropene	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
Hexachlorobutadiene	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
2-Hexanone	ND	200		µg/L	20	11/18/2014 6:15:29 AM	R22601
Isopropylbenzene	29	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
4-Isopropyltoluene	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
4-Methyl-2-pentanone	ND	200		µg/L	20	11/18/2014 6:15:29 AM	R22601
Methylene Chloride	ND	60		µg/L	20	11/18/2014 6:15:29 AM	R22601
n-Butylbenzene	ND	60		µg/L	20	11/18/2014 6:15:29 AM	R22601
n-Propylbenzene	78	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
sec-Butylbenzene	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
Styrene	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
tert-Butylbenzene	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
1,1,1,2-Tetrachloroethane	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
1,1,2,2-Tetrachloroethane	ND	40		µg/L	20	11/18/2014 6:15:29 AM	R22601
Tetrachloroethene (PCE)	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
trans-1,2-DCE	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
trans-1,3-Dichloropropene	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
1,2,3-Trichlorobenzene	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
1,2,4-Trichlorobenzene	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
1,1,1-Trichloroethane	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
1,1,2-Trichloroethane	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
Trichloroethene (TCE)	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
Trichlorofluoromethane	ND	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
1,2,3-Trichloropropane	ND	40		µg/L	20	11/18/2014 6:15:29 AM	R22601
Vinyl chloride	54	20		µg/L	20	11/18/2014 6:15:29 AM	R22601
Xylenes, Total	2300	30		µg/L	20	11/18/2014 6:15:29 AM	R22601
Surr: 1,2-Dichloroethane-d4	107	70-130		%REC	20	11/18/2014 6:15:29 AM	R22601

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CLIENT: Western Refining Southwest, Gallup
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Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Surr: 4-Bromofluorobenzene	97.6	70-130		%REC	20	11/18/2014 6:15:29 AM	R22601
Surr: Dibromofluoromethane	92.2	70-130		%REC	20	11/18/2014 6:15:29 AM	R22601
Surr: Toluene-d8	102	70-130		%REC	20	11/18/2014 6:15:29 AM	R22601

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EB-111414
Project: Q4 2014
Collection Date: 11/14/2014 3:45:00 PM
Lab ID: 1411590-014
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
Toluene	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
Ethylbenzene	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
Naphthalene	ND	2.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
1-Methylnaphthalene	ND	4.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
2-Methylnaphthalene	ND	4.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
Acetone	ND	10		µg/L	1	11/18/2014 2:03:18 PM	R22619
Bromobenzene	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
Bromodichloromethane	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
Bromoform	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
Bromomethane	ND	3.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
2-Butanone	ND	10		µg/L	1	11/18/2014 2:03:18 PM	R22619
Carbon disulfide	ND	10		µg/L	1	11/18/2014 2:03:18 PM	R22619
Carbon Tetrachloride	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
Chlorobenzene	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
Chloroethane	ND	2.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
Chloroform	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
Chloromethane	ND	3.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
2-Chlorotoluene	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
4-Chlorotoluene	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
cis-1,2-DCE	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
Dibromochloromethane	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
Dibromomethane	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
1,1-Dichloroethane	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
1,1-Dichloroethene	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
1,2-Dichloropropane	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
1,3-Dichloropropane	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
2,2-Dichloropropane	ND	2.0		µg/L	1	11/18/2014 2:03:18 PM	R22619

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EB-111414
Project: Q4 2014
Collection Date: 11/14/2014 3:45:00 PM
Lab ID: 1411590-014
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
Hexachlorobutadiene	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
2-Hexanone	ND	10		µg/L	1	11/18/2014 2:03:18 PM	R22619
Isopropylbenzene	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
4-Isopropyltoluene	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
4-Methyl-2-pentanone	ND	10		µg/L	1	11/18/2014 2:03:18 PM	R22619
Methylene Chloride	ND	3.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
n-Butylbenzene	ND	3.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
n-Propylbenzene	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
sec-Butylbenzene	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
Styrene	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
tert-Butylbenzene	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
trans-1,2-DCE	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
Trichlorofluoromethane	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
Vinyl chloride	ND	1.0		µg/L	1	11/18/2014 2:03:18 PM	R22619
Xylenes, Total	ND	1.5		µg/L	1	11/18/2014 2:03:18 PM	R22619
Surr: 1,2-Dichloroethane-d4	106	70-130		%REC	1	11/18/2014 2:03:18 PM	R22619
Surr: 4-Bromofluorobenzene	136	70-130	S	%REC	1	11/18/2014 2:03:18 PM	R22619
Surr: Dibromofluoromethane	98.0	70-130		%REC	1	11/18/2014 2:03:18 PM	R22619
Surr: Toluene-d8	102	70-130		%REC	1	11/18/2014 2:03:18 PM	R22619

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-111414
Project: Q4 2014
Collection Date: 11/14/2014 3:50:00 PM
Lab ID: 1411590-015
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
Toluene	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
Ethylbenzene	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
Naphthalene	ND	2.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
1-Methylnaphthalene	ND	4.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
2-Methylnaphthalene	ND	4.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
Acetone	ND	10		µg/L	1	11/18/2014 2:30:02 PM	R22619
Bromobenzene	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
Bromodichloromethane	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
Bromoform	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
Bromomethane	ND	3.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
2-Butanone	ND	10		µg/L	1	11/18/2014 2:30:02 PM	R22619
Carbon disulfide	ND	10		µg/L	1	11/18/2014 2:30:02 PM	R22619
Carbon Tetrachloride	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
Chlorobenzene	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
Chloroethane	ND	2.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
Chloroform	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
Chloromethane	ND	3.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
2-Chlorotoluene	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
4-Chlorotoluene	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
cis-1,2-DCE	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
Dibromochloromethane	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
Dibromomethane	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
1,1-Dichloroethane	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
1,1-Dichloroethene	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
1,2-Dichloropropane	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
1,3-Dichloropropane	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
2,2-Dichloropropane	ND	2.0		µg/L	1	11/18/2014 2:30:02 PM	R22619

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-111414
Project: Q4 2014
Collection Date: 11/14/2014 3:50:00 PM
Lab ID: 1411590-015
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
Hexachlorobutadiene	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
2-Hexanone	ND	10		µg/L	1	11/18/2014 2:30:02 PM	R22619
Isopropylbenzene	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
4-Isopropyltoluene	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
4-Methyl-2-pentanone	ND	10		µg/L	1	11/18/2014 2:30:02 PM	R22619
Methylene Chloride	ND	3.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
n-Butylbenzene	ND	3.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
n-Propylbenzene	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
sec-Butylbenzene	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
Styrene	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
tert-Butylbenzene	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
trans-1,2-DCE	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
Trichlorofluoromethane	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
Vinyl chloride	ND	1.0		µg/L	1	11/18/2014 2:30:02 PM	R22619
Xylenes, Total	ND	1.5		µg/L	1	11/18/2014 2:30:02 PM	R22619
Surr: 1,2-Dichloroethane-d4	98.8	70-130		%REC	1	11/18/2014 2:30:02 PM	R22619
Surr: 4-Bromofluorobenzene	138	70-130	S	%REC	1	11/18/2014 2:30:02 PM	R22619
Surr: Dibromofluoromethane	89.7	70-130		%REC	1	11/18/2014 2:30:02 PM	R22619
Surr: Toluene-d8	101	70-130		%REC	1	11/18/2014 2:30:02 PM	R22619

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TB-502
Project: Q4 2014
Collection Date: 11/14/2014
Lab ID: 1411590-016
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
Toluene	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
Ethylbenzene	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
Naphthalene	ND	2.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
1-Methylnaphthalene	ND	4.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
2-Methylnaphthalene	ND	4.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
Acetone	ND	10		µg/L	1	11/18/2014 7:35:41 AM	R22601
Bromobenzene	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
Bromodichloromethane	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
Bromoform	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
Bromomethane	ND	3.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
2-Butanone	ND	10		µg/L	1	11/18/2014 7:35:41 AM	R22601
Carbon disulfide	ND	10		µg/L	1	11/18/2014 7:35:41 AM	R22601
Carbon Tetrachloride	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
Chlorobenzene	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
Chloroethane	ND	2.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
Chloroform	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
Chloromethane	ND	3.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
2-Chlorotoluene	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
4-Chlorotoluene	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
cis-1,2-DCE	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
Dibromochloromethane	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
Dibromomethane	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
1,1-Dichloroethane	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
1,1-Dichloroethene	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
1,2-Dichloropropane	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
1,3-Dichloropropane	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
2,2-Dichloropropane	ND	2.0		µg/L	1	11/18/2014 7:35:41 AM	R22601

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TB-502
Project: Q4 2014
Collection Date: 11/14/2014
Lab ID: 1411590-016
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
Hexachlorobutadiene	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
2-Hexanone	ND	10		µg/L	1	11/18/2014 7:35:41 AM	R22601
Isopropylbenzene	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
4-Isopropyltoluene	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
4-Methyl-2-pentanone	ND	10		µg/L	1	11/18/2014 7:35:41 AM	R22601
Methylene Chloride	ND	3.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
n-Butylbenzene	ND	3.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
n-Propylbenzene	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
sec-Butylbenzene	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
Styrene	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
tert-Butylbenzene	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
trans-1,2-DCE	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
Trichlorofluoromethane	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
Vinyl chloride	ND	1.0		µg/L	1	11/18/2014 7:35:41 AM	R22601
Xylenes, Total	ND	1.5		µg/L	1	11/18/2014 7:35:41 AM	R22601
Surr: 1,2-Dichloroethane-d4	98.2	70-130		%REC	1	11/18/2014 7:35:41 AM	R22601
Surr: 4-Bromofluorobenzene	135	70-130	S	%REC	1	11/18/2014 7:35:41 AM	R22601
Surr: Dibromofluoromethane	89.4	70-130		%REC	1	11/18/2014 7:35:41 AM	R22601
Surr: Toluene-d8	101	70-130		%REC	1	11/18/2014 7:35:41 AM	R22601

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411590**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22755** RunNo: **22755**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671448** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22755** RunNo: **22755**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671449** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.6	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.8	85	115			
Calcium	50	1.0	50.00	0	100	85	115			
Chromium	0.48	0.0060	0.5000	0	96.1	85	115			
Copper	0.49	0.0060	0.5000	0	97.6	85	115			
Iron	0.49	0.020	0.5000	0	97.8	85	115			
Magnesium	50	1.0	50.00	0	101	85	115			
Manganese	0.47	0.0020	0.5000	0	93.5	85	115			
Potassium	49	1.0	50.00	0	97.3	85	115			
Silver	0.10	0.0050	0.1000	0	104	85	115			
Sodium	50	1.0	50.00	0	99.2	85	115			
Zinc	0.48	0.010	0.5000	0	96.3	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22813** RunNo: **22813**
Prep Date: Analysis Date: **11/25/2014** SeqNo: **673337** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Calcium	ND	1.0								
Iron	ND	0.020								
Manganese	ND	0.0020								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411590**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**		
Client ID:	**PBW**	Batch ID:	**R22813**	RunNo:	**22813**		
Prep Date:		Analysis Date:	**11/25/2014**	SeqNo:	**673337**	Units:	**mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**		
Client ID:	**LCSW**	Batch ID:	**R22813**	RunNo:	**22813**		
Prep Date:		Analysis Date:	**11/25/2014**	SeqNo:	**673338**	Units:	**mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	100	85	115			
Calcium	51	1.0	50.00	0	103	85	115			
Iron	0.50	0.020	0.5000	0	100	85	115			
Manganese	0.51	0.0020	0.5000	0	101	85	115			
Sodium	51	1.0	50.00	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411590**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB-16487** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **16487** RunNo: **22687**
Prep Date: **11/20/2014** Analysis Date: **11/20/2014** SeqNo: **669092** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-16487** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **16487** RunNo: **22687**
Prep Date: **11/20/2014** Analysis Date: **11/20/2014** SeqNo: **669093** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.0	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.0	85	115			
Chromium	0.48	0.0060	0.5000	0	96.8	85	115			
Copper	0.49	0.0060	0.5000	0	98.9	85	115			
Iron	0.51	0.020	0.5000	0	101	85	115			
Manganese	0.48	0.0020	0.5000	0	95.7	85	115			
Silver	0.11	0.0050	0.1000	0	108	85	115			
Zinc	0.48	0.010	0.5000	0	96.7	85	115			

Sample ID **1411590-002FMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **MKTF-09** Batch ID: **16487** RunNo: **22687**
Prep Date: **11/20/2014** Analysis Date: **11/20/2014** SeqNo: **669178** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.88	0.0020	0.5000	0.3881	98.2	70	130			
Cadmium	0.48	0.0020	0.5000	0	95.9	70	130			
Chromium	0.47	0.0060	0.5000	0	94.5	70	130			
Copper	0.52	0.0060	0.5000	0	104	70	130			
Silver	0.11	0.0050	0.1000	0	107	70	130			
Zinc	0.47	0.010	0.5000	0.01261	90.7	70	130			

Sample ID **1411590-002FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **MKTF-09** Batch ID: **16487** RunNo: **22687**
Prep Date: **11/20/2014** Analysis Date: **11/20/2014** SeqNo: **669179** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411590**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **1411590-002FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **MKTF-09** Batch ID: **16487** RunNo: **22687**
Prep Date: **11/20/2014** Analysis Date: **11/20/2014** SeqNo: **669179** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.89	0.0020	0.5000	0.3881	100	70	130	1.16	20	
Cadmium	0.48	0.0020	0.5000	0	95.8	70	130	0.0104	20	
Chromium	0.47	0.0060	0.5000	0	94.0	70	130	0.473	20	
Copper	0.53	0.0060	0.5000	0	105	70	130	0.645	20	
Silver	0.11	0.0050	0.1000	0	108	70	130	0.419	20	
Zinc	0.47	0.010	0.5000	0.01261	90.6	70	130	0.0730	20	

Sample ID **1411590-002FMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **MKTF-09** Batch ID: **16487** RunNo: **22732**
Prep Date: **11/20/2014** Analysis Date: **11/21/2014** SeqNo: **670616** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	3.1	0.010	0.5000	2.703	87.5	70	130			

Sample ID **1411590-002FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **MKTF-09** Batch ID: **16487** RunNo: **22732**
Prep Date: **11/20/2014** Analysis Date: **11/21/2014** SeqNo: **670617** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	3.2	0.010	0.5000	2.703	96.1	70	130	1.36	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411590**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22871** RunNo: **22871**
Prep Date: Analysis Date: **12/1/2014** SeqNo: **675136** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.7	85	115			
Selenium	0.024	0.0010	0.02500	0	97.6	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22871** RunNo: **22871**
Prep Date: Analysis Date: **12/1/2014** SeqNo: **675137** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.023	0.0010	0.02500	0	92.9	85	115			
Uranium	0.023	0.0010	0.02500	0	91.5	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22871** RunNo: **22871**
Prep Date: Analysis Date: **12/1/2014** SeqNo: **675138** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	90.2	85	115			
Lead	0.023	0.0010	0.02500	0	93.8	85	115			
Selenium	0.022	0.0010	0.02500	0	88.9	85	115			
Uranium	0.023	0.0010	0.02500	0	92.0	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22871** RunNo: **22871**
Prep Date: Analysis Date: **12/1/2014** SeqNo: **675139** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22871** RunNo: **22871**
Prep Date: Analysis Date: **12/1/2014** SeqNo: **675140** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411590**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22871** RunNo: **22871**
Prep Date: Analysis Date: **12/1/2014** SeqNo: **675141** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22885** RunNo: **22885**
Prep Date: Analysis Date: **12/2/2014** SeqNo: **675799** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.7	85	115			
Lead	0.025	0.0010	0.02500	0	101	85	115			
Selenium	0.024	0.0010	0.02500	0	94.3	85	115			
Uranium	0.026	0.0010	0.02500	0	103	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22885** RunNo: **22885**
Prep Date: Analysis Date: **12/2/2014** SeqNo: **675800** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	100	85	115			
Lead	0.025	0.0010	0.02500	0	98.4	85	115			
Selenium	0.024	0.0010	0.02500	0	95.6	85	115			
Uranium	0.026	0.0010	0.02500	0	102	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22885** RunNo: **22885**
Prep Date: Analysis Date: **12/2/2014** SeqNo: **675801** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22885** RunNo: **22885**
Prep Date: Analysis Date: **12/2/2014** SeqNo: **675802** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411590**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22885** RunNo: **22885**
Prep Date: Analysis Date: **12/2/2014** SeqNo: **675802** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22933** RunNo: **22933**
Prep Date: Analysis Date: **12/4/2014** SeqNo: **677289** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.4	85	115			
Lead	0.024	0.0010	0.02500	0	97.8	85	115			
Selenium	0.024	0.0010	0.02500	0	94.2	85	115			
Uranium	0.025	0.0010	0.02500	0	99.9	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22933** RunNo: **22933**
Prep Date: Analysis Date: **12/4/2014** SeqNo: **677290** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.5	85	115			
Lead	0.024	0.0010	0.02500	0	96.7	85	115			
Selenium	0.024	0.0010	0.02500	0	95.5	85	115			
Uranium	0.023	0.0010	0.02500	0	92.2	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22933** RunNo: **22933**
Prep Date: Analysis Date: **12/4/2014** SeqNo: **677291** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22933** RunNo: **22933**
Prep Date: Analysis Date: **12/4/2014** SeqNo: **677292** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411590**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**			
Client ID: **PBW**	Batch ID: **R22933**	RunNo: **22933**			
Prep Date:	Analysis Date: **12/4/2014**	SeqNo: **677292**	Units: **mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411590**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LLLCS-16487** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **16487** RunNo: **22842**
Prep Date: **11/20/2014** Analysis Date: **11/26/2014** SeqNo: **674131** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0	103	85	115			
Lead	0.026	0.0010	0.02500	0	105	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.026	0.0010	0.02500	0	104	85	115			

Sample ID **MB-16487** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **16487** RunNo: **22842**
Prep Date: **11/20/2014** Analysis Date: **11/26/2014** SeqNo: **674136** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **1411590-008FMSLL** SampType: **MSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **MKTF-28** Batch ID: **16487** RunNo: **22843**
Prep Date: **11/20/2014** Analysis Date: **11/26/2014** SeqNo: **674373** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.031	0.0050	0.02500	0.005428	102	70	130			
Lead	0.025	0.0050	0.02500	0.002370	92.4	70	130			
Selenium	0.040	0.0050	0.02500	0.01444	102	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411590**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB-16593** SampType: **MBLK** TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW** Batch ID: **16593** RunNo: **22825**
Prep Date: **11/26/2014** Analysis Date: **11/26/2014** SeqNo: **673696** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID **LCS-16593** SampType: **LCS** TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW** Batch ID: **16593** RunNo: **22825**
Prep Date: **11/26/2014** Analysis Date: **11/26/2014** SeqNo: **673697** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0	102	80	120			

Sample ID **1411590-006FMS** SampType: **MS** TestCode: **EPA Method 245.1: Mercury**
Client ID: **MKTF-26** Batch ID: **16593** RunNo: **22825**
Prep Date: **11/26/2014** Analysis Date: **11/26/2014** SeqNo: **673702** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0039	0.00020	0.005000	0	78.5	75	125			

Sample ID **1411590-006FMSD** SampType: **MSD** TestCode: **EPA Method 245.1: Mercury**
Client ID: **MKTF-26** Batch ID: **16593** RunNo: **22825**
Prep Date: **11/26/2014** Analysis Date: **11/26/2014** SeqNo: **673703** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0038	0.00020	0.005000	0	75.4	75	125	4.12	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411590**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22603** RunNo: **22603**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **666596** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R22603** RunNo: **22603**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **666597** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	96.7	90	110			
Chloride	4.8	0.50	5.000	0	95.8	90	110			
Bromide	2.5	0.10	2.500	0	99.7	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	97.5	90	110			
Sulfate	9.6	0.50	10.00	0	96.1	90	110			

Sample ID **1411590-002EMS** SampType: **MS** TestCode: **EPA Method 300.0: Anions**
Client ID: **MKTF-09** Batch ID: **R22603** RunNo: **22603**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **666609** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	4.9	1.0	5.000	0.2260	92.8	66.1	113			
Bromide	25	1.0	25.00	1.221	96.1	82.5	103			
Sulfate	240	5.0	100.0	139.3	96.5	88.3	114			

Sample ID **1411590-002EMSD** SampType: **MSD** TestCode: **EPA Method 300.0: Anions**
Client ID: **MKTF-09** Batch ID: **R22603** RunNo: **22603**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **666610** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	4.9	1.0	5.000	0.2260	93.2	66.1	113	0.390	20	
Bromide	25	1.0	25.00	1.221	97.0	82.5	103	0.927	20	
Sulfate	240	5.0	100.0	139.3	98.6	88.3	114	0.889	20	

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22603** RunNo: **22603**
Prep Date: Analysis Date: **11/18/2014** SeqNo: **666650** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411590**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22603** RunNo: **22603**
Prep Date: Analysis Date: **11/18/2014** SeqNo: **666650** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R22603** RunNo: **22603**
Prep Date: Analysis Date: **11/18/2014** SeqNo: **666651** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	97.4	90	110			
Chloride	4.9	0.50	5.000	0	97.5	90	110			
Bromide	2.5	0.10	2.500	0	102	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	99.7	90	110			
Sulfate	9.8	0.50	10.00	0	98.2	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22848** RunNo: **22848**
Prep Date: Analysis Date: **11/26/2014** SeqNo: **674415** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R22848** RunNo: **22848**
Prep Date: Analysis Date: **11/26/2014** SeqNo: **674416** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.6	0.20	3.500	0	104	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22875** RunNo: **22875**
Prep Date: Analysis Date: **12/1/2014** SeqNo: **675391** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411590**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**			
Client ID: **LCSW**	Batch ID: **R22875**	RunNo: **22875**			
Prep Date:	Analysis Date: **12/1/2014**	SeqNo: **675392**	Units: **mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	97.0	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	101	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411590**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB-16411** SampType: **MBLK** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **PBW** Batch ID: **16411** RunNo: **22596**
Prep Date: **11/17/2014** Analysis Date: **11/17/2014** SeqNo: **666120** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.2		1.000		122	59	141			

Sample ID **LCS-16411** SampType: **LCS** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSW** Batch ID: **16411** RunNo: **22596**
Prep Date: **11/17/2014** Analysis Date: **11/17/2014** SeqNo: **666121** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.3	1.0	5.000	0	126	69.7	142			
Surr: DNOP	0.72		0.5000		144	59	141			S

Sample ID **MB-16415** SampType: **MBLK** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **PBW** Batch ID: **16415** RunNo: **22594**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666747** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.0		1.000		101	59	141			

Sample ID **LCS-16415** SampType: **LCS** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSW** Batch ID: **16415** RunNo: **22594**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666748** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.7	1.0	5.000	0	93.6	69.7	142			
Surr: DNOP	0.60		0.5000		119	59	141			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411590**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW** Batch ID: **R22597** RunNo: **22597**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **666073** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	17		20.00		85.8	80	120			

Sample ID **2.5UG GRO LCS** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW** Batch ID: **R22597** RunNo: **22597**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **666074** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.47	0.050	0.5000	0	94.3	80	120			
Surr: BFB	19		20.00		93.0	80	120			

Sample ID **1411590-001BMS** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-10** Batch ID: **R22597** RunNo: **22597**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **666076** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	100	2.5	25.00	84.35	72.9	70.4	127			
Surr: BFB	1100		1000		106	80	120			

Sample ID **1411590-001BMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-10** Batch ID: **R22597** RunNo: **22597**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **666077** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	100	2.5	25.00	84.35	62.1	70.4	127	2.66	20	S
Surr: BFB	1000		1000		105	80	120	0	0	

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW** Batch ID: **R22618** RunNo: **22618**
Prep Date: Analysis Date: **11/18/2014** SeqNo: **667070** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		88.4	80	120			

Sample ID **2.5UG GRO LCS** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW** Batch ID: **R22618** RunNo: **22618**
Prep Date: Analysis Date: **11/18/2014** SeqNo: **667071** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411590**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**2.5UG GRO LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**
Client ID:	**LCSW**	Batch ID:	**R22618**	RunNo:	**22618**
Prep Date:		Analysis Date:	**11/18/2014**	SeqNo:	**667071** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	91.8	80	120			
Surr: BFB	19		20.00		94.0	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411590**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **5mL rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R22601**	RunNo: **22601**			
Prep Date:	Analysis Date: **11/17/2014**	SeqNo: **666323**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411590**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **5mL rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22601** RunNo: **22601**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **666323** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.3		10.00		92.7	70	130			
Surr: 4-Bromofluorobenzene	13		10.00		133	70	130			S
Surr: Dibromofluoromethane	8.1		10.00		81.3	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID **100ng lcs2** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22601** RunNo: **22601**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **666326** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	22	1.0	20.00	0	112	80	120			
Chlorobenzene	20	1.0	20.00	0	98.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411590**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **100ng lcs2** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22601** RunNo: **22601**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **666326** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	19	1.0	20.00	0	97.0	82.6	131			
Trichloroethene (TCE)	20	1.0	20.00	0	98.0	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	13		10.00		133	70	130			S
Surr: Dibromofluoromethane	9.1		10.00		90.9	70	130			
Surr: Toluene-d8	9.6		10.00		96.3	70	130			

Sample ID **1411590-001a ms** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-10** Batch ID: **R22601** RunNo: **22601**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **666331** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	12000	20	400.0	10900	215	70	130			ES
Toluene	23000	20	400.0	21700	427	70	130			ES
Chlorobenzene	430	20	400.0	0	107	70	130			
1,1-Dichloroethene	380	20	400.0	9.024	93.5	70	130			
Trichloroethene (TCE)	400	20	400.0	0	99.1	70	130			
Surr: 1,2-Dichloroethane-d4	200		200.0		101	70	130			
Surr: 4-Bromofluorobenzene	190		200.0		94.7	70	130			
Surr: Dibromofluoromethane	170		200.0		84.0	70	130			
Surr: Toluene-d8	200		200.0		98.3	70	130			

Sample ID **1411590-001a msd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-10** Batch ID: **R22601** RunNo: **22601**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **666332** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	11000	20	400.0	10900	43.7	70	130	5.99	20	ES
Toluene	21000	20	400.0	21700	-190	70	130	11.1	20	ES
Chlorobenzene	400	20	400.0	0	100	70	130	6.34	20	
1,1-Dichloroethene	360	20	400.0	9.024	88.7	70	130	5.10	20	
Trichloroethene (TCE)	380	20	400.0	0	94.2	70	130	5.06	20	
Surr: 1,2-Dichloroethane-d4	190		200.0		96.9	70	130	0	0	
Surr: 4-Bromofluorobenzene	180		200.0		92.3	70	130	0	0	
Surr: Dibromofluoromethane	170		200.0		85.5	70	130	0	0	
Surr: Toluene-d8	190		200.0		92.5	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411590**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **5mL rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R22619**	RunNo: **22619**			
Prep Date:	Analysis Date: **11/18/2014**	SeqNo: **667072**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411590**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **5mL rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22619** RunNo: **22619**
Prep Date: Analysis Date: **11/18/2014** SeqNo: **667072** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.1	70	130			
Surr: 4-Bromofluorobenzene	14		10.00		141	70	130			S
Surr: Dibromofluoromethane	9.0		10.00		89.6	70	130			
Surr: Toluene-d8	11		10.00		106	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22619** RunNo: **22619**
Prep Date: Analysis Date: **11/18/2014** SeqNo: **667075** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	106	70	130			
Toluene	21	1.0	20.00	0	106	80	120			
Chlorobenzene	20	1.0	20.00	0	98.3	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411590**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22619** RunNo: **22619**
Prep Date: Analysis Date: **11/18/2014** SeqNo: **667075** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	18	1.0	20.00	0	91.4	82.6	131			
Trichloroethene (TCE)	20	1.0	20.00	0	98.2	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	14		10.00		140	70	130			S
Surr: Dibromofluoromethane	9.7		10.00		97.2	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID **5mL rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22714** RunNo: **22714**
Prep Date: Analysis Date: **11/21/2014** SeqNo: **669903** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Surr: 1,2-Dichloroethane-d4	9.7		10.00		96.5	70	130			
Surr: 4-Bromofluorobenzene	14		10.00		136	70	130			S
Surr: Dibromofluoromethane	9.4		10.00		94.4	70	130			
Surr: Toluene-d8	11		10.00		108	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22714** RunNo: **22714**
Prep Date: Analysis Date: **11/21/2014** SeqNo: **669905** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.5	70	130			
Surr: 4-Bromofluorobenzene	14		10.00		136	70	130			S
Surr: Dibromofluoromethane	9.3		10.00		93.3	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411590**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **mb-16427**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **16427**	RunNo: **22650**			
Prep Date: **11/18/2014**	Analysis Date: **11/19/2014**	SeqNo: **667984**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411590**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**mb-16427**	SampType:	**MBLK**	TestCode:	**EPA Method 8270C: Semivolatiles**		
Client ID:	**PBW**	Batch ID:	**16427**	RunNo:	**22650**		
Prep Date:	**11/18/2014**	Analysis Date:	**11/19/2014**	SeqNo:	**667984**	Units:	**µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	130		200.0		67.4	17.6	104			
Surr: Phenol-d5	120		200.0		62.3	17.7	89.9			
Surr: 2,4,6-Tribromophenol	110		200.0		56.7	16.3	122			
Surr: Nitrobenzene-d5	68		100.0		68.0	45.3	117			
Surr: 2-Fluorobiphenyl	67		100.0		67.5	43	113			
Surr: 4-Terphenyl-d14	72		100.0		72.3	47.6	122			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411590**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **lcs-16427** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **16427** RunNo: **22650**
Prep Date: **11/18/2014** Analysis Date: **11/19/2014** SeqNo: **667985** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	62	10	100.0	0	62.4	47.9	114			
4-Chloro-3-methylphenol	140	10	200.0	0	71.1	51.7	122			
2-Chlorophenol	140	10	200.0	0	68.2	40.7	113			
1,4-Dichlorobenzene	60	10	100.0	0	60.1	39.6	99.9			
2,4-Dinitrotoluene	56	10	100.0	0	56.4	40.8	113			
N-Nitrosodi-n-propylamine	67	10	100.0	0	66.7	51.2	111			
4-Nitrophenol	140	10	200.0	0	70.4	15.7	86.9			
Pentachlorophenol	98	20	200.0	0	49.1	21.6	104			
Phenol	140	10	200.0	0	69.2	28.6	71.7			
Pyrene	61	10	100.0	0	60.6	54.2	128			
1,2,4-Trichlorobenzene	59	10	100.0	0	59.4	40.9	101			
Surr: 2-Fluorophenol	120		200.0		61.4	17.6	104			
Surr: Phenol-d5	120		200.0		62.2	17.7	89.9			
Surr: 2,4,6-Tribromophenol	130		200.0		64.7	16.3	122			
Surr: Nitrobenzene-d5	60		100.0		60.4	45.3	117			
Surr: 2-Fluorobiphenyl	58		100.0		58.2	43	113			
Surr: 4-Terphenyl-d14	70		100.0		70.2	47.6	122			

Sample ID **lcsd-16427** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **16427** RunNo: **22650**
Prep Date: **11/18/2014** Analysis Date: **11/19/2014** SeqNo: **667986** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	73	10	100.0	0	73.4	47.9	114	16.1	27.2	
4-Chloro-3-methylphenol	160	10	200.0	0	80.2	51.7	122	12.0	25.9	
2-Chlorophenol	160	10	200.0	0	77.8	40.7	113	13.2	22.5	
1,4-Dichlorobenzene	70	10	100.0	0	69.7	39.6	99.9	14.8	24.6	
2,4-Dinitrotoluene	70	10	100.0	0	69.6	40.8	113	20.9	25.3	
N-Nitrosodi-n-propylamine	78	10	100.0	0	77.7	51.2	111	15.2	23.6	
4-Nitrophenol	170	10	200.0	0	85.3	15.7	86.9	19.1	34.7	
Pentachlorophenol	110	20	200.0	0	57.5	21.6	104	15.7	32.8	
Phenol	160	10	200.0	0	81.8	28.6	71.7	16.7	25.5	S
Pyrene	63	10	100.0	0	63.2	54.2	128	4.14	31.4	
1,2,4-Trichlorobenzene	66	10	100.0	0	66.0	40.9	101	10.6	25.9	
Surr: 2-Fluorophenol	150		200.0		75.0	17.6	104	0	0	
Surr: Phenol-d5	140		200.0		72.2	17.7	89.9	0	0	
Surr: 2,4,6-Tribromophenol	140		200.0		71.8	16.3	122	0	0	
Surr: Nitrobenzene-d5	67		100.0		67.1	45.3	117	0	0	
Surr: 2-Fluorobiphenyl	69		100.0		69.4	43	113	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411590**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**lcsd-16427**	SampType:	**LCSD**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**LCSS02**	Batch ID:	**16427**	RunNo:	**22650**
Prep Date:	**11/18/2014**	Analysis Date:	**11/19/2014**	SeqNo:	**667986** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	75		100.0		74.6	47.6	122	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1411590 RcptNo: 1

Received by/date: SM 11/15/2014

Logged By: **Ashley Gallegos** 11/15/2014 9:15:00 AM

Completed By: **Ashley Gallegos** 11/17/2014 8:56:04 AM

Reviewed By: CS 11/17/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☑
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☑ CS 11/17/14
9. Was preservative added to bottles? Yes ☑ No ☑ NA ☐

- metals analysis, added 0.4ml HNO_3 to -003G, -010G, -012G and -013G; added 1 ml HNO_3 to -001
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐ added 2 ml HNO_3 to -001
11. Were any sample containers received broken? Yes ☐ No ☑ For 300 analysis, added 1 ml H_2SO_4 to -001E
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 30 (<2 or >12 unless noted) Held metals for 24 hrs.
Adjusted? yes — CS 11/17/14
Checked by: CS

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.9	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

X Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type) Trihydro Format

Turn-Around Time:

X Standard ☐ Rush

Project Name:

Q4 2014

Project #:

MKTF WELLS

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.8°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1411590	8260B + MTBE	8015B extended	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major cations/anions										Air Bubbles (Y or N)
11-14-14	1010	AQ	MKTF-10	11		-001	X	X	X	X	X	X										
11-14-14	1013	AQ	MKTF-09	11		-002	X	X	X	X	X	X										
11-14-14	1145	AQ	MKTF-02	11		-003	X	X	X	X	X	X										
11-14-14	—	AQ	BD-111414	1		-004			X													
11-14-14	—	AQ	BD-111414	1		-005			X													
11-14-14	1218	AQ	MKTF-26	11		-006	X	X	X	X	X	X										
11-14-14	1221	AQ	MKTF-27	11		-007	X	X	X	X	X	X										
11-14-14	1355	AQ	MKTF-28	11		-008	X	X	X	X	X	X										
11-14-14	1540	AQ	MKTF-24	11		-009	X	X	X	X	X	X										
11-14-14	1533	AQ	MKTF-25	11		-010	X	X	X	X	X	X										
11-14-14	—	AQ	TB-501	3		-011	X															

Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
11-15-14	845	Rex Lowder	Tracy McCoy	11/15/14	9:15	Page 1 of 3
Date:	Time:	Relinquished by:	Received by:	Date	Time	

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

X Standard ☐ Level 4 (Full Valication)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type) Trhydro Format

Turn-Around Time:

X Standard ☐ Rush

Project Name:

Q4 2014

Project #:

MKTF WELLS

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☐ Yes ☐ No

Sample Temperature: 1.9°C

www.hallenvironmental.cor

4901 Hawkins NE - Albuquerque, NM 8

Tel. 505-345-3975 Fax 505-345-410

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1411590	8260B + MTBE	8015B extended	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major cations/anions					
11-13-14	1545	AQ	MKTF-04	11		-012	X	X	X	X	X	X					
11-13-14	1642	AQ	MKTF-11	11		-013	X	X	X	X	X	X					

Date:	Time	Relinquished by:	Received by:	Date	Time
11-15-14	845	Pam Landers / Pam Landers	Tracy McCoy	11/15/14	9:15
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

Page 2 of 3

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

X Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) Trihydro Format

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

Q4 2014

Project #:

MKTF WELLS

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☐ Yes ☐ No

Sample Temperature: 19°C

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1411570	8260B + MTBE	8015B extended	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major cations/anions										Air Bubbles (Y or N)
11-14-14	1545	AQ	EB-111414	3		-014	X															
11-14-14	1550	AQ	FB-111414	3		-015	X															
11-14-14	—	AQ	TB-502	3		-016	X															
~~11-14-14~~	~~—~~	~~AQ~~	~~TB-503~~	~~2~~			~~X~~															

Date:	Time:	Relinquished by:	Received by:	Date	Time
11-15-14	845	Pat Landers / Pat Landers	Stacey Neg	11/15/14	9:15
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

Page 2 of 3

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 11, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: 2014 4th QTR MKTF WELLS/STP-1NW OrderNo.: 1411835

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 9 sample(s) on 11/19/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1411835**
Date Reported: **12/11/2014**

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-16
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 9:55:00 AM
Lab ID: 1411835-001
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	2.7	1.0		mg/L	1	11/21/2014 1:34:33 AM	16493
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/21/2014 1:34:33 AM	16493
Surr: DNOP	77.0	59-141		%REC	1	11/21/2014 1:34:33 AM	16493
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	53	2.5		mg/L	50	11/22/2014 1:18:18 AM	R22716
Surr: BFB	90.2	80-120		%REC	50	11/22/2014 1:18:18 AM	R22716
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	1.5	0.50		mg/L	5	11/19/2014 8:47:37 PM	R22657
Chloride	700	25		mg/L	50	12/1/2014 9:52:38 PM	R22875
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	11/19/2014 8:47:37 PM	R22657
Bromide	1.8	0.50		mg/L	5	11/19/2014 8:47:37 PM	R22657
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	11/19/2014 8:47:37 PM	R22657
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	11/19/2014 8:47:37 PM	R22657
Sulfate	ND	2.5		mg/L	5	11/19/2014 8:47:37 PM	R22657
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.88	0.0020		mg/L	1	12/1/2014 3:47:27 PM	R22857
Cadmium	ND	0.0020		mg/L	1	12/1/2014 3:47:27 PM	R22857
Calcium	62	1.0		mg/L	1	12/1/2014 3:47:27 PM	R22857
Chromium	ND	0.0060		mg/L	1	12/1/2014 3:47:27 PM	R22857
Copper	ND	0.0060		mg/L	1	12/1/2014 3:47:27 PM	R22857
Iron	7.2	0.20	*	mg/L	10	12/1/2014 5:11:30 PM	R22857
Magnesium	16	1.0		mg/L	1	12/1/2014 3:47:27 PM	R22857
Manganese	1.1	0.020	*	mg/L	10	12/1/2014 5:11:30 PM	R22857
Potassium	1.2	1.0		mg/L	1	12/1/2014 3:47:27 PM	R22857
Silver	ND	0.0050		mg/L	1	12/1/2014 3:47:27 PM	R22857
Sodium	840	10		mg/L	10	12/1/2014 5:11:30 PM	R22857
Zinc	0.019	0.010		mg/L	1	12/1/2014 3:47:27 PM	R22857
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	1.1	0.010		mg/L	5	12/1/2014 4:43:26 PM	16592
Cadmium	ND	0.0020		mg/L	1	12/1/2014 3:58:07 PM	16592
Chromium	ND	0.0060		mg/L	1	12/1/2014 3:58:07 PM	16592
Copper	ND	0.0060		mg/L	1	12/1/2014 3:58:07 PM	16592
Iron	10	0.40	*	mg/L	20	12/1/2014 4:45:08 PM	16592
Manganese	1.3	0.010	*	mg/L	5	12/1/2014 4:43:26 PM	16592
Silver	ND	0.0050		mg/L	1	12/1/2014 3:58:07 PM	16592
Zinc	0.050	0.010		mg/L	1	12/1/2014 3:58:07 PM	16592
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-16
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 9:55:00 AM
Lab ID: 1411835-001
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.011	0.010	*	mg/L	10	12/4/2014 2:28:21 PM	R22933
Lead	ND	0.0010		mg/L	1	12/4/2014 12:40:43 PM	R22933
Selenium	ND	0.010		mg/L	10	12/4/2014 2:28:21 PM	R22933
Uranium	ND	0.0010		mg/L	1	12/4/2014 12:40:43 PM	R22933
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.010	0.0050	*	mg/L	5	12/3/2014 6:09:38 PM	16592
Lead	0.0042	0.0010		mg/L	1	12/3/2014 3:52:49 PM	16592
Selenium	ND	0.050		mg/L	5	12/3/2014 6:09:38 PM	16592
Uranium	0.0016	0.0010		mg/L	1	12/3/2014 3:52:49 PM	16592
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	12/2/2014 1:54:07 PM	16625
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Acenaphthylene	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Aniline	18	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Anthracene	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Azobenzene	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Benz(a)anthracene	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Benzo(a)pyrene	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Benzo(b)fluoranthene	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Benzo(k)fluoranthene	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Benzoic acid	ND	20		µg/L	1	11/25/2014 11:03:09 AM	16507
Benzyl alcohol	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Bis(2-ethylhexyl)phthalate	14	10	B	µg/L	1	11/25/2014 11:03:09 AM	16507
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Butyl benzyl phthalate	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Carbazole	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
4-Chloroaniline	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
2-Chloronaphthalene	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
2-Chlorophenol	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Chrysene	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Di-n-butyl phthalate	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-16
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 9:55:00 AM
Lab ID: 1411835-001
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Di-n-octyl phthalate	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Dibenzofuran	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
1,2-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
1,3-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
1,4-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Diethyl phthalate	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Dimethyl phthalate	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
2,4-Dichlorophenol	ND	20		µg/L	1	11/25/2014 11:03:09 AM	16507
2,4-Dimethylphenol	80	10		µg/L	1	11/25/2014 11:03:09 AM	16507
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/25/2014 11:03:09 AM	16507
2,4-Dinitrophenol	ND	20		µg/L	1	11/25/2014 11:03:09 AM	16507
2,4-Dinitrotoluene	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
2,6-Dinitrotoluene	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Fluoranthene	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Fluorene	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Hexachlorobenzene	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Hexachlorobutadiene	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Hexachloroethane	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Isophorone	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
1-Methylnaphthalene	47	10		µg/L	1	11/25/2014 11:03:09 AM	16507
2-Methylnaphthalene	51	10		µg/L	1	11/25/2014 11:03:09 AM	16507
2-Methylphenol	140	10		µg/L	1	11/25/2014 11:03:09 AM	16507
3+4-Methylphenol	16	10		µg/L	1	11/25/2014 11:03:09 AM	16507
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
N-Nitrosodimethylamine	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Naphthalene	130	10		µg/L	1	11/25/2014 11:03:09 AM	16507
2-Nitroaniline	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
3-Nitroaniline	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
4-Nitroaniline	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Nitrobenzene	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
2-Nitrophenol	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
4-Nitrophenol	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Pentachlorophenol	ND	20		µg/L	1	11/25/2014 11:03:09 AM	16507
Phenanthrene	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-16
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 9:55:00 AM
Lab ID: 1411835-001
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Phenol	38	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Pyrene	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Pyridine	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/25/2014 11:03:09 AM	16507
Surr: 2-Fluorophenol	33.6	17.6-104		%REC	1	11/25/2014 11:03:09 AM	16507
Surr: Phenol-d5	50.8	17.7-89.9		%REC	1	11/25/2014 11:03:09 AM	16507
Surr: 2,4,6-Tribromophenol	93.1	16.3-122		%REC	1	11/25/2014 11:03:09 AM	16507
Surr: Nitrobenzene-d5	83.6	45.3-117		%REC	1	11/25/2014 11:03:09 AM	16507
Surr: 2-Fluorobiphenyl	82.3	43-113		%REC	1	11/25/2014 11:03:09 AM	16507
Surr: 4-Terphenyl-d14	85.0	47.6-122		%REC	1	11/25/2014 11:03:09 AM	16507
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	20000	500		µg/L	500	11/24/2014 2:10:28 PM	R22767
Toluene	1200	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
Ethylbenzene	1300	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
Methyl tert-butyl ether (MTBE)	1400	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
1,2,4-Trimethylbenzene	1000	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
1,3,5-Trimethylbenzene	360	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
1,2-Dichloroethane (EDC)	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
1,2-Dibromoethane (EDB)	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
Naphthalene	160	100		µg/L	50	11/24/2014 2:37:14 PM	R22767
1-Methylnaphthalene	ND	200		µg/L	50	11/24/2014 2:37:14 PM	R22767
2-Methylnaphthalene	ND	200		µg/L	50	11/24/2014 2:37:14 PM	R22767
Acetone	ND	500		µg/L	50	11/24/2014 2:37:14 PM	R22767
Bromobenzene	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
Bromodichloromethane	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
Bromoform	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
Bromomethane	ND	150		µg/L	50	11/24/2014 2:37:14 PM	R22767
2-Butanone	ND	500		µg/L	50	11/24/2014 2:37:14 PM	R22767
Carbon disulfide	ND	500		µg/L	50	11/24/2014 2:37:14 PM	R22767
Carbon Tetrachloride	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
Chlorobenzene	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
Chloroethane	ND	100		µg/L	50	11/24/2014 2:37:14 PM	R22767
Chloroform	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
Chloromethane	ND	150		µg/L	50	11/24/2014 2:37:14 PM	R22767
2-Chlorotoluene	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
4-Chlorotoluene	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
cis-1,2-DCE	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767

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Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-16
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 9:55:00 AM
Lab ID: 1411835-001
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
cis-1,3-Dichloropropene	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
1,2-Dibromo-3-chloropropane	ND	100		µg/L	50	11/24/2014 2:37:14 PM	R22767
Dibromochloromethane	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
Dibromomethane	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
1,2-Dichlorobenzene	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
1,3-Dichlorobenzene	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
1,4-Dichlorobenzene	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
Dichlorodifluoromethane	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
1,1-Dichloroethane	81	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
1,1-Dichloroethene	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
1,2-Dichloropropane	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
1,3-Dichloropropane	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
2,2-Dichloropropane	ND	100		µg/L	50	11/24/2014 2:37:14 PM	R22767
1,1-Dichloropropene	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
Hexachlorobutadiene	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
2-Hexanone	ND	500		µg/L	50	11/24/2014 2:37:14 PM	R22767
Isopropylbenzene	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
4-Isopropyltoluene	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
4-Methyl-2-pentanone	ND	500		µg/L	50	11/24/2014 2:37:14 PM	R22767
Methylene Chloride	ND	150		µg/L	50	11/24/2014 2:37:14 PM	R22767
n-Butylbenzene	ND	150		µg/L	50	11/24/2014 2:37:14 PM	R22767
n-Propylbenzene	90	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
sec-Butylbenzene	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
Styrene	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
tert-Butylbenzene	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
1,1,1,2-Tetrachloroethane	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
1,1,2,2-Tetrachloroethane	ND	100		µg/L	50	11/24/2014 2:37:14 PM	R22767
Tetrachloroethene (PCE)	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
trans-1,2-DCE	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
trans-1,3-Dichloropropene	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
1,2,3-Trichlorobenzene	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
1,2,4-Trichlorobenzene	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
1,1,1-Trichloroethane	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
1,1,2-Trichloroethane	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
Trichloroethene (TCE)	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
Trichlorofluoromethane	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
1,2,3-Trichloropropane	ND	100		µg/L	50	11/24/2014 2:37:14 PM	R22767
Vinyl chloride	ND	50		µg/L	50	11/24/2014 2:37:14 PM	R22767
Xylenes, Total	5800	75		µg/L	50	11/24/2014 2:37:14 PM	R22767

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-16
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 9:55:00 AM
Lab ID: 1411835-001
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Surr: 1,2-Dichloroethane-d4	95.5	70-130		%REC	50	11/24/2014 2:37:14 PM	R22767
Surr: 4-Bromofluorobenzene	93.5	70-130		%REC	50	11/24/2014 2:37:14 PM	R22767
Surr: Dibromofluoromethane	89.9	70-130		%REC	50	11/24/2014 2:37:14 PM	R22767
Surr: Toluene-d8	105	70-130		%REC	50	11/24/2014 2:37:14 PM	R22767

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-17
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 2:15:00 PM
Lab ID: 1411835-002
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	1.4	1.0		mg/L	1	11/21/2014 1:55:47 AM	16493
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/21/2014 1:55:47 AM	16493
Surr: DNOP	82.6	59-141		%REC	1	11/21/2014 1:55:47 AM	16493
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	1.2	1.0		mg/L	20	11/22/2014 1:45:38 AM	R22716
Surr: BFB	90.2	80-120		%REC	20	11/22/2014 1:45:38 AM	R22716
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	0.66	0.10		mg/L	1	11/19/2014 9:12:26 PM	R22657
Chloride	84	10		mg/L	20	11/19/2014 9:24:51 PM	R22657
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	11/19/2014 9:12:26 PM	R22657
Bromide	0.44	0.10		mg/L	1	11/19/2014 9:12:26 PM	R22657
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	11/19/2014 9:12:26 PM	R22657
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	11/19/2014 9:12:26 PM	R22657
Sulfate	200	10		mg/L	20	11/19/2014 9:24:51 PM	R22657
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.14	0.0020		mg/L	1	12/1/2014 3:49:28 PM	R22857
Cadmium	ND	0.0020		mg/L	1	12/1/2014 3:49:28 PM	R22857
Calcium	92	1.0		mg/L	1	12/1/2014 3:49:28 PM	R22857
Chromium	ND	0.0060		mg/L	1	12/1/2014 3:49:28 PM	R22857
Copper	ND	0.0060		mg/L	1	12/1/2014 3:49:28 PM	R22857
Iron	0.080	0.020		mg/L	1	12/1/2014 3:49:28 PM	R22857
Magnesium	17	1.0		mg/L	1	12/1/2014 3:49:28 PM	R22857
Manganese	2.8	0.010	*	mg/L	5	12/1/2014 5:13:20 PM	R22857
Potassium	1.1	1.0		mg/L	1	12/1/2014 3:49:28 PM	R22857
Silver	ND	0.0050		mg/L	1	12/1/2014 3:49:28 PM	R22857
Sodium	280	5.0		mg/L	5	12/1/2014 5:13:20 PM	R22857
Zinc	0.027	0.010		mg/L	1	12/1/2014 3:49:28 PM	R22857
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.21	0.0020		mg/L	1	12/1/2014 3:59:59 PM	16592
Cadmium	ND	0.0020		mg/L	1	12/1/2014 3:59:59 PM	16592
Chromium	ND	0.0060		mg/L	1	12/1/2014 3:59:59 PM	16592
Copper	ND	0.0060		mg/L	1	12/1/2014 3:59:59 PM	16592
Iron	2.0	0.10	*	mg/L	5	12/1/2014 4:48:53 PM	16592
Manganese	3.0	0.010	*	mg/L	5	12/1/2014 4:48:53 PM	16592
Silver	ND	0.0050		mg/L	1	12/1/2014 3:59:59 PM	16592
Zinc	0.019	0.010		mg/L	1	12/1/2014 3:59:59 PM	16592
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-17
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 2:15:00 PM
Lab ID: 1411835-002
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0047	0.0010		mg/L	1	12/4/2014 12:43:42 PM	R22933
Lead	ND	0.0010		mg/L	1	12/4/2014 12:43:42 PM	R22933
Selenium	ND	0.010		mg/L	1	12/4/2014 12:43:42 PM	R22933
Uranium	0.022	0.0010		mg/L	1	12/4/2014 12:43:42 PM	R22933
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0051	0.0010		mg/L	1	12/3/2014 4:02:05 PM	16592
Lead	0.0031	0.0010		mg/L	1	12/3/2014 4:02:05 PM	16592
Selenium	ND	0.010		mg/L	1	12/3/2014 4:02:05 PM	16592
Uranium	0.025	0.0010		mg/L	1	12/3/2014 4:02:05 PM	16592
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	12/2/2014 1:55:53 PM	16625
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Acenaphthylene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Aniline	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Anthracene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Azobenzene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Benz(a)anthracene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Benzo(a)pyrene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Benzo(b)fluoranthene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Benzo(k)fluoranthene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Benzoic acid	ND	20		µg/L	1	11/25/2014 11:30:29 AM	16507
Benzyl alcohol	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Bis(2-ethylhexyl)phthalate	10	10	B	µg/L	1	11/25/2014 11:30:29 AM	16507
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Butyl benzyl phthalate	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Carbazole	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
4-Chloroaniline	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
2-Chloronaphthalene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
2-Chlorophenol	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Chrysene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Di-n-butyl phthalate	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-17
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 2:15:00 PM
Lab ID: 1411835-002
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Di-n-octyl phthalate	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Dibenzofuran	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
1,2-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
1,3-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
1,4-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Diethyl phthalate	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Dimethyl phthalate	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
2,4-Dichlorophenol	ND	20		µg/L	1	11/25/2014 11:30:29 AM	16507
2,4-Dimethylphenol	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/25/2014 11:30:29 AM	16507
2,4-Dinitrophenol	ND	20		µg/L	1	11/25/2014 11:30:29 AM	16507
2,4-Dinitrotoluene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
2,6-Dinitrotoluene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Fluoranthene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Fluorene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Hexachlorobenzene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Hexachlorobutadiene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Hexachloroethane	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Isophorone	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
1-Methylnaphthalene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
2-Methylnaphthalene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
2-Methylphenol	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
3+4-Methylphenol	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
N-Nitrosodimethylamine	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Naphthalene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
2-Nitroaniline	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
3-Nitroaniline	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
4-Nitroaniline	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Nitrobenzene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
2-Nitrophenol	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
4-Nitrophenol	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Pentachlorophenol	ND	20		µg/L	1	11/25/2014 11:30:29 AM	16507
Phenanthrene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

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Client Sample ID: MKTF-17
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 2:15:00 PM
Lab ID: 1411835-002
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Phenol	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Pyrene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Pyridine	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/25/2014 11:30:29 AM	16507
Surr: 2-Fluorophenol	61.9	17.6-104		%REC	1	11/25/2014 11:30:29 AM	16507
Surr: Phenol-d5	59.2	17.7-89.9		%REC	1	11/25/2014 11:30:29 AM	16507
Surr: 2,4,6-Tribromophenol	79.9	16.3-122		%REC	1	11/25/2014 11:30:29 AM	16507
Surr: Nitrobenzene-d5	74.6	45.3-117		%REC	1	11/25/2014 11:30:29 AM	16507
Surr: 2-Fluorobiphenyl	77.6	43-113		%REC	1	11/25/2014 11:30:29 AM	16507
Surr: 4-Terphenyl-d14	79.4	47.6-122		%REC	1	11/25/2014 11:30:29 AM	16507
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	140	10		µg/L	10	11/24/2014 4:51:11 PM	R22767
Toluene	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
Ethylbenzene	78	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
Methyl tert-butyl ether (MTBE)	570	100		µg/L	100	11/24/2014 4:24:27 PM	R22767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
Naphthalene	ND	2.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
1-Methylnaphthalene	ND	4.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
2-Methylnaphthalene	ND	4.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
Acetone	ND	10		µg/L	1	11/25/2014 9:16:58 PM	R22801
Bromobenzene	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
Bromodichloromethane	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
Bromoform	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
Bromomethane	ND	3.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
2-Butanone	ND	10		µg/L	1	11/25/2014 9:16:58 PM	R22801
Carbon disulfide	ND	10		µg/L	1	11/25/2014 9:16:58 PM	R22801
Carbon Tetrachloride	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
Chlorobenzene	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
Chloroethane	ND	2.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
Chloroform	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
Chloromethane	ND	3.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
2-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
4-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
cis-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

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Client Sample ID: MKTF-17
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 2:15:00 PM
Lab ID: 1411835-002
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
Dibromochloromethane	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
Dibromomethane	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
1,1-Dichloroethane	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
1,1-Dichloroethene	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
1,2-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
1,3-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
2,2-Dichloropropane	ND	2.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
1,1-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
Hexachlorobutadiene	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
2-Hexanone	ND	10		µg/L	1	11/25/2014 9:16:58 PM	R22801
Isopropylbenzene	9.1	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
4-Isopropyltoluene	3.0	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
4-Methyl-2-pentanone	ND	10		µg/L	1	11/25/2014 9:16:58 PM	R22801
Methylene Chloride	ND	3.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
n-Butylbenzene	ND	3.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
n-Propylbenzene	13	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
sec-Butylbenzene	2.1	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
Styrene	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
tert-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
trans-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
Trichlorofluoromethane	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
Vinyl chloride	ND	1.0		µg/L	1	11/25/2014 9:16:58 PM	R22801
Xylenes, Total	ND	1.5		µg/L	1	11/25/2014 9:16:58 PM	R22801

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Collection Date: 11/18/2014 2:15:00 PM
Lab ID: 1411835-002
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Surr: 1,2-Dichloroethane-d4	96.6	70-130		%REC	1	11/25/2014 9:16:58 PM	R22801
Surr: 4-Bromofluorobenzene	88.4	70-130		%REC	1	11/25/2014 9:16:58 PM	R22801
Surr: Dibromofluoromethane	92.5	70-130		%REC	1	11/25/2014 9:16:58 PM	R22801
Surr: Toluene-d8	104	70-130		%REC	1	11/25/2014 9:16:58 PM	R22801

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-18
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 4:15:00 PM
Lab ID: 1411835-003
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	2.3	1.0		mg/L	1	11/21/2014 2:17:09 AM	16493
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/21/2014 2:17:09 AM	16493
Surr: DNOP	81.6	59-141		%REC	1	11/21/2014 2:17:09 AM	16493
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	1.4	0.25		mg/L	5	11/22/2014 2:12:57 AM	R22716
Surr: BFB	98.2	80-120		%REC	5	11/22/2014 2:12:57 AM	R22716
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	0.68	0.50		mg/L	5	11/19/2014 9:37:15 PM	R22657
Chloride	160	10		mg/L	20	11/19/2014 9:49:40 PM	R22657
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	11/19/2014 9:37:15 PM	R22657
Bromide	0.81	0.50		mg/L	5	11/19/2014 9:37:15 PM	R22657
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	11/19/2014 9:37:15 PM	R22657
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	11/19/2014 9:37:15 PM	R22657
Sulfate	ND	2.5		mg/L	5	11/19/2014 9:37:15 PM	R22657
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	2.4	0.010	*	mg/L	5	12/1/2014 5:15:15 PM	R22857
Cadmium	ND	0.0020		mg/L	1	12/1/2014 3:51:14 PM	R22857
Calcium	77	1.0		mg/L	1	12/1/2014 3:51:14 PM	R22857
Chromium	ND	0.0060		mg/L	1	12/1/2014 3:51:14 PM	R22857
Copper	ND	0.0060		mg/L	1	12/1/2014 3:51:14 PM	R22857
Iron	3.4	0.10	*	mg/L	5	12/1/2014 5:15:15 PM	R22857
Magnesium	21	1.0		mg/L	1	12/1/2014 3:51:14 PM	R22857
Manganese	1.7	0.010	*	mg/L	5	12/1/2014 5:15:15 PM	R22857
Potassium	1.1	1.0		mg/L	1	12/1/2014 3:51:14 PM	R22857
Silver	ND	0.0050		mg/L	1	12/1/2014 3:51:14 PM	R22857
Sodium	280	5.0		mg/L	5	12/1/2014 5:15:15 PM	R22857
Zinc	0.025	0.010		mg/L	1	12/1/2014 3:51:14 PM	R22857
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	2.5	0.010	*	mg/L	5	12/1/2014 4:50:52 PM	16592
Cadmium	ND	0.0020		mg/L	1	12/1/2014 4:01:34 PM	16592
Chromium	ND	0.0060		mg/L	1	12/1/2014 4:01:34 PM	16592
Copper	ND	0.0060		mg/L	1	12/1/2014 4:01:34 PM	16592
Iron	4.0	0.10	*	mg/L	5	12/1/2014 4:50:52 PM	16592
Manganese	1.8	0.010	*	mg/L	5	12/1/2014 4:50:52 PM	16592
Silver	ND	0.0050		mg/L	1	12/1/2014 4:01:34 PM	16592
Zinc	0.020	0.010		mg/L	1	12/1/2014 4:01:34 PM	16592
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**

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Collection Date: 11/18/2014 4:15:00 PM
Lab ID: 1411835-003
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0020	0.0010		mg/L	1	12/4/2014 12:46:41 PM	R22933
Lead	ND	0.0010		mg/L	1	12/4/2014 12:46:41 PM	R22933
Selenium	ND	0.010		mg/L	1	12/4/2014 12:46:41 PM	R22933
Uranium	ND	0.0010		mg/L	1	12/4/2014 12:46:41 PM	R22933
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0019	0.0010		mg/L	1	12/3/2014 4:05:10 PM	16592
Lead	0.0016	0.0010		mg/L	1	12/3/2014 4:05:10 PM	16592
Selenium	ND	0.010		mg/L	1	12/3/2014 4:05:10 PM	16592
Uranium	ND	0.0010		mg/L	1	12/3/2014 4:05:10 PM	16592
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	12/2/2014 1:57:39 PM	16625
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Acenaphthylene	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Aniline	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Anthracene	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Azobenzene	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Benz(a)anthracene	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Benzo(a)pyrene	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Benzo(b)fluoranthene	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Benzo(k)fluoranthene	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Benzoic acid	ND	20		µg/L	1	11/25/2014 11:57:50 AM	16507
Benzyl alcohol	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Bis(2-ethylhexyl)phthalate	12	10	B	µg/L	1	11/25/2014 11:57:50 AM	16507
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Butyl benzyl phthalate	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Carbazole	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
4-Chloroaniline	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
2-Chloronaphthalene	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
2-Chlorophenol	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Chrysene	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Di-n-butyl phthalate	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-18
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 4:15:00 PM
Lab ID: 1411835-003
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Di-n-octyl phthalate	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Dibenzofuran	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
1,2-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
1,3-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
1,4-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Diethyl phthalate	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Dimethyl phthalate	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
2,4-Dichlorophenol	ND	20		µg/L	1	11/25/2014 11:57:50 AM	16507
2,4-Dimethylphenol	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/25/2014 11:57:50 AM	16507
2,4-Dinitrophenol	ND	20		µg/L	1	11/25/2014 11:57:50 AM	16507
2,4-Dinitrotoluene	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
2,6-Dinitrotoluene	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Fluoranthene	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Fluorene	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Hexachlorobenzene	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Hexachlorobutadiene	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Hexachloroethane	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Isophorone	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
1-Methylnaphthalene	110	10		µg/L	1	11/25/2014 11:57:50 AM	16507
2-Methylnaphthalene	36	10		µg/L	1	11/25/2014 11:57:50 AM	16507
2-Methylphenol	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
3+4-Methylphenol	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
N-Nitrosodimethylamine	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Naphthalene	55	10		µg/L	1	11/25/2014 11:57:50 AM	16507
2-Nitroaniline	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
3-Nitroaniline	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
4-Nitroaniline	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Nitrobenzene	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
2-Nitrophenol	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
4-Nitrophenol	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Pentachlorophenol	ND	20		µg/L	1	11/25/2014 11:57:50 AM	16507
Phenanthrene	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507

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Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-18
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 4:15:00 PM
Lab ID: 1411835-003
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Phenol	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Pyrene	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Pyridine	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/25/2014 11:57:50 AM	16507
Surr: 2-Fluorophenol	72.2	17.6-104		%REC	1	11/25/2014 11:57:50 AM	16507
Surr: Phenol-d5	64.6	17.7-89.9		%REC	1	11/25/2014 11:57:50 AM	16507
Surr: 2,4,6-Tribromophenol	89.5	16.3-122		%REC	1	11/25/2014 11:57:50 AM	16507
Surr: Nitrobenzene-d5	85.1	45.3-117		%REC	1	11/25/2014 11:57:50 AM	16507
Surr: 2-Fluorobiphenyl	85.1	43-113		%REC	1	11/25/2014 11:57:50 AM	16507
Surr: 4-Terphenyl-d14	80.6	47.6-122		%REC	1	11/25/2014 11:57:50 AM	16507
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	96	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
Toluene	7.6	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
Ethylbenzene	90	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
Methyl tert-butyl ether (MTBE)	100	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
1,2,4-Trimethylbenzene	96	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
1,3,5-Trimethylbenzene	23	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
Naphthalene	88	10		µg/L	5	11/24/2014 5:44:45 PM	R22767
1-Methylnaphthalene	200	20		µg/L	5	11/24/2014 5:44:45 PM	R22767
2-Methylnaphthalene	82	20		µg/L	5	11/24/2014 5:44:45 PM	R22767
Acetone	ND	50		µg/L	5	11/24/2014 5:44:45 PM	R22767
Bromobenzene	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
Bromodichloromethane	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
Bromoform	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
Bromomethane	ND	15		µg/L	5	11/24/2014 5:44:45 PM	R22767
2-Butanone	ND	50		µg/L	5	11/24/2014 5:44:45 PM	R22767
Carbon disulfide	ND	50		µg/L	5	11/24/2014 5:44:45 PM	R22767
Carbon Tetrachloride	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
Chlorobenzene	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
Chloroethane	ND	10		µg/L	5	11/24/2014 5:44:45 PM	R22767
Chloroform	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
Chloromethane	ND	15		µg/L	5	11/24/2014 5:44:45 PM	R22767
2-Chlorotoluene	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
4-Chlorotoluene	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
cis-1,2-DCE	5.6	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-18
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 4:15:00 PM
Lab ID: 1411835-003
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
cis-1,3-Dichloropropene	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
1,2-Dibromo-3-chloropropane	ND	10		µg/L	5	11/24/2014 5:44:45 PM	R22767
Dibromochloromethane	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
Dibromomethane	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
1,2-Dichlorobenzene	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
1,3-Dichlorobenzene	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
1,4-Dichlorobenzene	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
Dichlorodifluoromethane	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
1,1-Dichloroethane	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
1,1-Dichloroethene	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
1,2-Dichloropropane	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
1,3-Dichloropropane	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
2,2-Dichloropropane	ND	10		µg/L	5	11/24/2014 5:44:45 PM	R22767
1,1-Dichloropropene	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
Hexachlorobutadiene	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
2-Hexanone	ND	50		µg/L	5	11/24/2014 5:44:45 PM	R22767
Isopropylbenzene	8.8	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
4-Isopropyltoluene	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
4-Methyl-2-pentanone	ND	50		µg/L	5	11/24/2014 5:44:45 PM	R22767
Methylene Chloride	ND	15		µg/L	5	11/24/2014 5:44:45 PM	R22767
n-Butylbenzene	ND	15		µg/L	5	11/24/2014 5:44:45 PM	R22767
n-Propylbenzene	13	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
sec-Butylbenzene	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
Styrene	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
tert-Butylbenzene	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
1,1,2,2-Tetrachloroethane	ND	10		µg/L	5	11/24/2014 5:44:45 PM	R22767
Tetrachloroethene (PCE)	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
trans-1,2-DCE	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
trans-1,3-Dichloropropene	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
1,2,3-Trichlorobenzene	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
1,2,4-Trichlorobenzene	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
1,1,1-Trichloroethane	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
1,1,2-Trichloroethane	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
Trichloroethene (TCE)	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
Trichlorofluoromethane	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
1,2,3-Trichloropropane	ND	10		µg/L	5	11/24/2014 5:44:45 PM	R22767
Vinyl chloride	ND	5.0		µg/L	5	11/24/2014 5:44:45 PM	R22767
Xylenes, Total	47	7.5		µg/L	5	11/24/2014 5:44:45 PM	R22767

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Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-18
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 4:15:00 PM
Lab ID: 1411835-003
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Surr: 1,2-Dichloroethane-d4	97.0	70-130		%REC	5	11/24/2014 5:44:45 PM	R22767
Surr: 4-Bromofluorobenzene	82.5	70-130		%REC	5	11/24/2014 5:44:45 PM	R22767
Surr: Dibromofluoromethane	92.5	70-130		%REC	5	11/24/2014 5:44:45 PM	R22767
Surr: Toluene-d8	104	70-130		%REC	5	11/24/2014 5:44:45 PM	R22767

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-19
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 2:30:00 PM
Lab ID: 1411835-004
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	13	1.0		mg/L	1	11/21/2014 2:38:25 AM	16493
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/21/2014 2:38:25 AM	16493
Surr: DNOP	86.6	59-141		%REC	1	11/21/2014 2:38:25 AM	16493
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	20	2.5		mg/L	50	11/22/2014 2:40:17 AM	R22716
Surr: BFB	91.2	80-120		%REC	50	11/22/2014 2:40:17 AM	R22716
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	ND	0.50		mg/L	5	11/19/2014 10:02:04 PM	R22657
Chloride	110	10		mg/L	20	11/19/2014 10:14:29 PM	R22657
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	11/19/2014 10:02:04 PM	R22657
Bromide	1.2	0.50		mg/L	5	11/19/2014 10:02:04 PM	R22657
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	11/19/2014 10:02:04 PM	R22657
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	11/19/2014 10:02:04 PM	R22657
Sulfate	ND	2.5		mg/L	5	11/19/2014 10:02:04 PM	R22657
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	1.6	0.010		mg/L	5	12/1/2014 5:17:09 PM	R22857
Cadmium	ND	0.0020		mg/L	1	12/1/2014 3:52:55 PM	R22857
Calcium	140	5.0		mg/L	5	12/1/2014 5:17:09 PM	R22857
Chromium	ND	0.0060		mg/L	1	12/1/2014 3:52:55 PM	R22857
Copper	ND	0.0060		mg/L	1	12/1/2014 3:52:55 PM	R22857
Iron	11	0.40	*	mg/L	20	12/1/2014 5:18:54 PM	R22857
Magnesium	28	1.0		mg/L	1	12/1/2014 3:52:55 PM	R22857
Manganese	3.0	0.010	*	mg/L	5	12/1/2014 5:17:09 PM	R22857
Potassium	1.1	1.0		mg/L	1	12/1/2014 3:52:55 PM	R22857
Silver	ND	0.0050		mg/L	1	12/1/2014 3:52:55 PM	R22857
Sodium	270	5.0		mg/L	5	12/1/2014 5:17:09 PM	R22857
Zinc	0.018	0.010		mg/L	1	12/1/2014 3:52:55 PM	R22857
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	3.6	0.020	*	mg/L	10	12/1/2014 4:52:45 PM	16592
Cadmium	ND	0.0020		mg/L	1	12/1/2014 4:03:16 PM	16592
Chromium	0.035	0.0060		mg/L	1	12/1/2014 4:03:16 PM	16592
Copper	0.043	0.0060		mg/L	1	12/1/2014 4:03:16 PM	16592
Iron	47	2.0	*	mg/L	100	12/1/2014 4:54:42 PM	16592
Manganese	5.6	0.020	*	mg/L	10	12/1/2014 4:52:45 PM	16592
Silver	ND	0.0050		mg/L	1	12/1/2014 4:03:16 PM	16592
Zinc	0.11	0.010		mg/L	1	12/1/2014 4:03:16 PM	16592
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-19
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 2:30:00 PM
Lab ID: 1411835-004
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.022	0.010	*	mg/L	10	12/4/2014 3:26:46 PM	R22933
Lead	0.0019	0.0010		mg/L	1	12/4/2014 12:49:40 PM	R22933
Selenium	ND	0.010		mg/L	10	12/4/2014 3:26:46 PM	R22933
Uranium	ND	0.0010		mg/L	1	12/4/2014 12:49:40 PM	R22933
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.022	0.010	*	mg/L	10	12/3/2014 6:18:55 PM	16592
Lead	0.079	0.010	*	mg/L	10	12/3/2014 6:18:55 PM	16592
Selenium	ND	0.010		mg/L	10	12/3/2014 6:18:55 PM	16592
Uranium	0.014	0.0010		mg/L	1	12/3/2014 4:08:15 PM	16592
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	12/2/2014 1:59:25 PM	16625
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Acenaphthylene	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Aniline	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Anthracene	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Azobenzene	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Benz(a)anthracene	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Benzo(a)pyrene	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Benzo(b)fluoranthene	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Benzo(k)fluoranthene	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Benzoic acid	ND	20		µg/L	1	11/25/2014 2:14:18 PM	16507
Benzyl alcohol	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Bis(2-ethylhexyl)phthalate	11	10	B	µg/L	1	11/25/2014 2:14:18 PM	16507
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Butyl benzyl phthalate	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Carbazole	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
4-Chloroaniline	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
2-Chloronaphthalene	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
2-Chlorophenol	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Chrysene	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Di-n-butyl phthalate	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-19
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 2:30:00 PM
Lab ID: 1411835-004
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Di-n-octyl phthalate	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Dibenzofuran	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
1,2-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
1,3-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
1,4-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Diethyl phthalate	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Dimethyl phthalate	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
2,4-Dichlorophenol	ND	20		µg/L	1	11/25/2014 2:14:18 PM	16507
2,4-Dimethylphenol	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/25/2014 2:14:18 PM	16507
2,4-Dinitrophenol	ND	20		µg/L	1	11/25/2014 2:14:18 PM	16507
2,4-Dinitrotoluene	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
2,6-Dinitrotoluene	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Fluoranthene	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Fluorene	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Hexachlorobenzene	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Hexachlorobutadiene	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Hexachloroethane	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Isophorone	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
1-Methylnaphthalene	110	10		µg/L	1	11/25/2014 2:14:18 PM	16507
2-Methylnaphthalene	33	10		µg/L	1	11/25/2014 2:14:18 PM	16507
2-Methylphenol	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
3+4-Methylphenol	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
N-Nitrosodimethylamine	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Naphthalene	54	10		µg/L	1	11/25/2014 2:14:18 PM	16507
2-Nitroaniline	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
3-Nitroaniline	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
4-Nitroaniline	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Nitrobenzene	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
2-Nitrophenol	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
4-Nitrophenol	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Pentachlorophenol	ND	20		µg/L	1	11/25/2014 2:14:18 PM	16507
Phenanthrene	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-19
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 2:30:00 PM
Lab ID: 1411835-004
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Phenol	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Pyrene	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Pyridine	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/25/2014 2:14:18 PM	16507
Surr: 2-Fluorophenol	70.5	17.6-104		%REC	1	11/25/2014 2:14:18 PM	16507
Surr: Phenol-d5	63.3	17.7-89.9		%REC	1	11/25/2014 2:14:18 PM	16507
Surr: 2,4,6-Tribromophenol	85.3	16.3-122		%REC	1	11/25/2014 2:14:18 PM	16507
Surr: Nitrobenzene-d5	87.2	45.3-117		%REC	1	11/25/2014 2:14:18 PM	16507
Surr: 2-Fluorobiphenyl	79.3	43-113		%REC	1	11/25/2014 2:14:18 PM	16507
Surr: 4-Terphenyl-d14	84.9	47.6-122		%REC	1	11/25/2014 2:14:18 PM	16507
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	2300	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
Toluene	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
Ethylbenzene	740	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
Methyl tert-butyl ether (MTBE)	9700	500		µg/L	500	11/25/2014 11:30:40 PM	R22801
1,2,4-Trimethylbenzene	830	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
1,3,5-Trimethylbenzene	110	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
1,2-Dichloroethane (EDC)	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
1,2-Dibromoethane (EDB)	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
Naphthalene	580	100		µg/L	50	11/24/2014 6:11:31 PM	R22767
1-Methylnaphthalene	410	200		µg/L	50	11/24/2014 6:11:31 PM	R22767
2-Methylnaphthalene	540	200		µg/L	50	11/24/2014 6:11:31 PM	R22767
Acetone	ND	500		µg/L	50	11/24/2014 6:11:31 PM	R22767
Bromobenzene	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
Bromodichloromethane	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
Bromoform	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
Bromomethane	ND	150		µg/L	50	11/24/2014 6:11:31 PM	R22767
2-Butanone	ND	500		µg/L	50	11/24/2014 6:11:31 PM	R22767
Carbon disulfide	ND	500		µg/L	50	11/24/2014 6:11:31 PM	R22767
Carbon Tetrachloride	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
Chlorobenzene	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
Chloroethane	ND	100		µg/L	50	11/24/2014 6:11:31 PM	R22767
Chloroform	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
Chloromethane	ND	150		µg/L	50	11/24/2014 6:11:31 PM	R22767
2-Chlorotoluene	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
4-Chlorotoluene	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
cis-1,2-DCE	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-19
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 2:30:00 PM
Lab ID: 1411835-004
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
cis-1,3-Dichloropropene	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
1,2-Dibromo-3-chloropropane	ND	100		µg/L	50	11/24/2014 6:11:31 PM	R22767
Dibromochloromethane	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
Dibromomethane	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
1,2-Dichlorobenzene	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
1,3-Dichlorobenzene	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
1,4-Dichlorobenzene	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
Dichlorodifluoromethane	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
1,1-Dichloroethane	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
1,1-Dichloroethene	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
1,2-Dichloropropane	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
1,3-Dichloropropane	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
2,2-Dichloropropane	ND	100		µg/L	50	11/24/2014 6:11:31 PM	R22767
1,1-Dichloropropene	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
Hexachlorobutadiene	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
2-Hexanone	ND	500		µg/L	50	11/24/2014 6:11:31 PM	R22767
Isopropylbenzene	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
4-Isopropyltoluene	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
4-Methyl-2-pentanone	ND	500		µg/L	50	11/24/2014 6:11:31 PM	R22767
Methylene Chloride	ND	150		µg/L	50	11/24/2014 6:11:31 PM	R22767
n-Butylbenzene	ND	150		µg/L	50	11/24/2014 6:11:31 PM	R22767
n-Propylbenzene	110	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
sec-Butylbenzene	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
Styrene	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
tert-Butylbenzene	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
1,1,1,2-Tetrachloroethane	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
1,1,2,2-Tetrachloroethane	ND	100		µg/L	50	11/24/2014 6:11:31 PM	R22767
Tetrachloroethene (PCE)	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
trans-1,2-DCE	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
trans-1,3-Dichloropropene	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
1,2,3-Trichlorobenzene	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
1,2,4-Trichlorobenzene	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
1,1,1-Trichloroethane	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
1,1,2-Trichloroethane	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
Trichloroethene (TCE)	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
Trichlorofluoromethane	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
1,2,3-Trichloropropane	ND	100		µg/L	50	11/24/2014 6:11:31 PM	R22767
Vinyl chloride	ND	50		µg/L	50	11/24/2014 6:11:31 PM	R22767
Xylenes, Total	360	75		µg/L	50	11/24/2014 6:11:31 PM	R22767

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-19
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 2:30:00 PM
Lab ID: 1411835-004
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Surr: 1,2-Dichloroethane-d4	105	70-130		%REC	50	11/24/2014 6:11:31 PM	R22767
Surr: 4-Bromofluorobenzene	93.4	70-130		%REC	50	11/24/2014 6:11:31 PM	R22767
Surr: Dibromofluoromethane	96.0	70-130		%REC	50	11/24/2014 6:11:31 PM	R22767
Surr: Toluene-d8	101	70-130		%REC	50	11/24/2014 6:11:31 PM	R22767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-20
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 10:15:00 AM
Lab ID: 1411835-005
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	24	1.0		mg/L	1	11/21/2014 2:59:45 AM	16493
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/21/2014 2:59:45 AM	16493
Surr: DNOP	84.5	59-141		%REC	1	11/21/2014 2:59:45 AM	16493
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	45	5.0		mg/L	100	11/22/2014 3:07:34 AM	R22716
Surr: BFB	89.7	80-120		%REC	100	11/22/2014 3:07:34 AM	R22716
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	0.87	0.50		mg/L	5	11/19/2014 10:26:53 PM	R22657
Chloride	82	2.5		mg/L	5	11/19/2014 10:26:53 PM	R22657
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	11/19/2014 10:26:53 PM	R22657
Bromide	ND	0.50		mg/L	5	11/19/2014 10:26:53 PM	R22657
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	11/19/2014 10:26:53 PM	R22657
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	11/19/2014 10:26:53 PM	R22657
Sulfate	16	2.5		mg/L	5	11/19/2014 10:26:53 PM	R22657
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Calcium	110	5.0		mg/L	5	12/1/2014 5:27:42 PM	R22857
Magnesium	20	1.0		mg/L	1	12/1/2014 3:54:35 PM	R22857
Potassium	22	1.0		mg/L	1	12/1/2014 3:54:35 PM	R22857
Sodium	100	5.0		mg/L	5	12/1/2014 5:27:42 PM	R22857
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	4.5	0.020	*	mg/L	10	12/1/2014 5:07:46 PM	16592
Cadmium	ND	0.0020		mg/L	1	12/1/2014 4:12:12 PM	16592
Chromium	0.022	0.0060		mg/L	1	12/1/2014 4:12:12 PM	16592
Copper	0.12	0.0060		mg/L	1	12/1/2014 4:12:12 PM	16592
Iron	45	2.0	*	mg/L	100	12/1/2014 5:09:30 PM	16592
Manganese	4.9	0.020	*	mg/L	10	12/1/2014 5:07:46 PM	16592
Silver	ND	0.0050		mg/L	1	12/1/2014 4:12:12 PM	16592
Zinc	0.19	0.010		mg/L	1	12/1/2014 4:12:12 PM	16592
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.017	0.0050	*	mg/L	5	12/3/2014 6:22:00 PM	16592
Lead	0.048	0.0010	*	mg/L	1	12/3/2014 4:11:20 PM	16592
Selenium	ND	0.0050		mg/L	5	12/3/2014 6:22:00 PM	16592
Uranium	0.0066	0.0010		mg/L	1	12/3/2014 4:11:20 PM	16592
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	0.00028	0.00020		mg/L	1	12/2/2014 2:01:14 PM	16625
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-20
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 10:15:00 AM
Lab ID: 1411835-005
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Acenaphthylene	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Aniline	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Anthracene	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Azobenzene	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Benz(a)anthracene	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Benzo(a)pyrene	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Benzo(b)fluoranthene	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Benzo(k)fluoranthene	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Benzoic acid	ND	20		µg/L	1	11/25/2014 2:40:51 PM	16507
Benzyl alcohol	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Bis(2-ethylhexyl)phthalate	14	10	B	µg/L	1	11/25/2014 2:40:51 PM	16507
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Butyl benzyl phthalate	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Carbazole	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
4-Chloroaniline	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
2-Chloronaphthalene	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
2-Chlorophenol	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Chrysene	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Di-n-butyl phthalate	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Di-n-octyl phthalate	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Dibenzofuran	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
1,2-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
1,3-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
1,4-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Diethyl phthalate	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Dimethyl phthalate	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
2,4-Dichlorophenol	ND	20		µg/L	1	11/25/2014 2:40:51 PM	16507
2,4-Dimethylphenol	610	100		µg/L	10	12/2/2014 12:30:33 PM	16507
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/25/2014 2:40:51 PM	16507
2,4-Dinitrophenol	ND	20		µg/L	1	11/25/2014 2:40:51 PM	16507

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-20
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 10:15:00 AM
Lab ID: 1411835-005
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2,4-Dinitrotoluene	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
2,6-Dinitrotoluene	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Fluoranthene	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Fluorene	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Hexachlorobenzene	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Hexachlorobutadiene	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Hexachloroethane	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Isophorone	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
1-Methylnaphthalene	110	10		µg/L	1	11/25/2014 2:40:51 PM	16507
2-Methylnaphthalene	66	10		µg/L	1	11/25/2014 2:40:51 PM	16507
2-Methylphenol	120	10		µg/L	1	11/25/2014 2:40:51 PM	16507
3+4-Methylphenol	51	10		µg/L	1	11/25/2014 2:40:51 PM	16507
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
N-Nitrosodimethylamine	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Naphthalene	100	10		µg/L	1	11/25/2014 2:40:51 PM	16507
2-Nitroaniline	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
3-Nitroaniline	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
4-Nitroaniline	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Nitrobenzene	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
2-Nitrophenol	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
4-Nitrophenol	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Pentachlorophenol	ND	20		µg/L	1	11/25/2014 2:40:51 PM	16507
Phenanthrene	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Phenol	37	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Pyrene	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Pyridine	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/25/2014 2:40:51 PM	16507
Surr: 2-Fluorophenol	21.6	17.6-104		%REC	1	11/25/2014 2:40:51 PM	16507
Surr: Phenol-d5	57.8	17.7-89.9		%REC	1	11/25/2014 2:40:51 PM	16507
Surr: 2,4,6-Tribromophenol	90.9	16.3-122		%REC	1	11/25/2014 2:40:51 PM	16507
Surr: Nitrobenzene-d5	78.5	45.3-117		%REC	1	11/25/2014 2:40:51 PM	16507
Surr: 2-Fluorobiphenyl	72.5	43-113		%REC	1	11/25/2014 2:40:51 PM	16507
Surr: 4-Terphenyl-d14	68.5	47.6-122		%REC	1	11/25/2014 2:40:51 PM	16507
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-20
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 10:15:00 AM
Lab ID: 1411835-005
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	4400	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
Toluene	1300	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
Ethylbenzene	480	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
Methyl tert-butyl ether (MTBE)	83	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
1,2,4-Trimethylbenzene	1800	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
1,3,5-Trimethylbenzene	530	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
1,2-Dichloroethane (EDC)	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
1,2-Dibromoethane (EDB)	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
Naphthalene	160	100		µg/L	50	11/24/2014 7:31:42 PM	R22767
1-Methylnaphthalene	ND	200		µg/L	50	11/24/2014 7:31:42 PM	R22767
2-Methylnaphthalene	ND	200		µg/L	50	11/24/2014 7:31:42 PM	R22767
Acetone	ND	500		µg/L	50	11/24/2014 7:31:42 PM	R22767
Bromobenzene	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
Bromodichloromethane	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
Bromoform	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
Bromomethane	ND	150		µg/L	50	11/24/2014 7:31:42 PM	R22767
2-Butanone	ND	500		µg/L	50	11/24/2014 7:31:42 PM	R22767
Carbon disulfide	ND	500		µg/L	50	11/24/2014 7:31:42 PM	R22767
Carbon Tetrachloride	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
Chlorobenzene	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
Chloroethane	ND	100		µg/L	50	11/24/2014 7:31:42 PM	R22767
Chloroform	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
Chloromethane	ND	150		µg/L	50	11/24/2014 7:31:42 PM	R22767
2-Chlorotoluene	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
4-Chlorotoluene	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
cis-1,2-DCE	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
cis-1,3-Dichloropropene	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
1,2-Dibromo-3-chloropropane	ND	100		µg/L	50	11/24/2014 7:31:42 PM	R22767
Dibromochloromethane	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
Dibromomethane	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
1,2-Dichlorobenzene	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
1,3-Dichlorobenzene	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
1,4-Dichlorobenzene	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
Dichlorodifluoromethane	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
1,1-Dichloroethane	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
1,1-Dichloroethene	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
1,2-Dichloropropane	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
1,3-Dichloropropane	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
2,2-Dichloropropane	ND	100		µg/L	50	11/24/2014 7:31:42 PM	R22767

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-20
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 10:15:00 AM
Lab ID: 1411835-005
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,1-Dichloropropene	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
Hexachlorobutadiene	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
2-Hexanone	ND	500		µg/L	50	11/24/2014 7:31:42 PM	R22767
Isopropylbenzene	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
4-Isopropyltoluene	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
4-Methyl-2-pentanone	ND	500		µg/L	50	11/24/2014 7:31:42 PM	R22767
Methylene Chloride	ND	150		µg/L	50	11/24/2014 7:31:42 PM	R22767
n-Butylbenzene	ND	150		µg/L	50	11/24/2014 7:31:42 PM	R22767
n-Propylbenzene	120	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
sec-Butylbenzene	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
Styrene	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
tert-Butylbenzene	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
1,1,1,2-Tetrachloroethane	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
1,1,2,2-Tetrachloroethane	ND	100		µg/L	50	11/24/2014 7:31:42 PM	R22767
Tetrachloroethene (PCE)	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
trans-1,2-DCE	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
trans-1,3-Dichloropropene	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
1,2,3-Trichlorobenzene	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
1,2,4-Trichlorobenzene	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
1,1,1-Trichloroethane	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
1,1,2-Trichloroethane	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
Trichloroethene (TCE)	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
Trichlorofluoromethane	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
1,2,3-Trichloropropane	ND	100		µg/L	50	11/24/2014 7:31:42 PM	R22767
Vinyl chloride	ND	50		µg/L	50	11/24/2014 7:31:42 PM	R22767
Xylenes, Total	10000	75		µg/L	50	11/24/2014 7:31:42 PM	R22767
Surr: 1,2-Dichloroethane-d4	93.5	70-130		%REC	50	11/24/2014 7:31:42 PM	R22767
Surr: 4-Bromofluorobenzene	92.2	70-130		%REC	50	11/24/2014 7:31:42 PM	R22767
Surr: Dibromofluoromethane	88.8	70-130		%REC	50	11/24/2014 7:31:42 PM	R22767
Surr: Toluene-d8	99.3	70-130		%REC	50	11/24/2014 7:31:42 PM	R22767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP-1NW
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 1:15:00 PM
Lab ID: 1411835-006
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/21/2014 3:20:58 AM	16493
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/21/2014 3:20:58 AM	16493
Surr: DNOP	95.7	59-141		%REC	1	11/21/2014 3:20:58 AM	16493
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/22/2014 3:34:53 AM	R22716
Surr: BFB	89.5	80-120		%REC	1	11/22/2014 3:34:53 AM	R22716
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	0.29	0.10		mg/L	1	11/19/2014 11:16:32 PM	R22657
Chloride	1800	100		mg/L	200	12/1/2014 10:05:02 PM	R22875
Nitrogen, Nitrite (As N)	ND	2.0		mg/L	20	11/19/2014 11:53:46 PM	R22657
Bromide	2.8	0.10		mg/L	1	11/19/2014 11:16:32 PM	R22657
Nitrogen, Nitrate (As N)	18	2.0	*	mg/L	20	11/19/2014 11:53:46 PM	R22657
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	11/19/2014 11:16:32 PM	R22657
Sulfate	120	10		mg/L	20	11/19/2014 11:53:46 PM	R22657
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.12	0.0020		mg/L	1	12/1/2014 3:56:06 PM	R22857
Cadmium	ND	0.0020		mg/L	1	12/1/2014 3:56:06 PM	R22857
Calcium	64	1.0		mg/L	1	12/1/2014 3:56:06 PM	R22857
Chromium	ND	0.0060		mg/L	1	12/1/2014 3:56:06 PM	R22857
Copper	ND	0.0060		mg/L	1	12/1/2014 3:56:06 PM	R22857
Iron	0.026	0.020		mg/L	1	12/1/2014 3:56:06 PM	R22857
Magnesium	8.5	1.0		mg/L	1	12/1/2014 3:56:06 PM	R22857
Manganese	0.028	0.0020		mg/L	1	12/1/2014 3:56:06 PM	R22857
Potassium	6.0	1.0		mg/L	1	12/1/2014 3:56:06 PM	R22857
Silver	ND	0.0050		mg/L	1	12/1/2014 3:56:06 PM	R22857
Sodium	1200	20		mg/L	20	12/1/2014 5:29:23 PM	R22857
Zinc	0.058	0.010		mg/L	1	12/1/2014 3:56:06 PM	R22857
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.13	0.0020		mg/L	1	12/1/2014 4:13:55 PM	16592
Cadmium	ND	0.0020		mg/L	1	12/1/2014 4:13:55 PM	16592
Chromium	ND	0.0060		mg/L	1	12/1/2014 4:13:55 PM	16592
Copper	ND	0.0060		mg/L	1	12/1/2014 4:13:55 PM	16592
Iron	0.15	0.020		mg/L	1	12/1/2014 4:13:55 PM	16592
Manganese	0.032	0.0020		mg/L	1	12/1/2014 4:13:55 PM	16592
Silver	ND	0.0050		mg/L	1	12/1/2014 4:13:55 PM	16592
Zinc	0.032	0.010		mg/L	1	12/1/2014 4:13:55 PM	16592
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP-1NW
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 1:15:00 PM
Lab ID: 1411835-006
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	12/4/2014 2:40:20 PM	R22933
Lead	ND	0.0010		mg/L	1	12/4/2014 12:58:39 PM	R22933
Selenium	0.023	0.010		mg/L	10	12/4/2014 2:40:20 PM	R22933
Uranium	0.026	0.0010		mg/L	1	12/4/2014 12:58:39 PM	R22933
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	12/3/2014 6:25:06 PM	16592
Lead	ND	0.0010		mg/L	1	12/3/2014 4:14:25 PM	16592
Selenium	0.024	0.010		mg/L	10	12/3/2014 6:25:06 PM	16592
Uranium	0.030	0.0010		mg/L	1	12/3/2014 4:14:25 PM	16592
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	12/2/2014 2:03:02 PM	16625
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Acenaphthylene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Aniline	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Anthracene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Azobenzene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Benz(a)anthracene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Benzo(a)pyrene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Benzo(b)fluoranthene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Benzo(k)fluoranthene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Benzoic acid	ND	20		µg/L	1	11/25/2014 3:07:24 PM	16507
Benzyl alcohol	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Bis(2-ethylhexyl)phthalate	11	10	B	µg/L	1	11/25/2014 3:07:24 PM	16507
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Butyl benzyl phthalate	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Carbazole	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
4-Chloroaniline	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
2-Chloronaphthalene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
2-Chlorophenol	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Chrysene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Di-n-butyl phthalate	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP-1NW
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 1:15:00 PM
Lab ID: 1411835-006
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Di-n-octyl phthalate	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Dibenzofuran	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
1,2-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
1,3-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
1,4-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Diethyl phthalate	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Dimethyl phthalate	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
2,4-Dichlorophenol	ND	20		µg/L	1	11/25/2014 3:07:24 PM	16507
2,4-Dimethylphenol	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/25/2014 3:07:24 PM	16507
2,4-Dinitrophenol	ND	20		µg/L	1	11/25/2014 3:07:24 PM	16507
2,4-Dinitrotoluene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
2,6-Dinitrotoluene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Fluoranthene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Fluorene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Hexachlorobenzene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Hexachlorobutadiene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Hexachloroethane	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Isophorone	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
1-Methylnaphthalene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
2-Methylnaphthalene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
2-Methylphenol	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
3+4-Methylphenol	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
N-Nitrosodimethylamine	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Naphthalene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
2-Nitroaniline	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
3-Nitroaniline	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
4-Nitroaniline	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Nitrobenzene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
2-Nitrophenol	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
4-Nitrophenol	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Pentachlorophenol	ND	20		µg/L	1	11/25/2014 3:07:24 PM	16507
Phenanthrene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP-1NW
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 1:15:00 PM
Lab ID: 1411835-006
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Phenol	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Pyrene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Pyridine	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/25/2014 3:07:24 PM	16507
Surr: 2-Fluorophenol	77.4	17.6-104		%REC	1	11/25/2014 3:07:24 PM	16507
Surr: Phenol-d5	67.2	17.7-89.9		%REC	1	11/25/2014 3:07:24 PM	16507
Surr: 2,4,6-Tribromophenol	91.1	16.3-122		%REC	1	11/25/2014 3:07:24 PM	16507
Surr: Nitrobenzene-d5	89.9	45.3-117		%REC	1	11/25/2014 3:07:24 PM	16507
Surr: 2-Fluorobiphenyl	86.6	43-113		%REC	1	11/25/2014 3:07:24 PM	16507
Surr: 4-Terphenyl-d14	93.8	47.6-122		%REC	1	11/25/2014 3:07:24 PM	16507
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
Toluene	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
Ethylbenzene	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
Naphthalene	ND	2.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
1-Methylnaphthalene	ND	4.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
2-Methylnaphthalene	ND	4.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
Acetone	ND	10		µg/L	1	11/24/2014 7:58:26 PM	R22767
Bromobenzene	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
Bromodichloromethane	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
Bromoform	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
Bromomethane	ND	3.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
2-Butanone	ND	10		µg/L	1	11/24/2014 7:58:26 PM	R22767
Carbon disulfide	ND	10		µg/L	1	11/24/2014 7:58:26 PM	R22767
Carbon Tetrachloride	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
Chlorobenzene	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
Chloroethane	ND	2.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
Chloroform	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
Chloromethane	ND	3.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
2-Chlorotoluene	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
4-Chlorotoluene	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
cis-1,2-DCE	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP-1NW
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 1:15:00 PM
Lab ID: 1411835-006
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
Dibromochloromethane	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
Dibromomethane	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
1,1-Dichloroethane	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
1,1-Dichloroethene	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
1,2-Dichloropropane	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
1,3-Dichloropropane	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
2,2-Dichloropropane	ND	2.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
1,1-Dichloropropene	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
Hexachlorobutadiene	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
2-Hexanone	ND	10		µg/L	1	11/24/2014 7:58:26 PM	R22767
Isopropylbenzene	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
4-Isopropyltoluene	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
4-Methyl-2-pentanone	ND	10		µg/L	1	11/24/2014 7:58:26 PM	R22767
Methylene Chloride	ND	3.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
n-Butylbenzene	ND	3.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
n-Propylbenzene	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
sec-Butylbenzene	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
Styrene	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
tert-Butylbenzene	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
trans-1,2-DCE	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
Trichlorofluoromethane	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
Vinyl chloride	ND	1.0		µg/L	1	11/24/2014 7:58:26 PM	R22767
Xylenes, Total	ND	1.5		µg/L	1	11/24/2014 7:58:26 PM	R22767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
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R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP-1NW
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 1:15:00 PM
Lab ID: 1411835-006
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Surr: 1,2-Dichloroethane-d4	96.3	70-130		%REC	1	11/24/2014 7:58:26 PM	R22767
Surr: 4-Bromofluorobenzene	117	70-130		%REC	1	11/24/2014 7:58:26 PM	R22767
Surr: Dibromofluoromethane	102	70-130		%REC	1	11/24/2014 7:58:26 PM	R22767
Surr: Toluene-d8	110	70-130		%REC	1	11/24/2014 7:58:26 PM	R22767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BD-MKTF-11-18-14
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 8:00:00 AM
Lab ID: 1411835-007
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Acenaphthylene	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Aniline	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Anthracene	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Azobenzene	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Benz(a)anthracene	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Benzo(a)pyrene	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Benzo(b)fluoranthene	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Benzo(k)fluoranthene	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Benzoic acid	ND	20		µg/L	1	11/25/2014 3:34:34 PM	16507
Benzyl alcohol	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Bis(2-ethylhexyl)phthalate	12	10	B	µg/L	1	11/25/2014 3:34:34 PM	16507
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Butyl benzyl phthalate	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Carbazole	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
4-Chloroaniline	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
2-Chloronaphthalene	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
2-Chlorophenol	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Chrysene	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Di-n-butyl phthalate	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Di-n-octyl phthalate	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Dibenzofuran	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
1,2-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
1,3-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
1,4-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Diethyl phthalate	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Dimethyl phthalate	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
2,4-Dichlorophenol	ND	20		µg/L	1	11/25/2014 3:34:34 PM	16507
2,4-Dimethylphenol	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/25/2014 3:34:34 PM	16507
2,4-Dinitrophenol	ND	20		µg/L	1	11/25/2014 3:34:34 PM	16507

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BD-MKTF-11-18-14
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 8:00:00 AM
Lab ID: 1411835-007
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2,4-Dinitrotoluene	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
2,6-Dinitrotoluene	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Fluoranthene	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Fluorene	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Hexachlorobenzene	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Hexachlorobutadiene	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Hexachloroethane	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Isophorone	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
1-Methylnaphthalene	120	10		µg/L	1	11/25/2014 3:34:34 PM	16507
2-Methylnaphthalene	36	10		µg/L	1	11/25/2014 3:34:34 PM	16507
2-Methylphenol	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
3+4-Methylphenol	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
N-Nitrosodimethylamine	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Naphthalene	57	10		µg/L	1	11/25/2014 3:34:34 PM	16507
2-Nitroaniline	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
3-Nitroaniline	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
4-Nitroaniline	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Nitrobenzene	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
2-Nitrophenol	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
4-Nitrophenol	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Pentachlorophenol	ND	20		µg/L	1	11/25/2014 3:34:34 PM	16507
Phenanthrene	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Phenol	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Pyrene	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Pyridine	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/25/2014 3:34:34 PM	16507
Surr: 2-Fluorophenol	80.1	17.6-104		%REC	1	11/25/2014 3:34:34 PM	16507
Surr: Phenol-d5	70.7	17.7-89.9		%REC	1	11/25/2014 3:34:34 PM	16507
Surr: 2,4,6-Tribromophenol	102	16.3-122		%REC	1	11/25/2014 3:34:34 PM	16507
Surr: Nitrobenzene-d5	96.4	45.3-117		%REC	1	11/25/2014 3:34:34 PM	16507
Surr: 2-Fluorobiphenyl	92.6	43-113		%REC	1	11/25/2014 3:34:34 PM	16507
Surr: 4-Terphenyl-d14	89.8	47.6-122		%REC	1	11/25/2014 3:34:34 PM	16507

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Field Blank
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 8:00:00 AM
Lab ID: 1411835-008
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
Toluene	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
Ethylbenzene	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
Naphthalene	ND	2.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
1-Methylnaphthalene	ND	4.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
2-Methylnaphthalene	ND	4.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
Acetone	ND	10		µg/L	1	11/24/2014 8:25:11 PM	R22767
Bromobenzene	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
Bromodichloromethane	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
Bromoform	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
Bromomethane	ND	3.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
2-Butanone	ND	10		µg/L	1	11/24/2014 8:25:11 PM	R22767
Carbon disulfide	ND	10		µg/L	1	11/24/2014 8:25:11 PM	R22767
Carbon Tetrachloride	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
Chlorobenzene	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
Chloroethane	ND	2.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
Chloroform	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
Chloromethane	ND	3.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
2-Chlorotoluene	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
4-Chlorotoluene	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
cis-1,2-DCE	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
Dibromochloromethane	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
Dibromomethane	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
1,1-Dichloroethane	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
1,1-Dichloroethene	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
1,2-Dichloropropane	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
1,3-Dichloropropane	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
2,2-Dichloropropane	ND	2.0		µg/L	1	11/24/2014 8:25:11 PM	R22767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Field Blank
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date: 11/18/2014 8:00:00 AM
Lab ID: 1411835-008
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
Hexachlorobutadiene	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
2-Hexanone	ND	10		µg/L	1	11/24/2014 8:25:11 PM	R22767
Isopropylbenzene	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
4-Isopropyltoluene	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
4-Methyl-2-pentanone	ND	10		µg/L	1	11/24/2014 8:25:11 PM	R22767
Methylene Chloride	ND	3.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
n-Butylbenzene	ND	3.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
n-Propylbenzene	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
sec-Butylbenzene	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
Styrene	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
tert-Butylbenzene	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
trans-1,2-DCE	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
Trichlorofluoromethane	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
Vinyl chloride	ND	1.0		µg/L	1	11/24/2014 8:25:11 PM	R22767
Xylenes, Total	ND	1.5		µg/L	1	11/24/2014 8:25:11 PM	R22767
Surr: 1,2-Dichloroethane-d4	92.5	70-130		%REC	1	11/24/2014 8:25:11 PM	R22767
Surr: 4-Bromofluorobenzene	118	70-130		%REC	1	11/24/2014 8:25:11 PM	R22767
Surr: Dibromofluoromethane	93.1	70-130		%REC	1	11/24/2014 8:25:11 PM	R22767
Surr: Toluene-d8	109	70-130		%REC	1	11/24/2014 8:25:11 PM	R22767

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date:
Lab ID: 1411835-009
Matrix: TRIP BLANK
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
Toluene	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
Ethylbenzene	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
Naphthalene	ND	2.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
1-Methylnaphthalene	ND	4.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
2-Methylnaphthalene	ND	4.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
Acetone	ND	10		µg/L	1	11/24/2014 1:43:43 PM	R22767
Bromobenzene	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
Bromodichloromethane	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
Bromoform	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
Bromomethane	ND	3.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
2-Butanone	ND	10		µg/L	1	11/24/2014 1:43:43 PM	R22767
Carbon disulfide	ND	10		µg/L	1	11/24/2014 1:43:43 PM	R22767
Carbon Tetrachloride	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
Chlorobenzene	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
Chloroethane	ND	2.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
Chloroform	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
Chloromethane	ND	3.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
2-Chlorotoluene	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
4-Chlorotoluene	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
cis-1,2-DCE	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
Dibromochloromethane	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
Dibromomethane	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
1,1-Dichloroethane	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
1,1-Dichloroethene	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
1,2-Dichloropropane	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
1,3-Dichloropropane	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
2,2-Dichloropropane	ND	2.0		µg/L	1	11/24/2014 1:43:43 PM	R22767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 2014 4th QTR MKTF WELLS/STP-1N
Collection Date:
Lab ID: 1411835-009
Matrix: TRIP BLANK
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
Hexachlorobutadiene	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
2-Hexanone	ND	10		µg/L	1	11/24/2014 1:43:43 PM	R22767
Isopropylbenzene	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
4-Isopropyltoluene	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
4-Methyl-2-pentanone	ND	10		µg/L	1	11/24/2014 1:43:43 PM	R22767
Methylene Chloride	ND	3.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
n-Butylbenzene	ND	3.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
n-Propylbenzene	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
sec-Butylbenzene	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
Styrene	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
tert-Butylbenzene	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
trans-1,2-DCE	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
Trichlorofluoromethane	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
Vinyl chloride	ND	1.0		µg/L	1	11/24/2014 1:43:43 PM	R22767
Xylenes, Total	ND	1.5		µg/L	1	11/24/2014 1:43:43 PM	R22767
Surr: 1,2-Dichloroethane-d4	100	70-130		%REC	1	11/24/2014 1:43:43 PM	R22767
Surr: 4-Bromofluorobenzene	117	70-130		%REC	1	11/24/2014 1:43:43 PM	R22767
Surr: Dibromofluoromethane	105	70-130		%REC	1	11/24/2014 1:43:43 PM	R22767
Surr: Toluene-d8	109	70-130		%REC	1	11/24/2014 1:43:43 PM	R22767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411835**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF WELLS/STP-1NW

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22857** RunNo: **22857**
Prep Date: Analysis Date: **12/1/2014** SeqNo: **674626** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22857** RunNo: **22857**
Prep Date: Analysis Date: **12/1/2014** SeqNo: **674627** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	95.2	85	115			
Cadmium	0.47	0.0020	0.5000	0	94.6	85	115			
Calcium	50	1.0	50.00	0	99.2	85	115			
Chromium	0.47	0.0060	0.5000	0	93.8	85	115			
Copper	0.46	0.0060	0.5000	0	92.3	85	115			
Iron	0.47	0.020	0.5000	0	93.2	85	115			
Magnesium	50	1.0	50.00	0	101	85	115			
Manganese	0.46	0.0020	0.5000	0	91.1	85	115			
Potassium	48	1.0	50.00	0	96.9	85	115			
Silver	0.10	0.0050	0.1000	0	104	85	115			
Sodium	49	1.0	50.00	0	98.8	85	115			
Zinc	0.47	0.010	0.5000	0	94.6	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22857** RunNo: **22857**
Prep Date: Analysis Date: **12/1/2014** SeqNo: **674628** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411835**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF WELLS/STP-1NW

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22857** RunNo: **22857**
Prep Date: Analysis Date: **12/1/2014** SeqNo: **674628** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22857** RunNo: **22857**
Prep Date: Analysis Date: **12/1/2014** SeqNo: **674629** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.1	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.6	85	115			
Calcium	50	1.0	50.00	0	100	85	115			
Chromium	0.48	0.0060	0.5000	0	96.6	85	115			
Copper	0.48	0.0060	0.5000	0	95.4	85	115			
Iron	0.48	0.020	0.5000	0	96.9	85	115			
Magnesium	50	1.0	50.00	0	101	85	115			
Manganese	0.47	0.0020	0.5000	0	93.9	85	115			
Potassium	48	1.0	50.00	0	96.8	85	115			
Silver	0.11	0.0050	0.1000	0	106	85	115			
Sodium	49	1.0	50.00	0	98.9	85	115			
Zinc	0.49	0.010	0.5000	0	97.3	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411835**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF WELLS/STP-1NW

Sample ID **MB-16592** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **16592** RunNo: **22823**
Prep Date: **11/26/2014** Analysis Date: **11/26/2014** SeqNo: **674320** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-16592** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **16592** RunNo: **22823**
Prep Date: **11/26/2014** Analysis Date: **11/26/2014** SeqNo: **674321** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	100	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.5	85	115			
Chromium	0.49	0.0060	0.5000	0	98.4	85	115			
Copper	0.49	0.0060	0.5000	0	98.7	85	115			
Iron	0.49	0.020	0.5000	0	98.7	85	115			
Manganese	0.48	0.0020	0.5000	0	97.0	85	115			
Silver	0.11	0.0050	0.1000	0	106	85	115			
Zinc	0.50	0.010	0.5000	0	100	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411835**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF WELLS/STP-1NW

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22933** RunNo: **22933**
Prep Date: Analysis Date: **12/4/2014** SeqNo: **677289** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.4	85	115			
Lead	0.024	0.0010	0.02500	0	97.8	85	115			
Selenium	0.024	0.0010	0.02500	0	94.2	85	115			
Uranium	0.025	0.0010	0.02500	0	99.9	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22933** RunNo: **22933**
Prep Date: Analysis Date: **12/4/2014** SeqNo: **677290** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.5	85	115			
Lead	0.024	0.0010	0.02500	0	96.7	85	115			
Selenium	0.024	0.0010	0.02500	0	95.5	85	115			
Uranium	0.023	0.0010	0.02500	0	92.2	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22933** RunNo: **22933**
Prep Date: Analysis Date: **12/4/2014** SeqNo: **677291** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22933** RunNo: **22933**
Prep Date: Analysis Date: **12/4/2014** SeqNo: **677292** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411835**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF WELLS/STP-1NW

Sample ID **1411835-006GMSDL** SampType: **MSDLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **STP-1NW** Batch ID: **16592** RunNo: **22904**
Prep Date: **11/26/2014** Analysis Date: **12/3/2014** SeqNo: **676752** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.027	0.0010	0.02500	0.0006461	104	70	130	1.53	20	
Uranium	0.056	0.0010	0.02500	0.02970	107	70	130	2.76	20	E

Sample ID **1411835-006GMSLL** SampType: **MSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **STP-1NW** Batch ID: **16592** RunNo: **22904**
Prep Date: **11/26/2014** Analysis Date: **12/3/2014** SeqNo: **676753** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.027	0.0010	0.02500	0.0006461	106	70	130			
Uranium	0.058	0.0010	0.02500	0.02970	113	70	130			E

Sample ID **LLLCS-16592** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **16592** RunNo: **22904**
Prep Date: **11/26/2014** Analysis Date: **12/3/2014** SeqNo: **676773** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.6	85	115			
Lead	0.024	0.0010	0.02500	0	94.3	85	115			
Selenium	0.023	0.0010	0.02500	0	92.8	85	115			
Uranium	0.024	0.0010	0.02500	0	97.9	85	115			

Sample ID **MB-16592** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **16592** RunNo: **22904**
Prep Date: **11/26/2014** Analysis Date: **12/3/2014** SeqNo: **676775** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411835**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF WELLS/STP-1NW

Sample ID	**MB-16625**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**
Client ID:	**PBW**	Batch ID:	**16625**	RunNo:	**22882**
Prep Date:	**12/2/2014**	Analysis Date:	**12/2/2014**	SeqNo:	**675569** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-16625**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**
Client ID:	**LCSW**	Batch ID:	**16625**	RunNo:	**22882**
Prep Date:	**12/2/2014**	Analysis Date:	**12/2/2014**	SeqNo:	**675570** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0053	0.00020	0.005000	0	107	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411835**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF WELLS/STP-1NW

Sample ID **1411835-006EMS** SampType: **MS** TestCode: **EPA Method 300.0: Anions**
Client ID: **STP-1NW** Batch ID: **R22657** RunNo: **22657**
Prep Date: Analysis Date: **11/19/2014** SeqNo: **668270** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.65	0.10	0.5000	0.2920	72.3	66.1	113			
Bromide	4.8	0.10	2.500	2.776	81.5	82.5	103			S
Phosphorus, Orthophosphate (As P	4.1	0.50	5.000	0	82.6	69	109			

Sample ID **1411835-006EMSD** SampType: **MSD** TestCode: **EPA Method 300.0: Anions**
Client ID: **STP-1NW** Batch ID: **R22657** RunNo: **22657**
Prep Date: Analysis Date: **11/19/2014** SeqNo: **668271** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.65	0.10	0.5000	0.2920	71.7	66.1	113	0.429	20	
Bromide	4.8	0.10	2.500	2.776	81.2	82.5	103	0.150	20	S
Phosphorus, Orthophosphate (As P	4.2	0.50	5.000	0	83.4	69	109	1.01	20	

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22875** RunNo: **22875**
Prep Date: Analysis Date: **12/1/2014** SeqNo: **675391** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R22875** RunNo: **22875**
Prep Date: Analysis Date: **12/1/2014** SeqNo: **675392** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	97.0	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411835**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF WELLS/STP-1NW

Sample ID	**MB-16493**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Diesel Range**		
Client ID:	**PBW**	Batch ID:	**16493**	RunNo:	**22660**		
Prep Date:	**11/20/2014**	Analysis Date:	**11/21/2014**	SeqNo:	**669374**	Units:	**mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.87		1.000		87.2	59	141			

Sample ID	**LCS-16493**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Diesel Range**		
Client ID:	**LCSW**	Batch ID:	**16493**	RunNo:	**22660**		
Prep Date:	**11/20/2014**	Analysis Date:	**11/21/2014**	SeqNo:	**669375**	Units:	**mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.0	1.0	5.000	0	119	69.7	142			
Surr: DNOP	0.47		0.5000		93.2	59	141			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411835**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF WELLS/STP-1NW

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**		
Client ID:	**PBW**	Batch ID:	**R22716**	RunNo:	**22716**		
Prep Date:		Analysis Date:	**11/21/2014**	SeqNo:	**670112**	Units:	**mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		92.8	80	120			

Sample ID	**2.5UG GRO LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**		
Client ID:	**LCSW**	Batch ID:	**R22716**	RunNo:	**22716**		
Prep Date:		Analysis Date:	**11/21/2014**	SeqNo:	**670113**	Units:	**mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.45	0.050	0.5000	0	89.6	80	120			
Surr: BFB	19		20.00		94.0	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411835**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF WELLS/STP-1NW

Sample ID **5mL rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R22767**	RunNo: **22767**			
Prep Date:	Analysis Date: **11/24/2014**	SeqNo: **671611**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411835**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF WELLS/STP-1NW

Sample ID **5mL rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22767** RunNo: **22767**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671611** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.1	70	130			
Surr: 4-Bromofluorobenzene	14		10.00		141	70	130			S
Surr: Dibromofluoromethane	8.1		10.00		80.9	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22767** RunNo: **22767**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671614** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	70	130			
Toluene	19	1.0	20.00	0	94.6	80	120			
Chlorobenzene	18	1.0	20.00	0	91.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411835**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF WELLS/STP-1NW

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22767** RunNo: **22767**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671614** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	19	1.0	20.00	0	97.0	82.6	131			
Trichloroethene (TCE)	17	1.0	20.00	0	85.2	70	130			
Surr: 1,2-Dichloroethane-d4	9.7		10.00		96.7	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		120	70	130			
Surr: Dibromofluoromethane	9.1		10.00		91.4	70	130			
Surr: Toluene-d8	9.6		10.00		96.1	70	130			

Sample ID **1411835-001a ms** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-16** Batch ID: **R22767** RunNo: **22767**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671626** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20000	50	1000	19490	79.6	70	130			E
Toluene	2200	50	1000	1166	102	70	130			
Chlorobenzene	1000	50	1000	0	101	70	130			
1,1-Dichloroethene	890	50	1000	0	88.8	70	130			
Trichloroethene (TCE)	880	50	1000	0	87.7	70	130			
Surr: 1,2-Dichloroethane-d4	470		500.0		93.2	70	130			
Surr: 4-Bromofluorobenzene	490		500.0		97.1	70	130			
Surr: Dibromofluoromethane	460		500.0		91.4	70	130			
Surr: Toluene-d8	510		500.0		102	70	130			

Sample ID **1411835-001a msd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-16** Batch ID: **R22767** RunNo: **22767**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671627** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21000	50	1000	19490	126	70	130	2.25	20	E
Toluene	2100	50	1000	1166	91.3	70	130	5.18	20	
Chlorobenzene	960	50	1000	0	96.2	70	130	4.44	20	
1,1-Dichloroethene	890	50	1000	0	89.0	70	130	0.325	20	
Trichloroethene (TCE)	900	50	1000	0	90.1	70	130	2.64	20	
Surr: 1,2-Dichloroethane-d4	500		500.0		99.0	70	130	0	0	
Surr: 4-Bromofluorobenzene	480		500.0		95.9	70	130	0	0	
Surr: Dibromofluoromethane	460		500.0		91.7	70	130	0	0	
Surr: Toluene-d8	500		500.0		99.2	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411835**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF WELLS/STP-1NW

Sample ID **100ng lcs2** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22767** RunNo: **22767**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671653** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	115	70	130			
Toluene	22	1.0	20.00	0	108	80	120			
Chlorobenzene	19	1.0	20.00	0	97.2	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	96.0	82.6	131			
Trichloroethene (TCE)	19	1.0	20.00	0	93.7	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		117	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.4	70	130			
Surr: Toluene-d8	11		10.00		106	70	130			

Sample ID **b5** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22767** RunNo: **22767**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671935** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411835**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF WELLS/STP-1NW

Sample ID **b5**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R22767**	RunNo: **22767**	
Prep Date:	Analysis Date: **11/24/2014**	SeqNo: **671935**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411835**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF WELLS/STP-1NW

Sample ID **b5**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R22767**	RunNo: **22767**
Prep Date:	Analysis Date: **11/24/2014**	SeqNo: **671935** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.0	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	9.1		10.00		91.4	70	130			
Surr: Toluene-d8	11		10.00		110	70	130			

Sample ID **5mL rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R22801**	RunNo: **22801**
Prep Date:	Analysis Date: **11/25/2014**	SeqNo: **672809** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411835**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF WELLS/STP-1NW

Sample ID **5mL rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R22801**	RunNo: **22801**			
Prep Date:	Analysis Date: **11/25/2014**	SeqNo: **672809**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.2		10.00		91.9	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		124	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411835**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF WELLS/STP-1NW

Sample ID **5mL rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22801** RunNo: **22801**
Prep Date: Analysis Date: **11/25/2014** SeqNo: **672809** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	8.9		10.00		88.9	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22801** RunNo: **22801**
Prep Date: Analysis Date: **11/25/2014** SeqNo: **672811** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	21	1.0	20.00	0	107	80	120			
Chlorobenzene	19	1.0	20.00	0	93.7	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	92.7	82.6	131			
Trichloroethene (TCE)	18	1.0	20.00	0	92.4	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.6	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		113	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.6	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411835**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF WELLS/STP-1NW

Sample ID **mb-16507**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **16507**	RunNo: **22768**			
Prep Date: **11/21/2014**	Analysis Date: **11/24/2014**	SeqNo: **671719**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	14	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411835**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF WELLS/STP-1NW

Sample ID **mb-16507**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **16507**	RunNo: **22768**			
Prep Date: **11/21/2014**	Analysis Date: **11/24/2014**	SeqNo: **671719**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	160		200.0		78.3	17.6	104			
Surr: Phenol-d5	160		200.0		81.6	17.7	89.9			
Surr: 2,4,6-Tribromophenol	180		200.0		89.3	16.3	122			
Surr: Nitrobenzene-d5	80		100.0		80.5	45.3	117			
Surr: 2-Fluorobiphenyl	80		100.0		79.6	43	113			
Surr: 4-Terphenyl-d14	87		100.0		87.4	47.6	122			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411835**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF WELLS/STP-1NW

Sample ID **lcs-16507** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **16507** RunNo: **22768**
Prep Date: **11/21/2014** Analysis Date: **11/24/2014** SeqNo: **671720** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	79	10	100.0	0	78.9	47.9	114			
4-Chloro-3-methylphenol	180	10	200.0	0	89.2	51.7	122			
2-Chlorophenol	150	10	200.0	0	77.3	40.7	113			
1,4-Dichlorobenzene	66	10	100.0	0	66.0	39.6	99.9			
2,4-Dinitrotoluene	62	10	100.0	0	61.8	40.8	113			
N-Nitrosodi-n-propylamine	78	10	100.0	0	78.2	51.2	111			
4-Nitrophenol	160	10	200.0	0	80.2	15.7	86.9			
Pentachlorophenol	140	20	200.0	0	68.7	21.6	104			
Phenol	170	10	200.0	0	83.3	28.6	71.7			S
Pyrene	81	10	100.0	0	81.0	54.2	128			
1,2,4-Trichlorobenzene	71	10	100.0	0	71.1	40.9	101			
Surr: 2-Fluorophenol	140		200.0		70.0	17.6	104			
Surr: Phenol-d5	150		200.0		75.8	17.7	89.9			
Surr: 2,4,6-Tribromophenol	180		200.0		88.2	16.3	122			
Surr: Nitrobenzene-d5	80		100.0		79.8	45.3	117			
Surr: 2-Fluorobiphenyl	76		100.0		75.7	43	113			
Surr: 4-Terphenyl-d14	90		100.0		89.5	47.6	122			

Sample ID **lcsd-16507** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **16507** RunNo: **22768**
Prep Date: **11/21/2014** Analysis Date: **11/24/2014** SeqNo: **671721** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	90	10	100.0	0	89.8	47.9	114	13.0	27.2	
4-Chloro-3-methylphenol	190	10	200.0	0	95.3	51.7	122	6.67	25.9	
2-Chlorophenol	180	10	200.0	0	90.7	40.7	113	15.9	22.5	
1,4-Dichlorobenzene	81	10	100.0	0	80.5	39.6	99.9	19.9	24.6	
2,4-Dinitrotoluene	79	10	100.0	0	79.1	40.8	113	24.5	25.3	
N-Nitrosodi-n-propylamine	92	10	100.0	0	91.5	51.2	111	15.7	23.6	
4-Nitrophenol	180	10	200.0	0	91.4	15.7	86.9	13.1	34.7	S
Pentachlorophenol	160	20	200.0	0	78.2	21.6	104	12.9	32.8	
Phenol	190	10	200.0	0	96.4	28.6	71.7	14.5	25.5	S
Pyrene	93	10	100.0	0	93.4	54.2	128	14.3	31.4	
1,2,4-Trichlorobenzene	80	10	100.0	0	80.1	40.9	101	11.9	25.9	
Surr: 2-Fluorophenol	160		200.0		79.0	17.6	104	0	0	
Surr: Phenol-d5	170		200.0		83.5	17.7	89.9	0	0	
Surr: 2,4,6-Tribromophenol	190		200.0		93.6	16.3	122	0	0	
Surr: Nitrobenzene-d5	81		100.0		81.2	45.3	117	0	0	
Surr: 2-Fluorobiphenyl	80		100.0		80.4	43	113	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411835**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF WELLS/STP-1NW

Sample ID	**lcsd-16507**	SampType:	**LCSD**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**LCSS02**	Batch ID:	**16507**	RunNo:	**22768**
Prep Date:	**11/21/2014**	Analysis Date:	**11/24/2014**	SeqNo:	**671721** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	93		100.0		93.3	47.6	122	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1411835 RcptNo: 1

Received by/date: CS 11/19/14

Logged By: **Celina Sessa** 11/19/2014 4:00:00 PM Celina Sessa

Completed By: **Ashley Gallegos** 11/20/2014 9:43:26 AM AG

Reviewed By: CS 11/20/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☑ No ☑ 11/20/14 NA ☐
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 18 (<2 or >12 unless noted)
Adjusted? yes
Checked by: CS

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks: For diss. metals analysis, poured off from the Amber jar + filtered into a 125m bottle, added 0.4ml HNO_3 for acceptable pH (for -005F). For Dissolved Metals: Added 0.4 mL HNO_3 to 002F, 003F, 004F for acceptable pH Held in login for 24hrs. after preservation. For Total Metals Added 1mL HNO_3 to 001G for acceptable pH. Held in login for 24hrs after preservation. 11/20/14

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

92 GIANT CROSSING ROAD, GALLUP, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

2014 4th QTR MKTF WELLS/STP-1NW

(MKTF 16-20 & STP-1NW)

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler: C. JOHNSON

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1411835	8260+MTBE	8015B EXTENDED	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major Cations/Anions									Air Bubbles (Y or N)
11/18/2014	955	AQUEOUS	MKTF-16	MISC	HCL	-001	X	X	X	X	X	X									
11/18/2014	1415	AQUEOUS	MKTF-17	MISC	HCL	-002	X	X	X	X	X	X									
11/18/2014	1615	AQUEOUS	MKTF-18	MISC	HCL	-003	X	X	X	X	X	X									
11/18/2014	1430	AQUEOUS	MKTF-19	MISC	HCL	-004	X	X	X	X	X	X									
11/18/2014	1015	AQUEOUS	MKTF-20	MISC	HCL	-005	X	X	X	X		X									
				MISC	HCL	-01															
11/18/2014	1315	AQUEOUS	STP-1NW	MISC	HCL	-006	X	X	X	X	X	X									
11/18/2014		AQUEOUS	BD-MKTF-11-18-14	1L AMBER	NONE	-007			X												
11/18/2014	0800	AQUEOUS	FIELD BLANK	3-40ML VOA	HCL	-008	X														
11/18/2014	0800	AQUEOUS	TRIP BLANK	3-40ML VOA	HCL	-009	X														

Date:	Time:	Relinquished by:	Received by:	Date	Time
11/19/2014	1130			11/19/14	2:00
11/19/14	4:00		Celina Sanz	11/19/14	1600

Remarks: MKTF 20 - No sample for the Filtered WQCC Metals (Not enough water)

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 11, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: 2014 4th QTR MKTF Wells OrderNo.: 1411861

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 10 sample(s) on 11/19/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1411861**
Date Reported: **12/11/2014**

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-22
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 1:00:00 PM
Lab ID: 1411861-001
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	1.6	1.0		mg/L	1	11/21/2014 3:42:20 AM	16493
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/21/2014 3:42:20 AM	16493
Surr: DNOP	92.8	59-141		%REC	1	11/21/2014 3:42:20 AM	16493
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	6.8	0.50		mg/L	10	11/24/2014 11:48:30 PM	R22770
Surr: BFB	96.1	80-120		%REC	10	11/24/2014 11:48:30 PM	R22770
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	0.38	0.10		mg/L	1	11/21/2014 5:49:14 PM	R22742
Chloride	96	10		mg/L	20	11/21/2014 6:01:38 PM	R22742
Bromide	ND	0.10		mg/L	1	11/21/2014 5:49:14 PM	R22742
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	11/21/2014 5:49:14 PM	R22742
Sulfate	19	0.50		mg/L	1	11/21/2014 5:49:14 PM	R22742
Nitrate+Nitrite as N	7.1	1.0		mg/L	5	12/1/2014 11:43:03 AM	R22874
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.78	0.0020		mg/L	1	12/1/2014 4:21:13 PM	R22857
Cadmium	ND	0.0020		mg/L	1	12/1/2014 4:21:13 PM	R22857
Calcium	110	10		mg/L	10	12/1/2014 5:31:14 PM	R22857
Chromium	ND	0.0060		mg/L	1	12/1/2014 4:21:13 PM	R22857
Copper	ND	0.0060		mg/L	1	12/1/2014 4:21:13 PM	R22857
Iron	6.8	0.20	*	mg/L	10	12/1/2014 5:31:14 PM	R22857
Magnesium	23	1.0		mg/L	1	12/1/2014 4:21:13 PM	R22857
Manganese	2.2	0.020	*	mg/L	10	12/1/2014 5:31:14 PM	R22857
Potassium	1.4	1.0		mg/L	1	12/1/2014 4:21:13 PM	R22857
Silver	ND	0.0050		mg/L	1	12/1/2014 4:21:13 PM	R22857
Sodium	260	10		mg/L	10	12/1/2014 5:31:14 PM	R22857
Zinc	0.024	0.010		mg/L	1	12/1/2014 4:21:13 PM	R22857
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	1.1	0.010		mg/L	5	12/3/2014 1:31:16 PM	16624
Cadmium	ND	0.0020		mg/L	1	12/3/2014 1:07:46 PM	16624
Chromium	ND	0.0060		mg/L	1	12/3/2014 1:07:46 PM	16624
Copper	ND	0.0060		mg/L	1	12/3/2014 1:07:46 PM	16624
Iron	15	1.0	*	mg/L	50	12/3/2014 1:32:59 PM	16624
Manganese	3.0	0.010	*	mg/L	5	12/3/2014 1:31:16 PM	16624
Silver	ND	0.0050		mg/L	1	12/3/2014 1:07:46 PM	16624
Zinc	0.025	0.010		mg/L	1	12/3/2014 1:07:46 PM	16624
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	12/4/2014 2:53:57 PM	R22933

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-22
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 1:00:00 PM
Lab ID: 1411861-001
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	0.0010	0.0010		mg/L	1	12/4/2014 1:40:32 PM	R22933
Selenium	ND	0.0050		mg/L	5	12/4/2014 2:53:57 PM	R22933
Uranium	0.0053	0.0010		mg/L	1	12/4/2014 1:40:32 PM	R22933
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0028	0.0010		mg/L	1	12/3/2014 5:23:23 PM	16624
Lead	0.014	0.0010		mg/L	1	12/3/2014 5:23:23 PM	16624
Selenium	0.0040	0.0010		mg/L	1	12/3/2014 5:23:23 PM	16624
Uranium	0.0041	0.0010		mg/L	1	12/3/2014 5:23:23 PM	16624
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	12/2/2014 2:10:24 PM	16625
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Acenaphthylene	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Aniline	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Anthracene	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Azobenzene	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Benz(a)anthracene	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Benzo(a)pyrene	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Benzo(b)fluoranthene	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Benzo(k)fluoranthene	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Benzoic acid	ND	20		µg/L	1	11/25/2014 4:01:51 PM	16507
Benzyl alcohol	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Bis(2-ethylhexyl)phthalate	13	10	B	µg/L	1	11/25/2014 4:01:51 PM	16507
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Butyl benzyl phthalate	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Carbazole	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
4-Chloroaniline	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
2-Chloronaphthalene	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
2-Chlorophenol	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Chrysene	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Di-n-butyl phthalate	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Di-n-octyl phthalate	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-22
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 1:00:00 PM
Lab ID: 1411861-001
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Dibenzofuran	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
1,2-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
1,3-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
1,4-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Diethyl phthalate	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Dimethyl phthalate	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
2,4-Dichlorophenol	ND	20		µg/L	1	11/25/2014 4:01:51 PM	16507
2,4-Dimethylphenol	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/25/2014 4:01:51 PM	16507
2,4-Dinitrophenol	ND	20		µg/L	1	11/25/2014 4:01:51 PM	16507
2,4-Dinitrotoluene	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
2,6-Dinitrotoluene	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Fluoranthene	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Fluorene	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Hexachlorobenzene	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Hexachlorobutadiene	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Hexachloroethane	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Isophorone	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
1-Methylnaphthalene	45	10		µg/L	1	11/25/2014 4:01:51 PM	16507
2-Methylnaphthalene	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
2-Methylphenol	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
3+4-Methylphenol	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
N-Nitrosodimethylamine	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Naphthalene	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
2-Nitroaniline	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
3-Nitroaniline	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
4-Nitroaniline	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Nitrobenzene	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
2-Nitrophenol	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
4-Nitrophenol	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Pentachlorophenol	ND	20		µg/L	1	11/25/2014 4:01:51 PM	16507
Phenanthrene	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Phenol	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-22
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 1:00:00 PM
Lab ID: 1411861-001
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyrene	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Pyridine	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/25/2014 4:01:51 PM	16507
Surr: 2-Fluorophenol	67.0	17.6-104		%REC	1	11/25/2014 4:01:51 PM	16507
Surr: Phenol-d5	62.0	17.7-89.9		%REC	1	11/25/2014 4:01:51 PM	16507
Surr: 2,4,6-Tribromophenol	93.1	16.3-122		%REC	1	11/25/2014 4:01:51 PM	16507
Surr: Nitrobenzene-d5	79.0	45.3-117		%REC	1	11/25/2014 4:01:51 PM	16507
Surr: 2-Fluorobiphenyl	80.9	43-113		%REC	1	11/25/2014 4:01:51 PM	16507
Surr: 4-Terphenyl-d14	89.1	47.6-122		%REC	1	11/25/2014 4:01:51 PM	16507
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	1600	200		µg/L	200	11/25/2014 8:50:18 PM	R22801
Toluene	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
Ethylbenzene	90	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
Methyl tert-butyl ether (MTBE)	3900	200		µg/L	200	11/25/2014 8:50:18 PM	R22801
1,2,4-Trimethylbenzene	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
1,3,5-Trimethylbenzene	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
Naphthalene	ND	20		µg/L	10	11/24/2014 9:18:40 PM	R22767
1-Methylnaphthalene	58	40		µg/L	10	11/24/2014 9:18:40 PM	R22767
2-Methylnaphthalene	ND	40		µg/L	10	11/24/2014 9:18:40 PM	R22767
Acetone	ND	100		µg/L	10	11/24/2014 9:18:40 PM	R22767
Bromobenzene	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
Bromodichloromethane	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
Bromoform	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
Bromomethane	ND	30		µg/L	10	11/24/2014 9:18:40 PM	R22767
2-Butanone	ND	100		µg/L	10	11/24/2014 9:18:40 PM	R22767
Carbon disulfide	ND	100		µg/L	10	11/24/2014 9:18:40 PM	R22767
Carbon Tetrachloride	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
Chlorobenzene	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
Chloroethane	ND	20		µg/L	10	11/24/2014 9:18:40 PM	R22767
Chloroform	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
Chloromethane	ND	30		µg/L	10	11/24/2014 9:18:40 PM	R22767
2-Chlorotoluene	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
4-Chlorotoluene	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
cis-1,2-DCE	10	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-22
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 1:00:00 PM
Lab ID: 1411861-001
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/24/2014 9:18:40 PM	R22767
Dibromochloromethane	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
Dibromomethane	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
1,2-Dichlorobenzene	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
1,3-Dichlorobenzene	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
1,4-Dichlorobenzene	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
Dichlorodifluoromethane	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
1,1-Dichloroethane	15	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
1,1-Dichloroethene	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
1,2-Dichloropropane	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
1,3-Dichloropropane	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
2,2-Dichloropropane	ND	20		µg/L	10	11/24/2014 9:18:40 PM	R22767
1,1-Dichloropropene	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
Hexachlorobutadiene	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
2-Hexanone	ND	100		µg/L	10	11/24/2014 9:18:40 PM	R22767
Isopropylbenzene	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
4-Isopropyltoluene	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
4-Methyl-2-pentanone	ND	100		µg/L	10	11/24/2014 9:18:40 PM	R22767
Methylene Chloride	ND	30		µg/L	10	11/24/2014 9:18:40 PM	R22767
n-Butylbenzene	ND	30		µg/L	10	11/24/2014 9:18:40 PM	R22767
n-Propylbenzene	13	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
sec-Butylbenzene	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
Styrene	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
tert-Butylbenzene	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	11/24/2014 9:18:40 PM	R22767
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
trans-1,2-DCE	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
1,1,1-Trichloroethane	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
1,1,2-Trichloroethane	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
Trichloroethene (TCE)	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
Trichlorofluoromethane	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
1,2,3-Trichloropropane	ND	20		µg/L	10	11/24/2014 9:18:40 PM	R22767
Vinyl chloride	ND	10		µg/L	10	11/24/2014 9:18:40 PM	R22767
Xylenes, Total	ND	15		µg/L	10	11/24/2014 9:18:40 PM	R22767
Surr: 1,2-Dichloroethane-d4	92.6	70-130		%REC	10	11/24/2014 9:18:40 PM	R22767

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-22
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 1:00:00 PM
Lab ID: 1411861-001
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Surr: 4-Bromofluorobenzene	98.7	70-130		%REC	10	11/24/2014 9:18:40 PM	R22767
Surr: Dibromofluoromethane	95.0	70-130		%REC	10	11/24/2014 9:18:40 PM	R22767
Surr: Toluene-d8	102	70-130		%REC	10	11/24/2014 9:18:40 PM	R22767

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-23
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 11:55:00 AM
Lab ID: 1411861-002
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	7.7	1.0		mg/L	1	11/21/2014 4:03:32 AM	16493
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/21/2014 4:03:32 AM	16493
Surr: DNOP	85.6	59-141		%REC	1	11/21/2014 4:03:32 AM	16493
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	26	1.0		mg/L	20	11/25/2014 1:42:56 AM	R22770
Surr: BFB	103	80-120		%REC	20	11/25/2014 1:42:56 AM	R22770
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	0.43	0.10		mg/L	1	11/21/2014 6:38:52 PM	R22742
Chloride	390	10		mg/L	20	11/21/2014 6:51:17 PM	R22742
Bromide	ND	0.10		mg/L	1	11/21/2014 6:38:52 PM	R22742
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	11/21/2014 6:38:52 PM	R22742
Sulfate	5.9	0.50		mg/L	1	11/21/2014 6:38:52 PM	R22742
Nitrate+Nitrite as N	ND	1.0		mg/L	5	12/1/2014 11:55:28 AM	R22874
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.57	0.0020		mg/L	1	12/1/2014 4:22:51 PM	R22857
Cadmium	ND	0.0020		mg/L	1	12/1/2014 4:22:51 PM	R22857
Calcium	77	1.0		mg/L	1	12/1/2014 4:22:51 PM	R22857
Chromium	ND	0.0060		mg/L	1	12/1/2014 4:22:51 PM	R22857
Copper	ND	0.0060		mg/L	1	12/1/2014 4:22:51 PM	R22857
Iron	3.1	0.20	*	mg/L	10	12/1/2014 5:33:09 PM	R22857
Magnesium	13	1.0		mg/L	1	12/1/2014 4:22:51 PM	R22857
Manganese	1.7	0.020	*	mg/L	10	12/1/2014 5:33:09 PM	R22857
Potassium	2.1	1.0		mg/L	1	12/1/2014 4:22:51 PM	R22857
Silver	ND	0.0050		mg/L	1	12/1/2014 4:22:51 PM	R22857
Sodium	530	10		mg/L	10	12/1/2014 5:33:09 PM	R22857
Zinc	0.018	0.010		mg/L	1	12/1/2014 4:22:51 PM	R22857
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.49	0.0020		mg/L	1	12/3/2014 1:09:28 PM	16624
Cadmium	ND	0.0020		mg/L	1	12/3/2014 1:09:28 PM	16624
Chromium	ND	0.0060		mg/L	1	12/3/2014 1:09:28 PM	16624
Copper	ND	0.060		mg/L	10	12/3/2014 1:34:44 PM	16624
Iron	6.2	0.20	*	mg/L	10	12/3/2014 1:34:44 PM	16624
Manganese	1.6	0.020	*	mg/L	10	12/3/2014 1:34:44 PM	16624
Silver	ND	0.0050		mg/L	1	12/3/2014 1:09:28 PM	16624
Zinc	0.035	0.010		mg/L	1	12/3/2014 1:09:28 PM	16624
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.010	0.0050	*	mg/L	5	12/4/2014 2:56:56 PM	R22933

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Hall Environmental Analysis Laboratory, Inc.

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Lab ID: 1411861-002
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.0010		mg/L	1	12/4/2014 1:43:31 PM	R22933
Selenium	ND	0.010		mg/L	10	12/4/2014 3:29:45 PM	R22933
Uranium	0.013	0.0010		mg/L	1	12/4/2014 1:43:31 PM	R22933
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.011	0.0010	*	mg/L	1	12/3/2014 5:26:27 PM	16624
Lead	0.0050	0.0010		mg/L	1	12/3/2014 5:26:27 PM	16624
Selenium	0.0067	0.0010		mg/L	1	12/3/2014 5:26:27 PM	16624
Uranium	0.016	0.0010		mg/L	1	12/3/2014 5:26:27 PM	16624
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	12/2/2014 2:12:14 PM	16625
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Acenaphthylene	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Aniline	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Anthracene	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Azobenzene	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Benz(a)anthracene	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Benzo(a)pyrene	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Benzo(b)fluoranthene	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Benzo(k)fluoranthene	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Benzoic acid	ND	20		µg/L	1	11/25/2014 4:29:09 PM	16507
Benzyl alcohol	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Bis(2-ethylhexyl)phthalate	14	10	B	µg/L	1	11/25/2014 4:29:09 PM	16507
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Butyl benzyl phthalate	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Carbazole	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
4-Chloroaniline	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
2-Chloronaphthalene	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
2-Chlorophenol	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Chrysene	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Di-n-butyl phthalate	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Di-n-octyl phthalate	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-23
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 11:55:00 AM
Lab ID: 1411861-002
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Dibenzofuran	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
1,2-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
1,3-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
1,4-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Diethyl phthalate	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Dimethyl phthalate	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
2,4-Dichlorophenol	ND	20		µg/L	1	11/25/2014 4:29:09 PM	16507
2,4-Dimethylphenol	31	10		µg/L	1	11/25/2014 4:29:09 PM	16507
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/25/2014 4:29:09 PM	16507
2,4-Dinitrophenol	ND	20		µg/L	1	11/25/2014 4:29:09 PM	16507
2,4-Dinitrotoluene	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
2,6-Dinitrotoluene	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Fluoranthene	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Fluorene	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Hexachlorobenzene	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Hexachlorobutadiene	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Hexachloroethane	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Isophorone	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
1-Methylnaphthalene	84	10		µg/L	1	11/25/2014 4:29:09 PM	16507
2-Methylnaphthalene	92	10		µg/L	1	11/25/2014 4:29:09 PM	16507
2-Methylphenol	58	10		µg/L	1	11/25/2014 4:29:09 PM	16507
3+4-Methylphenol	53	10		µg/L	1	11/25/2014 4:29:09 PM	16507
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
N-Nitrosodimethylamine	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Naphthalene	130	10		µg/L	1	11/25/2014 4:29:09 PM	16507
2-Nitroaniline	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
3-Nitroaniline	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
4-Nitroaniline	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Nitrobenzene	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
2-Nitrophenol	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
4-Nitrophenol	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Pentachlorophenol	ND	20		µg/L	1	11/25/2014 4:29:09 PM	16507
Phenanthrene	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Phenol	27	10		µg/L	1	11/25/2014 4:29:09 PM	16507

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-23
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 11:55:00 AM
Lab ID: 1411861-002
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Pyrene	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Pyridine	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/25/2014 4:29:09 PM	16507
Surr: 2-Fluorophenol	42.5	17.6-104		%REC	1	11/25/2014 4:29:09 PM	16507
Surr: Phenol-d5	51.3	17.7-89.9		%REC	1	11/25/2014 4:29:09 PM	16507
Surr: 2,4,6-Tribromophenol	78.8	16.3-122		%REC	1	11/25/2014 4:29:09 PM	16507
Surr: Nitrobenzene-d5	79.0	45.3-117		%REC	1	11/25/2014 4:29:09 PM	16507
Surr: 2-Fluorobiphenyl	80.2	43-113		%REC	1	11/25/2014 4:29:09 PM	16507
Surr: 4-Terphenyl-d14	80.0	47.6-122		%REC	1	11/25/2014 4:29:09 PM	16507
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	3600	100		µg/L	100	11/24/2014 11:58:52 PM	R22767
Toluene	3000	100		µg/L	100	11/24/2014 11:58:52 PM	R22767
Ethylbenzene	470	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
Methyl tert-butyl ether (MTBE)	570	100		µg/L	100	11/24/2014 11:58:52 PM	R22767
1,2,4-Trimethylbenzene	890	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
1,3,5-Trimethylbenzene	220	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
Naphthalene	150	20		µg/L	10	11/25/2014 12:25:34 AM	R22767
1-Methylnaphthalene	74	40		µg/L	10	11/25/2014 12:25:34 AM	R22767
2-Methylnaphthalene	110	40		µg/L	10	11/25/2014 12:25:34 AM	R22767
Acetone	ND	100		µg/L	10	11/25/2014 12:25:34 AM	R22767
Bromobenzene	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
Bromodichloromethane	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
Bromoform	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
Bromomethane	ND	30		µg/L	10	11/25/2014 12:25:34 AM	R22767
2-Butanone	ND	100		µg/L	10	11/25/2014 12:25:34 AM	R22767
Carbon disulfide	ND	100		µg/L	10	11/25/2014 12:25:34 AM	R22767
Carbon Tetrachloride	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
Chlorobenzene	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
Chloroethane	ND	20		µg/L	10	11/25/2014 12:25:34 AM	R22767
Chloroform	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
Chloromethane	55	30		µg/L	10	11/25/2014 12:25:34 AM	R22767
2-Chlorotoluene	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
4-Chlorotoluene	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
cis-1,2-DCE	43	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-23
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 11:55:00 AM
Lab ID: 1411861-002
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/25/2014 12:25:34 AM	R22767
Dibromochloromethane	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
Dibromomethane	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
1,2-Dichlorobenzene	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
1,3-Dichlorobenzene	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
1,4-Dichlorobenzene	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
Dichlorodifluoromethane	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
1,1-Dichloroethane	150	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
1,1-Dichloroethene	64	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
1,2-Dichloropropane	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
1,3-Dichloropropane	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
2,2-Dichloropropane	ND	20		µg/L	10	11/25/2014 12:25:34 AM	R22767
1,1-Dichloropropene	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
Hexachlorobutadiene	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
2-Hexanone	ND	100		µg/L	10	11/25/2014 12:25:34 AM	R22767
Isopropylbenzene	34	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
4-Isopropyltoluene	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
4-Methyl-2-pentanone	ND	100		µg/L	10	11/25/2014 12:25:34 AM	R22767
Methylene Chloride	ND	30		µg/L	10	11/25/2014 12:25:34 AM	R22767
n-Butylbenzene	ND	30		µg/L	10	11/25/2014 12:25:34 AM	R22767
n-Propylbenzene	66	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
sec-Butylbenzene	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
Styrene	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
tert-Butylbenzene	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	11/25/2014 12:25:34 AM	R22767
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
trans-1,2-DCE	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
1,1,1-Trichloroethane	24	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
1,1,2-Trichloroethane	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
Trichloroethene (TCE)	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
Trichlorofluoromethane	ND	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
1,2,3-Trichloropropane	ND	20		µg/L	10	11/25/2014 12:25:34 AM	R22767
Vinyl chloride	22	10		µg/L	10	11/25/2014 12:25:34 AM	R22767
Xylenes, Total	4500	150		µg/L	100	11/24/2014 11:58:52 PM	R22767
Surr: 1,2-Dichloroethane-d4	92.2	70-130		%REC	10	11/25/2014 12:25:34 AM	R22767

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-23
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 11:55:00 AM
Lab ID: 1411861-002
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Surr: 4-Bromofluorobenzene	79.2	70-130		%REC	10	11/25/2014 12:25:34 AM	R22767
Surr: Dibromofluoromethane	94.5	70-130		%REC	10	11/25/2014 12:25:34 AM	R22767
Surr: Toluene-d8	98.0	70-130		%REC	10	11/25/2014 12:25:34 AM	R22767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-30
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 11:15:00 AM
Lab ID: 1411861-003
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/21/2014 4:24:44 AM	16493
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/21/2014 4:24:44 AM	16493
Surr: DNOP	96.8	59-141		%REC	1	11/21/2014 4:24:44 AM	16493
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	0.054	0.050		mg/L	1	11/25/2014 2:11:34 AM	R22770
Surr: BFB	89.7	80-120		%REC	1	11/25/2014 2:11:34 AM	R22770
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	0.56	0.10		mg/L	1	11/21/2014 7:03:42 PM	R22742
Chloride	1400	50		mg/L	100	12/1/2014 6:45:06 PM	R22874
Bromide	1.3	0.10		mg/L	1	11/21/2014 7:03:42 PM	R22742
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	11/21/2014 7:03:42 PM	R22742
Sulfate	730	10		mg/L	20	11/21/2014 7:16:06 PM	R22742
Nitrate+Nitrite as N	ND	1.0		mg/L	5	12/1/2014 12:07:53 PM	R22874
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.036	0.0020		mg/L	1	12/1/2014 4:24:24 PM	R22857
Cadmium	ND	0.0020		mg/L	1	12/1/2014 4:24:24 PM	R22857
Calcium	180	10		mg/L	10	12/1/2014 5:35:01 PM	R22857
Chromium	ND	0.0060		mg/L	1	12/1/2014 4:24:24 PM	R22857
Copper	ND	0.0060		mg/L	1	12/1/2014 4:24:24 PM	R22857
Iron	0.26	0.020		mg/L	1	12/1/2014 4:24:24 PM	R22857
Magnesium	32	1.0		mg/L	1	12/1/2014 4:24:24 PM	R22857
Manganese	0.021	0.0020		mg/L	1	12/1/2014 4:24:24 PM	R22857
Potassium	ND	1.0		mg/L	1	12/1/2014 4:24:24 PM	R22857
Silver	ND	0.0050		mg/L	1	12/1/2014 4:24:24 PM	R22857
Sodium	1200	20		mg/L	20	12/1/2014 5:36:55 PM	R22857
Zinc	0.039	0.010		mg/L	1	12/1/2014 4:24:24 PM	R22857
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.26	0.0020		mg/L	1	12/3/2014 1:11:03 PM	16624
Cadmium	ND	0.0020		mg/L	1	12/3/2014 1:11:03 PM	16624
Chromium	0.0070	0.0060		mg/L	1	12/3/2014 1:11:03 PM	16624
Copper	ND	0.0060		mg/L	1	12/3/2014 1:11:03 PM	16624
Iron	8.0	0.20	*	mg/L	10	12/3/2014 1:36:35 PM	16624
Manganese	0.72	0.0020	*	mg/L	1	12/3/2014 1:11:03 PM	16624
Silver	ND	0.0050		mg/L	1	12/3/2014 1:11:03 PM	16624
Zinc	0.029	0.010		mg/L	1	12/3/2014 1:11:03 PM	16624
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	12/4/2014 2:59:55 PM	R22933

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-30
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 11:15:00 AM
Lab ID: 1411861-003
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.0010		mg/L	1	12/4/2014 1:46:31 PM	R22933
Selenium	ND	0.010		mg/L	10	12/4/2014 2:59:55 PM	R22933
Uranium	0.041	0.0010	*	mg/L	1	12/4/2014 1:46:31 PM	R22933
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	12/5/2014 1:38:07 PM	16624
Lead	0.0090	0.0010		mg/L	1	12/3/2014 5:29:32 PM	16624
Selenium	0.010	0.0050		mg/L	5	12/5/2014 1:38:07 PM	16624
Uranium	0.039	0.0010	*	mg/L	1	12/3/2014 5:29:32 PM	16624
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	12/2/2014 2:14:04 PM	16625
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Acenaphthylene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Aniline	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Anthracene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Azobenzene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Benz(a)anthracene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Benzo(a)pyrene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Benzo(b)fluoranthene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Benzo(k)fluoranthene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Benzoic acid	ND	20		µg/L	1	11/25/2014 4:56:38 PM	16507
Benzyl alcohol	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Bis(2-ethylhexyl)phthalate	11	10	B	µg/L	1	11/25/2014 4:56:38 PM	16507
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Butyl benzyl phthalate	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Carbazole	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
4-Chloroaniline	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
2-Chloronaphthalene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
2-Chlorophenol	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Chrysene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Di-n-butyl phthalate	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Di-n-octyl phthalate	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507

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Qualifiers:

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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-30
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 11:15:00 AM
Lab ID: 1411861-003
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Dibenzofuran	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
1,2-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
1,3-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
1,4-Dichlorobenzene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Diethyl phthalate	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Dimethyl phthalate	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
2,4-Dichlorophenol	ND	20		µg/L	1	11/25/2014 4:56:38 PM	16507
2,4-Dimethylphenol	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/25/2014 4:56:38 PM	16507
2,4-Dinitrophenol	ND	20		µg/L	1	11/25/2014 4:56:38 PM	16507
2,4-Dinitrotoluene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
2,6-Dinitrotoluene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Fluoranthene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Fluorene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Hexachlorobenzene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Hexachlorobutadiene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Hexachloroethane	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Isophorone	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
1-Methylnaphthalene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
2-Methylnaphthalene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
2-Methylphenol	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
3+4-Methylphenol	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
N-Nitrosodimethylamine	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Naphthalene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
2-Nitroaniline	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
3-Nitroaniline	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
4-Nitroaniline	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Nitrobenzene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
2-Nitrophenol	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
4-Nitrophenol	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Pentachlorophenol	ND	20		µg/L	1	11/25/2014 4:56:38 PM	16507
Phenanthrene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Phenol	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-30
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 11:15:00 AM
Lab ID: 1411861-003
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyrene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Pyridine	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/25/2014 4:56:38 PM	16507
Surr: 2-Fluorophenol	55.2	17.6-104		%REC	1	11/25/2014 4:56:38 PM	16507
Surr: Phenol-d5	54.1	17.7-89.9		%REC	1	11/25/2014 4:56:38 PM	16507
Surr: 2,4,6-Tribromophenol	78.3	16.3-122		%REC	1	11/25/2014 4:56:38 PM	16507
Surr: Nitrobenzene-d5	80.3	45.3-117		%REC	1	11/25/2014 4:56:38 PM	16507
Surr: 2-Fluorobiphenyl	77.5	43-113		%REC	1	11/25/2014 4:56:38 PM	16507
Surr: 4-Terphenyl-d14	76.2	47.6-122		%REC	1	11/25/2014 4:56:38 PM	16507
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
Toluene	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
Ethylbenzene	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
Methyl tert-butyl ether (MTBE)	3.7	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
1,2-Dichloroethane (EDC)	5.3	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
Naphthalene	ND	2.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
1-Methylnaphthalene	ND	4.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
2-Methylnaphthalene	ND	4.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
Acetone	ND	10		µg/L	1	11/25/2014 1:18:54 AM	R22767
Bromobenzene	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
Bromodichloromethane	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
Bromoform	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
Bromomethane	ND	3.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
2-Butanone	ND	10		µg/L	1	11/25/2014 1:18:54 AM	R22767
Carbon disulfide	ND	10		µg/L	1	11/25/2014 1:18:54 AM	R22767
Carbon Tetrachloride	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
Chlorobenzene	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
Chloroethane	ND	2.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
Chloroform	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
Chloromethane	ND	3.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
2-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
4-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
cis-1,2-DCE	3.9	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767

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Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-30
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 11:15:00 AM
Lab ID: 1411861-003
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
Dibromochloromethane	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
Dibromomethane	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
1,1-Dichloroethane	87	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
1,1-Dichloroethene	2.7	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
1,2-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
1,3-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
2,2-Dichloropropane	ND	2.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
1,1-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
Hexachlorobutadiene	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
2-Hexanone	ND	10		µg/L	1	11/25/2014 1:18:54 AM	R22767
Isopropylbenzene	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
4-Isopropyltoluene	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
4-Methyl-2-pentanone	ND	10		µg/L	1	11/25/2014 1:18:54 AM	R22767
Methylene Chloride	ND	3.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
n-Butylbenzene	ND	3.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
n-Propylbenzene	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
sec-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
Styrene	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
tert-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
trans-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
1,1,1-Trichloroethane	3.0	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
1,1,2-Trichloroethane	1.1	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
Trichloroethene (TCE)	4.4	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
Trichlorofluoromethane	ND	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
Vinyl chloride	4.8	1.0		µg/L	1	11/25/2014 1:18:54 AM	R22767
Xylenes, Total	ND	1.5		µg/L	1	11/25/2014 1:18:54 AM	R22767
Surr: 1,2-Dichloroethane-d4	102	70-130		%REC	1	11/25/2014 1:18:54 AM	R22767

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-30
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 11:15:00 AM
Lab ID: 1411861-003
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Surr: 4-Bromofluorobenzene	125	70-130		%REC	1	11/25/2014 1:18:54 AM	R22767
Surr: Dibromofluoromethane	105	70-130		%REC	1	11/25/2014 1:18:54 AM	R22767
Surr: Toluene-d8	106	70-130		%REC	1	11/25/2014 1:18:54 AM	R22767

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-31
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 2:10:00 PM
Lab ID: 1411861-004
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/21/2014 4:46:00 AM	16493
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/21/2014 4:46:00 AM	16493
Surr: DNOP	97.9	59-141		%REC	1	11/21/2014 4:46:00 AM	16493
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	0.068	0.050		mg/L	1	11/25/2014 2:40:12 AM	R22770
Surr: BFB	90.9	80-120		%REC	1	11/25/2014 2:40:12 AM	R22770
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	ND	0.10		mg/L	1	11/21/2014 7:28:31 PM	R22742
Chloride	920	50		mg/L	100	12/1/2014 6:57:31 PM	R22874
Bromide	ND	0.10		mg/L	1	11/21/2014 7:28:31 PM	R22742
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	11/21/2014 7:28:31 PM	R22742
Sulfate	82	10		mg/L	20	11/21/2014 7:40:56 PM	R22742
Nitrate+Nitrite as N	ND	1.0		mg/L	5	12/1/2014 12:20:18 PM	R22874
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.17	0.0020		mg/L	1	12/1/2014 4:26:18 PM	R22857
Cadmium	ND	0.0020		mg/L	1	12/1/2014 4:26:18 PM	R22857
Calcium	210	10		mg/L	10	12/1/2014 5:38:56 PM	R22857
Chromium	ND	0.0060		mg/L	1	12/1/2014 4:26:18 PM	R22857
Copper	ND	0.0060		mg/L	1	12/1/2014 4:26:18 PM	R22857
Iron	ND	0.020		mg/L	1	12/1/2014 4:26:18 PM	R22857
Magnesium	40	1.0		mg/L	1	12/1/2014 4:26:18 PM	R22857
Manganese	0.059	0.0020	*	mg/L	1	12/1/2014 4:26:18 PM	R22857
Potassium	1.7	1.0		mg/L	1	12/1/2014 4:26:18 PM	R22857
Silver	ND	0.0050		mg/L	1	12/1/2014 4:26:18 PM	R22857
Sodium	550	10		mg/L	10	12/1/2014 5:38:56 PM	R22857
Zinc	0.027	0.010		mg/L	1	12/1/2014 4:26:18 PM	R22857
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.22	0.0020		mg/L	1	12/3/2014 1:12:52 PM	16624
Cadmium	ND	0.0020		mg/L	1	12/3/2014 1:12:52 PM	16624
Chromium	ND	0.0060		mg/L	1	12/3/2014 1:12:52 PM	16624
Copper	ND	0.0060		mg/L	1	12/3/2014 1:12:52 PM	16624
Iron	2.9	0.10	*	mg/L	5	12/3/2014 1:38:27 PM	16624
Manganese	0.24	0.0020	*	mg/L	1	12/3/2014 1:12:52 PM	16624
Silver	ND	0.0050		mg/L	1	12/3/2014 1:12:52 PM	16624
Zinc	0.017	0.010		mg/L	1	12/3/2014 1:12:52 PM	16624
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	12/4/2014 3:02:54 PM	R22933

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-31
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 2:10:00 PM
Lab ID: 1411861-004
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.0010		mg/L	1	12/4/2014 1:49:30 PM	R22933
Selenium	0.0075	0.0050		mg/L	5	12/4/2014 3:02:54 PM	R22933
Uranium	0.045	0.0050	*	mg/L	5	12/4/2014 3:02:54 PM	R22933
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	12/5/2014 1:47:23 PM	16624
Lead	0.0041	0.0010		mg/L	1	12/3/2014 5:32:37 PM	16624
Selenium	0.0080	0.0050		mg/L	5	12/5/2014 1:47:23 PM	16624
Uranium	0.050	0.0010	*	mg/L	1	12/3/2014 5:32:37 PM	16624
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	12/2/2014 2:15:55 PM	16625
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Acenaphthylene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Aniline	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Anthracene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Azobenzene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Benz(a)anthracene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Benzo(a)pyrene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Benzo(b)fluoranthene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Benzo(k)fluoranthene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Benzoic acid	ND	20		µg/L	1	11/24/2014 7:34:40 PM	16507
Benzyl alcohol	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Bis(2-ethylhexyl)phthalate	13	10	B	µg/L	1	11/24/2014 7:34:40 PM	16507
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Butyl benzyl phthalate	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Carbazole	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
4-Chloroaniline	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
2-Chloronaphthalene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
2-Chlorophenol	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Chrysene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Di-n-butyl phthalate	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Di-n-octyl phthalate	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-31
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 2:10:00 PM
Lab ID: 1411861-004
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Dibenzofuran	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
1,2-Dichlorobenzene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
1,3-Dichlorobenzene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
1,4-Dichlorobenzene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Diethyl phthalate	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Dimethyl phthalate	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
2,4-Dichlorophenol	ND	20		µg/L	1	11/24/2014 7:34:40 PM	16507
2,4-Dimethylphenol	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/24/2014 7:34:40 PM	16507
2,4-Dinitrophenol	ND	20		µg/L	1	11/24/2014 7:34:40 PM	16507
2,4-Dinitrotoluene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
2,6-Dinitrotoluene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Fluoranthene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Fluorene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Hexachlorobenzene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Hexachlorobutadiene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Hexachloroethane	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Isophorone	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
1-Methylnaphthalene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
2-Methylnaphthalene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
2-Methylphenol	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
3+4-Methylphenol	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
N-Nitrosodimethylamine	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Naphthalene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
2-Nitroaniline	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
3-Nitroaniline	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
4-Nitroaniline	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Nitrobenzene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
2-Nitrophenol	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
4-Nitrophenol	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Pentachlorophenol	ND	20		µg/L	1	11/24/2014 7:34:40 PM	16507
Phenanthrene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Phenol	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-31
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 2:10:00 PM
Lab ID: 1411861-004
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyrene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Pyridine	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/24/2014 7:34:40 PM	16507
Surr: 2-Fluorophenol	69.2	17.6-104		%REC	1	11/24/2014 7:34:40 PM	16507
Surr: Phenol-d5	66.0	17.7-89.9		%REC	1	11/24/2014 7:34:40 PM	16507
Surr: 2,4,6-Tribromophenol	91.1	16.3-122		%REC	1	11/24/2014 7:34:40 PM	16507
Surr: Nitrobenzene-d5	93.4	45.3-117		%REC	1	11/24/2014 7:34:40 PM	16507
Surr: 2-Fluorobiphenyl	87.9	43-113		%REC	1	11/24/2014 7:34:40 PM	16507
Surr: 4-Terphenyl-d14	83.4	47.6-122		%REC	1	11/24/2014 7:34:40 PM	16507
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
Toluene	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
Ethylbenzene	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
Methyl tert-butyl ether (MTBE)	58	10		µg/L	10	11/25/2014 6:36:29 PM	R22801
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
1,2-Dichloroethane (EDC)	16	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
Naphthalene	ND	2.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
1-Methylnaphthalene	ND	4.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
2-Methylnaphthalene	ND	4.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
Acetone	ND	10		µg/L	1	11/25/2014 1:45:34 AM	R22767
Bromobenzene	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
Bromodichloromethane	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
Bromoform	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
Bromomethane	ND	3.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
2-Butanone	ND	10		µg/L	1	11/25/2014 1:45:34 AM	R22767
Carbon disulfide	ND	10		µg/L	1	11/25/2014 1:45:34 AM	R22767
Carbon Tetrachloride	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
Chlorobenzene	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
Chloroethane	ND	2.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
Chloroform	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
Chloromethane	ND	3.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
2-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
4-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
cis-1,2-DCE	1.8	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-31
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 2:10:00 PM
Lab ID: 1411861-004
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
Dibromochloromethane	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
Dibromomethane	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
1,1-Dichloroethane	29	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
1,1-Dichloroethene	34	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
1,2-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
1,3-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
2,2-Dichloropropane	ND	2.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
1,1-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
Hexachlorobutadiene	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
2-Hexanone	ND	10		µg/L	1	11/25/2014 1:45:34 AM	R22767
Isopropylbenzene	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
4-Isopropyltoluene	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
4-Methyl-2-pentanone	ND	10		µg/L	1	11/25/2014 1:45:34 AM	R22767
Methylene Chloride	ND	3.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
n-Butylbenzene	ND	3.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
n-Propylbenzene	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
sec-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
Styrene	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
tert-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
trans-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
1,1,1-Trichloroethane	3.9	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
1,1,2-Trichloroethane	1.6	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
Trichloroethene (TCE)	2.4	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
Trichlorofluoromethane	ND	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
Vinyl chloride	1.9	1.0		µg/L	1	11/25/2014 1:45:34 AM	R22767
Xylenes, Total	ND	1.5		µg/L	1	11/25/2014 1:45:34 AM	R22767
Surr: 1,2-Dichloroethane-d4	103	70-130		%REC	1	11/25/2014 1:45:34 AM	R22767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-31
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 2:10:00 PM
Lab ID: 1411861-004
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Surr: 4-Bromofluorobenzene	126	70-130		%REC	1	11/25/2014 1:45:34 AM	R22767
Surr: Dibromofluoromethane	104	70-130		%REC	1	11/25/2014 1:45:34 AM	R22767
Surr: Toluene-d8	103	70-130		%REC	1	11/25/2014 1:45:34 AM	R22767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-32
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 1:50:00 PM
Lab ID: 1411861-005
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/21/2014 5:07:23 AM	16493
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/21/2014 5:07:23 AM	16493
Surr: DNOP	95.7	59-141		%REC	1	11/21/2014 5:07:23 AM	16493
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	0.28	0.25		mg/L	5	11/25/2014 3:08:44 AM	R22770
Surr: BFB	90.8	80-120		%REC	5	11/25/2014 3:08:44 AM	R22770
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	0.27	0.10		mg/L	1	11/21/2014 7:53:21 PM	R22742
Chloride	610	25		mg/L	50	12/1/2014 7:09:56 PM	R22874
Bromide	1.3	0.10		mg/L	1	11/21/2014 7:53:21 PM	R22742
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	11/21/2014 7:53:21 PM	R22742
Sulfate	100	10		mg/L	20	11/21/2014 8:05:45 PM	R22742
Nitrate+Nitrite as N	ND	1.0		mg/L	5	12/1/2014 12:32:43 PM	R22874
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.064	0.0020		mg/L	1	12/1/2014 4:28:21 PM	R22857
Cadmium	ND	0.0020		mg/L	1	12/1/2014 4:28:21 PM	R22857
Calcium	37	1.0		mg/L	1	12/1/2014 4:28:21 PM	R22857
Chromium	ND	0.0060		mg/L	1	12/1/2014 4:28:21 PM	R22857
Copper	ND	0.0060		mg/L	1	12/1/2014 4:28:21 PM	R22857
Iron	0.21	0.020		mg/L	1	12/1/2014 4:28:21 PM	R22857
Magnesium	7.0	1.0		mg/L	1	12/1/2014 4:28:21 PM	R22857
Manganese	0.094	0.0020	*	mg/L	1	12/1/2014 4:28:21 PM	R22857
Potassium	ND	1.0		mg/L	1	12/1/2014 4:28:21 PM	R22857
Silver	ND	0.0050		mg/L	1	12/1/2014 4:28:21 PM	R22857
Sodium	680	10		mg/L	10	12/1/2014 5:40:53 PM	R22857
Zinc	0.010	0.010		mg/L	1	12/1/2014 4:28:21 PM	R22857
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.091	0.0020		mg/L	1	12/3/2014 1:14:39 PM	16624
Cadmium	ND	0.0020		mg/L	1	12/3/2014 1:14:39 PM	16624
Chromium	ND	0.0060		mg/L	1	12/3/2014 1:14:39 PM	16624
Copper	ND	0.0060		mg/L	1	12/3/2014 1:14:39 PM	16624
Iron	2.0	0.10	*	mg/L	5	12/3/2014 1:40:26 PM	16624
Manganese	0.23	0.0020	*	mg/L	1	12/3/2014 1:14:39 PM	16624
Silver	ND	0.0050		mg/L	1	12/3/2014 1:14:39 PM	16624
Zinc	0.014	0.010		mg/L	1	12/3/2014 1:14:39 PM	16624
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	12/4/2014 3:05:53 PM	R22933

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R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-32
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 1:50:00 PM
Lab ID: 1411861-005
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.0010		mg/L	1	12/4/2014 1:52:30 PM	R22933
Selenium	ND	0.010		mg/L	10	12/4/2014 3:32:44 PM	R22933
Uranium	0.059	0.0050	*	mg/L	5	12/4/2014 3:05:53 PM	R22933
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	12/5/2014 1:50:28 PM	16624
Lead	0.0027	0.0010		mg/L	1	12/3/2014 5:35:42 PM	16624
Selenium	ND	0.010		mg/L	10	12/5/2014 3:29:17 PM	16624
Uranium	0.067	0.0050	*	mg/L	5	12/5/2014 1:50:28 PM	16624
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	12/2/2014 2:17:46 PM	16625
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Acenaphthylene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Aniline	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Anthracene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Azobenzene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Benz(a)anthracene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Benzo(a)pyrene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Benzo(b)fluoranthene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Benzo(k)fluoranthene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Benzoic acid	ND	20		µg/L	1	11/24/2014 8:01:40 PM	16507
Benzyl alcohol	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Bis(2-ethylhexyl)phthalate	12	10	B	µg/L	1	11/24/2014 8:01:40 PM	16507
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Butyl benzyl phthalate	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Carbazole	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
4-Chloroaniline	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
2-Chloronaphthalene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
2-Chlorophenol	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Chrysene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Di-n-butyl phthalate	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Di-n-octyl phthalate	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507

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Lab ID: 1411861-005
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Dibenzofuran	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
1,2-Dichlorobenzene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
1,3-Dichlorobenzene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
1,4-Dichlorobenzene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Diethyl phthalate	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Dimethyl phthalate	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
2,4-Dichlorophenol	ND	20		µg/L	1	11/24/2014 8:01:40 PM	16507
2,4-Dimethylphenol	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/24/2014 8:01:40 PM	16507
2,4-Dinitrophenol	ND	20		µg/L	1	11/24/2014 8:01:40 PM	16507
2,4-Dinitrotoluene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
2,6-Dinitrotoluene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Fluoranthene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Fluorene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Hexachlorobenzene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Hexachlorobutadiene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Hexachloroethane	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Isophorone	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
1-Methylnaphthalene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
2-Methylnaphthalene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
2-Methylphenol	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
3+4-Methylphenol	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
N-Nitrosodimethylamine	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Naphthalene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
2-Nitroaniline	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
3-Nitroaniline	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
4-Nitroaniline	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Nitrobenzene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
2-Nitrophenol	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
4-Nitrophenol	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Pentachlorophenol	ND	20		µg/L	1	11/24/2014 8:01:40 PM	16507
Phenanthrene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Phenol	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507

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Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyrene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Pyridine	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/24/2014 8:01:40 PM	16507
Surr: 2-Fluorophenol	69.0	17.6-104		%REC	1	11/24/2014 8:01:40 PM	16507
Surr: Phenol-d5	63.4	17.7-89.9		%REC	1	11/24/2014 8:01:40 PM	16507
Surr: 2,4,6-Tribromophenol	86.2	16.3-122		%REC	1	11/24/2014 8:01:40 PM	16507
Surr: Nitrobenzene-d5	87.2	45.3-117		%REC	1	11/24/2014 8:01:40 PM	16507
Surr: 2-Fluorobiphenyl	81.2	43-113		%REC	1	11/24/2014 8:01:40 PM	16507
Surr: 4-Terphenyl-d14	85.9	47.6-122		%REC	1	11/24/2014 8:01:40 PM	16507
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
Toluene	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
Ethylbenzene	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
Methyl tert-butyl ether (MTBE)	400	20		µg/L	20	11/25/2014 7:03:10 PM	R22801
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
1,2-Dichloroethane (EDC)	28	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
Naphthalene	ND	2.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
1-Methylnaphthalene	ND	4.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
2-Methylnaphthalene	ND	4.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
Acetone	ND	10		µg/L	1	11/25/2014 7:29:56 PM	R22801
Bromobenzene	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
Bromodichloromethane	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
Bromoform	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
Bromomethane	ND	3.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
2-Butanone	ND	10		µg/L	1	11/25/2014 7:29:56 PM	R22801
Carbon disulfide	ND	10		µg/L	1	11/25/2014 7:29:56 PM	R22801
Carbon Tetrachloride	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
Chlorobenzene	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
Chloroethane	ND	2.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
Chloroform	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
Chloromethane	13	3.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
2-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
4-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
cis-1,2-DCE	1.2	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
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Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 1:50:00 PM
Lab ID: 1411861-005
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
Dibromochloromethane	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
Dibromomethane	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
1,1-Dichloroethane	24	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
1,1-Dichloroethene	41	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
1,2-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
1,3-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
2,2-Dichloropropane	ND	2.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
1,1-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
Hexachlorobutadiene	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
2-Hexanone	ND	10		µg/L	1	11/25/2014 7:29:56 PM	R22801
Isopropylbenzene	1.1	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
4-Isopropyltoluene	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
4-Methyl-2-pentanone	ND	10		µg/L	1	11/25/2014 7:29:56 PM	R22801
Methylene Chloride	ND	3.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
n-Butylbenzene	ND	3.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
n-Propylbenzene	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
sec-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
Styrene	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
tert-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
trans-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
1,1,1-Trichloroethane	1.1	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
1,1,2-Trichloroethane	2.5	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
Trichlorofluoromethane	ND	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
Vinyl chloride	2.0	1.0		µg/L	1	11/25/2014 7:29:56 PM	R22801
Xylenes, Total	ND	1.5		µg/L	1	11/25/2014 7:29:56 PM	R22801
Surr: 1,2-Dichloroethane-d4	96.1	70-130		%REC	1	11/25/2014 7:29:56 PM	R22801

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-32
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 1:50:00 PM
Lab ID: 1411861-005
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Surr: 4-Bromofluorobenzene	117	70-130		%REC	1	11/25/2014 7:29:56 PM	R22801
Surr: Dibromofluoromethane	98.1	70-130		%REC	1	11/25/2014 7:29:56 PM	R22801
Surr: Toluene-d8	112	70-130		%REC	1	11/25/2014 7:29:56 PM	R22801

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-33
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 1:30:00 PM
Lab ID: 1411861-006
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/21/2014 5:28:42 AM	16493
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/21/2014 5:28:42 AM	16493
Surr: DNOP	94.1	59-141		%REC	1	11/21/2014 5:28:42 AM	16493
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	0.36	0.25		mg/L	5	11/25/2014 3:37:18 AM	R22770
Surr: BFB	89.3	80-120		%REC	5	11/25/2014 3:37:18 AM	R22770
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	0.31	0.10		mg/L	1	11/21/2014 8:18:10 PM	R22742
Chloride	98	10		mg/L	20	11/21/2014 8:30:34 PM	R22742
Bromide	0.61	0.10		mg/L	1	11/21/2014 8:18:10 PM	R22742
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	11/21/2014 8:18:10 PM	R22742
Sulfate	360	10		mg/L	20	11/21/2014 8:30:34 PM	R22742
Nitrate+Nitrite as N	ND	1.0		mg/L	5	12/1/2014 12:45:07 PM	R22874
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.064	0.0020		mg/L	1	12/1/2014 4:37:03 PM	R22857
Cadmium	ND	0.0020		mg/L	1	12/1/2014 4:37:03 PM	R22857
Calcium	89	1.0		mg/L	1	12/1/2014 4:37:03 PM	R22857
Chromium	ND	0.0060		mg/L	1	12/1/2014 4:37:03 PM	R22857
Copper	ND	0.0060		mg/L	1	12/1/2014 4:37:03 PM	R22857
Iron	0.061	0.020		mg/L	1	12/1/2014 4:37:03 PM	R22857
Magnesium	19	1.0		mg/L	1	12/1/2014 4:37:03 PM	R22857
Manganese	0.24	0.0020	*	mg/L	1	12/1/2014 4:37:03 PM	R22857
Potassium	1.3	1.0		mg/L	1	12/1/2014 4:37:03 PM	R22857
Silver	ND	0.0050		mg/L	1	12/1/2014 4:37:03 PM	R22857
Sodium	310	10		mg/L	10	12/1/2014 5:43:06 PM	R22857
Zinc	0.016	0.010		mg/L	1	12/1/2014 4:37:03 PM	R22857
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.18	0.0020		mg/L	1	12/3/2014 1:16:25 PM	16624
Cadmium	ND	0.0020		mg/L	1	12/3/2014 1:16:25 PM	16624
Chromium	ND	0.0060		mg/L	1	12/3/2014 1:16:25 PM	16624
Copper	ND	0.0060		mg/L	1	12/3/2014 1:16:25 PM	16624
Iron	3.3	0.10	*	mg/L	5	12/3/2014 1:42:17 PM	16624
Manganese	0.92	0.0020	*	mg/L	1	12/3/2014 1:16:25 PM	16624
Silver	ND	0.0050		mg/L	1	12/3/2014 1:16:25 PM	16624
Zinc	0.018	0.010		mg/L	1	12/3/2014 1:16:25 PM	16624
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	12/4/2014 3:08:52 PM	R22933

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-33
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 1:30:00 PM
Lab ID: 1411861-006
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.0010		mg/L	1	12/4/2014 1:55:29 PM	R22933
Selenium	ND	0.0050		mg/L	5	12/4/2014 3:08:52 PM	R22933
Uranium	0.045	0.0010	*	mg/L	1	12/4/2014 1:55:29 PM	R22933
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0016	0.0010		mg/L	1	12/3/2014 5:44:59 PM	16624
Lead	0.0050	0.0010		mg/L	1	12/3/2014 5:44:59 PM	16624
Selenium	0.0031	0.0010		mg/L	1	12/3/2014 5:44:59 PM	16624
Uranium	0.043	0.0010	*	mg/L	1	12/3/2014 5:44:59 PM	16624
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	12/2/2014 2:19:38 PM	16625
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Acenaphthylene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Aniline	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Anthracene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Azobenzene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Benz(a)anthracene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Benzo(a)pyrene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Benzo(b)fluoranthene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Benzo(k)fluoranthene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Benzoic acid	ND	20		µg/L	1	11/24/2014 8:28:31 PM	16507
Benzyl alcohol	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Bis(2-ethylhexyl)phthalate	12	10	B	µg/L	1	11/24/2014 8:28:31 PM	16507
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Butyl benzyl phthalate	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Carbazole	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
4-Chloroaniline	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
2-Chloronaphthalene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
2-Chlorophenol	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Chrysene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Di-n-butyl phthalate	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Di-n-octyl phthalate	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-33
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 1:30:00 PM
Lab ID: 1411861-006
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Dibenzofuran	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
1,2-Dichlorobenzene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
1,3-Dichlorobenzene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
1,4-Dichlorobenzene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Diethyl phthalate	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Dimethyl phthalate	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
2,4-Dichlorophenol	ND	20		µg/L	1	11/24/2014 8:28:31 PM	16507
2,4-Dimethylphenol	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/24/2014 8:28:31 PM	16507
2,4-Dinitrophenol	ND	20		µg/L	1	11/24/2014 8:28:31 PM	16507
2,4-Dinitrotoluene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
2,6-Dinitrotoluene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Fluoranthene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Fluorene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Hexachlorobenzene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Hexachlorobutadiene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Hexachloroethane	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Isophorone	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
1-Methylnaphthalene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
2-Methylnaphthalene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
2-Methylphenol	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
3+4-Methylphenol	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
N-Nitrosodimethylamine	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Naphthalene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
2-Nitroaniline	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
3-Nitroaniline	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
4-Nitroaniline	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Nitrobenzene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
2-Nitrophenol	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
4-Nitrophenol	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Pentachlorophenol	ND	20		µg/L	1	11/24/2014 8:28:31 PM	16507
Phenanthrene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Phenol	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-33
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 1:30:00 PM
Lab ID: 1411861-006
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyrene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Pyridine	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/24/2014 8:28:31 PM	16507
Surr: 2-Fluorophenol	76.9	17.6-104		%REC	1	11/24/2014 8:28:31 PM	16507
Surr: Phenol-d5	68.1	17.7-89.9		%REC	1	11/24/2014 8:28:31 PM	16507
Surr: 2,4,6-Tribromophenol	101	16.3-122		%REC	1	11/24/2014 8:28:31 PM	16507
Surr: Nitrobenzene-d5	98.8	45.3-117		%REC	1	11/24/2014 8:28:31 PM	16507
Surr: 2-Fluorobiphenyl	95.3	43-113		%REC	1	11/24/2014 8:28:31 PM	16507
Surr: 4-Terphenyl-d14	92.4	47.6-122		%REC	1	11/24/2014 8:28:31 PM	16507
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
Toluene	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
Ethylbenzene	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
Methyl tert-butyl ether (MTBE)	410	20		µg/L	20	11/25/2014 7:56:44 PM	R22801
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
Naphthalene	ND	2.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
1-Methylnaphthalene	ND	4.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
2-Methylnaphthalene	ND	4.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
Acetone	ND	10		µg/L	1	11/25/2014 8:23:28 PM	R22801
Bromobenzene	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
Bromodichloromethane	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
Bromoform	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
Bromomethane	ND	3.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
2-Butanone	ND	10		µg/L	1	11/25/2014 8:23:28 PM	R22801
Carbon disulfide	ND	10		µg/L	1	11/25/2014 8:23:28 PM	R22801
Carbon Tetrachloride	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
Chlorobenzene	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
Chloroethane	ND	2.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
Chloroform	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
Chloromethane	ND	3.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
2-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
4-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
cis-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-33
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 1:30:00 PM
Lab ID: 1411861-006
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
Dibromochloromethane	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
Dibromomethane	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
1,1-Dichloroethane	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
1,1-Dichloroethene	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
1,2-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
1,3-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
2,2-Dichloropropane	ND	2.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
1,1-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
Hexachlorobutadiene	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
2-Hexanone	ND	10		µg/L	1	11/25/2014 8:23:28 PM	R22801
Isopropylbenzene	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
4-Isopropyltoluene	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
4-Methyl-2-pentanone	ND	10		µg/L	1	11/25/2014 8:23:28 PM	R22801
Methylene Chloride	ND	3.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
n-Butylbenzene	ND	3.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
n-Propylbenzene	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
sec-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
Styrene	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
tert-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
trans-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
Trichlorofluoromethane	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
Vinyl chloride	ND	1.0		µg/L	1	11/25/2014 8:23:28 PM	R22801
Xylenes, Total	ND	1.5		µg/L	1	11/25/2014 8:23:28 PM	R22801
Surr: 1,2-Dichloroethane-d4	96.1	70-130		%REC	1	11/25/2014 8:23:28 PM	R22801

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-33
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 1:30:00 PM
Lab ID: 1411861-006
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Surr: 4-Bromofluorobenzene	117	70-130		%REC	1	11/25/2014 8:23:28 PM	R22801
Surr: Dibromofluoromethane	102	70-130		%REC	1	11/25/2014 8:23:28 PM	R22801
Surr: Toluene-d8	107	70-130		%REC	1	11/25/2014 8:23:28 PM	R22801

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-34
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 2:50:00 PM
Lab ID: 1411861-007
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/21/2014 5:49:58 AM	16493
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/21/2014 5:49:58 AM	16493
Surr: DNOP	97.9	59-141		%REC	1	11/21/2014 5:49:58 AM	16493
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/25/2014 4:05:49 AM	R22770
Surr: BFB	88.1	80-120		%REC	1	11/25/2014 4:05:49 AM	R22770
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	0.54	0.10		mg/L	1	11/21/2014 9:07:48 PM	R22742
Chloride	400	25		mg/L	50	12/1/2014 7:22:21 PM	R22874
Bromide	2.2	0.10		mg/L	1	11/21/2014 9:07:48 PM	R22742
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	11/21/2014 9:07:48 PM	R22742
Sulfate	73	10		mg/L	20	11/21/2014 9:20:12 PM	R22742
Nitrate+Nitrite as N	6.6	1.0		mg/L	5	12/1/2014 12:57:32 PM	R22874
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.15	0.0020		mg/L	1	12/1/2014 4:38:55 PM	R22857
Cadmium	ND	0.0020		mg/L	1	12/1/2014 4:38:55 PM	R22857
Calcium	63	1.0		mg/L	1	12/1/2014 4:38:55 PM	R22857
Chromium	ND	0.0060		mg/L	1	12/1/2014 4:38:55 PM	R22857
Copper	ND	0.0060		mg/L	1	12/1/2014 4:38:55 PM	R22857
Iron	ND	0.020		mg/L	1	12/1/2014 4:38:55 PM	R22857
Magnesium	14	1.0		mg/L	1	12/1/2014 4:38:55 PM	R22857
Manganese	0.0041	0.0020		mg/L	1	12/1/2014 4:38:55 PM	R22857
Potassium	1.8	1.0		mg/L	1	12/1/2014 4:38:55 PM	R22857
Silver	ND	0.0050		mg/L	1	12/1/2014 4:38:55 PM	R22857
Sodium	360	10		mg/L	10	12/1/2014 5:44:54 PM	R22857
Zinc	0.051	0.010		mg/L	1	12/1/2014 4:38:55 PM	R22857
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.17	0.0020		mg/L	1	12/3/2014 1:18:01 PM	16624
Cadmium	ND	0.0020		mg/L	1	12/3/2014 1:18:01 PM	16624
Chromium	ND	0.0060		mg/L	1	12/3/2014 1:18:01 PM	16624
Copper	ND	0.0060		mg/L	1	12/3/2014 1:18:01 PM	16624
Iron	2.4	0.10	*	mg/L	5	12/3/2014 1:44:09 PM	16624
Manganese	0.075	0.0020	*	mg/L	1	12/3/2014 1:18:01 PM	16624
Silver	ND	0.0050		mg/L	1	12/3/2014 1:18:01 PM	16624
Zinc	0.037	0.010		mg/L	1	12/3/2014 1:18:01 PM	16624
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	12/4/2014 3:11:51 PM	R22933

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Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-34
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 2:50:00 PM
Lab ID: 1411861-007
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.0010		mg/L	1	12/4/2014 2:04:28 PM	R22933
Selenium	ND	0.020		mg/L	20	12/4/2014 3:35:43 PM	R22933
Uranium	0.027	0.0010		mg/L	1	12/4/2014 2:04:28 PM	R22933
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	12/5/2014 3:32:22 PM	16624
Lead	0.0014	0.0010		mg/L	1	12/3/2014 5:48:04 PM	16624
Selenium	ND	0.020		mg/L	20	12/5/2014 3:38:32 PM	16624
Uranium	0.026	0.0010		mg/L	1	12/3/2014 5:48:04 PM	16624
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	12/2/2014 2:21:22 PM	16625
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Acenaphthylene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Aniline	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Anthracene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Azobenzene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Benz(a)anthracene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Benzo(a)pyrene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Benzo(b)fluoranthene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Benzo(k)fluoranthene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Benzoic acid	ND	20		µg/L	1	11/24/2014 8:55:25 PM	16507
Benzyl alcohol	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Bis(2-ethylhexyl)phthalate	14	10	B	µg/L	1	11/24/2014 8:55:25 PM	16507
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Butyl benzyl phthalate	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Carbazole	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
4-Chloroaniline	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
2-Chloronaphthalene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
2-Chlorophenol	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Chrysene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Di-n-butyl phthalate	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Di-n-octyl phthalate	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507

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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-34
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 2:50:00 PM
Lab ID: 1411861-007
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Dibenzofuran	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
1,2-Dichlorobenzene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
1,3-Dichlorobenzene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
1,4-Dichlorobenzene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Diethyl phthalate	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Dimethyl phthalate	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
2,4-Dichlorophenol	ND	20		µg/L	1	11/24/2014 8:55:25 PM	16507
2,4-Dimethylphenol	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/24/2014 8:55:25 PM	16507
2,4-Dinitrophenol	ND	20		µg/L	1	11/24/2014 8:55:25 PM	16507
2,4-Dinitrotoluene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
2,6-Dinitrotoluene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Fluoranthene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Fluorene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Hexachlorobenzene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Hexachlorobutadiene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Hexachloroethane	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Isophorone	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
1-Methylnaphthalene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
2-Methylnaphthalene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
2-Methylphenol	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
3+4-Methylphenol	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
N-Nitrosodimethylamine	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Naphthalene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
2-Nitroaniline	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
3-Nitroaniline	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
4-Nitroaniline	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Nitrobenzene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
2-Nitrophenol	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
4-Nitrophenol	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Pentachlorophenol	ND	20		µg/L	1	11/24/2014 8:55:25 PM	16507
Phenanthrene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Phenol	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-34
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 2:50:00 PM
Lab ID: 1411861-007
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyrene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Pyridine	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/24/2014 8:55:25 PM	16507
Surr: 2-Fluorophenol	73.8	17.6-104		%REC	1	11/24/2014 8:55:25 PM	16507
Surr: Phenol-d5	66.0	17.7-89.9		%REC	1	11/24/2014 8:55:25 PM	16507
Surr: 2,4,6-Tribromophenol	92.5	16.3-122		%REC	1	11/24/2014 8:55:25 PM	16507
Surr: Nitrobenzene-d5	87.1	45.3-117		%REC	1	11/24/2014 8:55:25 PM	16507
Surr: 2-Fluorobiphenyl	89.5	43-113		%REC	1	11/24/2014 8:55:25 PM	16507
Surr: 4-Terphenyl-d14	88.5	47.6-122		%REC	1	11/24/2014 8:55:25 PM	16507
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
Toluene	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
Ethylbenzene	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
Naphthalene	ND	2.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
1-Methylnaphthalene	ND	4.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
2-Methylnaphthalene	ND	4.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
Acetone	ND	10		µg/L	1	11/25/2014 3:05:26 AM	R22767
Bromobenzene	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
Bromodichloromethane	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
Bromoform	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
Bromomethane	ND	3.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
2-Butanone	ND	10		µg/L	1	11/25/2014 3:05:26 AM	R22767
Carbon disulfide	ND	10		µg/L	1	11/25/2014 3:05:26 AM	R22767
Carbon Tetrachloride	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
Chlorobenzene	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
Chloroethane	ND	2.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
Chloroform	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
Chloromethane	ND	3.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
2-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
4-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
cis-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-34
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 2:50:00 PM
Lab ID: 1411861-007
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
Dibromochloromethane	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
Dibromomethane	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
1,1-Dichloroethane	1.5	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
1,1-Dichloroethene	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
1,2-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
1,3-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
2,2-Dichloropropane	ND	2.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
1,1-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
Hexachlorobutadiene	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
2-Hexanone	ND	10		µg/L	1	11/25/2014 3:05:26 AM	R22767
Isopropylbenzene	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
4-Isopropyltoluene	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
4-Methyl-2-pentanone	ND	10		µg/L	1	11/25/2014 3:05:26 AM	R22767
Methylene Chloride	ND	3.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
n-Butylbenzene	ND	3.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
n-Propylbenzene	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
sec-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
Styrene	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
tert-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
trans-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
Trichloroethene (TCE)	1.4	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
Trichlorofluoromethane	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
Vinyl chloride	ND	1.0		µg/L	1	11/25/2014 3:05:26 AM	R22767
Xylenes, Total	ND	1.5		µg/L	1	11/25/2014 3:05:26 AM	R22767
Surr: 1,2-Dichloroethane-d4	108	70-130		%REC	1	11/25/2014 3:05:26 AM	R22767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-34
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 2:50:00 PM
Lab ID: 1411861-007
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Surr: 4-Bromofluorobenzene	116	70-130		%REC	1	11/25/2014 3:05:26 AM	R22767
Surr: Dibromofluoromethane	103	70-130		%REC	1	11/25/2014 3:05:26 AM	R22767
Surr: Toluene-d8	106	70-130		%REC	1	11/25/2014 3:05:26 AM	R22767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 2014 4th QTR MKTF Wells
Collection Date:
Lab ID: 1411861-008
Matrix: TRIP BLANK
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
Toluene	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
Ethylbenzene	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
Naphthalene	ND	2.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
1-Methylnaphthalene	ND	4.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
2-Methylnaphthalene	ND	4.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
Acetone	ND	10		µg/L	1	11/24/2014 8:51:56 PM	R22767
Bromobenzene	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
Bromodichloromethane	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
Bromoform	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
Bromomethane	ND	3.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
2-Butanone	ND	10		µg/L	1	11/24/2014 8:51:56 PM	R22767
Carbon disulfide	ND	10		µg/L	1	11/24/2014 8:51:56 PM	R22767
Carbon Tetrachloride	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
Chlorobenzene	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
Chloroethane	ND	2.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
Chloroform	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
Chloromethane	ND	3.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
2-Chlorotoluene	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
4-Chlorotoluene	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
cis-1,2-DCE	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
Dibromochloromethane	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
Dibromomethane	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
1,1-Dichloroethane	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
1,1-Dichloroethene	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
1,2-Dichloropropane	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
1,3-Dichloropropane	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
2,2-Dichloropropane	ND	2.0		µg/L	1	11/24/2014 8:51:56 PM	R22767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 2014 4th QTR MKTF Wells
Collection Date:
Lab ID: 1411861-008
Matrix: TRIP BLANK
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
Hexachlorobutadiene	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
2-Hexanone	ND	10		µg/L	1	11/24/2014 8:51:56 PM	R22767
Isopropylbenzene	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
4-Isopropyltoluene	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
4-Methyl-2-pentanone	ND	10		µg/L	1	11/24/2014 8:51:56 PM	R22767
Methylene Chloride	ND	3.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
n-Butylbenzene	ND	3.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
n-Propylbenzene	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
sec-Butylbenzene	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
Styrene	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
tert-Butylbenzene	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
trans-1,2-DCE	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
Trichlorofluoromethane	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
Vinyl chloride	ND	1.0		µg/L	1	11/24/2014 8:51:56 PM	R22767
Xylenes, Total	ND	1.5		µg/L	1	11/24/2014 8:51:56 PM	R22767
Surr: 1,2-Dichloroethane-d4	91.9	70-130		%REC	1	11/24/2014 8:51:56 PM	R22767
Surr: 4-Bromofluorobenzene	119	70-130		%REC	1	11/24/2014 8:51:56 PM	R22767
Surr: Dibromofluoromethane	93.5	70-130		%REC	1	11/24/2014 8:51:56 PM	R22767
Surr: Toluene-d8	108	70-130		%REC	1	11/24/2014 8:51:56 PM	R22767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Field Blank
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 8:00:00 AM
Lab ID: 1411861-009
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
Toluene	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
Ethylbenzene	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
Naphthalene	ND	2.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
1-Methylnaphthalene	ND	4.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
2-Methylnaphthalene	ND	4.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
Acetone	ND	10		µg/L	1	11/25/2014 3:32:03 AM	R22767
Bromobenzene	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
Bromodichloromethane	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
Bromoform	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
Bromomethane	ND	3.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
2-Butanone	ND	10		µg/L	1	11/25/2014 3:32:03 AM	R22767
Carbon disulfide	ND	10		µg/L	1	11/25/2014 3:32:03 AM	R22767
Carbon Tetrachloride	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
Chlorobenzene	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
Chloroethane	ND	2.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
Chloroform	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
Chloromethane	ND	3.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
2-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
4-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
cis-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
Dibromochloromethane	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
Dibromomethane	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
1,1-Dichloroethane	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
1,1-Dichloroethene	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
1,2-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
1,3-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
2,2-Dichloropropane	ND	2.0		µg/L	1	11/25/2014 3:32:03 AM	R22767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Field Blank
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014 8:00:00 AM
Lab ID: 1411861-009
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
Hexachlorobutadiene	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
2-Hexanone	ND	10		µg/L	1	11/25/2014 3:32:03 AM	R22767
Isopropylbenzene	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
4-Isopropyltoluene	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
4-Methyl-2-pentanone	ND	10		µg/L	1	11/25/2014 3:32:03 AM	R22767
Methylene Chloride	ND	3.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
n-Butylbenzene	ND	3.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
n-Propylbenzene	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
sec-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
Styrene	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
tert-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
trans-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
Trichlorofluoromethane	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
Vinyl chloride	ND	1.0		µg/L	1	11/25/2014 3:32:03 AM	R22767
Xylenes, Total	ND	1.5		µg/L	1	11/25/2014 3:32:03 AM	R22767
Surr: 1,2-Dichloroethane-d4	96.4	70-130		%REC	1	11/25/2014 3:32:03 AM	R22767
Surr: 4-Bromofluorobenzene	122	70-130		%REC	1	11/25/2014 3:32:03 AM	R22767
Surr: Dibromofluoromethane	95.1	70-130		%REC	1	11/25/2014 3:32:03 AM	R22767
Surr: Toluene-d8	107	70-130		%REC	1	11/25/2014 3:32:03 AM	R22767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BD-MKTF-11-17-14
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014
Lab ID: 1411861-010
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Acenaphthylene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Aniline	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Anthracene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Azobenzene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Benz(a)anthracene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Benzo(a)pyrene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Benzo(b)fluoranthene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Benzo(k)fluoranthene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Benzoic acid	ND	20		µg/L	1	11/24/2014 9:22:16 PM	16507
Benzyl alcohol	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Butyl benzyl phthalate	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Carbazole	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
4-Chloroaniline	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
2-Chloronaphthalene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
2-Chlorophenol	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Chrysene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Di-n-butyl phthalate	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Di-n-octyl phthalate	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Dibenzofuran	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
1,2-Dichlorobenzene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
1,3-Dichlorobenzene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
1,4-Dichlorobenzene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Diethyl phthalate	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Dimethyl phthalate	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
2,4-Dichlorophenol	ND	20		µg/L	1	11/24/2014 9:22:16 PM	16507
2,4-Dimethylphenol	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/24/2014 9:22:16 PM	16507
2,4-Dinitrophenol	ND	20		µg/L	1	11/24/2014 9:22:16 PM	16507

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BD-MKTF-11-17-14
Project: 2014 4th QTR MKTF Wells
Collection Date: 11/17/2014
Lab ID: 1411861-010
Matrix: AQUEOUS
Received Date: 11/19/2014 4:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2,4-Dinitrotoluene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
2,6-Dinitrotoluene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Fluoranthene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Fluorene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Hexachlorobenzene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Hexachlorobutadiene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Hexachloroethane	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Isophorone	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
1-Methylnaphthalene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
2-Methylnaphthalene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
2-Methylphenol	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
3+4-Methylphenol	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
N-Nitrosodimethylamine	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Naphthalene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
2-Nitroaniline	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
3-Nitroaniline	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
4-Nitroaniline	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Nitrobenzene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
2-Nitrophenol	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
4-Nitrophenol	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Pentachlorophenol	ND	20		µg/L	1	11/24/2014 9:22:16 PM	16507
Phenanthrene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Phenol	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Pyrene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Pyridine	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/24/2014 9:22:16 PM	16507
Surr: 2-Fluorophenol	70.6	17.6-104		%REC	1	11/24/2014 9:22:16 PM	16507
Surr: Phenol-d5	63.6	17.7-89.9		%REC	1	11/24/2014 9:22:16 PM	16507
Surr: 2,4,6-Tribromophenol	98.0	16.3-122		%REC	1	11/24/2014 9:22:16 PM	16507
Surr: Nitrobenzene-d5	89.2	45.3-117		%REC	1	11/24/2014 9:22:16 PM	16507
Surr: 2-Fluorobiphenyl	88.0	43-113		%REC	1	11/24/2014 9:22:16 PM	16507
Surr: 4-Terphenyl-d14	91.3	47.6-122		%REC	1	11/24/2014 9:22:16 PM	16507

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411861**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF Wells

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22857** RunNo: **22857**
Prep Date: Analysis Date: **12/1/2014** SeqNo: **674626** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22857** RunNo: **22857**
Prep Date: Analysis Date: **12/1/2014** SeqNo: **674627** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	95.2	85	115			
Cadmium	0.47	0.0020	0.5000	0	94.6	85	115			
Calcium	50	1.0	50.00	0	99.2	85	115			
Chromium	0.47	0.0060	0.5000	0	93.8	85	115			
Copper	0.46	0.0060	0.5000	0	92.3	85	115			
Iron	0.47	0.020	0.5000	0	93.2	85	115			
Magnesium	50	1.0	50.00	0	101	85	115			
Manganese	0.46	0.0020	0.5000	0	91.1	85	115			
Potassium	48	1.0	50.00	0	96.9	85	115			
Silver	0.10	0.0050	0.1000	0	104	85	115			
Sodium	49	1.0	50.00	0	98.8	85	115			
Zinc	0.47	0.010	0.5000	0	94.6	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22857** RunNo: **22857**
Prep Date: Analysis Date: **12/1/2014** SeqNo: **674628** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411861**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF Wells

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22857** RunNo: **22857**
Prep Date: Analysis Date: **12/1/2014** SeqNo: **674628** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22857** RunNo: **22857**
Prep Date: Analysis Date: **12/1/2014** SeqNo: **674629** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.1	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.6	85	115			
Calcium	50	1.0	50.00	0	100	85	115			
Chromium	0.48	0.0060	0.5000	0	96.6	85	115			
Copper	0.48	0.0060	0.5000	0	95.4	85	115			
Iron	0.48	0.020	0.5000	0	96.9	85	115			
Magnesium	50	1.0	50.00	0	101	85	115			
Manganese	0.47	0.0020	0.5000	0	93.9	85	115			
Potassium	48	1.0	50.00	0	96.8	85	115			
Silver	0.11	0.0050	0.1000	0	106	85	115			
Sodium	49	1.0	50.00	0	98.9	85	115			
Zinc	0.49	0.010	0.5000	0	97.3	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411861**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF Wells

Sample ID **MB-16624** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **16624** RunNo: **22897**
Prep Date: **12/2/2014** Analysis Date: **12/3/2014** SeqNo: **676181** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-16624** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **16624** RunNo: **22897**
Prep Date: **12/2/2014** Analysis Date: **12/3/2014** SeqNo: **676182** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.9	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.1	85	115			
Chromium	0.49	0.0060	0.5000	0	97.9	85	115			
Copper	0.49	0.0060	0.5000	0	97.2	85	115			
Iron	0.49	0.020	0.5000	0	97.7	85	115			
Manganese	0.47	0.0020	0.5000	0	94.4	85	115			
Silver	0.11	0.0050	0.1000	0	107	85	115			
Zinc	0.48	0.010	0.5000	0	96.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411861**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF Wells

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22933** RunNo: **22933**
Prep Date: Analysis Date: **12/4/2014** SeqNo: **677289** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.4	85	115			
Lead	0.024	0.0010	0.02500	0	97.8	85	115			
Selenium	0.024	0.0010	0.02500	0	94.2	85	115			
Uranium	0.025	0.0010	0.02500	0	99.9	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22933** RunNo: **22933**
Prep Date: Analysis Date: **12/4/2014** SeqNo: **677290** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.5	85	115			
Lead	0.024	0.0010	0.02500	0	96.7	85	115			
Selenium	0.024	0.0010	0.02500	0	95.5	85	115			
Uranium	0.023	0.0010	0.02500	0	92.2	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22933** RunNo: **22933**
Prep Date: Analysis Date: **12/4/2014** SeqNo: **677291** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22933** RunNo: **22933**
Prep Date: Analysis Date: **12/4/2014** SeqNo: **677292** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411861**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF Wells

Sample ID **LLLCS-16624** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **16624** RunNo: **22904**
Prep Date: **12/2/2014** Analysis Date: **12/3/2014** SeqNo: **676459** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.7	85	115			
Lead	0.026	0.0010	0.02500	0	102	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.027	0.0010	0.02500	0	110	85	115			

Sample ID **MB-16624** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **16624** RunNo: **22904**
Prep Date: **12/2/2014** Analysis Date: **12/3/2014** SeqNo: **676461** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411861**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF Wells

Sample ID	**MB-16625**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**
Client ID:	**PBW**	Batch ID:	**16625**	RunNo:	**22882**
Prep Date:	**12/2/2014**	Analysis Date:	**12/2/2014**	SeqNo:	**675569** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-16625**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**
Client ID:	**LCSW**	Batch ID:	**16625**	RunNo:	**22882**
Prep Date:	**12/2/2014**	Analysis Date:	**12/2/2014**	SeqNo:	**675570** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0053	0.00020	0.005000	0	107	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411861**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF Wells

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22742** RunNo: **22742**
Prep Date: Analysis Date: **11/21/2014** SeqNo: **670973** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R22742** RunNo: **22742**
Prep Date: Analysis Date: **11/21/2014** SeqNo: **670974** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	97.5	90	110			
Chloride	4.7	0.50	5.000	0	94.8	90	110			
Bromide	2.5	0.10	2.500	0	98.9	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	95.3	90	110			
Sulfate	9.6	0.50	10.00	0	96.3	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22742** RunNo: **22742**
Prep Date: Analysis Date: **11/21/2014** SeqNo: **671027** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R22742** RunNo: **22742**
Prep Date: Analysis Date: **11/21/2014** SeqNo: **671028** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.51	0.10	0.5000	0	102	90	110			
Chloride	4.7	0.50	5.000	0	93.3	90	110			
Bromide	2.3	0.10	2.500	0	90.9	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	95.9	90	110			
Sulfate	9.5	0.50	10.00	0	95.5	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411861**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF Wells

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**			
Client ID: **PBW**	Batch ID: **R22874**	RunNo: **22874**			
Prep Date:	Analysis Date: **12/1/2014**	SeqNo: **675189**	Units: **mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**			
Client ID: **LCSW**	Batch ID: **R22874**	RunNo: **22874**			
Prep Date:	Analysis Date: **12/1/2014**	SeqNo: **675190**	Units: **mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000	0	91.2	90	110			
Nitrate+Nitrite as N	3.3	0.20	3.500	0	95.3	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411861**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF Wells

Sample ID **MB-16493**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Diesel Range**		
Client ID: **PBW**	Batch ID: **16493**	RunNo: **22660**		
Prep Date: **11/20/2014**	Analysis Date: **11/21/2014**	SeqNo: **669374**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.87		1.000		87.2	59	141			

Sample ID **LCS-16493**	SampType: **LCS**	TestCode: **EPA Method 8015D: Diesel Range**		
Client ID: **LCSW**	Batch ID: **16493**	RunNo: **22660**		
Prep Date: **11/20/2014**	Analysis Date: **11/21/2014**	SeqNo: **669375**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.0	1.0	5.000	0	119	69.7	142			
Surr: DNOP	0.47		0.5000		93.2	59	141			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411861**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF Wells

Sample ID **B27** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW** Batch ID: **R22770** RunNo: **22770**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671706** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		91.5	80	120			

Sample ID **2.5UG GRO LCS** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW** Batch ID: **R22770** RunNo: **22770**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671707** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	92.5	80	120			
Surr: BFB	20		20.00		98.4	80	120			

Sample ID **1411861-001BMS** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-22** Batch ID: **R22770** RunNo: **22770**
Prep Date: Analysis Date: **11/25/2014** SeqNo: **671710** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	13	0.50	5.000	6.792	119	70.4	127			
Surr: BFB	210		200.0		104	80	120			

Sample ID **1411861-001BMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-22** Batch ID: **R22770** RunNo: **22770**
Prep Date: Analysis Date: **11/25/2014** SeqNo: **671712** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	12	0.50	5.000	6.792	105	70.4	127	5.34	20	
Surr: BFB	210		200.0		104	80	120	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411861**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF Wells

Sample ID **5mL rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R22767**	RunNo: **22767**			
Prep Date:	Analysis Date: **11/24/2014**	SeqNo: **671611**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411861**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF Wells

Sample ID **5mL rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22767** RunNo: **22767**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671611** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.1	70	130			
Surr: 4-Bromofluorobenzene	14		10.00		141	70	130			S
Surr: Dibromofluoromethane	8.1		10.00		80.9	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22767** RunNo: **22767**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671614** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	70	130			
Toluene	19	1.0	20.00	0	94.6	80	120			
Chlorobenzene	18	1.0	20.00	0	91.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411861**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF Wells

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22767** RunNo: **22767**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671614** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	19	1.0	20.00	0	97.0	82.6	131			
Trichloroethene (TCE)	17	1.0	20.00	0	85.2	70	130			
Surr: 1,2-Dichloroethane-d4	9.7		10.00		96.7	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		120	70	130			
Surr: Dibromofluoromethane	9.1		10.00		91.4	70	130			
Surr: Toluene-d8	9.6		10.00		96.1	70	130			

Sample ID **100ng lcs2** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22767** RunNo: **22767**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671653** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	115	70	130			
Toluene	22	1.0	20.00	0	108	80	120			
Chlorobenzene	19	1.0	20.00	0	97.2	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	96.0	82.6	131			
Trichloroethene (TCE)	19	1.0	20.00	0	93.7	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		117	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.4	70	130			
Surr: Toluene-d8	11		10.00		106	70	130			

Sample ID **b5** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22767** RunNo: **22767**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671935** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411861**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF Wells

Sample ID **b5**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R22767**	RunNo: **22767**	
Prep Date:	Analysis Date: **11/24/2014**	SeqNo: **671935**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411861**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF Wells

Sample ID **b5** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22767** RunNo: **22767**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671935** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.0	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	9.1		10.00		91.4	70	130			
Surr: Toluene-d8	11		10.00		110	70	130			

Sample ID **5mL rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22801** RunNo: **22801**
Prep Date: Analysis Date: **11/25/2014** SeqNo: **672809** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411861**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF Wells

Sample ID **5mL rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R22801**	RunNo: **22801**			
Prep Date:	Analysis Date: **11/25/2014**	SeqNo: **672809**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411861**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF Wells

Sample ID **5mL rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22801** RunNo: **22801**
Prep Date: Analysis Date: **11/25/2014** SeqNo: **672809** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.2		10.00		91.9	70	130			
Surr: 4-Bromofluorobenzene	12		10.00		124	70	130			
Surr: Dibromofluoromethane	8.9		10.00		88.9	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22801** RunNo: **22801**
Prep Date: Analysis Date: **11/25/2014** SeqNo: **672811** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	109	70	130			
Toluene	21	1.0	20.00	0	107	80	120			
Chlorobenzene	19	1.0	20.00	0	93.7	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	92.7	82.6	131			
Trichloroethene (TCE)	18	1.0	20.00	0	92.4	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.6	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		113	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.6	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411861**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF Wells

Sample ID **mb-16507**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **16507**	RunNo: **22768**			
Prep Date: **11/21/2014**	Analysis Date: **11/24/2014**	SeqNo: **671719**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	14	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411861**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF Wells

Sample ID **mb-16507**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **16507**	RunNo: **22768**			
Prep Date: **11/21/2014**	Analysis Date: **11/24/2014**	SeqNo: **671719**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	160		200.0		78.3	17.6	104			
Surr: Phenol-d5	160		200.0		81.6	17.7	89.9			
Surr: 2,4,6-Tribromophenol	180		200.0		89.3	16.3	122			
Surr: Nitrobenzene-d5	80		100.0		80.5	45.3	117			
Surr: 2-Fluorobiphenyl	80		100.0		79.6	43	113			
Surr: 4-Terphenyl-d14	87		100.0		87.4	47.6	122			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411861**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF Wells

Sample ID **lcs-16507** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **16507** RunNo: **22768**
Prep Date: **11/21/2014** Analysis Date: **11/24/2014** SeqNo: **671720** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	79	10	100.0	0	78.9	47.9	114			
4-Chloro-3-methylphenol	180	10	200.0	0	89.2	51.7	122			
2-Chlorophenol	150	10	200.0	0	77.3	40.7	113			
1,4-Dichlorobenzene	66	10	100.0	0	66.0	39.6	99.9			
2,4-Dinitrotoluene	62	10	100.0	0	61.8	40.8	113			
N-Nitrosodi-n-propylamine	78	10	100.0	0	78.2	51.2	111			
4-Nitrophenol	160	10	200.0	0	80.2	15.7	86.9			
Pentachlorophenol	140	20	200.0	0	68.7	21.6	104			
Phenol	170	10	200.0	0	83.3	28.6	71.7			S
Pyrene	81	10	100.0	0	81.0	54.2	128			
1,2,4-Trichlorobenzene	71	10	100.0	0	71.1	40.9	101			
Surr: 2-Fluorophenol	140		200.0		70.0	17.6	104			
Surr: Phenol-d5	150		200.0		75.8	17.7	89.9			
Surr: 2,4,6-Tribromophenol	180		200.0		88.2	16.3	122			
Surr: Nitrobenzene-d5	80		100.0		79.8	45.3	117			
Surr: 2-Fluorobiphenyl	76		100.0		75.7	43	113			
Surr: 4-Terphenyl-d14	90		100.0		89.5	47.6	122			

Sample ID **lcsd-16507** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **16507** RunNo: **22768**
Prep Date: **11/21/2014** Analysis Date: **11/24/2014** SeqNo: **671721** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	90	10	100.0	0	89.8	47.9	114	13.0	27.2	
4-Chloro-3-methylphenol	190	10	200.0	0	95.3	51.7	122	6.67	25.9	
2-Chlorophenol	180	10	200.0	0	90.7	40.7	113	15.9	22.5	
1,4-Dichlorobenzene	81	10	100.0	0	80.5	39.6	99.9	19.9	24.6	
2,4-Dinitrotoluene	79	10	100.0	0	79.1	40.8	113	24.5	25.3	
N-Nitrosodi-n-propylamine	92	10	100.0	0	91.5	51.2	111	15.7	23.6	
4-Nitrophenol	180	10	200.0	0	91.4	15.7	86.9	13.1	34.7	S
Pentachlorophenol	160	20	200.0	0	78.2	21.6	104	12.9	32.8	
Phenol	190	10	200.0	0	96.4	28.6	71.7	14.5	25.5	S
Pyrene	93	10	100.0	0	93.4	54.2	128	14.3	31.4	
1,2,4-Trichlorobenzene	80	10	100.0	0	80.1	40.9	101	11.9	25.9	
Surr: 2-Fluorophenol	160		200.0		79.0	17.6	104	0	0	
Surr: Phenol-d5	170		200.0		83.5	17.7	89.9	0	0	
Surr: 2,4,6-Tribromophenol	190		200.0		93.6	16.3	122	0	0	
Surr: Nitrobenzene-d5	81		100.0		81.2	45.3	117	0	0	
Surr: 2-Fluorobiphenyl	80		100.0		80.4	43	113	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411861**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: 2014 4th QTR MKTF Wells

Sample ID	**lcsd-16507**	SampType:	**LCSD**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**LCSS02**	Batch ID:	**16507**	RunNo:	**22768**
Prep Date:	**11/21/2014**	Analysis Date:	**11/24/2014**	SeqNo:	**671721** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	93		100.0		93.3	47.6	122	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1411861 RcptNo: 1

Received by/date: CS 11/19/14

Logged By: **Ashley Gallegos** 11/19/2014 4:00:00 PM AG

Completed By: **Ashley Gallegos** 11/20/2014 10:08:00 AM AG

Reviewed By: MG 11/20/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☑ No ☑ 11/20/14 NA ☐
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 21
(<2 or >12 unless noted)
Adjusted? YES
Checked by: MG

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks: For dissolved metals analysis: Added 0.4 mL HNO_3 to 001F, 003F, 004F for Acceptable pH. For Total Metals analysis: Added 1 mL HNO_3 to 002A for acceptable pH. Held in login for 24 hours after preservation. MG 11/20/14

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

92 GIANT CROSSING ROAD, GALLUP, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

2014 4th QTR MKTF WELLS

(MKTF - 23, 33, 32, 31, 25)

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler: C. JOHNSON

On Ice: X Yes ☐ No

Sample Temperature: 1.0°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1411861	8260+MTBE	8015B EXTENDED	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major Cations/Anions									Air Bubbles (Y or N)
11/17/2014	1300	AQUEOUS	MKTF-22	MISC	MISC	-001	X	X	X	X	X	X									
11/17/2014	1155	AQUEOUS	MKTF-23	MISC	MISC	-002	X	X	X	X	X	X									
11/17/2014	1115	AQUEOUS	MKTF-30	MISC	MISC	-003	X	X	X	X	X	X									
11/17/2014	1410	AQUEOUS	MKTF-31	MISC	MISC	-004	X	X	X	X	X	X									
11/17/2014	1350	AQUEOUS	MKTF-32	MISC	MISC	-005	X	X	X	X	X	X									
11/17/2014	1330	AQUEOUS	MKTF-33	MISC	MISC	-006	X	X	X	X	X	X									
11/17/2014	1450	AQUEOUS	MKTF-34	MISC	MISC	-007	X	X	X	X	X	X									
				1 L 11/20/14																	
11/17/2014		AQUEOUS	TRIP BLANK	3-40ML VOAS	HCL	-008	X														
11/17/2014	800	AQUEOUS	FIELD BLANK	3-40ML VOAS	HCL	-009	X														
11/17/2014		AQUEOUS	BD-MKTF-11-17-14	1L AMBER	NONE	-010			X												

Date	Time	Relinquished by:	Received by:	Date	Time
11/19/2014	1130			11/19/14	2:00
11/19/14	400		Celina Sanchez	11/19/14	1600

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 08, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: 2014 2nd Quarter OrderNo.: 1406364

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 15 sample(s) on 6/6/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: **1406364**
Date: **7/8/2014**

CLIENT: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Analytical Notes for EPA Method 8260 and 8015 GRO:
Sample "MKTF-17" was analyzed with headspace.

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-1
Project: 2014 2nd Quarter
Collection Date: 6/6/2014 11:35:00 AM
Lab ID: 1406364-001
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	510	10		mg/L	10	6/11/2014 11:08:45 PM	13583
Motor Oil Range Organics (MRO)	ND	50		mg/L	10	6/11/2014 11:08:45 PM	13583
Surr: DNOP	0	62.7-145	S	%REC	10	6/11/2014 11:08:45 PM	13583
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	0.60	0.10		mg/L	1	6/9/2014 12:44:07 PM	R19161
Chloride	400	10		mg/L	20	6/9/2014 12:56:32 PM	R19161
Bromide	0.96	0.10		mg/L	1	6/9/2014 12:44:07 PM	R19161
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	6/9/2014 12:44:07 PM	R19161
Sulfate	0.58	0.50		mg/L	1	6/9/2014 12:44:07 PM	R19161
Nitrate+Nitrite as N	ND	1.0		mg/L	5	6/9/2014 10:00:18 PM	R19165
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	1.4	0.010		mg/L	5	6/12/2014 4:31:40 PM	R19227
Cadmium	ND	0.0020		mg/L	1	6/12/2014 4:29:57 PM	R19227
Chromium	ND	0.0060		mg/L	1	6/12/2014 4:29:57 PM	R19227
Copper	ND	0.0060		mg/L	1	6/12/2014 4:29:57 PM	R19227
Iron	4.7	0.10	*	mg/L	5	6/12/2014 4:31:40 PM	R19227
Manganese	1.7	0.010	*	mg/L	5	6/12/2014 4:31:40 PM	R19227
Silver	ND	0.0050		mg/L	1	6/12/2014 4:29:57 PM	R19227
Zinc	0.028	0.010		mg/L	1	6/12/2014 4:29:57 PM	R19227
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	4.7	0.010	*	mg/L	5	6/18/2014 12:48:55 PM	13717
Cadmium	ND	0.0020		mg/L	1	6/17/2014 2:07:40 PM	13717
Calcium	230	5.0		mg/L	5	6/18/2014 12:48:55 PM	13717
Chromium	0.035	0.0060		mg/L	1	6/17/2014 2:07:40 PM	13717
Copper	0.038	0.0060		mg/L	1	6/17/2014 2:07:40 PM	13717
Iron	35	1.0	*	mg/L	50	6/18/2014 12:50:25 PM	13717
Magnesium	43	1.0		mg/L	1	6/18/2014 12:47:26 PM	13717
Manganese	4.1	0.010	*	mg/L	5	6/18/2014 12:48:55 PM	13717
Potassium	7.1	1.0		mg/L	1	6/18/2014 12:47:26 PM	13717
Silver	ND	0.0050		mg/L	1	6/18/2014 5:44:46 PM	13717
Sodium	440	5.0		mg/L	5	6/18/2014 5:46:30 PM	13717
Zinc	0.078	0.010		mg/L	1	6/18/2014 12:47:26 PM	13717
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	6/18/2014 3:43:13 PM	R19364
Lead	ND	0.0050		mg/L	5	6/18/2014 3:43:13 PM	R19364
Selenium	0.013	0.0050		mg/L	5	6/20/2014 3:38:31 PM	R19449
Uranium	ND	0.010		mg/L	10	6/25/2014 12:25:45 PM	R19508

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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

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Client Sample ID: MKTF-1
Project: 2014 2nd Quarter
Collection Date: 6/6/2014 11:35:00 AM
Lab ID: 1406364-001
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0070	0.0050		mg/L	5	6/17/2014 3:59:35 PM	13717
Lead	0.074	0.0050	*	mg/L	5	6/17/2014 3:59:35 PM	13717
Selenium	0.0091	0.0050		mg/L	5	6/17/2014 3:59:35 PM	13717
Uranium	ND	0.0050		mg/L	5	6/17/2014 3:59:35 PM	13717
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	6/18/2014 12:18:42 PM	13740
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Acenaphthylene	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Aniline	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Anthracene	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Azobenzene	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Benz(a)anthracene	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Benzo(a)pyrene	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Benzo(b)fluoranthene	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Benzo(g,h,i)perylene	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Benzo(k)fluoranthene	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Benzoic acid	ND	20		µg/L	1	6/10/2014 8:13:29 PM	13597
Benzyl alcohol	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Bis(2-chloroethyl)ether	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
4-Bromophenyl phenyl ether	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Butyl benzyl phthalate	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Carbazole	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
4-Chloro-3-methylphenol	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
4-Chloroaniline	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
2-Chloronaphthalene	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
2-Chlorophenol	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Chrysene	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Di-n-butyl phthalate	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Di-n-octyl phthalate	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Dibenz(a,h)anthracene	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Dibenzofuran	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
1,2-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
1,3-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597

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Hall Environmental Analysis Laboratory, Inc.

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Project: 2014 2nd Quarter
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Lab ID: 1406364-001
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Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,4-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
3,3´-Dichlorobenzidine	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Diethyl phthalate	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Dimethyl phthalate	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
2,4-Dichlorophenol	ND	20		µg/L	1	6/10/2014 8:13:29 PM	13597
2,4-Dimethylphenol	50	10		µg/L	1	6/10/2014 8:13:29 PM	13597
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	6/10/2014 8:13:29 PM	13597
2,4-Dinitrophenol	ND	20		µg/L	1	6/10/2014 8:13:29 PM	13597
2,4-Dinitrotoluene	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
2,6-Dinitrotoluene	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Fluoranthene	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Fluorene	20	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Hexachlorobenzene	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Hexachlorobutadiene	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Hexachlorocyclopentadiene	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Hexachloroethane	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Isophorone	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
1-Methylnaphthalene	310	20		µg/L	2	6/12/2014 12:42:10 PM	13597
2-Methylnaphthalene	310	20		µg/L	2	6/12/2014 12:42:10 PM	13597
2-Methylphenol	60	20		µg/L	1	6/10/2014 8:13:29 PM	13597
3+4-Methylphenol	31	10		µg/L	1	6/10/2014 8:13:29 PM	13597
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
N-Nitrosodimethylamine	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
N-Nitrosodiphenylamine	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Naphthalene	310	20		µg/L	2	6/12/2014 12:42:10 PM	13597
2-Nitroaniline	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
3-Nitroaniline	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
4-Nitroaniline	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Nitrobenzene	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
2-Nitrophenol	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
4-Nitrophenol	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Pentachlorophenol	ND	20		µg/L	1	6/10/2014 8:13:29 PM	13597
Phenanthrene	28	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Phenol	19	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Pyrene	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Pyridine	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
1,2,4-Trichlorobenzene	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
2,4,5-Trichlorophenol	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597

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Hall Environmental Analysis Laboratory, Inc.

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Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
2,4,6-Trichlorophenol	ND	10		µg/L	1	6/10/2014 8:13:29 PM	13597
Surr: 2-Fluorophenol	18.4	12.1-85.8		%REC	1	6/10/2014 8:13:29 PM	13597
Surr: Phenol-d5	35.0	17.7-65.8		%REC	1	6/10/2014 8:13:29 PM	13597
Surr: 2,4,6-Tribromophenol	60.4	26-138		%REC	1	6/10/2014 8:13:29 PM	13597
Surr: Nitrobenzene-d5	83.1	47.5-119		%REC	1	6/10/2014 8:13:29 PM	13597
Surr: 2-Fluorobiphenyl	58.7	48.1-106		%REC	1	6/10/2014 8:13:29 PM	13597
Surr: 4-Terphenyl-d14	66.6	44-113		%REC	1	6/10/2014 8:13:29 PM	13597
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	8700	500		µg/L	500	6/13/2014 3:58:45 PM	R19253
Toluene	7100	500		µg/L	500	6/13/2014 3:58:45 PM	R19253
Ethylbenzene	920	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
Methyl tert-butyl ether (MTBE)	420	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
1,2,4-Trimethylbenzene	1100	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
1,3,5-Trimethylbenzene	270	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
1,2-Dichloroethane (EDC)	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
1,2-Dibromoethane (EDB)	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
Naphthalene	300	100		µg/L	50	6/11/2014 6:33:26 PM	R19202
1-Methylnaphthalene	ND	200		µg/L	50	6/11/2014 6:33:26 PM	R19202
2-Methylnaphthalene	ND	200		µg/L	50	6/11/2014 6:33:26 PM	R19202
Acetone	ND	500		µg/L	50	6/11/2014 6:33:26 PM	R19202
Bromobenzene	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
Bromodichloromethane	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
Bromoform	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
Bromomethane	ND	150		µg/L	50	6/11/2014 6:33:26 PM	R19202
2-Butanone	ND	500		µg/L	50	6/11/2014 6:33:26 PM	R19202
Carbon disulfide	ND	500		µg/L	50	6/11/2014 6:33:26 PM	R19202
Carbon Tetrachloride	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
Chlorobenzene	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
Chloroethane	ND	100		µg/L	50	6/11/2014 6:33:26 PM	R19202
Chloroform	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
Chloromethane	ND	150		µg/L	50	6/11/2014 6:33:26 PM	R19202
2-Chlorotoluene	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
4-Chlorotoluene	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
cis-1,2-DCE	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
cis-1,3-Dichloropropene	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
1,2-Dibromo-3-chloropropane	ND	100		µg/L	50	6/11/2014 6:33:26 PM	R19202
Dibromochloromethane	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
Dibromomethane	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
1,2-Dichlorobenzene	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202

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Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,3-Dichlorobenzene	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
1,4-Dichlorobenzene	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
Dichlorodifluoromethane	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
1,1-Dichloroethane	94	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
1,1-Dichloroethene	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
1,2-Dichloropropane	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
1,3-Dichloropropane	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
2,2-Dichloropropane	ND	100		µg/L	50	6/11/2014 6:33:26 PM	R19202
1,1-Dichloropropene	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
Hexachlorobutadiene	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
2-Hexanone	ND	500		µg/L	50	6/11/2014 6:33:26 PM	R19202
Isopropylbenzene	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
4-Isopropyltoluene	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
4-Methyl-2-pentanone	ND	500		µg/L	50	6/11/2014 6:33:26 PM	R19202
Methylene Chloride	ND	150		µg/L	50	6/11/2014 6:33:26 PM	R19202
n-Butylbenzene	ND	150		µg/L	50	6/11/2014 6:33:26 PM	R19202
n-Propylbenzene	140	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
sec-Butylbenzene	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
Styrene	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
tert-Butylbenzene	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
1,1,1,2-Tetrachloroethane	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
1,1,2,2-Tetrachloroethane	ND	100		µg/L	50	6/11/2014 6:33:26 PM	R19202
Tetrachloroethene (PCE)	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
trans-1,2-DCE	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
trans-1,3-Dichloropropene	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
1,2,3-Trichlorobenzene	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
1,2,4-Trichlorobenzene	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
1,1,1-Trichloroethane	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
1,1,2-Trichloroethane	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
Trichloroethene (TCE)	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
Trichlorofluoromethane	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
1,2,3-Trichloropropane	ND	100		µg/L	50	6/11/2014 6:33:26 PM	R19202
Vinyl chloride	ND	50		µg/L	50	6/11/2014 6:33:26 PM	R19202
Xylenes, Total	4300	75		µg/L	50	6/11/2014 6:33:26 PM	R19202
Surr: 1,2-Dichloroethane-d4	98.7	70-130		%REC	50	6/11/2014 6:33:26 PM	R19202
Surr: 4-Bromofluorobenzene	88.9	70-130		%REC	50	6/11/2014 6:33:26 PM	R19202
Surr: Dibromofluoromethane	108	70-130		%REC	50	6/11/2014 6:33:26 PM	R19202
Surr: Toluene-d8	98.9	70-130		%REC	50	6/11/2014 6:33:26 PM	R19202
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **cadg**	

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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **cadg**	
Gasoline Range Organics (GRO)	50	2.5		mg/L	50	6/11/2014 6:33:26 PM	R19202
Surr: BFB	96.8	70-130		%REC	50	6/11/2014 6:33:26 PM	R19202

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-2
Project: 2014 2nd Quarter
Collection Date: 6/6/2014 11:30:00 AM
Lab ID: 1406364-002
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	6/11/2014 8:45:09 AM	13583
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	6/11/2014 8:45:09 AM	13583
Surr: DNOP	97.9	62.7-145		%REC	1	6/11/2014 8:45:09 AM	13583
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	0.76	0.10		mg/L	1	6/9/2014 1:08:57 PM	R19161
Chloride	750	50		mg/L	100	6/11/2014 3:07:44 AM	R19191
Bromide	0.46	0.10		mg/L	1	6/9/2014 1:08:57 PM	R19161
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	6/9/2014 1:08:57 PM	R19161
Sulfate	200	10		mg/L	20	6/9/2014 1:21:22 PM	R19161
Nitrate+Nitrite as N	ND	1.0		mg/L	5	6/9/2014 10:12:43 PM	R19165
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.13	0.0020		mg/L	1	6/12/2014 4:42:19 PM	R19227
Cadmium	ND	0.0020		mg/L	1	6/12/2014 4:42:19 PM	R19227
Chromium	ND	0.0060		mg/L	1	6/12/2014 4:42:19 PM	R19227
Copper	ND	0.0060		mg/L	1	6/12/2014 4:42:19 PM	R19227
Iron	0.34	0.020	*	mg/L	1	6/12/2014 4:42:19 PM	R19227
Manganese	0.56	0.0020	*	mg/L	1	6/12/2014 4:42:19 PM	R19227
Silver	ND	0.0050		mg/L	1	6/12/2014 4:42:19 PM	R19227
Zinc	0.010	0.010		mg/L	1	6/12/2014 4:42:19 PM	R19227
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.20	0.0020		mg/L	1	6/17/2014 2:09:31 PM	13717
Cadmium	ND	0.0020		mg/L	1	6/17/2014 2:09:31 PM	13717
Calcium	110	5.0		mg/L	5	6/18/2014 12:56:22 PM	13717
Chromium	ND	0.0060		mg/L	1	6/17/2014 2:09:31 PM	13717
Copper	ND	0.0060		mg/L	1	6/17/2014 2:09:31 PM	13717
Iron	4.2	0.20	*	mg/L	10	6/18/2014 1:00:52 PM	13717
Magnesium	17	1.0		mg/L	1	6/17/2014 2:09:31 PM	13717
Manganese	0.70	0.010	*	mg/L	5	6/18/2014 12:56:22 PM	13717
Potassium	9.2	1.0		mg/L	1	6/17/2014 2:09:31 PM	13717
Silver	ND	0.0050		mg/L	1	6/18/2014 5:53:29 PM	13717
Sodium	720	10		mg/L	10	6/18/2014 5:58:57 PM	13717
Zinc	0.017	0.010		mg/L	1	6/18/2014 12:52:00 PM	13717
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	6/18/2014 3:48:13 PM	R19364
Lead	ND	0.0050		mg/L	5	6/18/2014 3:48:13 PM	R19364
Selenium	0.012	0.0050		mg/L	5	6/20/2014 3:41:33 PM	R19449
Uranium	0.056	0.010	*	mg/L	10	6/25/2014 12:28:09 PM	R19508

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Hall Environmental Analysis Laboratory, Inc.

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Lab ID: 1406364-002
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	6/17/2014 4:04:34 PM	13717
Lead	ND	0.0050		mg/L	5	6/17/2014 4:04:34 PM	13717
Selenium	0.0069	0.0050		mg/L	5	6/17/2014 4:04:34 PM	13717
Uranium	0.056	0.0050	*	mg/L	5	6/17/2014 4:04:34 PM	13717
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	6/18/2014 10:23:15 AM	13740
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Acenaphthylene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Aniline	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Anthracene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Azobenzene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Benz(a)anthracene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Benzo(a)pyrene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Benzo(b)fluoranthene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Benzo(g,h,i)perylene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Benzo(k)fluoranthene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Benzoic acid	ND	20		µg/L	1	6/10/2014 8:42:40 PM	13597
Benzyl alcohol	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Bis(2-chloroethyl)ether	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
4-Bromophenyl phenyl ether	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Butyl benzyl phthalate	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Carbazole	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
4-Chloro-3-methylphenol	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
4-Chloroaniline	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
2-Chloronaphthalene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
2-Chlorophenol	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Chrysene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Di-n-butyl phthalate	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Di-n-octyl phthalate	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Dibenz(a,h)anthracene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Dibenzofuran	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
1,2-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
1,3-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597

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Hall Environmental Analysis Laboratory, Inc.

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Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,4-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
3,3´-Dichlorobenzidine	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Diethyl phthalate	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Dimethyl phthalate	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
2,4-Dichlorophenol	ND	20		µg/L	1	6/10/2014 8:42:40 PM	13597
2,4-Dimethylphenol	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	6/10/2014 8:42:40 PM	13597
2,4-Dinitrophenol	ND	20		µg/L	1	6/10/2014 8:42:40 PM	13597
2,4-Dinitrotoluene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
2,6-Dinitrotoluene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Fluoranthene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Fluorene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Hexachlorobenzene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Hexachlorobutadiene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Hexachlorocyclopentadiene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Hexachloroethane	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Isophorone	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
1-Methylnaphthalene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
2-Methylnaphthalene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
2-Methylphenol	ND	20		µg/L	1	6/10/2014 8:42:40 PM	13597
3+4-Methylphenol	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
N-Nitrosodimethylamine	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
N-Nitrosodiphenylamine	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Naphthalene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
2-Nitroaniline	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
3-Nitroaniline	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
4-Nitroaniline	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Nitrobenzene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
2-Nitrophenol	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
4-Nitrophenol	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Pentachlorophenol	ND	20		µg/L	1	6/10/2014 8:42:40 PM	13597
Phenanthrene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Phenol	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Pyrene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Pyridine	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
1,2,4-Trichlorobenzene	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
2,4,5-Trichlorophenol	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597

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Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
2,4,6-Trichlorophenol	ND	10		µg/L	1	6/10/2014 8:42:40 PM	13597
Surr: 2-Fluorophenol	34.1	12.1-85.8		%REC	1	6/10/2014 8:42:40 PM	13597
Surr: Phenol-d5	31.7	17.7-65.8		%REC	1	6/10/2014 8:42:40 PM	13597
Surr: 2,4,6-Tribromophenol	61.0	26-138		%REC	1	6/10/2014 8:42:40 PM	13597
Surr: Nitrobenzene-d5	68.7	47.5-119		%REC	1	6/10/2014 8:42:40 PM	13597
Surr: 2-Fluorobiphenyl	65.2	48.1-106		%REC	1	6/10/2014 8:42:40 PM	13597
Surr: 4-Terphenyl-d14	58.7	44-113		%REC	1	6/10/2014 8:42:40 PM	13597
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	230	10		µg/L	10	6/13/2014 4:27:30 PM	R19253
Toluene	3.6	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
Ethylbenzene	22	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
Methyl tert-butyl ether (MTBE)	42	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
1,2,4-Trimethylbenzene	31	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
1,3,5-Trimethylbenzene	1.9	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
1,2-Dichloroethane (EDC)	8.1	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
Naphthalene	4.9	2.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
1-Methylnaphthalene	ND	4.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
2-Methylnaphthalene	ND	4.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
Acetone	12	10		µg/L	1	6/11/2014 8:00:04 PM	R19202
Bromobenzene	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
Bromodichloromethane	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
Bromoform	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
Bromomethane	ND	3.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
2-Butanone	ND	10		µg/L	1	6/11/2014 8:00:04 PM	R19202
Carbon disulfide	ND	10		µg/L	1	6/11/2014 8:00:04 PM	R19202
Carbon Tetrachloride	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
Chlorobenzene	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
Chloroethane	ND	2.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
Chloroform	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
Chloromethane	ND	3.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
2-Chlorotoluene	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
4-Chlorotoluene	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
cis-1,2-DCE	11	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
Dibromochloromethane	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
Dibromomethane	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202

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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
1,1-Dichloroethane	70	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
1,1-Dichloroethene	41	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
1,2-Dichloropropane	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
1,3-Dichloropropane	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
2,2-Dichloropropane	ND	2.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
1,1-Dichloropropene	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
Hexachlorobutadiene	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
2-Hexanone	ND	10		µg/L	1	6/11/2014 8:00:04 PM	R19202
Isopropylbenzene	3.1	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
4-Isopropyltoluene	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
4-Methyl-2-pentanone	ND	10		µg/L	1	6/11/2014 8:00:04 PM	R19202
Methylene Chloride	ND	3.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
n-Butylbenzene	ND	3.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
n-Propylbenzene	9.0	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
sec-Butylbenzene	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
Styrene	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
tert-Butylbenzene	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
trans-1,2-DCE	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
1,1,1-Trichloroethane	3.5	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
1,1,2-Trichloroethane	1.2	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
Trichloroethene (TCE)	4.1	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
Trichlorofluoromethane	ND	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
Vinyl chloride	1.0	1.0		µg/L	1	6/11/2014 8:00:04 PM	R19202
Xylenes, Total	34	1.5		µg/L	1	6/11/2014 8:00:04 PM	R19202
Surr: 1,2-Dichloroethane-d4	94.8	70-130		%REC	1	6/11/2014 8:00:04 PM	R19202
Surr: 4-Bromofluorobenzene	88.7	70-130		%REC	1	6/11/2014 8:00:04 PM	R19202
Surr: Dibromofluoromethane	100	70-130		%REC	1	6/11/2014 8:00:04 PM	R19202
Surr: Toluene-d8	103	70-130		%REC	1	6/11/2014 8:00:04 PM	R19202
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **cadg**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-2
Project: 2014 2nd Quarter
Collection Date: 6/6/2014 11:30:00 AM
Lab ID: 1406364-002
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **cadg**	
Gasoline Range Organics (GRO)	1.5	0.050		mg/L	1	6/11/2014 8:00:04 PM	R19202
Surr: BFB	94.8	70-130		%REC	1	6/11/2014 8:00:04 PM	R19202

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-4
Project: 2014 2nd Quarter
Collection Date: 6/4/2014 4:10:00 PM
Lab ID: 1406364-003
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	2.9	1.0		mg/L	1	6/11/2014 11:38:29 PM	13583
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	6/11/2014 11:38:29 PM	13583
Surr: DNOP	114	62.7-145		%REC	1	6/11/2014 11:38:29 PM	13583
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	0.70	0.10		mg/L	1	6/9/2014 1:33:46 PM	R19161
Chloride	190	10		mg/L	20	6/9/2014 1:46:10 PM	R19161
Bromide	1.8	0.10		mg/L	1	6/9/2014 1:33:46 PM	R19161
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	6/9/2014 1:33:46 PM	R19161
Sulfate	6.8	0.50		mg/L	1	6/9/2014 1:33:46 PM	R19161
Nitrate+Nitrite as N	ND	1.0		mg/L	5	6/9/2014 10:25:07 PM	R19165
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	1.9	0.010		mg/L	5	6/12/2014 4:47:59 PM	R19227
Cadmium	ND	0.0020		mg/L	1	6/12/2014 4:46:18 PM	R19227
Chromium	ND	0.0060		mg/L	1	6/12/2014 4:46:18 PM	R19227
Copper	ND	0.0060		mg/L	1	6/12/2014 4:46:18 PM	R19227
Iron	2.5	0.10	*	mg/L	5	6/12/2014 4:47:59 PM	R19227
Manganese	1.4	0.010	*	mg/L	5	6/12/2014 4:47:59 PM	R19227
Silver	ND	0.0050		mg/L	1	6/12/2014 4:46:18 PM	R19227
Zinc	ND	0.010		mg/L	1	6/12/2014 4:46:18 PM	R19227
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	1.4	0.010		mg/L	5	6/18/2014 1:22:59 PM	13717
Cadmium	ND	0.0020		mg/L	1	6/17/2014 2:23:44 PM	13717
Calcium	120	5.0		mg/L	5	6/18/2014 1:22:59 PM	13717
Chromium	0.0085	0.0060		mg/L	1	6/17/2014 2:23:44 PM	13717
Copper	0.013	0.0060		mg/L	1	6/17/2014 2:23:44 PM	13717
Iron	7.9	0.20	*	mg/L	10	6/18/2014 1:24:23 PM	13717
Magnesium	31	1.0		mg/L	1	6/17/2014 2:23:44 PM	13717
Manganese	2.1	0.010	*	mg/L	5	6/18/2014 1:22:59 PM	13717
Potassium	5.0	1.0		mg/L	1	6/17/2014 2:23:44 PM	13717
Silver	ND	0.0050		mg/L	1	6/18/2014 6:00:51 PM	13717
Sodium	340	5.0		mg/L	5	6/18/2014 6:02:31 PM	13717
Zinc	0.020	0.010		mg/L	1	6/18/2014 1:21:31 PM	13717
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0078	0.0050		mg/L	5	6/18/2014 3:53:12 PM	R19364
Lead	ND	0.0050		mg/L	5	6/18/2014 3:53:12 PM	R19364
Selenium	0.022	0.0050		mg/L	5	6/20/2014 3:54:57 PM	R19449
Uranium	ND	0.010		mg/L	10	6/25/2014 12:30:34 PM	R19508

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-4
Project: 2014 2nd Quarter
Collection Date: 6/4/2014 4:10:00 PM
Lab ID: 1406364-003
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0061	0.0050		mg/L	5	6/17/2014 4:09:33 PM	13717
Lead	0.013	0.0050		mg/L	5	6/17/2014 4:09:33 PM	13717
Selenium	0.013	0.0050		mg/L	5	6/17/2014 4:09:33 PM	13717
Uranium	0.0090	0.0050		mg/L	5	6/17/2014 4:09:33 PM	13717
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	6/18/2014 10:25:05 AM	13740
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Acenaphthylene	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Aniline	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Anthracene	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Azobenzene	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Benz(a)anthracene	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Benzo(a)pyrene	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Benzo(b)fluoranthene	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Benzo(g,h,i)perylene	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Benzo(k)fluoranthene	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Benzoic acid	21	20		µg/L	1	6/10/2014 9:11:48 PM	13597
Benzyl alcohol	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Bis(2-chloroethyl)ether	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
4-Bromophenyl phenyl ether	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Butyl benzyl phthalate	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Carbazole	11	10		µg/L	1	6/10/2014 9:11:48 PM	13597
4-Chloro-3-methylphenol	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
4-Chloroaniline	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
2-Chloronaphthalene	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
2-Chlorophenol	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Chrysene	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Di-n-butyl phthalate	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Di-n-octyl phthalate	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Dibenz(a,h)anthracene	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Dibenzofuran	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
1,2-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
1,3-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-4
Project: 2014 2nd Quarter
Collection Date: 6/4/2014 4:10:00 PM
Lab ID: 1406364-003
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,4-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
3,3´-Dichlorobenzidine	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Diethyl phthalate	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Dimethyl phthalate	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
2,4-Dichlorophenol	ND	20		µg/L	1	6/10/2014 9:11:48 PM	13597
2,4-Dimethylphenol	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	6/10/2014 9:11:48 PM	13597
2,4-Dinitrophenol	ND	20		µg/L	1	6/10/2014 9:11:48 PM	13597
2,4-Dinitrotoluene	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
2,6-Dinitrotoluene	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Fluoranthene	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Fluorene	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Hexachlorobenzene	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Hexachlorobutadiene	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Hexachlorocyclopentadiene	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Hexachloroethane	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Isophorone	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
1-Methylnaphthalene	110	10		µg/L	1	6/10/2014 9:11:48 PM	13597
2-Methylnaphthalene	140	10		µg/L	1	6/10/2014 9:11:48 PM	13597
2-Methylphenol	ND	20		µg/L	1	6/10/2014 9:11:48 PM	13597
3+4-Methylphenol	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
N-Nitrosodimethylamine	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
N-Nitrosodiphenylamine	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Naphthalene	240	20		µg/L	2	6/12/2014 1:11:20 PM	13597
2-Nitroaniline	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
3-Nitroaniline	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
4-Nitroaniline	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Nitrobenzene	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
2-Nitrophenol	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
4-Nitrophenol	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Pentachlorophenol	ND	20		µg/L	1	6/10/2014 9:11:48 PM	13597
Phenanthrene	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Phenol	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Pyrene	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Pyridine	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
1,2,4-Trichlorobenzene	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
2,4,5-Trichlorophenol	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-4
Project: 2014 2nd Quarter
Collection Date: 6/4/2014 4:10:00 PM
Lab ID: 1406364-003
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
2,4,6-Trichlorophenol	ND	10		µg/L	1	6/10/2014 9:11:48 PM	13597
Surr: 2-Fluorophenol	39.3	12.1-85.8		%REC	1	6/10/2014 9:11:48 PM	13597
Surr: Phenol-d5	39.7	17.7-65.8		%REC	1	6/10/2014 9:11:48 PM	13597
Surr: 2,4,6-Tribromophenol	75.9	26-138		%REC	1	6/10/2014 9:11:48 PM	13597
Surr: Nitrobenzene-d5	74.9	47.5-119		%REC	1	6/10/2014 9:11:48 PM	13597
Surr: 2-Fluorobiphenyl	74.5	48.1-106		%REC	1	6/10/2014 9:11:48 PM	13597
Surr: 4-Terphenyl-d14	70.0	44-113		%REC	1	6/10/2014 9:11:48 PM	13597
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	670	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
Toluene	19	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
Ethylbenzene	570	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
Methyl tert-butyl ether (MTBE)	1800	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
1,2,4-Trimethylbenzene	270	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
1,3,5-Trimethylbenzene	49	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
Naphthalene	310	20		µg/L	10	6/11/2014 9:26:51 PM	R19202
1-Methylnaphthalene	130	40		µg/L	10	6/11/2014 9:26:51 PM	R19202
2-Methylnaphthalene	170	40		µg/L	10	6/11/2014 9:26:51 PM	R19202
Acetone	ND	100		µg/L	10	6/11/2014 9:26:51 PM	R19202
Bromobenzene	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
Bromodichloromethane	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
Bromoform	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
Bromomethane	ND	30		µg/L	10	6/11/2014 9:26:51 PM	R19202
2-Butanone	ND	100		µg/L	10	6/11/2014 9:26:51 PM	R19202
Carbon disulfide	ND	100		µg/L	10	6/11/2014 9:26:51 PM	R19202
Carbon Tetrachloride	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
Chlorobenzene	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
Chloroethane	ND	20		µg/L	10	6/11/2014 9:26:51 PM	R19202
Chloroform	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
Chloromethane	ND	30		µg/L	10	6/11/2014 9:26:51 PM	R19202
2-Chlorotoluene	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
4-Chlorotoluene	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
cis-1,2-DCE	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
cis-1,3-Dichloropropene	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	6/11/2014 9:26:51 PM	R19202
Dibromochloromethane	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
Dibromomethane	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
1,2-Dichlorobenzene	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-4
Project: 2014 2nd Quarter
Collection Date: 6/4/2014 4:10:00 PM
Lab ID: 1406364-003
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,3-Dichlorobenzene	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
1,4-Dichlorobenzene	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
Dichlorodifluoromethane	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
1,1-Dichloroethane	11	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
1,1-Dichloroethene	21	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
1,2-Dichloropropane	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
1,3-Dichloropropane	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
2,2-Dichloropropane	ND	20		µg/L	10	6/11/2014 9:26:51 PM	R19202
1,1-Dichloropropene	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
Hexachlorobutadiene	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
2-Hexanone	ND	100		µg/L	10	6/11/2014 9:26:51 PM	R19202
Isopropylbenzene	20	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
4-Isopropyltoluene	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
4-Methyl-2-pentanone	ND	100		µg/L	10	6/11/2014 9:26:51 PM	R19202
Methylene Chloride	ND	30		µg/L	10	6/11/2014 9:26:51 PM	R19202
n-Butylbenzene	ND	30		µg/L	10	6/11/2014 9:26:51 PM	R19202
n-Propylbenzene	46	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
sec-Butylbenzene	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
Styrene	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
tert-Butylbenzene	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	6/11/2014 9:26:51 PM	R19202
Tetrachloroethene (PCE)	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
trans-1,2-DCE	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
trans-1,3-Dichloropropene	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
1,2,3-Trichlorobenzene	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
1,2,4-Trichlorobenzene	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
1,1,1-Trichloroethane	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
1,1,2-Trichloroethane	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
Trichloroethene (TCE)	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
Trichlorofluoromethane	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
1,2,3-Trichloropropane	ND	20		µg/L	10	6/11/2014 9:26:51 PM	R19202
Vinyl chloride	ND	10		µg/L	10	6/11/2014 9:26:51 PM	R19202
Xylenes, Total	680	15		µg/L	10	6/11/2014 9:26:51 PM	R19202
Surr: 1,2-Dichloroethane-d4	96.3	70-130		%REC	10	6/11/2014 9:26:51 PM	R19202
Surr: 4-Bromofluorobenzene	90.8	70-130		%REC	10	6/11/2014 9:26:51 PM	R19202
Surr: Dibromofluoromethane	107	70-130		%REC	10	6/11/2014 9:26:51 PM	R19202
Surr: Toluene-d8	102	70-130		%REC	10	6/11/2014 9:26:51 PM	R19202
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **cadg**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-4
Project: 2014 2nd Quarter
Collection Date: 6/4/2014 4:10:00 PM
Lab ID: 1406364-003
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **cadg**	
Gasoline Range Organics (GRO)	8.2	0.50		mg/L	10	6/11/2014 9:26:51 PM	R19202
Surr: BFB	96.5	70-130		%REC	10	6/11/2014 9:26:51 PM	R19202

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-9
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 5:30:00 PM
Lab ID: 1406364-004
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	2.7	1.0		mg/L	1	6/12/2014 12:08:17 AM	13583
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	6/12/2014 12:08:17 AM	13583
Surr: DNOP	117	62.7-145		%REC	1	6/12/2014 12:08:17 AM	13583
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	0.43	0.10		mg/L	1	6/9/2014 1:58:34 PM	R19161
Chloride	180	10		mg/L	20	6/9/2014 2:10:58 PM	R19161
Bromide	1.1	0.10		mg/L	1	6/9/2014 1:58:34 PM	R19161
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	6/9/2014 1:58:34 PM	R19161
Sulfate	78	10		mg/L	20	6/9/2014 2:10:58 PM	R19161
Nitrate+Nitrite as N	ND	1.0		mg/L	5	6/9/2014 10:37:31 PM	R19165
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.44	0.0020		mg/L	1	6/12/2014 4:49:51 PM	R19227
Cadmium	ND	0.0020		mg/L	1	6/12/2014 4:49:51 PM	R19227
Chromium	ND	0.0060		mg/L	1	6/12/2014 4:49:51 PM	R19227
Copper	ND	0.0060		mg/L	1	6/12/2014 4:49:51 PM	R19227
Iron	3.4	0.10	*	mg/L	5	6/12/2014 4:51:41 PM	R19227
Manganese	3.6	0.010	*	mg/L	5	6/12/2014 4:51:41 PM	R19227
Silver	ND	0.0050		mg/L	1	6/12/2014 4:49:51 PM	R19227
Zinc	ND	0.010		mg/L	1	6/12/2014 4:49:51 PM	R19227
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.58	0.0020		mg/L	1	6/17/2014 2:25:36 PM	13717
Cadmium	ND	0.0020		mg/L	1	6/17/2014 2:25:36 PM	13717
Calcium	150	5.0		mg/L	5	6/18/2014 1:27:27 PM	13717
Chromium	ND	0.0060		mg/L	1	6/17/2014 2:25:36 PM	13717
Copper	ND	0.0060		mg/L	1	6/17/2014 2:25:36 PM	13717
Iron	6.7	0.20	*	mg/L	10	6/18/2014 1:28:51 PM	13717
Magnesium	33	1.0		mg/L	1	6/17/2014 2:25:36 PM	13717
Manganese	3.8	0.010	*	mg/L	5	6/18/2014 1:27:27 PM	13717
Potassium	3.1	1.0		mg/L	1	6/17/2014 2:25:36 PM	13717
Silver	ND	0.0050		mg/L	1	6/18/2014 6:04:20 PM	13717
Sodium	220	5.0		mg/L	5	6/18/2014 6:05:59 PM	13717
Zinc	0.015	0.010		mg/L	1	6/18/2014 1:25:59 PM	13717
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	6/18/2014 3:58:11 PM	R19364
Lead	ND	0.0050		mg/L	5	6/18/2014 3:58:11 PM	R19364
Selenium	0.014	0.0050		mg/L	5	6/20/2014 3:57:59 PM	R19449
Uranium	ND	0.010		mg/L	10	6/25/2014 12:37:52 PM	R19508

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-9
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 5:30:00 PM
Lab ID: 1406364-004
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	6/17/2014 4:14:33 PM	13717
Lead	0.0058	0.0050		mg/L	5	6/17/2014 4:14:33 PM	13717
Selenium	0.0073	0.0050		mg/L	5	6/17/2014 4:14:33 PM	13717
Uranium	0.0060	0.0050		mg/L	5	6/17/2014 4:14:33 PM	13717
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	6/18/2014 10:26:56 AM	13740
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Acenaphthylene	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Aniline	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Anthracene	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Azobenzene	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Benz(a)anthracene	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Benzo(a)pyrene	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Benzo(b)fluoranthene	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Benzo(g,h,i)perylene	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Benzo(k)fluoranthene	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Benzoic acid	ND	20		µg/L	1	6/10/2014 9:40:43 PM	13597
Benzyl alcohol	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Bis(2-chloroethyl)ether	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
4-Bromophenyl phenyl ether	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Butyl benzyl phthalate	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Carbazole	10	10		µg/L	1	6/10/2014 9:40:43 PM	13597
4-Chloro-3-methylphenol	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
4-Chloroaniline	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
2-Chloronaphthalene	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
2-Chlorophenol	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Chrysene	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Di-n-butyl phthalate	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Di-n-octyl phthalate	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Dibenz(a,h)anthracene	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Dibenzofuran	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
1,2-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
1,3-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-9
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 5:30:00 PM
Lab ID: 1406364-004
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,4-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
3,3´-Dichlorobenzidine	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Diethyl phthalate	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Dimethyl phthalate	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
2,4-Dichlorophenol	ND	20		µg/L	1	6/10/2014 9:40:43 PM	13597
2,4-Dimethylphenol	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	6/10/2014 9:40:43 PM	13597
2,4-Dinitrophenol	ND	20		µg/L	1	6/10/2014 9:40:43 PM	13597
2,4-Dinitrotoluene	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
2,6-Dinitrotoluene	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Fluoranthene	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Fluorene	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Hexachlorobenzene	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Hexachlorobutadiene	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Hexachlorocyclopentadiene	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Hexachloroethane	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Isophorone	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
1-Methylnaphthalene	58	10		µg/L	1	6/10/2014 9:40:43 PM	13597
2-Methylnaphthalene	14	10		µg/L	1	6/10/2014 9:40:43 PM	13597
2-Methylphenol	ND	20		µg/L	1	6/10/2014 9:40:43 PM	13597
3+4-Methylphenol	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
N-Nitrosodimethylamine	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
N-Nitrosodiphenylamine	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Naphthalene	41	10		µg/L	1	6/10/2014 9:40:43 PM	13597
2-Nitroaniline	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
3-Nitroaniline	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
4-Nitroaniline	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Nitrobenzene	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
2-Nitrophenol	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
4-Nitrophenol	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Pentachlorophenol	ND	20		µg/L	1	6/10/2014 9:40:43 PM	13597
Phenanthrene	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Phenol	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Pyrene	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Pyridine	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
1,2,4-Trichlorobenzene	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
2,4,5-Trichlorophenol	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-9
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 5:30:00 PM
Lab ID: 1406364-004
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
2,4,6-Trichlorophenol	ND	10		µg/L	1	6/10/2014 9:40:43 PM	13597
Surr: 2-Fluorophenol	26.6	12.1-85.8		%REC	1	6/10/2014 9:40:43 PM	13597
Surr: Phenol-d5	35.0	17.7-65.8		%REC	1	6/10/2014 9:40:43 PM	13597
Surr: 2,4,6-Tribromophenol	30.8	26-138		%REC	1	6/10/2014 9:40:43 PM	13597
Surr: Nitrobenzene-d5	78.9	47.5-119		%REC	1	6/10/2014 9:40:43 PM	13597
Surr: 2-Fluorobiphenyl	75.5	48.1-106		%REC	1	6/10/2014 9:40:43 PM	13597
Surr: 4-Terphenyl-d14	72.3	44-113		%REC	1	6/10/2014 9:40:43 PM	13597
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	1300	100		µg/L	100	6/13/2014 4:56:17 PM	R19253
Toluene	52	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
Ethylbenzene	200	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
Methyl tert-butyl ether (MTBE)	1200	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
1,2,4-Trimethylbenzene	83	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
1,3,5-Trimethylbenzene	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
Naphthalene	68	20		µg/L	10	6/12/2014 12:48:19 AM	R19202
1-Methylnaphthalene	89	40		µg/L	10	6/12/2014 12:48:19 AM	R19202
2-Methylnaphthalene	ND	40		µg/L	10	6/12/2014 12:48:19 AM	R19202
Acetone	ND	100		µg/L	10	6/12/2014 12:48:19 AM	R19202
Bromobenzene	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
Bromodichloromethane	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
Bromoform	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
Bromomethane	ND	30		µg/L	10	6/12/2014 12:48:19 AM	R19202
2-Butanone	ND	100		µg/L	10	6/12/2014 12:48:19 AM	R19202
Carbon disulfide	ND	100		µg/L	10	6/12/2014 12:48:19 AM	R19202
Carbon Tetrachloride	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
Chlorobenzene	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
Chloroethane	ND	20		µg/L	10	6/12/2014 12:48:19 AM	R19202
Chloroform	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
Chloromethane	ND	30		µg/L	10	6/12/2014 12:48:19 AM	R19202
2-Chlorotoluene	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
4-Chlorotoluene	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
cis-1,2-DCE	14	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
cis-1,3-Dichloropropene	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	6/12/2014 12:48:19 AM	R19202
Dibromochloromethane	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
Dibromomethane	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
1,2-Dichlorobenzene	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-9
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 5:30:00 PM
Lab ID: 1406364-004
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,3-Dichlorobenzene	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
1,4-Dichlorobenzene	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
Dichlorodifluoromethane	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
1,1-Dichloroethane	26	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
1,1-Dichloroethene	41	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
1,2-Dichloropropane	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
1,3-Dichloropropane	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
2,2-Dichloropropane	ND	20		µg/L	10	6/12/2014 12:48:19 AM	R19202
1,1-Dichloropropene	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
Hexachlorobutadiene	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
2-Hexanone	ND	100		µg/L	10	6/12/2014 12:48:19 AM	R19202
Isopropylbenzene	17	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
4-Isopropyltoluene	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
4-Methyl-2-pentanone	ND	100		µg/L	10	6/12/2014 12:48:19 AM	R19202
Methylene Chloride	ND	30		µg/L	10	6/12/2014 12:48:19 AM	R19202
n-Butylbenzene	ND	30		µg/L	10	6/12/2014 12:48:19 AM	R19202
n-Propylbenzene	33	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
sec-Butylbenzene	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
Styrene	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
tert-Butylbenzene	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	6/12/2014 12:48:19 AM	R19202
Tetrachloroethene (PCE)	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
trans-1,2-DCE	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
trans-1,3-Dichloropropene	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
1,2,3-Trichlorobenzene	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
1,2,4-Trichlorobenzene	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
1,1,1-Trichloroethane	65	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
1,1,2-Trichloroethane	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
Trichloroethene (TCE)	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
Trichlorofluoromethane	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
1,2,3-Trichloropropane	ND	20		µg/L	10	6/12/2014 12:48:19 AM	R19202
Vinyl chloride	ND	10		µg/L	10	6/12/2014 12:48:19 AM	R19202
Xylenes, Total	98	15		µg/L	10	6/12/2014 12:48:19 AM	R19202
Surr: 1,2-Dichloroethane-d4	95.1	70-130		%REC	10	6/12/2014 12:48:19 AM	R19202
Surr: 4-Bromofluorobenzene	94.0	70-130		%REC	10	6/12/2014 12:48:19 AM	R19202
Surr: Dibromofluoromethane	102	70-130		%REC	10	6/12/2014 12:48:19 AM	R19202
Surr: Toluene-d8	101	70-130		%REC	10	6/12/2014 12:48:19 AM	R19202
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **cadg**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-9
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 5:30:00 PM
Lab ID: 1406364-004
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **cadg**	
Gasoline Range Organics (GRO)	6.2	0.50		mg/L	10	6/12/2014 12:48:19 AM	R19202
Surr: BFB	98.4	70-130		%REC	10	6/12/2014 12:48:19 AM	R19202

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-10
Project: 2014 2nd Quarter
Collection Date: 6/6/2014 7:45:00 AM
Lab ID: 1406364-005
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	5.5	1.0		mg/L	1	6/12/2014 12:38:05 AM	13583
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	6/12/2014 12:38:05 AM	13583
Surr: DNOP	114	62.7-145		%REC	1	6/12/2014 12:38:05 AM	13583
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	8.1	0.10	*	mg/L	50	6/12/2014 5:33:22 PM	R19227
Cadmium	ND	0.0020		mg/L	1	6/12/2014 4:53:31 PM	R19227
Chromium	ND	0.0060		mg/L	1	6/12/2014 4:53:31 PM	R19227
Copper	ND	0.0060		mg/L	1	6/12/2014 4:53:31 PM	R19227
Iron	18	1.0	*	mg/L	50	6/12/2014 5:33:22 PM	R19227
Manganese	9.2	0.10	*	mg/L	50	6/12/2014 5:33:22 PM	R19227
Silver	ND	0.0050		mg/L	1	6/12/2014 4:53:31 PM	R19227
Zinc	ND	0.010		mg/L	1	6/12/2014 4:53:31 PM	R19227
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	7.7	0.040	*	mg/L	20	6/18/2014 1:33:30 PM	13717
Cadmium	ND	0.0020		mg/L	1	6/17/2014 2:27:27 PM	13717
Calcium	410	5.0		mg/L	5	6/18/2014 1:32:02 PM	13717
Chromium	ND	0.0060		mg/L	1	6/17/2014 2:27:27 PM	13717
Copper	ND	0.0060		mg/L	1	6/17/2014 2:27:27 PM	13717
Iron	25	2.0	*	mg/L	100	6/18/2014 1:34:55 PM	13717
Magnesium	120	5.0		mg/L	5	6/18/2014 1:32:02 PM	13717
Manganese	9.5	0.040	*	mg/L	20	6/18/2014 1:33:30 PM	13717
Potassium	4.0	1.0		mg/L	1	6/17/2014 2:27:27 PM	13717
Silver	ND	0.0050		mg/L	1	6/18/2014 6:07:32 PM	13717
Sodium	490	20		mg/L	20	6/18/2014 6:09:15 PM	13717
Zinc	ND	0.010		mg/L	1	6/18/2014 1:30:27 PM	13717
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	6/18/2014 4:03:10 PM	R19364
Lead	ND	0.0050		mg/L	5	6/18/2014 4:03:10 PM	R19364
Selenium	0.011	0.0050		mg/L	5	6/20/2014 4:01:01 PM	R19449
Uranium	ND	0.010		mg/L	10	6/25/2014 12:40:17 PM	R19508
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	6/17/2014 4:19:32 PM	13717
Lead	ND	0.0050		mg/L	5	6/17/2014 4:19:32 PM	13717
Selenium	0.0061	0.0050		mg/L	5	6/17/2014 4:19:32 PM	13717
Uranium	ND	0.0050		mg/L	5	6/17/2014 4:19:32 PM	13717
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	6/18/2014 10:28:47 AM	13740

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-10
Project: 2014 2nd Quarter
Collection Date: 6/6/2014 7:45:00 AM
Lab ID: 1406364-005
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Acenaphthylene	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Aniline	75	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Anthracene	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Azobenzene	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Benz(a)anthracene	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Benzo(a)pyrene	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Benzo(b)fluoranthene	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Benzo(g,h,i)perylene	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Benzo(k)fluoranthene	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Benzoic acid	ND	20		µg/L	1	6/10/2014 10:09:47 PM	13597
Benzyl alcohol	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Bis(2-chloroethyl)ether	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
4-Bromophenyl phenyl ether	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Butyl benzyl phthalate	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Carbazole	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
4-Chloro-3-methylphenol	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
4-Chloroaniline	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
2-Chloronaphthalene	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
2-Chlorophenol	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Chrysene	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Di-n-butyl phthalate	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Di-n-octyl phthalate	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Dibenz(a,h)anthracene	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Dibenzofuran	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
1,2-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
1,3-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
1,4-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
3,3´-Dichlorobenzidine	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Diethyl phthalate	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Dimethyl phthalate	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
2,4-Dichlorophenol	ND	20		µg/L	1	6/10/2014 10:09:47 PM	13597
2,4-Dimethylphenol	110	10		µg/L	1	6/10/2014 10:09:47 PM	13597
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	6/10/2014 10:09:47 PM	13597
2,4-Dinitrophenol	ND	20		µg/L	1	6/10/2014 10:09:47 PM	13597

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-10
Project: 2014 2nd Quarter
Collection Date: 6/6/2014 7:45:00 AM
Lab ID: 1406364-005
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2,4-Dinitrotoluene	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
2,6-Dinitrotoluene	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Fluoranthene	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Fluorene	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Hexachlorobenzene	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Hexachlorobutadiene	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Hexachlorocyclopentadiene	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Hexachloroethane	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Isophorone	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
1-Methylnaphthalene	40	10		µg/L	1	6/10/2014 10:09:47 PM	13597
2-Methylnaphthalene	53	10		µg/L	1	6/10/2014 10:09:47 PM	13597
2-Methylphenol	490	80		µg/L	4	6/12/2014 1:40:31 PM	13597
3+4-Methylphenol	610	40		µg/L	4	6/12/2014 1:40:31 PM	13597
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
N-Nitrosodimethylamine	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
N-Nitrosodiphenylamine	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Naphthalene	140	10		µg/L	1	6/10/2014 10:09:47 PM	13597
2-Nitroaniline	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
3-Nitroaniline	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
4-Nitroaniline	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Nitrobenzene	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
2-Nitrophenol	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
4-Nitrophenol	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Pentachlorophenol	ND	20		µg/L	1	6/10/2014 10:09:47 PM	13597
Phenanthrene	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Phenol	370	40		µg/L	4	6/12/2014 1:40:31 PM	13597
Pyrene	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Pyridine	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
1,2,4-Trichlorobenzene	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
2,4,5-Trichlorophenol	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
2,4,6-Trichlorophenol	ND	10		µg/L	1	6/10/2014 10:09:47 PM	13597
Surr: 2-Fluorophenol	19.6	12.1-85.8		%REC	1	6/10/2014 10:09:47 PM	13597
Surr: Phenol-d5	49.4	17.7-65.8		%REC	1	6/10/2014 10:09:47 PM	13597
Surr: 2,4,6-Tribromophenol	67.3	26-138		%REC	1	6/10/2014 10:09:47 PM	13597
Surr: Nitrobenzene-d5	82.5	47.5-119		%REC	1	6/10/2014 10:09:47 PM	13597
Surr: 2-Fluorobiphenyl	85.9	48.1-106		%REC	1	6/10/2014 10:09:47 PM	13597
Surr: 4-Terphenyl-d14	80.6	44-113		%REC	1	6/10/2014 10:09:47 PM	13597
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-10
Project: 2014 2nd Quarter
Collection Date: 6/6/2014 7:45:00 AM
Lab ID: 1406364-005
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	12000	200		µg/L	200	6/13/2014 5:25:06 PM	R19253
Toluene	14000	200		µg/L	200	6/13/2014 5:25:06 PM	R19253
Ethylbenzene	740	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
Methyl tert-butyl ether (MTBE)	19	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
1,2,4-Trimethylbenzene	270	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
1,3,5-Trimethylbenzene	65	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
Naphthalene	79	20		µg/L	10	6/12/2014 1:16:58 AM	R19202
1-Methylnaphthalene	ND	40		µg/L	10	6/12/2014 1:16:58 AM	R19202
2-Methylnaphthalene	ND	40		µg/L	10	6/12/2014 1:16:58 AM	R19202
Acetone	210	100		µg/L	10	6/12/2014 1:16:58 AM	R19202
Bromobenzene	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
Bromodichloromethane	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
Bromoform	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
Bromomethane	ND	30		µg/L	10	6/12/2014 1:16:58 AM	R19202
2-Butanone	1800	100		µg/L	10	6/12/2014 1:16:58 AM	R19202
Carbon disulfide	ND	100		µg/L	10	6/12/2014 1:16:58 AM	R19202
Carbon Tetrachloride	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
Chlorobenzene	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
Chloroethane	ND	20		µg/L	10	6/12/2014 1:16:58 AM	R19202
Chloroform	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
Chloromethane	ND	30		µg/L	10	6/12/2014 1:16:58 AM	R19202
2-Chlorotoluene	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
4-Chlorotoluene	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
cis-1,2-DCE	33	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
cis-1,3-Dichloropropene	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	6/12/2014 1:16:58 AM	R19202
Dibromochloromethane	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
Dibromomethane	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
1,2-Dichlorobenzene	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
1,3-Dichlorobenzene	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
1,4-Dichlorobenzene	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
Dichlorodifluoromethane	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
1,1-Dichloroethane	51	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
1,1-Dichloroethene	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
1,2-Dichloropropane	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
1,3-Dichloropropane	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
2,2-Dichloropropane	ND	20		µg/L	10	6/12/2014 1:16:58 AM	R19202

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-10
Project: 2014 2nd Quarter
Collection Date: 6/6/2014 7:45:00 AM
Lab ID: 1406364-005
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,1-Dichloropropene	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
Hexachlorobutadiene	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
2-Hexanone	ND	100		µg/L	10	6/12/2014 1:16:58 AM	R19202
Isopropylbenzene	19	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
4-Isopropyltoluene	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
4-Methyl-2-pentanone	ND	100		µg/L	10	6/12/2014 1:16:58 AM	R19202
Methylene Chloride	ND	30		µg/L	10	6/12/2014 1:16:58 AM	R19202
n-Butylbenzene	ND	30		µg/L	10	6/12/2014 1:16:58 AM	R19202
n-Propylbenzene	38	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
sec-Butylbenzene	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
Styrene	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
tert-Butylbenzene	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	6/12/2014 1:16:58 AM	R19202
Tetrachloroethene (PCE)	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
trans-1,2-DCE	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
trans-1,3-Dichloropropene	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
1,2,3-Trichlorobenzene	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
1,2,4-Trichlorobenzene	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
1,1,1-Trichloroethane	15	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
1,1,2-Trichloroethane	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
Trichloroethene (TCE)	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
Trichlorofluoromethane	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
1,2,3-Trichloropropane	ND	20		µg/L	10	6/12/2014 1:16:58 AM	R19202
Vinyl chloride	ND	10		µg/L	10	6/12/2014 1:16:58 AM	R19202
Xylenes, Total	3400	300		µg/L	200	6/13/2014 5:25:06 PM	R19253
Surr: 1,2-Dichloroethane-d4	97.3	70-130		%REC	10	6/12/2014 1:16:58 AM	R19202
Surr: 4-Bromofluorobenzene	91.1	70-130		%REC	10	6/12/2014 1:16:58 AM	R19202
Surr: Dibromofluoromethane	103	70-130		%REC	10	6/12/2014 1:16:58 AM	R19202
Surr: Toluene-d8	101	70-130		%REC	10	6/12/2014 1:16:58 AM	R19202
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **cadg**	
Gasoline Range Organics (GRO)	64	10		mg/L	200	6/13/2014 5:25:06 PM	R19253
Surr: BFB	93.4	70-130		%REC	200	6/13/2014 5:25:06 PM	R19253

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Hall Environmental Analysis Laboratory, Inc.

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Project: 2014 2nd Quarter
Collection Date: 6/5/2014 3:15:00 PM
Lab ID: 1406364-006
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	2.6	1.0		mg/L	1	6/12/2014 1:07:48 AM	13583
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	6/12/2014 1:07:48 AM	13583
Surr: DNOP	90.9	62.7-145		%REC	1	6/12/2014 1:07:48 AM	13583
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	7.0	2.0	*	mg/L	20	6/9/2014 3:25:25 PM	R19161
Chloride	480	25		mg/L	50	6/11/2014 3:20:09 AM	R19191
Bromide	0.67	0.10		mg/L	1	6/9/2014 3:13:01 PM	R19161
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	6/9/2014 3:13:01 PM	R19161
Sulfate	11	0.50		mg/L	1	6/9/2014 3:13:01 PM	R19161
Nitrate+Nitrite as N	ND	1.0		mg/L	5	6/9/2014 11:02:21 PM	R19165
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	1.8	0.010		mg/L	5	6/12/2014 4:59:04 PM	R19227
Cadmium	ND	0.0020		mg/L	1	6/12/2014 4:57:05 PM	R19227
Chromium	0.0060	0.0060		mg/L	1	6/12/2014 4:57:05 PM	R19227
Copper	ND	0.0060		mg/L	1	6/12/2014 4:57:05 PM	R19227
Iron	11	1.0	*	mg/L	50	6/12/2014 5:35:16 PM	R19227
Manganese	3.6	0.010	*	mg/L	5	6/12/2014 4:59:04 PM	R19227
Silver	ND	0.0050		mg/L	1	6/12/2014 4:57:05 PM	R19227
Zinc	0.036	0.010		mg/L	1	6/12/2014 4:57:05 PM	R19227
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	1.2	0.010		mg/L	5	6/18/2014 1:43:58 PM	13717
Cadmium	ND	0.0020		mg/L	1	6/17/2014 2:29:17 PM	13717
Calcium	110	5.0		mg/L	5	6/18/2014 1:43:58 PM	13717
Chromium	0.0061	0.0060		mg/L	1	6/17/2014 2:29:17 PM	13717
Copper	ND	0.0060		mg/L	1	6/17/2014 2:29:17 PM	13717
Iron	8.8	0.20	*	mg/L	10	6/18/2014 1:45:24 PM	13717
Magnesium	31	1.0		mg/L	1	6/17/2014 2:29:17 PM	13717
Manganese	2.8	0.010	*	mg/L	5	6/18/2014 1:43:58 PM	13717
Potassium	4.7	1.0		mg/L	1	6/17/2014 2:29:17 PM	13717
Silver	ND	0.0050		mg/L	1	6/18/2014 6:16:18 PM	13717
Sodium	530	10		mg/L	10	6/18/2014 6:18:02 PM	13717
Zinc	0.038	0.010		mg/L	1	6/18/2014 1:42:19 PM	13717
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0064	0.0050		mg/L	5	6/18/2014 4:08:09 PM	R19364
Lead	0.022	0.0050	*	mg/L	5	6/18/2014 4:08:09 PM	R19364
Selenium	0.010	0.0050		mg/L	5	6/20/2014 4:04:05 PM	R19449
Uranium	ND	0.010		mg/L	10	6/25/2014 12:42:44 PM	R19508

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Hall Environmental Analysis Laboratory, Inc.

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Lab ID: 1406364-006
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0063	0.0050		mg/L	5	6/17/2014 4:24:31 PM	13717
Lead	0.0093	0.0050		mg/L	5	6/17/2014 4:24:31 PM	13717
Selenium	0.0055	0.0050		mg/L	5	6/17/2014 4:24:31 PM	13717
Uranium	ND	0.0050		mg/L	5	6/17/2014 4:24:31 PM	13717
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	6/18/2014 12:20:26 PM	13740
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Acenaphthylene	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Aniline	25	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Anthracene	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Azobenzene	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Benz(a)anthracene	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Benzo(a)pyrene	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Benzo(b)fluoranthene	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Benzo(g,h,i)perylene	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Benzo(k)fluoranthene	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Benzoic acid	ND	20		µg/L	1	6/10/2014 10:38:45 PM	13597
Benzyl alcohol	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Bis(2-chloroethyl)ether	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
4-Bromophenyl phenyl ether	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Butyl benzyl phthalate	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Carbazole	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
4-Chloro-3-methylphenol	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
4-Chloroaniline	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
2-Chloronaphthalene	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
2-Chlorophenol	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Chrysene	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Di-n-butyl phthalate	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Di-n-octyl phthalate	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Dibenz(a,h)anthracene	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Dibenzofuran	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
1,2-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
1,3-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597

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Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,4-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
3,3´-Dichlorobenzidine	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Diethyl phthalate	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Dimethyl phthalate	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
2,4-Dichlorophenol	ND	20		µg/L	1	6/10/2014 10:38:45 PM	13597
2,4-Dimethylphenol	92	10		µg/L	1	6/10/2014 10:38:45 PM	13597
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	6/10/2014 10:38:45 PM	13597
2,4-Dinitrophenol	ND	20		µg/L	1	6/10/2014 10:38:45 PM	13597
2,4-Dinitrotoluene	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
2,6-Dinitrotoluene	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Fluoranthene	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Fluorene	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Hexachlorobenzene	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Hexachlorobutadiene	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Hexachlorocyclopentadiene	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Hexachloroethane	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Isophorone	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
1-Methylnaphthalene	11	10		µg/L	1	6/10/2014 10:38:45 PM	13597
2-Methylnaphthalene	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
2-Methylphenol	180	20		µg/L	1	6/10/2014 10:38:45 PM	13597
3+4-Methylphenol	130	10		µg/L	1	6/10/2014 10:38:45 PM	13597
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
N-Nitrosodimethylamine	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
N-Nitrosodiphenylamine	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Naphthalene	46	10		µg/L	1	6/10/2014 10:38:45 PM	13597
2-Nitroaniline	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
3-Nitroaniline	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
4-Nitroaniline	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Nitrobenzene	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
2-Nitrophenol	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
4-Nitrophenol	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Pentachlorophenol	ND	20		µg/L	1	6/10/2014 10:38:45 PM	13597
Phenanthrene	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Phenol	32	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Pyrene	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Pyridine	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
1,2,4-Trichlorobenzene	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
2,4,5-Trichlorophenol	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597

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Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
2,4,6-Trichlorophenol	ND	10		µg/L	1	6/10/2014 10:38:45 PM	13597
Surr: 2-Fluorophenol	25.6	12.1-85.8		%REC	1	6/10/2014 10:38:45 PM	13597
Surr: Phenol-d5	39.0	17.7-65.8		%REC	1	6/10/2014 10:38:45 PM	13597
Surr: 2,4,6-Tribromophenol	57.0	26-138		%REC	1	6/10/2014 10:38:45 PM	13597
Surr: Nitrobenzene-d5	74.7	47.5-119		%REC	1	6/10/2014 10:38:45 PM	13597
Surr: 2-Fluorobiphenyl	71.5	48.1-106		%REC	1	6/10/2014 10:38:45 PM	13597
Surr: 4-Terphenyl-d14	69.9	44-113		%REC	1	6/10/2014 10:38:45 PM	13597
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	12000	200		µg/L	200	6/13/2014 5:53:52 PM	R19253
Toluene	7800	200		µg/L	200	6/13/2014 5:53:52 PM	R19253
Ethylbenzene	750	200		µg/L	200	6/13/2014 5:53:52 PM	R19253
Methyl tert-butyl ether (MTBE)	96	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
1,2,4-Trimethylbenzene	270	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
1,3,5-Trimethylbenzene	52	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
Naphthalene	66	10		µg/L	5	6/12/2014 1:45:36 AM	R19202
1-Methylnaphthalene	ND	20		µg/L	5	6/12/2014 1:45:36 AM	R19202
2-Methylnaphthalene	ND	20		µg/L	5	6/12/2014 1:45:36 AM	R19202
Acetone	290	50		µg/L	5	6/12/2014 1:45:36 AM	R19202
Bromobenzene	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
Bromodichloromethane	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
Bromoform	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
Bromomethane	ND	15		µg/L	5	6/12/2014 1:45:36 AM	R19202
2-Butanone	170	50		µg/L	5	6/12/2014 1:45:36 AM	R19202
Carbon disulfide	ND	50		µg/L	5	6/12/2014 1:45:36 AM	R19202
Carbon Tetrachloride	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
Chlorobenzene	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
Chloroethane	ND	10		µg/L	5	6/12/2014 1:45:36 AM	R19202
Chloroform	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
Chloromethane	ND	15		µg/L	5	6/12/2014 1:45:36 AM	R19202
2-Chlorotoluene	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
4-Chlorotoluene	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
cis-1,2-DCE	16	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
cis-1,3-Dichloropropene	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
1,2-Dibromo-3-chloropropane	ND	10		µg/L	5	6/12/2014 1:45:36 AM	R19202
Dibromochloromethane	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
Dibromomethane	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
1,2-Dichlorobenzene	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202

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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,3-Dichlorobenzene	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
1,4-Dichlorobenzene	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
Dichlorodifluoromethane	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
1,1-Dichloroethane	53	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
1,1-Dichloroethene	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
1,2-Dichloropropane	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
1,3-Dichloropropane	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
2,2-Dichloropropane	ND	10		µg/L	5	6/12/2014 1:45:36 AM	R19202
1,1-Dichloropropene	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
Hexachlorobutadiene	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
2-Hexanone	ND	50		µg/L	5	6/12/2014 1:45:36 AM	R19202
Isopropylbenzene	29	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
4-Isopropyltoluene	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
4-Methyl-2-pentanone	ND	50		µg/L	5	6/12/2014 1:45:36 AM	R19202
Methylene Chloride	ND	15		µg/L	5	6/12/2014 1:45:36 AM	R19202
n-Butylbenzene	ND	15		µg/L	5	6/12/2014 1:45:36 AM	R19202
n-Propylbenzene	68	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
sec-Butylbenzene	7.8	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
Styrene	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
tert-Butylbenzene	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
1,1,2,2-Tetrachloroethane	ND	10		µg/L	5	6/12/2014 1:45:36 AM	R19202
Tetrachloroethene (PCE)	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
trans-1,2-DCE	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
trans-1,3-Dichloropropene	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
1,2,3-Trichlorobenzene	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
1,2,4-Trichlorobenzene	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
1,1,1-Trichloroethane	14	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
1,1,2-Trichloroethane	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
Trichloroethene (TCE)	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
Trichlorofluoromethane	ND	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
1,2,3-Trichloropropane	ND	10		µg/L	5	6/12/2014 1:45:36 AM	R19202
Vinyl chloride	18	5.0		µg/L	5	6/12/2014 1:45:36 AM	R19202
Xylenes, Total	2200	300		µg/L	200	6/13/2014 5:53:52 PM	R19253
Surr: 1,2-Dichloroethane-d4	89.1	70-130		%REC	5	6/12/2014 1:45:36 AM	R19202
Surr: 4-Bromofluorobenzene	86.3	70-130		%REC	5	6/12/2014 1:45:36 AM	R19202
Surr: Dibromofluoromethane	97.3	70-130		%REC	5	6/12/2014 1:45:36 AM	R19202
Surr: Toluene-d8	97.6	70-130		%REC	5	6/12/2014 1:45:36 AM	R19202
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **cadg**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-11
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 3:15:00 PM
Lab ID: 1406364-006
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **cadg**	
Gasoline Range Organics (GRO)	48	10		mg/L	200	6/13/2014 5:53:52 PM	R19253
Surr: BFB	92.6	70-130		%REC	200	6/13/2014 5:53:52 PM	R19253

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-15
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 3:00:00 PM
Lab ID: 1406364-007
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	10	1.0		mg/L	1	6/12/2014 1:37:49 AM	13583
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	6/12/2014 1:37:49 AM	13583
Surr: DNOP	114	62.7-145		%REC	1	6/12/2014 1:37:49 AM	13583
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	ND	2.0		mg/L	20	6/9/2014 3:50:15 PM	R19161
Chloride	5200	500		mg/L	1E	6/20/2014 11:43:00 AM	R19420
Bromide	ND	2.0		mg/L	20	6/9/2014 3:50:15 PM	R19161
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	6/9/2014 3:37:50 PM	R19161
Sulfate	1.2	0.50		mg/L	1	6/9/2014 3:37:50 PM	R19161
Nitrate+Nitrite as N	ND	4.0		mg/L	20	6/11/2014 3:57:23 AM	R19191
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	25	0.10	*	mg/L	50	6/13/2014 3:25:41 PM	R19281
Cadmium	ND	0.0020		mg/L	1	6/12/2014 5:07:45 PM	R19227
Chromium	ND	0.0060		mg/L	1	6/12/2014 5:07:45 PM	R19227
Copper	ND	0.0060		mg/L	1	6/12/2014 5:07:45 PM	R19227
Iron	11	1.0	*	mg/L	50	6/13/2014 3:25:41 PM	R19281
Manganese	7.5	0.10	*	mg/L	50	6/13/2014 3:25:41 PM	R19281
Silver	ND	0.0050		mg/L	1	6/12/2014 5:07:45 PM	R19227
Zinc	0.011	0.010		mg/L	1	6/12/2014 5:07:45 PM	R19227
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	25	0.10	*	mg/L	50	6/18/2014 1:49:55 PM	13717
Cadmium	ND	0.0020		mg/L	1	6/17/2014 2:31:13 PM	13717
Calcium	880	10		mg/L	10	6/18/2014 1:48:28 PM	13717
Chromium	0.0074	0.0060		mg/L	1	6/17/2014 2:31:13 PM	13717
Copper	ND	0.0060		mg/L	1	6/17/2014 2:31:13 PM	13717
Iron	11	1.0	*	mg/L	50	6/18/2014 1:49:55 PM	13717
Magnesium	260	10		mg/L	10	6/18/2014 1:48:28 PM	13717
Manganese	7.9	0.020	*	mg/L	10	6/18/2014 1:48:28 PM	13717
Potassium	14	1.0		mg/L	1	6/17/2014 2:31:13 PM	13717
Silver	ND	0.0050		mg/L	1	6/18/2014 6:19:44 PM	13717
Sodium	2400	50		mg/L	50	6/18/2014 6:21:30 PM	13717
Zinc	0.017	0.010		mg/L	1	6/18/2014 1:46:49 PM	13717
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	6/18/2014 4:13:09 PM	R19364
Lead	ND	0.0050		mg/L	5	6/18/2014 4:13:09 PM	R19364
Selenium	ND	0.010		mg/L	10	6/25/2014 2:10:58 PM	R19508
Uranium	ND	0.010		mg/L	10	6/25/2014 12:45:08 PM	R19508

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-15
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 3:00:00 PM
Lab ID: 1406364-007
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	6/17/2014 5:54:24 PM	13717
Lead	0.011	0.0050		mg/L	5	6/17/2014 4:29:30 PM	13717
Selenium	ND	0.010		mg/L	10	6/17/2014 5:54:24 PM	13717
Uranium	ND	0.0050		mg/L	5	6/17/2014 4:29:30 PM	13717
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	6/18/2014 12:22:12 PM	13740
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Acenaphthylene	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Aniline	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Anthracene	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Azobenzene	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Benz(a)anthracene	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Benzo(a)pyrene	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Benzo(b)fluoranthene	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Benzo(g,h,i)perylene	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Benzo(k)fluoranthene	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Benzoic acid	23	20		µg/L	1	6/12/2014 8:31:32 PM	13597
Benzyl alcohol	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Bis(2-chloroethyl)ether	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
4-Bromophenyl phenyl ether	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Butyl benzyl phthalate	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Carbazole	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
4-Chloro-3-methylphenol	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
4-Chloroaniline	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
2-Chloronaphthalene	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
2-Chlorophenol	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Chrysene	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Di-n-butyl phthalate	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Di-n-octyl phthalate	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Dibenz(a,h)anthracene	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Dibenzofuran	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
1,2-Dichlorobenzene	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
1,3-Dichlorobenzene	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-15
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 3:00:00 PM
Lab ID: 1406364-007
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,4-Dichlorobenzene	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
3,3´-Dichlorobenzidine	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Diethyl phthalate	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Dimethyl phthalate	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
2,4-Dichlorophenol	ND	20		µg/L	1	6/12/2014 8:31:32 PM	13597
2,4-Dimethylphenol	13	10		µg/L	1	6/12/2014 8:31:32 PM	13597
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	6/12/2014 8:31:32 PM	13597
2,4-Dinitrophenol	ND	20		µg/L	1	6/12/2014 8:31:32 PM	13597
2,4-Dinitrotoluene	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
2,6-Dinitrotoluene	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Fluoranthene	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Fluorene	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Hexachlorobenzene	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Hexachlorobutadiene	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Hexachlorocyclopentadiene	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Hexachloroethane	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Isophorone	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
1-Methylnaphthalene	21	10		µg/L	1	6/12/2014 8:31:32 PM	13597
2-Methylnaphthalene	21	10		µg/L	1	6/12/2014 8:31:32 PM	13597
2-Methylphenol	28	20		µg/L	1	6/12/2014 8:31:32 PM	13597
3+4-Methylphenol	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
N-Nitrosodimethylamine	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
N-Nitrosodiphenylamine	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Naphthalene	50	10		µg/L	1	6/12/2014 8:31:32 PM	13597
2-Nitroaniline	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
3-Nitroaniline	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
4-Nitroaniline	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Nitrobenzene	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
2-Nitrophenol	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
4-Nitrophenol	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Pentachlorophenol	ND	20		µg/L	1	6/12/2014 8:31:32 PM	13597
Phenanthrene	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Phenol	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Pyrene	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Pyridine	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
1,2,4-Trichlorobenzene	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
2,4,5-Trichlorophenol	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-15
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 3:00:00 PM
Lab ID: 1406364-007
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
2,4,6-Trichlorophenol	ND	10		µg/L	1	6/12/2014 8:31:32 PM	13597
Surr: 2-Fluorophenol	4.42	12.1-85.8	S	%REC	1	6/12/2014 8:31:32 PM	13597
Surr: Phenol-d5	17.3	17.7-65.8	S	%REC	1	6/12/2014 8:31:32 PM	13597
Surr: 2,4,6-Tribromophenol	14.4	26-138	S	%REC	1	6/12/2014 8:31:32 PM	13597
Surr: Nitrobenzene-d5	101	47.5-119		%REC	1	6/12/2014 8:31:32 PM	13597
Surr: 2-Fluorobiphenyl	97.7	48.1-106		%REC	1	6/12/2014 8:31:32 PM	13597
Surr: 4-Terphenyl-d14	89.9	44-113		%REC	1	6/12/2014 8:31:32 PM	13597
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	12000	200		µg/L	200	6/13/2014 6:22:38 PM	R19253
Toluene	8800	200		µg/L	200	6/13/2014 6:22:38 PM	R19253
Ethylbenzene	1300	200		µg/L	200	6/13/2014 6:22:38 PM	R19253
Methyl tert-butyl ether (MTBE)	270	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
1,2,4-Trimethylbenzene	330	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
1,3,5-Trimethylbenzene	95	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
Naphthalene	80	10		µg/L	5	6/12/2014 2:14:21 AM	R19202
1-Methylnaphthalene	30	20		µg/L	5	6/12/2014 2:14:21 AM	R19202
2-Methylnaphthalene	35	20		µg/L	5	6/12/2014 2:14:21 AM	R19202
Acetone	290	50		µg/L	5	6/12/2014 2:14:21 AM	R19202
Bromobenzene	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
Bromodichloromethane	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
Bromoform	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
Bromomethane	ND	15		µg/L	5	6/12/2014 2:14:21 AM	R19202
2-Butanone	62	50		µg/L	5	6/12/2014 2:14:21 AM	R19202
Carbon disulfide	ND	50		µg/L	5	6/12/2014 2:14:21 AM	R19202
Carbon Tetrachloride	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
Chlorobenzene	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
Chloroethane	ND	10		µg/L	5	6/12/2014 2:14:21 AM	R19202
Chloroform	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
Chloromethane	ND	15		µg/L	5	6/12/2014 2:14:21 AM	R19202
2-Chlorotoluene	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
4-Chlorotoluene	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
cis-1,2-DCE	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
cis-1,3-Dichloropropene	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
1,2-Dibromo-3-chloropropane	ND	10		µg/L	5	6/12/2014 2:14:21 AM	R19202
Dibromochloromethane	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
Dibromomethane	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
1,2-Dichlorobenzene	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-15
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 3:00:00 PM
Lab ID: 1406364-007
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,3-Dichlorobenzene	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
1,4-Dichlorobenzene	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
Dichlorodifluoromethane	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
1,1-Dichloroethane	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
1,1-Dichloroethene	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
1,2-Dichloropropane	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
1,3-Dichloropropane	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
2,2-Dichloropropane	ND	10		µg/L	5	6/12/2014 2:14:21 AM	R19202
1,1-Dichloropropene	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
Hexachlorobutadiene	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
2-Hexanone	ND	50		µg/L	5	6/12/2014 2:14:21 AM	R19202
Isopropylbenzene	59	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
4-Isopropyltoluene	5.9	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
4-Methyl-2-pentanone	ND	50		µg/L	5	6/12/2014 2:14:21 AM	R19202
Methylene Chloride	ND	15		µg/L	5	6/12/2014 2:14:21 AM	R19202
n-Butylbenzene	ND	15		µg/L	5	6/12/2014 2:14:21 AM	R19202
n-Propylbenzene	97	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
sec-Butylbenzene	12	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
Styrene	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
tert-Butylbenzene	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
1,1,2,2-Tetrachloroethane	ND	10		µg/L	5	6/12/2014 2:14:21 AM	R19202
Tetrachloroethene (PCE)	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
trans-1,2-DCE	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
trans-1,3-Dichloropropene	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
1,2,3-Trichlorobenzene	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
1,2,4-Trichlorobenzene	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
1,1,1-Trichloroethane	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
1,1,2-Trichloroethane	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
Trichloroethene (TCE)	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
Trichlorofluoromethane	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
1,2,3-Trichloropropane	ND	10		µg/L	5	6/12/2014 2:14:21 AM	R19202
Vinyl chloride	ND	5.0		µg/L	5	6/12/2014 2:14:21 AM	R19202
Xylenes, Total	3700	300		µg/L	200	6/13/2014 6:22:38 PM	R19253
Surr: 1,2-Dichloroethane-d4	92.8	70-130		%REC	5	6/12/2014 2:14:21 AM	R19202
Surr: 4-Bromofluorobenzene	82.0	70-130		%REC	5	6/12/2014 2:14:21 AM	R19202
Surr: Dibromofluoromethane	97.2	70-130		%REC	5	6/12/2014 2:14:21 AM	R19202
Surr: Toluene-d8	107	70-130		%REC	5	6/12/2014 2:14:21 AM	R19202
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **cadg**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-15
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 3:00:00 PM
Lab ID: 1406364-007
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **cadg**	
Gasoline Range Organics (GRO)	57	10		mg/L	200	6/13/2014 6:22:38 PM	R19253
Surr: BFB	94.2	70-130		%REC	200	6/13/2014 6:22:38 PM	R19253

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-16
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 4:35:00 PM
Lab ID: 1406364-008
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	5.7	1.0		mg/L	1	6/12/2014 2:07:54 AM	13583
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	6/12/2014 2:07:54 AM	13583
Surr: DNOP	116	62.7-145		%REC	1	6/12/2014 2:07:54 AM	13583
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	1.1	0.50		mg/L	5	6/9/2014 4:02:40 PM	R19161
Chloride	540	25		mg/L	50	6/11/2014 3:44:58 AM	R19191
Bromide	1.7	0.50		mg/L	5	6/9/2014 4:02:40 PM	R19161
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	6/9/2014 4:02:40 PM	R19161
Sulfate	ND	2.5		mg/L	5	6/9/2014 4:02:40 PM	R19161
Nitrate+Nitrite as N	ND	1.0	H	mg/L	5	6/9/2014 4:02:40 PM	R19161
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.81	0.0020		mg/L	1	6/12/2014 5:11:06 PM	R19227
Cadmium	ND	0.0020		mg/L	1	6/12/2014 5:11:06 PM	R19227
Chromium	ND	0.0060		mg/L	1	6/12/2014 5:11:06 PM	R19227
Copper	ND	0.0060		mg/L	1	6/12/2014 5:11:06 PM	R19227
Iron	7.9	0.20	*	mg/L	10	6/13/2014 3:34:56 PM	R19281
Manganese	1.3	0.010	*	mg/L	5	6/12/2014 5:12:55 PM	R19227
Silver	ND	0.0050		mg/L	1	6/12/2014 5:11:06 PM	R19227
Zinc	0.022	0.010		mg/L	1	6/12/2014 5:11:06 PM	R19227
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.90	0.0020		mg/L	1	6/17/2014 2:33:00 PM	13717
Cadmium	ND	0.0020		mg/L	1	6/17/2014 2:33:00 PM	13717
Calcium	68	1.0		mg/L	1	6/17/2014 2:33:00 PM	13717
Chromium	ND	0.0060		mg/L	1	6/17/2014 2:33:00 PM	13717
Copper	0.0080	0.0060		mg/L	1	6/17/2014 2:33:00 PM	13717
Iron	7.9	0.20	*	mg/L	10	6/18/2014 1:53:06 PM	13717
Magnesium	17	1.0		mg/L	1	6/17/2014 2:33:00 PM	13717
Manganese	1.2	0.020	*	mg/L	10	6/18/2014 1:53:06 PM	13717
Potassium	5.2	1.0		mg/L	1	6/17/2014 2:33:00 PM	13717
Silver	ND	0.0050		mg/L	1	6/18/2014 6:23:29 PM	13717
Sodium	740	10		mg/L	10	6/18/2014 6:25:10 PM	13717
Zinc	0.089	0.010		mg/L	1	6/18/2014 1:51:31 PM	13717
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.013	0.0050	*	mg/L	5	6/18/2014 4:38:10 PM	R19364
Lead	ND	0.0050		mg/L	5	6/18/2014 4:38:10 PM	R19364
Selenium	0.017	0.0050		mg/L	5	6/20/2014 4:10:08 PM	R19449
Uranium	ND	0.010		mg/L	10	6/25/2014 12:47:33 PM	R19508

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Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-16
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 4:35:00 PM
Lab ID: 1406364-008
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.023	0.0050	*	mg/L	5	6/17/2014 4:34:29 PM	13717
Lead	ND	0.0050		mg/L	5	6/17/2014 4:34:29 PM	13717
Selenium	0.013	0.0050		mg/L	5	6/17/2014 4:34:29 PM	13717
Uranium	0.015	0.0050		mg/L	5	6/17/2014 4:34:29 PM	13717
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	6/18/2014 10:34:09 AM	13740
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	18000	500		µg/L	500	6/13/2014 6:51:20 PM	R19253
Toluene	3700	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
Ethylbenzene	1700	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
Methyl tert-butyl ether (MTBE)	2000	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
1,2,4-Trimethylbenzene	1200	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
1,3,5-Trimethylbenzene	360	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
1,2-Dichloroethane (EDC)	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
1,2-Dibromoethane (EDB)	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
Naphthalene	240	100		µg/L	50	6/13/2014 7:20:03 PM	R19253
1-Methylnaphthalene	ND	200		µg/L	50	6/13/2014 7:20:03 PM	R19253
2-Methylnaphthalene	ND	200		µg/L	50	6/13/2014 7:20:03 PM	R19253
Acetone	ND	500		µg/L	50	6/13/2014 7:20:03 PM	R19253
Bromobenzene	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
Bromodichloromethane	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
Bromoform	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
Bromomethane	ND	150		µg/L	50	6/13/2014 7:20:03 PM	R19253
2-Butanone	ND	500		µg/L	50	6/13/2014 7:20:03 PM	R19253
Carbon disulfide	ND	500		µg/L	50	6/13/2014 7:20:03 PM	R19253
Carbon Tetrachloride	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
Chlorobenzene	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
Chloroethane	ND	100		µg/L	50	6/13/2014 7:20:03 PM	R19253
Chloroform	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
Chloromethane	ND	150		µg/L	50	6/13/2014 7:20:03 PM	R19253
2-Chlorotoluene	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
4-Chlorotoluene	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
cis-1,2-DCE	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
cis-1,3-Dichloropropene	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
1,2-Dibromo-3-chloropropane	ND	100		µg/L	50	6/13/2014 7:20:03 PM	R19253
Dibromochloromethane	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
Dibromomethane	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
1,2-Dichlorobenzene	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-16
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 4:35:00 PM
Lab ID: 1406364-008
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,3-Dichlorobenzene	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
1,4-Dichlorobenzene	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
Dichlorodifluoromethane	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
1,1-Dichloroethane	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
1,1-Dichloroethene	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
1,2-Dichloropropane	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
1,3-Dichloropropane	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
2,2-Dichloropropane	ND	100		µg/L	50	6/13/2014 7:20:03 PM	R19253
1,1-Dichloropropene	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
Hexachlorobutadiene	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
2-Hexanone	ND	500		µg/L	50	6/13/2014 7:20:03 PM	R19253
Isopropylbenzene	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
4-Isopropyltoluene	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
4-Methyl-2-pentanone	ND	500		µg/L	50	6/13/2014 7:20:03 PM	R19253
Methylene Chloride	ND	150		µg/L	50	6/13/2014 7:20:03 PM	R19253
n-Butylbenzene	ND	150		µg/L	50	6/13/2014 7:20:03 PM	R19253
n-Propylbenzene	150	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
sec-Butylbenzene	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
Styrene	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
tert-Butylbenzene	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
1,1,1,2-Tetrachloroethane	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
1,1,2,2-Tetrachloroethane	ND	100		µg/L	50	6/13/2014 7:20:03 PM	R19253
Tetrachloroethene (PCE)	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
trans-1,2-DCE	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
trans-1,3-Dichloropropene	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
1,2,3-Trichlorobenzene	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
1,2,4-Trichlorobenzene	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
1,1,1-Trichloroethane	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
1,1,2-Trichloroethane	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
Trichloroethene (TCE)	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
Trichlorofluoromethane	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
1,2,3-Trichloropropane	ND	100		µg/L	50	6/13/2014 7:20:03 PM	R19253
Vinyl chloride	ND	50		µg/L	50	6/13/2014 7:20:03 PM	R19253
Xylenes, Total	8100	75		µg/L	50	6/13/2014 7:20:03 PM	R19253
Surr: 1,2-Dichloroethane-d4	96.5	70-130		%REC	50	6/13/2014 7:20:03 PM	R19253
Surr: 4-Bromofluorobenzene	95.1	70-130		%REC	50	6/13/2014 7:20:03 PM	R19253
Surr: Dibromofluoromethane	107	70-130		%REC	50	6/13/2014 7:20:03 PM	R19253
Surr: Toluene-d8	96.7	70-130		%REC	50	6/13/2014 7:20:03 PM	R19253
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **cadg**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-16
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 4:35:00 PM
Lab ID: 1406364-008
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **cadg**	
Gasoline Range Organics (GRO)	71	2.5		mg/L	50	6/13/2014 7:20:03 PM	R19253
Surr: BFB	97.5	70-130		%REC	50	6/13/2014 7:20:03 PM	R19253

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-17
Project: 2014 2nd Quarter
Collection Date: 6/6/2014 10:15:00 AM
Lab ID: 1406364-009
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	4.2	1.0		mg/L	1	6/12/2014 2:37:26 AM	13583
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	6/12/2014 2:37:26 AM	13583
Surr: DNOP	97.8	62.7-145		%REC	1	6/12/2014 2:37:26 AM	13583
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	2600	100	p	µg/L	100	6/13/2014 9:14:56 PM	R19253
Toluene	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
Ethylbenzene	480	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
Methyl tert-butyl ether (MTBE)	1100	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
1,2,4-Trimethylbenzene	64	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
1,3,5-Trimethylbenzene	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
1,2-Dichloroethane (EDC)	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
1,2-Dibromoethane (EDB)	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
Naphthalene	ND	20	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
1-Methylnaphthalene	ND	40	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
2-Methylnaphthalene	ND	40	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
Acetone	ND	100	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
Bromobenzene	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
Bromodichloromethane	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
Bromoform	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
Bromomethane	ND	30	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
2-Butanone	ND	100	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
Carbon disulfide	ND	100	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
Carbon Tetrachloride	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
Chlorobenzene	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
Chloroethane	ND	20	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
Chloroform	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
Chloromethane	ND	30	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
2-Chlorotoluene	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
4-Chlorotoluene	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
cis-1,2-DCE	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
cis-1,3-Dichloropropene	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
1,2-Dibromo-3-chloropropane	ND	20	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
Dibromochloromethane	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
Dibromomethane	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
1,2-Dichlorobenzene	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
1,3-Dichlorobenzene	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
1,4-Dichlorobenzene	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
Dichlorodifluoromethane	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
1,1-Dichloroethane	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-17
Project: 2014 2nd Quarter
Collection Date: 6/6/2014 10:15:00 AM
Lab ID: 1406364-009
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
1,1-Dichloroethene	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
1,2-Dichloropropane	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
1,3-Dichloropropane	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
2,2-Dichloropropane	ND	20	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
1,1-Dichloropropene	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
Hexachlorobutadiene	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
2-Hexanone	ND	100	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
Isopropylbenzene	30	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
4-Isopropyltoluene	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
4-Methyl-2-pentanone	ND	100	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
Methylene Chloride	ND	30	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
n-Butylbenzene	ND	30	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
n-Propylbenzene	60	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
sec-Butylbenzene	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
Styrene	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
tert-Butylbenzene	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
1,1,1,2-Tetrachloroethane	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
1,1,2,2-Tetrachloroethane	ND	20	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
Tetrachloroethene (PCE)	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
trans-1,2-DCE	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
trans-1,3-Dichloropropene	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
1,2,3-Trichlorobenzene	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
1,2,4-Trichlorobenzene	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
1,1,1-Trichloroethane	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
1,1,2-Trichloroethane	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
Trichloroethene (TCE)	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
Trichlorofluoromethane	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
1,2,3-Trichloropropane	ND	20	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
Vinyl chloride	ND	10	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
Xylenes, Total	68	15	p	µg/L	10	6/13/2014 9:43:39 PM	R19253
Surr: 1,2-Dichloroethane-d4	93.2	70-130	p	%REC	10	6/13/2014 9:43:39 PM	R19253
Surr: 4-Bromofluorobenzene	87.1	70-130	p	%REC	10	6/13/2014 9:43:39 PM	R19253
Surr: Dibromofluoromethane	101	70-130	p	%REC	10	6/13/2014 9:43:39 PM	R19253
Surr: Toluene-d8	97.4	70-130	p	%REC	10	6/13/2014 9:43:39 PM	R19253
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**cadg**
Gasoline Range Organics (GRO)	8.3	0.50	p	mg/L	10	6/13/2014 9:43:39 PM	R19253
Surr: BFB	91.0	70-130	p	%REC	10	6/13/2014 9:43:39 PM	R19253

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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-18
Project: 2014 2nd Quarter
Collection Date: 6/6/2014 9:20:00 AM
Lab ID: 1406364-010
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	7.8	1.0		mg/L	1	6/12/2014 3:07:03 AM	13583
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	6/12/2014 3:07:03 AM	13583
Surr: DNOP	132	62.7-145		%REC	1	6/12/2014 3:07:03 AM	13583
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	0.65	0.10		mg/L	1	6/9/2014 4:27:29 PM	R19161
Chloride	170	10		mg/L	20	6/9/2014 4:39:53 PM	R19161
Bromide	0.81	0.10		mg/L	1	6/9/2014 4:27:29 PM	R19161
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	6/9/2014 4:27:29 PM	R19161
Sulfate	0.95	0.50		mg/L	1	6/9/2014 4:27:29 PM	R19161
Nitrate+Nitrite as N	ND	1.0		mg/L	5	6/10/2014 12:19:02 AM	R19161
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	2.4	0.010	*	mg/L	5	6/12/2014 5:16:20 PM	R19227
Cadmium	ND	0.0020		mg/L	1	6/12/2014 5:14:35 PM	R19227
Chromium	ND	0.0060		mg/L	1	6/12/2014 5:14:35 PM	R19227
Copper	ND	0.0060		mg/L	1	6/12/2014 5:14:35 PM	R19227
Iron	4.5	0.10	*	mg/L	5	6/12/2014 5:16:20 PM	R19227
Manganese	2.0	0.010	*	mg/L	5	6/12/2014 5:16:20 PM	R19227
Silver	ND	0.0050		mg/L	1	6/12/2014 5:14:35 PM	R19227
Zinc	ND	0.010		mg/L	1	6/12/2014 5:14:35 PM	R19227
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	19	0.040	*	mg/L	20	6/18/2014 2:11:41 PM	13717
Cadmium	ND	0.010		mg/L	5	6/18/2014 2:10:14 PM	13717
Calcium	890	20		mg/L	20	6/18/2014 2:11:41 PM	13717
Chromium	0.11	0.030	*	mg/L	5	6/18/2014 2:10:14 PM	13717
Copper	0.12	0.030		mg/L	5	6/18/2014 2:10:14 PM	13717
Iron	81	2.0	*	mg/L	100	6/18/2014 2:13:05 PM	13717
Magnesium	100	5.0		mg/L	5	6/18/2014 2:10:14 PM	13717
Manganese	17	0.040	*	mg/L	20	6/18/2014 2:11:41 PM	13717
Potassium	11	5.0		mg/L	5	6/18/2014 2:10:14 PM	13717
Silver	ND	0.025		mg/L	5	6/18/2014 2:10:14 PM	13717
Sodium	250	5.0		mg/L	5	6/18/2014 6:26:51 PM	13717
Zinc	0.31	0.050		mg/L	5	6/18/2014 2:10:14 PM	13717
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	6/18/2014 4:43:10 PM	R19364
Lead	ND	0.0050		mg/L	5	6/18/2014 4:43:10 PM	R19364
Selenium	0.0086	0.0050		mg/L	5	6/20/2014 4:13:10 PM	R19449
Uranium	ND	0.010		mg/L	10	6/25/2014 12:49:57 PM	R19508

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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-18
Project: 2014 2nd Quarter
Collection Date: 6/6/2014 9:20:00 AM
Lab ID: 1406364-010
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.013	0.0050	*	mg/L	5	6/26/2014 4:26:48 PM	13717
Lead	0.29	0.020	*	mg/L	20	6/20/2014 11:59:14 AM	13717
Selenium	0.013	0.0050		mg/L	5	6/26/2014 4:26:48 PM	13717
Uranium	0.022	0.0050		mg/L	5	6/17/2014 4:39:29 PM	13717
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	6/18/2014 12:23:57 PM	13740
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Acenaphthylene	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Aniline	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Anthracene	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Azobenzene	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Benz(a)anthracene	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Benzo(a)pyrene	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Benzo(b)fluoranthene	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Benzo(g,h,i)perylene	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Benzo(k)fluoranthene	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Benzoic acid	ND	29		µg/L	1	6/10/2014 11:36:58 PM	13597
Benzyl alcohol	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Bis(2-chloroethoxy)methane	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Bis(2-chloroethyl)ether	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Bis(2-chloroisopropyl)ether	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Bis(2-ethylhexyl)phthalate	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
4-Bromophenyl phenyl ether	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Butyl benzyl phthalate	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Carbazole	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
4-Chloro-3-methylphenol	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
4-Chloroaniline	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
2-Chloronaphthalene	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
2-Chlorophenol	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
4-Chlorophenyl phenyl ether	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Chrysene	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Di-n-butyl phthalate	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Di-n-octyl phthalate	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Dibenz(a,h)anthracene	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Dibenzofuran	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
1,2-Dichlorobenzene	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
1,3-Dichlorobenzene	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-18
Project: 2014 2nd Quarter
Collection Date: 6/6/2014 9:20:00 AM
Lab ID: 1406364-010
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,4-Dichlorobenzene	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
3,3´-Dichlorobenzidine	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Diethyl phthalate	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Dimethyl phthalate	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
2,4-Dichlorophenol	ND	29		µg/L	1	6/10/2014 11:36:58 PM	13597
2,4-Dimethylphenol	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
4,6-Dinitro-2-methylphenol	ND	29		µg/L	1	6/10/2014 11:36:58 PM	13597
2,4-Dinitrophenol	ND	29		µg/L	1	6/10/2014 11:36:58 PM	13597
2,4-Dinitrotoluene	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
2,6-Dinitrotoluene	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Fluoranthene	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Fluorene	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Hexachlorobenzene	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Hexachlorobutadiene	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Hexachlorocyclopentadiene	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Hexachloroethane	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Indeno(1,2,3-cd)pyrene	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Isophorone	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
1-Methylnaphthalene	64	14		µg/L	1	6/10/2014 11:36:58 PM	13597
2-Methylnaphthalene	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
2-Methylphenol	ND	29		µg/L	1	6/10/2014 11:36:58 PM	13597
3+4-Methylphenol	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
N-Nitrosodi-n-propylamine	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
N-Nitrosodimethylamine	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
N-Nitrosodiphenylamine	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Naphthalene	26	14		µg/L	1	6/10/2014 11:36:58 PM	13597
2-Nitroaniline	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
3-Nitroaniline	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
4-Nitroaniline	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Nitrobenzene	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
2-Nitrophenol	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
4-Nitrophenol	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Pentachlorophenol	ND	29		µg/L	1	6/10/2014 11:36:58 PM	13597
Phenanthrene	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Phenol	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Pyrene	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Pyridine	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
1,2,4-Trichlorobenzene	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
2,4,5-Trichlorophenol	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-18
Project: 2014 2nd Quarter
Collection Date: 6/6/2014 9:20:00 AM
Lab ID: 1406364-010
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
2,4,6-Trichlorophenol	ND	14		µg/L	1	6/10/2014 11:36:58 PM	13597
Surr: 2-Fluorophenol	38.9	12.1-85.8		%REC	1	6/10/2014 11:36:58 PM	13597
Surr: Phenol-d5	31.1	17.7-65.8		%REC	1	6/10/2014 11:36:58 PM	13597
Surr: 2,4,6-Tribromophenol	63.5	26-138		%REC	1	6/10/2014 11:36:58 PM	13597
Surr: Nitrobenzene-d5	67.0	47.5-119		%REC	1	6/10/2014 11:36:58 PM	13597
Surr: 2-Fluorobiphenyl	60.5	48.1-106		%REC	1	6/10/2014 11:36:58 PM	13597
Surr: 4-Terphenyl-d14	63.4	44-113		%REC	1	6/10/2014 11:36:58 PM	13597
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	290	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
Toluene	14	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
Ethylbenzene	36	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
Methyl tert-butyl ether (MTBE)	140	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
1,2,4-Trimethylbenzene	88	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
1,3,5-Trimethylbenzene	29	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
Naphthalene	68	10		µg/L	5	6/13/2014 8:17:26 PM	R19253
1-Methylnaphthalene	130	20		µg/L	5	6/13/2014 8:17:26 PM	R19253
2-Methylnaphthalene	28	20		µg/L	5	6/13/2014 8:17:26 PM	R19253
Acetone	ND	50		µg/L	5	6/13/2014 8:17:26 PM	R19253
Bromobenzene	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
Bromodichloromethane	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
Bromoform	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
Bromomethane	ND	15		µg/L	5	6/13/2014 8:17:26 PM	R19253
2-Butanone	ND	50		µg/L	5	6/13/2014 8:17:26 PM	R19253
Carbon disulfide	ND	50		µg/L	5	6/13/2014 8:17:26 PM	R19253
Carbon Tetrachloride	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
Chlorobenzene	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
Chloroethane	ND	10		µg/L	5	6/13/2014 8:17:26 PM	R19253
Chloroform	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
Chloromethane	ND	15		µg/L	5	6/13/2014 8:17:26 PM	R19253
2-Chlorotoluene	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
4-Chlorotoluene	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
cis-1,2-DCE	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
cis-1,3-Dichloropropene	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
1,2-Dibromo-3-chloropropane	ND	10		µg/L	5	6/13/2014 8:17:26 PM	R19253
Dibromochloromethane	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
Dibromomethane	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
1,2-Dichlorobenzene	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-18
Project: 2014 2nd Quarter
Collection Date: 6/6/2014 9:20:00 AM
Lab ID: 1406364-010
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,3-Dichlorobenzene	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
1,4-Dichlorobenzene	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
Dichlorodifluoromethane	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
1,1-Dichloroethane	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
1,1-Dichloroethene	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
1,2-Dichloropropane	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
1,3-Dichloropropane	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
2,2-Dichloropropane	ND	10		µg/L	5	6/13/2014 8:17:26 PM	R19253
1,1-Dichloropropene	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
Hexachlorobutadiene	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
2-Hexanone	ND	50		µg/L	5	6/13/2014 8:17:26 PM	R19253
Isopropylbenzene	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
4-Isopropyltoluene	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
4-Methyl-2-pentanone	ND	50		µg/L	5	6/13/2014 8:17:26 PM	R19253
Methylene Chloride	ND	15		µg/L	5	6/13/2014 8:17:26 PM	R19253
n-Butylbenzene	ND	15		µg/L	5	6/13/2014 8:17:26 PM	R19253
n-Propylbenzene	6.6	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
sec-Butylbenzene	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
Styrene	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
tert-Butylbenzene	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
1,1,2,2-Tetrachloroethane	ND	10		µg/L	5	6/13/2014 8:17:26 PM	R19253
Tetrachloroethene (PCE)	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
trans-1,2-DCE	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
trans-1,3-Dichloropropene	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
1,2,3-Trichlorobenzene	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
1,2,4-Trichlorobenzene	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
1,1,1-Trichloroethane	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
1,1,2-Trichloroethane	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
Trichloroethene (TCE)	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
Trichlorofluoromethane	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
1,2,3-Trichloropropane	ND	10		µg/L	5	6/13/2014 8:17:26 PM	R19253
Vinyl chloride	ND	5.0		µg/L	5	6/13/2014 8:17:26 PM	R19253
Xylenes, Total	55	7.5		µg/L	5	6/13/2014 8:17:26 PM	R19253
Surr: 1,2-Dichloroethane-d4	96.8	70-130		%REC	5	6/13/2014 8:17:26 PM	R19253
Surr: 4-Bromofluorobenzene	93.7	70-130		%REC	5	6/13/2014 8:17:26 PM	R19253
Surr: Dibromofluoromethane	105	70-130		%REC	5	6/13/2014 8:17:26 PM	R19253
Surr: Toluene-d8	101	70-130		%REC	5	6/13/2014 8:17:26 PM	R19253
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **cadg**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-18
Project: 2014 2nd Quarter
Collection Date: 6/6/2014 9:20:00 AM
Lab ID: 1406364-010
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **cadg**	
Gasoline Range Organics (GRO)	2.2	0.25		mg/L	5	6/13/2014 8:17:26 PM	R19253
Surr: BFB	100	70-130		%REC	5	6/13/2014 8:17:26 PM	R19253

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-GROUP4-060414
Project: 2014 2nd Quarter
Collection Date: 6/4/2014 5:00:00 PM
Lab ID: 1406364-011
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
Toluene	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
Ethylbenzene	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
Naphthalene	ND	2.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
1-Methylnaphthalene	ND	4.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
2-Methylnaphthalene	ND	4.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
Acetone	ND	10		µg/L	1	6/13/2014 8:46:09 PM	R19253
Bromobenzene	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
Bromodichloromethane	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
Bromoform	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
Bromomethane	ND	3.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
2-Butanone	ND	10		µg/L	1	6/13/2014 8:46:09 PM	R19253
Carbon disulfide	ND	10		µg/L	1	6/13/2014 8:46:09 PM	R19253
Carbon Tetrachloride	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
Chlorobenzene	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
Chloroethane	ND	2.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
Chloroform	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
Chloromethane	ND	3.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
2-Chlorotoluene	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
4-Chlorotoluene	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
cis-1,2-DCE	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
Dibromochloromethane	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
Dibromomethane	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
1,1-Dichloroethane	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
1,1-Dichloroethene	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
1,2-Dichloropropane	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
1,3-Dichloropropane	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
2,2-Dichloropropane	ND	2.0		µg/L	1	6/13/2014 8:46:09 PM	R19253

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-GROUP4-060414
Project: 2014 2nd Quarter
Collection Date: 6/4/2014 5:00:00 PM
Lab ID: 1406364-011
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,1-Dichloropropene	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
Hexachlorobutadiene	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
2-Hexanone	ND	10		µg/L	1	6/13/2014 8:46:09 PM	R19253
Isopropylbenzene	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
4-Isopropyltoluene	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
4-Methyl-2-pentanone	ND	10		µg/L	1	6/13/2014 8:46:09 PM	R19253
Methylene Chloride	ND	3.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
n-Butylbenzene	ND	3.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
n-Propylbenzene	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
sec-Butylbenzene	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
Styrene	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
tert-Butylbenzene	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
trans-1,2-DCE	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
Trichlorofluoromethane	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
Vinyl chloride	ND	1.0		µg/L	1	6/13/2014 8:46:09 PM	R19253
Xylenes, Total	ND	1.5		µg/L	1	6/13/2014 8:46:09 PM	R19253
Surr: 1,2-Dichloroethane-d4	99.5	70-130		%REC	1	6/13/2014 8:46:09 PM	R19253
Surr: 4-Bromofluorobenzene	105	70-130		%REC	1	6/13/2014 8:46:09 PM	R19253
Surr: Dibromofluoromethane	111	70-130		%REC	1	6/13/2014 8:46:09 PM	R19253
Surr: Toluene-d8	99.7	70-130		%REC	1	6/13/2014 8:46:09 PM	R19253

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EB-#1-6/5/14
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 6:30:00 PM
Lab ID: 1406364-012
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
Toluene	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
Ethylbenzene	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
Naphthalene	ND	2.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
1-Methylnaphthalene	ND	4.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
2-Methylnaphthalene	ND	4.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
Acetone	ND	10		µg/L	1	6/12/2014 4:38:00 AM	R19202
Bromobenzene	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
Bromodichloromethane	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
Bromoform	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
Bromomethane	ND	3.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
2-Butanone	ND	10		µg/L	1	6/12/2014 4:38:00 AM	R19202
Carbon disulfide	ND	10		µg/L	1	6/12/2014 4:38:00 AM	R19202
Carbon Tetrachloride	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
Chlorobenzene	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
Chloroethane	ND	2.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
Chloroform	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
Chloromethane	ND	3.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
2-Chlorotoluene	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
4-Chlorotoluene	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
cis-1,2-DCE	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
Dibromochloromethane	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
Dibromomethane	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
1,1-Dichloroethane	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
1,1-Dichloroethene	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
1,2-Dichloropropane	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
1,3-Dichloropropane	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
2,2-Dichloropropane	ND	2.0		µg/L	1	6/12/2014 4:38:00 AM	R19202

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EB-#1-6/5/14
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 6:30:00 PM
Lab ID: 1406364-012
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,1-Dichloropropene	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
Hexachlorobutadiene	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
2-Hexanone	ND	10		µg/L	1	6/12/2014 4:38:00 AM	R19202
Isopropylbenzene	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
4-Isopropyltoluene	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
4-Methyl-2-pentanone	ND	10		µg/L	1	6/12/2014 4:38:00 AM	R19202
Methylene Chloride	ND	3.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
n-Butylbenzene	ND	3.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
n-Propylbenzene	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
sec-Butylbenzene	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
Styrene	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
tert-Butylbenzene	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
trans-1,2-DCE	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
Trichlorofluoromethane	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
Vinyl chloride	ND	1.0		µg/L	1	6/12/2014 4:38:00 AM	R19202
Xylenes, Total	ND	1.5		µg/L	1	6/12/2014 4:38:00 AM	R19202
Surr: 1,2-Dichloroethane-d4	101	70-130		%REC	1	6/12/2014 4:38:00 AM	R19202
Surr: 4-Bromofluorobenzene	99.7	70-130		%REC	1	6/12/2014 4:38:00 AM	R19202
Surr: Dibromofluoromethane	111	70-130		%REC	1	6/12/2014 4:38:00 AM	R19202
Surr: Toluene-d8	102	70-130		%REC	1	6/12/2014 4:38:00 AM	R19202

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EB-#2-6/5/14
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 6:45:00 PM
Lab ID: 1406364-013
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
Toluene	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
Ethylbenzene	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
Naphthalene	ND	2.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
1-Methylnaphthalene	ND	4.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
2-Methylnaphthalene	ND	4.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
Acetone	ND	10		µg/L	1	6/12/2014 5:06:45 AM	R19202
Bromobenzene	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
Bromodichloromethane	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
Bromoform	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
Bromomethane	ND	3.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
2-Butanone	ND	10		µg/L	1	6/12/2014 5:06:45 AM	R19202
Carbon disulfide	ND	10		µg/L	1	6/12/2014 5:06:45 AM	R19202
Carbon Tetrachloride	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
Chlorobenzene	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
Chloroethane	ND	2.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
Chloroform	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
Chloromethane	ND	3.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
2-Chlorotoluene	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
4-Chlorotoluene	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
cis-1,2-DCE	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
Dibromochloromethane	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
Dibromomethane	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
1,1-Dichloroethane	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
1,1-Dichloroethene	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
1,2-Dichloropropane	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
1,3-Dichloropropane	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
2,2-Dichloropropane	ND	2.0		µg/L	1	6/12/2014 5:06:45 AM	R19202

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EB-#2-6/5/14
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 6:45:00 PM
Lab ID: 1406364-013
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,1-Dichloropropene	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
Hexachlorobutadiene	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
2-Hexanone	ND	10		µg/L	1	6/12/2014 5:06:45 AM	R19202
Isopropylbenzene	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
4-Isopropyltoluene	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
4-Methyl-2-pentanone	ND	10		µg/L	1	6/12/2014 5:06:45 AM	R19202
Methylene Chloride	ND	3.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
n-Butylbenzene	ND	3.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
n-Propylbenzene	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
sec-Butylbenzene	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
Styrene	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
tert-Butylbenzene	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
trans-1,2-DCE	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
Trichlorofluoromethane	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
Vinyl chloride	ND	1.0		µg/L	1	6/12/2014 5:06:45 AM	R19202
Xylenes, Total	ND	1.5		µg/L	1	6/12/2014 5:06:45 AM	R19202
Surr: 1,2-Dichloroethane-d4	104	70-130		%REC	1	6/12/2014 5:06:45 AM	R19202
Surr: 4-Bromofluorobenzene	99.9	70-130		%REC	1	6/12/2014 5:06:45 AM	R19202
Surr: Dibromofluoromethane	116	70-130		%REC	1	6/12/2014 5:06:45 AM	R19202
Surr: Toluene-d8	99.5	70-130		%REC	1	6/12/2014 5:06:45 AM	R19202

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BD-MKTF-6/4/14
Project: 2014 2nd Quarter
Collection Date: 6/4/2014
Lab ID: 1406364-014
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Acenaphthylene	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Aniline	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Anthracene	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Azobenzene	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Benz(a)anthracene	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Benzo(a)pyrene	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Benzo(b)fluoranthene	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Benzo(g,h,i)perylene	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Benzo(k)fluoranthene	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Benzoic acid	ND	20		µg/L	1	6/11/2014 12:06:10 AM	13597
Benzyl alcohol	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Bis(2-chloroethyl)ether	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
4-Bromophenyl phenyl ether	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Butyl benzyl phthalate	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Carbazole	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
4-Chloro-3-methylphenol	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
4-Chloroaniline	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
2-Chloronaphthalene	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
2-Chlorophenol	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Chrysene	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Di-n-butyl phthalate	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Di-n-octyl phthalate	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Dibenz(a,h)anthracene	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Dibenzofuran	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
1,2-Dichlorobenzene	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
1,3-Dichlorobenzene	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
1,4-Dichlorobenzene	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
3,3´-Dichlorobenzidine	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Diethyl phthalate	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Dimethyl phthalate	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
2,4-Dichlorophenol	ND	20		µg/L	1	6/11/2014 12:06:10 AM	13597
2,4-Dimethylphenol	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	6/11/2014 12:06:10 AM	13597
2,4-Dinitrophenol	ND	20		µg/L	1	6/11/2014 12:06:10 AM	13597

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BD-MKTF-6/4/14
Project: 2014 2nd Quarter
Collection Date: 6/4/2014
Lab ID: 1406364-014
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2,4-Dinitrotoluene	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
2,6-Dinitrotoluene	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Fluoranthene	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Fluorene	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Hexachlorobenzene	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Hexachlorobutadiene	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Hexachlorocyclopentadiene	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Hexachloroethane	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Isophorone	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
1-Methylnaphthalene	88	10		µg/L	1	6/11/2014 12:06:10 AM	13597
2-Methylnaphthalene	110	10		µg/L	1	6/11/2014 12:06:10 AM	13597
2-Methylphenol	ND	20		µg/L	1	6/11/2014 12:06:10 AM	13597
3+4-Methylphenol	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
N-Nitrosodimethylamine	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
N-Nitrosodiphenylamine	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Naphthalene	200	10		µg/L	1	6/11/2014 12:06:10 AM	13597
2-Nitroaniline	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
3-Nitroaniline	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
4-Nitroaniline	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Nitrobenzene	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
2-Nitrophenol	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
4-Nitrophenol	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Pentachlorophenol	ND	20		µg/L	1	6/11/2014 12:06:10 AM	13597
Phenanthrene	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Phenol	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Pyrene	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Pyridine	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
1,2,4-Trichlorobenzene	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
2,4,5-Trichlorophenol	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
2,4,6-Trichlorophenol	ND	10		µg/L	1	6/11/2014 12:06:10 AM	13597
Surr: 2-Fluorophenol	41.7	12.1-85.8		%REC	1	6/11/2014 12:06:10 AM	13597
Surr: Phenol-d5	39.0	17.7-65.8		%REC	1	6/11/2014 12:06:10 AM	13597
Surr: 2,4,6-Tribromophenol	67.2	26-138		%REC	1	6/11/2014 12:06:10 AM	13597
Surr: Nitrobenzene-d5	71.9	47.5-119		%REC	1	6/11/2014 12:06:10 AM	13597
Surr: 2-Fluorobiphenyl	69.2	48.1-106		%REC	1	6/11/2014 12:06:10 AM	13597
Surr: 4-Terphenyl-d14	64.3	44-113		%REC	1	6/11/2014 12:06:10 AM	13597

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Trip Blank
Project: 2014 2nd Quarter
Collection Date:
Lab ID: 1406364-015
Matrix: TRIP BLANK
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
Toluene	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
Ethylbenzene	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
Naphthalene	ND	2.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
1-Methylnaphthalene	ND	4.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
2-Methylnaphthalene	ND	4.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
Acetone	ND	10		µg/L	1	6/12/2014 5:35:37 AM	R19202
Bromobenzene	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
Bromodichloromethane	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
Bromoform	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
Bromomethane	ND	3.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
2-Butanone	ND	10		µg/L	1	6/12/2014 5:35:37 AM	R19202
Carbon disulfide	ND	10		µg/L	1	6/12/2014 5:35:37 AM	R19202
Carbon Tetrachloride	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
Chlorobenzene	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
Chloroethane	ND	2.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
Chloroform	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
Chloromethane	ND	3.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
2-Chlorotoluene	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
4-Chlorotoluene	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
cis-1,2-DCE	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
Dibromochloromethane	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
Dibromomethane	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
1,1-Dichloroethane	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
1,1-Dichloroethene	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
1,2-Dichloropropane	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
1,3-Dichloropropane	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
2,2-Dichloropropane	ND	2.0		µg/L	1	6/12/2014 5:35:37 AM	R19202

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Trip Blank
Project: 2014 2nd Quarter
Collection Date:
Lab ID: 1406364-015
Matrix: TRIP BLANK
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,1-Dichloropropene	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
Hexachlorobutadiene	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
2-Hexanone	ND	10		µg/L	1	6/12/2014 5:35:37 AM	R19202
Isopropylbenzene	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
4-Isopropyltoluene	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
4-Methyl-2-pentanone	ND	10		µg/L	1	6/12/2014 5:35:37 AM	R19202
Methylene Chloride	ND	3.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
n-Butylbenzene	ND	3.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
n-Propylbenzene	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
sec-Butylbenzene	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
Styrene	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
tert-Butylbenzene	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
trans-1,2-DCE	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
Trichlorofluoromethane	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
Vinyl chloride	ND	1.0		µg/L	1	6/12/2014 5:35:37 AM	R19202
Xylenes, Total	ND	1.5		µg/L	1	6/12/2014 5:35:37 AM	R19202
Surr: 1,2-Dichloroethane-d4	102	70-130		%REC	1	6/12/2014 5:35:37 AM	R19202
Surr: 4-Bromofluorobenzene	103	70-130		%REC	1	6/12/2014 5:35:37 AM	R19202
Surr: Dibromofluoromethane	115	70-130		%REC	1	6/12/2014 5:35:37 AM	R19202
Surr: Toluene-d8	102	70-130		%REC	1	6/12/2014 5:35:37 AM	R19202
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **cadg**	
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	6/12/2014 5:35:37 AM	R19202
Surr: BFB	96.9	70-130		%REC	1	6/12/2014 5:35:37 AM	R19202

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406364**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19227** RunNo: **19227**
Prep Date: Analysis Date: **6/12/2014** SeqNo: **555952** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19227** RunNo: **19227**
Prep Date: Analysis Date: **6/12/2014** SeqNo: **555953** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	100	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.8	85	115			
Chromium	0.49	0.0060	0.5000	0	98.3	85	115			
Copper	0.49	0.0060	0.5000	0	98.2	85	115			
Iron	0.52	0.020	0.5000	0	104	85	115			
Manganese	0.50	0.0020	0.5000	0	101	85	115			
Silver	0.099	0.0050	0.1000	0	98.8	85	115			
Zinc	0.52	0.010	0.5000	0	105	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19281** RunNo: **19281**
Prep Date: Analysis Date: **6/13/2014** SeqNo: **557419** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Iron	ND	0.020								
Manganese	ND	0.0020								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19281** RunNo: **19281**
Prep Date: Analysis Date: **6/13/2014** SeqNo: **557420** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.1	85	115			
Iron	0.50	0.020	0.5000	0	99.8	85	115			
Manganese	0.48	0.0020	0.5000	0	96.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406364**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **1406364-002FMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **MKTF-2** Batch ID: **13717** RunNo: **19331**
Prep Date: **6/16/2014** Analysis Date: **6/17/2014** SeqNo: **558727** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.77	0.0020	0.5000	0.1962	115	70	130			
Cadmium	0.52	0.0020	0.5000	0	104	70	130			
Chromium	0.49	0.0060	0.5000	0.004070	96.2	70	130			
Copper	0.51	0.0060	0.5000	0.004700	101	70	130			
Magnesium	68	1.0	50.00	17.39	101	70	130			
Potassium	65	1.0	50.00	9.193	111	70	130			

Sample ID **1406364-002FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **MKTF-2** Batch ID: **13717** RunNo: **19331**
Prep Date: **6/16/2014** Analysis Date: **6/17/2014** SeqNo: **558728** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.78	0.0020	0.5000	0.1962	118	70	130	1.36	20	
Cadmium	0.49	0.0020	0.5000	0	98.1	70	130	5.58	20	
Chromium	0.49	0.0060	0.5000	0.004070	97.3	70	130	1.11	20	
Copper	0.52	0.0060	0.5000	0.004700	102	70	130	1.10	20	
Magnesium	67	1.0	50.00	17.39	99.5	70	130	0.806	20	
Potassium	64	1.0	50.00	9.193	110	70	130	1.16	20	

Sample ID **MB-13717** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **13717** RunNo: **19331**
Prep Date: **6/16/2014** Analysis Date: **6/17/2014** SeqNo: **558754** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS-13717** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **13717** RunNo: **19331**
Prep Date: **6/16/2014** Analysis Date: **6/17/2014** SeqNo: **558755** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406364**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **LCS-13717** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **13717** RunNo: **19331**
Prep Date: **6/16/2014** Analysis Date: **6/17/2014** SeqNo: **558755** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.6	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.4	85	115			
Calcium	51	1.0	50.00	0	101	85	115			
Chromium	0.49	0.0060	0.5000	0	97.5	85	115			
Copper	0.49	0.0060	0.5000	0	97.9	85	115			
Magnesium	51	1.0	50.00	0	101	85	115			
Manganese	0.51	0.0020	0.5000	0	101	85	115			
Silver	0.098	0.0050	0.1000	0	98.0	85	115			
Sodium	50	1.0	50.00	0	99.8	85	115			
Zinc	0.51	0.010	0.5000	0	103	85	115			

Sample ID **MB-13717** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **13717** RunNo: **19331**
Prep Date: **6/16/2014** Analysis Date: **6/17/2014** SeqNo: **558756** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	ND	1.0								

Sample ID **LCS-13717** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **13717** RunNo: **19331**
Prep Date: **6/16/2014** Analysis Date: **6/17/2014** SeqNo: **558757** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	50	1.0	50.00	0	99.7	85	115			

Sample ID **1406364-002FMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **MKTF-2** Batch ID: **13717** RunNo: **19357**
Prep Date: **6/16/2014** Analysis Date: **6/18/2014** SeqNo: **559774** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.48	0.010	0.5000	0.01675	92.1	70	130			

Sample ID **1406364-002FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **MKTF-2** Batch ID: **13717** RunNo: **19357**
Prep Date: **6/16/2014** Analysis Date: **6/18/2014** SeqNo: **559775** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.48	0.010	0.5000	0.01675	91.7	70	130	0.325	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406364**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **1406364-002FMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **MKTF-2** Batch ID: **13717** RunNo: **19357**
Prep Date: **6/16/2014** Analysis Date: **6/18/2014** SeqNo: **559777** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	150	5.0	50.00	105.3	94.2	70	130			
Manganese	1.2	0.010	0.5000	0.7036	98.4	70	130			

Sample ID **1406364-002FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **MKTF-2** Batch ID: **13717** RunNo: **19357**
Prep Date: **6/16/2014** Analysis Date: **6/18/2014** SeqNo: **559778** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	150	5.0	50.00	105.3	85.8	70	130	2.81	20	
Manganese	1.2	0.010	0.5000	0.7036	96.2	70	130	0.895	20	

Sample ID **MB-13717** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **13717** RunNo: **19357**
Prep Date: **6/16/2014** Analysis Date: **6/18/2014** SeqNo: **559813** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.021	0.020								

Sample ID **LCS-13717** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **13717** RunNo: **19357**
Prep Date: **6/16/2014** Analysis Date: **6/18/2014** SeqNo: **559814** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.53	0.020	0.5000	0	107	85	115			B

Sample ID **1406364-002FMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **MKTF-2** Batch ID: **13717** RunNo: **19365**
Prep Date: **6/16/2014** Analysis Date: **6/18/2014** SeqNo: **560153** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.11	0.0050	0.1000	0	106	70	130			

Sample ID **1406364-002FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **MKTF-2** Batch ID: **13717** RunNo: **19365**
Prep Date: **6/16/2014** Analysis Date: **6/18/2014** SeqNo: **560154** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.11	0.0050	0.1000	0	106	70	130	0.199	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406364**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19364** RunNo: **19364**
Prep Date: Analysis Date: **6/18/2014** SeqNo: **560092** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.5	85	115			
Lead	0.024	0.0010	0.02500	0	94.8	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19364** RunNo: **19364**
Prep Date: Analysis Date: **6/18/2014** SeqNo: **560093** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.022	0.0010	0.02500	0	89.7	85	115			
Lead	0.023	0.0010	0.02500	0	93.9	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19364** RunNo: **19364**
Prep Date: Analysis Date: **6/18/2014** SeqNo: **560094** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19364** RunNo: **19364**
Prep Date: Analysis Date: **6/18/2014** SeqNo: **560095** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								

Sample ID **LCS RR** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19449** RunNo: **19449**
Prep Date: Analysis Date: **6/20/2014** SeqNo: **562633** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.024	0.0010	0.02500	0	95.9	85	115			

Sample ID **LCS RR** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19449** RunNo: **19449**
Prep Date: Analysis Date: **6/20/2014** SeqNo: **562635** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.023	0.0010	0.02500	0	93.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406364**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **MB RR** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19449** RunNo: **19449**
Prep Date: Analysis Date: **6/20/2014** SeqNo: **562637** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Sample ID **MB RR** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19449** RunNo: **19449**
Prep Date: Analysis Date: **6/20/2014** SeqNo: **562639** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19508** RunNo: **19508**
Prep Date: Analysis Date: **6/25/2014** SeqNo: **564692** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.024	0.0010	0.02500	0	96.3	85	115			
Uranium	0.025	0.0010	0.02500	0	100	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19508** RunNo: **19508**
Prep Date: Analysis Date: **6/25/2014** SeqNo: **564693** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.024	0.0010	0.02500	0	95.8	85	115			
Uranium	0.025	0.0010	0.02500	0	99.1	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19508** RunNo: **19508**
Prep Date: Analysis Date: **6/25/2014** SeqNo: **564694** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19508** RunNo: **19508**
Prep Date: Analysis Date: **6/25/2014** SeqNo: **564695** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406364**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **1406364-010FMSDL** SampType: **MSDLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **MKTF-18** Batch ID: **13717** RunNo: **19343**
Prep Date: **6/16/2014** Analysis Date: **6/17/2014** SeqNo: **559194** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.047	0.0050	0.02500	0.02238	99.8	70	130	1.17	20	

Sample ID **1406364-010FMSLL** SampType: **MSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **MKTF-18** Batch ID: **13717** RunNo: **19343**
Prep Date: **6/16/2014** Analysis Date: **6/17/2014** SeqNo: **559195** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.048	0.0050	0.02500	0.02238	102	70	130			

Sample ID **LLLCS-13717** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **13717** RunNo: **19343**
Prep Date: **6/16/2014** Analysis Date: **6/17/2014** SeqNo: **559197** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	101	85	115			
Lead	0.025	0.0010	0.02500	0	98.4	85	115			
Selenium	0.025	0.0010	0.02500	0	100	85	115			
Uranium	0.023	0.0010	0.02500	0	93.0	85	115			

Sample ID **MB-13717** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **13717** RunNo: **19343**
Prep Date: **6/16/2014** Analysis Date: **6/17/2014** SeqNo: **559199** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **1406364-010FMSDL** SampType: **MSDLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **MKTF-18** Batch ID: **13717** RunNo: **19535**
Prep Date: **6/16/2014** Analysis Date: **6/26/2014** SeqNo: **565861** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.028	0.0050	0.02500	0.01348	57.3	70	130	4.06	20	S
Selenium	0.020	0.0050	0.02500	0.01258	27.9	70	130	3.61	20	S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406364**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **1406364-010FMSLL** SampType: **MSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **MKTF-18** Batch ID: **13717** RunNo: **19535**
Prep Date: **6/16/2014** Analysis Date: **6/26/2014** SeqNo: **565862** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.029	0.0050	0.02500	0.01348	61.9	70	130			S
Selenium	0.020	0.0050	0.02500	0.01258	30.8	70	130			S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406364**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID	**MB-13740**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**
Client ID:	**PBW**	Batch ID:	**13740**	RunNo:	**19350**
Prep Date:	**6/17/2014**	Analysis Date:	**6/18/2014**	SeqNo:	**559471** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-13740**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**
Client ID:	**LCSW**	Batch ID:	**13740**	RunNo:	**19350**
Prep Date:	**6/17/2014**	Analysis Date:	**6/18/2014**	SeqNo:	**559472** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.8	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406364**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R19161** RunNo: **19161**
Prep Date: Analysis Date: **6/9/2014** SeqNo: **553729** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R19161** RunNo: **19161**
Prep Date: Analysis Date: **6/9/2014** SeqNo: **553730** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	97.0	90	110			
Chloride	4.7	0.50	5.000	0	95.0	90	110			
Bromide	2.5	0.10	2.500	0	98.1	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	93.9	90	110			
Sulfate	9.7	0.50	10.00	0	97.3	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	98.4	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R19161** RunNo: **19161**
Prep Date: Analysis Date: **6/9/2014** SeqNo: **553777** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R19161** RunNo: **19161**
Prep Date: Analysis Date: **6/9/2014** SeqNo: **553778** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	97.9	90	110			
Chloride	4.6	0.50	5.000	0	92.0	90	110			
Bromide	2.4	0.10	2.500	0	95.5	90	110			
Phosphorus, Orthophosphate (As P	4.6	0.50	5.000	0	92.1	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406364**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R19161** RunNo: **19161**
Prep Date: Analysis Date: **6/9/2014** SeqNo: **553778** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	9.4	0.50	10.00	0	93.8	90	110			
Nitrate+Nitrite as N	3.3	0.20	3.500	0	95.5	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R19165** RunNo: **19165**
Prep Date: Analysis Date: **6/9/2014** SeqNo: **553915** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R19165** RunNo: **19165**
Prep Date: Analysis Date: **6/9/2014** SeqNo: **553916** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.3	0.20	3.500	0	95.7	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R19191** RunNo: **19191**
Prep Date: Analysis Date: **6/10/2014** SeqNo: **554760** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R19191** RunNo: **19191**
Prep Date: Analysis Date: **6/10/2014** SeqNo: **554761** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000	0	91.7	90	110			
Nitrate+Nitrite as N	3.3	0.20	3.500	0	94.9	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406364**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **MB-13583** SampType: **MBLK** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **PBW** Batch ID: **13583** RunNo: **19152**
Prep Date: **6/9/2014** Analysis Date: **6/11/2014** SeqNo: **554465** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.0		1.000		103	62.7	145			

Sample ID **LCS-13583** SampType: **LCS** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSW** Batch ID: **13583** RunNo: **19152**
Prep Date: **6/9/2014** Analysis Date: **6/11/2014** SeqNo: **554466** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.9	1.0	5.000	0	97.4	78.6	146			
Surr: DNOP	0.46		0.5000		91.3	62.7	145			

Sample ID **LCSD-13583** SampType: **LCSD** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSS02** Batch ID: **13583** RunNo: **19152**
Prep Date: **6/9/2014** Analysis Date: **6/11/2014** SeqNo: **554468** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.4	1.0	5.000	0	89.0	78.6	146	9.06	26.5	
Surr: DNOP	0.44		0.5000		88.0	62.7	145	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406364**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **5mL rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R19202**	RunNo: **19202**	
Prep Date:	Analysis Date: **6/11/2014**	SeqNo: **555226**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406364**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **5mL rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R19202** RunNo: **19202**
Prep Date: Analysis Date: **6/11/2014** SeqNo: **555226** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		99.1	70	130			
Surr: Dibromofluoromethane	11		10.00		111	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R19202** RunNo: **19202**
Prep Date: Analysis Date: **6/11/2014** SeqNo: **555257** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	70	130			
Toluene	21	1.0	20.00	0	104	80	120			
Chlorobenzene	19	1.0	20.00	0	92.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406364**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R19202** RunNo: **19202**
Prep Date: Analysis Date: **6/11/2014** SeqNo: **555257** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22	1.0	20.00	0	111	82.6	131			
Trichloroethene (TCE)	19	1.0	20.00	0	93.5	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.9	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID **1406364-001a ms** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-1** Batch ID: **R19202** RunNo: **19202**
Prep Date: Analysis Date: **6/11/2014** SeqNo: **555274** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	9400	50	1000	8261	111	70	130			E
Toluene	7000	50	1000	5991	105	67.5	123			E
Chlorobenzene	950	50	1000	0	95.3	70	130			
1,1-Dichloroethene	1200	50	1000	35.12	114	81.9	134			
Trichloroethene (TCE)	940	50	1000	0	93.6	70	130			
Surr: 1,2-Dichloroethane-d4	500		500.0		99.9	70	130			
Surr: 4-Bromofluorobenzene	460		500.0		92.7	70	130			
Surr: Dibromofluoromethane	480		500.0		96.3	70	130			
Surr: Toluene-d8	480		500.0		96.9	70	130			

Sample ID **1406364-001a msd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **MKTF-1** Batch ID: **R19202** RunNo: **19202**
Prep Date: Analysis Date: **6/11/2014** SeqNo: **555275** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	8700	50	1000	8261	48.0	70	130	6.98	20	ES
Toluene	7000	50	1000	5991	98.1	67.5	123	1.03	20	E
Chlorobenzene	960	50	1000	0	95.7	70	130	0.506	20	
1,1-Dichloroethene	1100	50	1000	35.12	102	81.9	134	10.4	20	
Trichloroethene (TCE)	880	50	1000	0	87.5	70	130	6.74	20	
Surr: 1,2-Dichloroethane-d4	490		500.0		98.2	70	130	0	0	
Surr: 4-Bromofluorobenzene	470		500.0		93.2	70	130	0	0	
Surr: Dibromofluoromethane	470		500.0		95.0	70	130	0	0	
Surr: Toluene-d8	500		500.0		101	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406364**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **5mL rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R19253**	RunNo: **19253**	
Prep Date:	Analysis Date: **6/13/2014**	SeqNo: **557108**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406364**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **5mL rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R19253** RunNo: **19253**
Prep Date: Analysis Date: **6/13/2014** SeqNo: **557108** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.4	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	10		10.00		105	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID **100ng lcs 200ng an** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R19253** RunNo: **19253**
Prep Date: Analysis Date: **6/13/2014** SeqNo: **557110** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	94.0	70	130			
Toluene	20	1.0	20.00	0	99.0	80	120			
Chlorobenzene	18	1.0	20.00	0	90.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406364**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **100ng lcs 200ng an** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R19253** RunNo: **19253**
Prep Date: Analysis Date: **6/13/2014** SeqNo: **557110** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	20	1.0	20.00	0	99.4	82.6	131			
Trichloroethene (TCE)	17	1.0	20.00	0	85.3	70	130			
Surr: 1,2-Dichloroethane-d4	9.3		10.00		92.5	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.3	70	130			
Surr: Dibromofluoromethane	9.0		10.00		90.3	70	130			
Surr: Toluene-d8	9.9		10.00		98.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406364**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **mb-13597**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **13597**	RunNo: **19174**			
Prep Date: **6/10/2014**	Analysis Date: **6/10/2014**	SeqNo: **554254**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406364**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **mb-13597**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **13597**	RunNo: **19174**			
Prep Date: **6/10/2014**	Analysis Date: **6/10/2014**	SeqNo: **554254**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	130		200.0		62.8	12.1	85.8			
Surr: Phenol-d5	110		200.0		54.1	17.7	65.8			
Surr: 2,4,6-Tribromophenol	180		200.0		88.5	26	138			
Surr: Nitrobenzene-d5	98		100.0		98.1	47.5	119			
Surr: 2-Fluorobiphenyl	97		100.0		96.7	48.1	106			
Surr: 4-Terphenyl-d14	96		100.0		96.2	44	113			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406364**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **lcs-13597** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **13597** RunNo: **19174**
Prep Date: **6/10/2014** Analysis Date: **6/10/2014** SeqNo: **554255** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	74	10	100.0	0	74.1	50.3	109			
4-Chloro-3-methylphenol	140	10	200.0	0	67.6	51.2	113			
2-Chlorophenol	120	10	200.0	0	57.6	48.5	104			
1,4-Dichlorobenzene	69	10	100.0	0	68.8	39.5	106			
2,4-Dinitrotoluene	69	10	100.0	0	68.7	45.4	107			
N-Nitrosodi-n-propylamine	77	10	100.0	0	77.1	50.4	119			
4-Nitrophenol	70	10	200.0	0	35.1	15.5	62.2			
Pentachlorophenol	71	20	200.0	0	35.5	23.5	93.5			
Phenol	97	10	200.0	0	48.7	26.8	65.6			
Pyrene	81	10	100.0	0	81.4	54.4	108			
1,2,4-Trichlorobenzene	67	10	100.0	0	66.7	39.9	106			
Surr: 2-Fluorophenol	88		200.0		43.8	12.1	85.8			
Surr: Phenol-d5	110		200.0		53.2	17.7	65.8			
Surr: 2,4,6-Tribromophenol	93		200.0		46.5	26	138			
Surr: Nitrobenzene-d5	75		100.0		74.8	47.5	119			
Surr: 2-Fluorobiphenyl	72		100.0		72.0	48.1	106			
Surr: 4-Terphenyl-d14	75		100.0		75.4	44	113			

Sample ID **lcsd-13597** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **13597** RunNo: **19174**
Prep Date: **6/10/2014** Analysis Date: **6/10/2014** SeqNo: **554256** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	67	10	100.0	0	66.7	50.3	109	10.4	27.2	
4-Chloro-3-methylphenol	140	10	200.0	0	68.5	51.2	113	1.34	25.9	
2-Chlorophenol	100	10	200.0	0	51.9	48.5	104	10.5	22.5	
1,4-Dichlorobenzene	60	10	100.0	0	60.2	39.5	106	13.3	24.6	
2,4-Dinitrotoluene	65	10	100.0	0	65.2	45.4	107	5.17	25.3	
N-Nitrosodi-n-propylamine	65	10	100.0	0	64.6	50.4	119	17.6	23.6	
4-Nitrophenol	73	10	200.0	0	36.3	15.5	62.2	3.33	34.7	
Pentachlorophenol	66	20	200.0	0	33.1	23.5	93.5	7.12	32.8	
Phenol	93	10	200.0	0	46.3	26.8	65.6	5.03	25.5	
Pyrene	91	10	100.0	0	91.4	54.4	108	11.6	31.4	
1,2,4-Trichlorobenzene	58	10	100.0	0	58.0	39.9	106	13.9	25.9	
Surr: 2-Fluorophenol	84		200.0		41.9	12.1	85.8	0	0	
Surr: Phenol-d5	99		200.0		49.7	17.7	65.8	0	0	
Surr: 2,4,6-Tribromophenol	82		200.0		40.8	26	138	0	0	
Surr: Nitrobenzene-d5	66		100.0		65.8	47.5	119	0	0	
Surr: 2-Fluorobiphenyl	64		100.0		63.7	48.1	106	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406364**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID	**lcsd-13597**	SampType:	**LCSD**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**LCSS02**	Batch ID:	**13597**	RunNo:	**19174**
Prep Date:	**6/10/2014**	Analysis Date:	**6/10/2014**	SeqNo:	**554256** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	74		100.0		73.9	44	113	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406364**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **5mL rb** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW** Batch ID: **R19202** RunNo: **19202**
Prep Date: Analysis Date: **6/11/2014** SeqNo: **555295** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	9.3		10.00		93.5	70	130			

Sample ID **2.5ug gro lcs** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW** Batch ID: **R19202** RunNo: **19202**
Prep Date: Analysis Date: **6/11/2014** SeqNo: **555297** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.51	0.050	0.5000	0	102	80	120			
Surr: BFB	9.9		10.00		98.9	70	130			

Sample ID **1406364-002B MS** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-2** Batch ID: **R19202** RunNo: **19202**
Prep Date: Analysis Date: **6/11/2014** SeqNo: **555306** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	1.9	0.050	0.5000	1.488	87.4	70	130			
Surr: BFB	9.5		10.00		95.2	70	130			

Sample ID **1406364-002B MSD** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-2** Batch ID: **R19202** RunNo: **19202**
Prep Date: Analysis Date: **6/11/2014** SeqNo: **555307** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	1.8	0.050	0.5000	1.488	63.0	70	130	6.54	20	S
Surr: BFB	9.6		10.00		96.1	70	130	0	0	

Sample ID **5mL rb** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW** Batch ID: **R19253** RunNo: **19253**
Prep Date: Analysis Date: **6/13/2014** SeqNo: **557149** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	9.6		10.00		96.3	70	130			

Sample ID **2.5ug gro lcs** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW** Batch ID: **R19253** RunNo: **19253**
Prep Date: Analysis Date: **6/13/2014** SeqNo: **557153** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406364**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID	**2.5ug gro lcs**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**
Client ID:	**LCSW**	Batch ID:	**R19253**	RunNo:	**19253**
Prep Date:		Analysis Date:	**6/13/2014**	SeqNo:	**557153** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.49	0.050	0.5000	0	98.1	80	120			
Surr: BFB	9.5		10.00		94.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1406364 RcptNo: 1

Received by/date: MG 06/06/14

Logged By: **Michelle Garcia** 6/6/2014 3:50:00 PM Michelle Garcia

Completed By: **Michelle Garcia** 6/9/2014 9:34:19 AM Michelle Garcia

Reviewed By: 06/09/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? ~~Yes ☑~~ No ☑
9. Was preservative added to bottles? Yes ☐ ~~No ☑~~ NA ☐ 06/09/14

SEE REMARKS

10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 26
(<2 or >12 unless noted)
Adjusted? YES
Checked by:

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks: FOR METALS ANALYSIS: ADDED 1mL HNO_3 TO -005F, -008F, & -010F FOR ACCEPTABLE pH. FOR DISS. METALS ANALYSIS: ADDED 0.4mL HNO_3 TO -005G, FOR ACCEPTABLE pH. HELD IN LOGIN FOR 24 HOURS AFTER PRESERVATION. 06/09/14 @1130

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Not Present			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

X Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) Trihydro Format

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

2014 2nd Quarter

Project #:

MKTF WELLS

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler: PL, BS

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1406364	8260+MTBE	8015B extended	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major Cations/Anions										Air Bubbles (Y or N)	
6/6/14	1135	H20	MKTF-1			-001	X	X	X	X	X	X											
6/6/14	1130	H20	MKTF-2			-002	X	X	X	X	X	X											
		H20	~~MKTF-3~~				X	X	X	X	X	X											15
6/9/14	1610	H20	MKTF-4			-003	X	X	X	X	X	X											
		H20	~~MKTF-5~~				X	X	X	X	X	X											1
~~6/6/14~~		H20	~~MKTF-6~~				X	X	X	X	X	X											135
		H20	~~MKTF-7~~				X	X	X	X	X	X											135
		H20	~~MKTF-8~~				X	X	X	X	X	X											135
6/5/14	1730	H20	MKTF-9			-004	X	X	X	X	X	X											
6/6/14 0745 6/5/14	~~1430~~	H20	MKTF-10 *			-005	X	X	X	X	X	X											
* 6/6/14 6/5/14	1515	H20	MKTF-11			-006	X	X	X	X	X	X											
		H20	~~MKTF-12~~				X	X	X	X	X	X											135

Date:	Time:	Relinquished by:	Received by:	Date Time	Remarks:
6/6/14	1550	Pam Landers	[illegible]	06/06/14 1550	Page 1 of 2
Date:	Time:	Relinquished by:	Received by:	Date Time	

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

* - Did not collect full bottle set

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

X Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type) Trihydro Format

Turn-Around Time:

X Standard ☐ Rush

Project Name:

2014 2nd Quarter

Project #:

MKTF WELLS

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.0

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1406364	8260+MTBE	8015B extended	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major Cations/Anions										Air Bubbles (Y or N)
												A 06/09/14										
~~		H20	~~MKTF-13~~				X	X	X	X	X	X										155
~~		H20	~~MKTF-14~~				X	X	X	X	X	X										155
6/5/14	1500	H20	MKTF-15			-007	X	X	X	X	X	X										
6/5/14	1635	H20	MKTF-16			-008	X	X	~~X~~ no	X	X	X										
6/6/14	1015	H20	MKTF-17 ✱			-009	X	X	~~X~~ no	~~X~~ no	~~X~~ no	~~X~~ no										
6/6/14	920	H20	MKTF-18 ✱			-010	X	X	X	X	X	X										
6/4/14	1700	H20	FB-GROUP4-060414			-011	~~X~~ no	~~X~~ no	~~X~~ no	~~X~~ no	~~X~~ no	~~X~~ no										
6/5/14	1830	H20	EB-#1-6/5/14			-012	X	X	no													
6/5/14	1845	H20	EB-#2-6/5/14			-013	X	X	no													
6/4/14	—	H20	BD-MKTF-6/4/14			-014			X													
			TB A 06/09/14			-015	X	X														

Date:	Time:	Relinquished by:	Received by:	Date	Time
6/6/14	1550	Pam Landers	Michelle Gp	06/06/14	1550
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

Page 2 of 2

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

✱ - Did not collect full bottle set

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 11, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: Q4 2014 OrderNo.: 1411599

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 11/15/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1411599**
Date Reported: **12/11/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-3
Project: Q4 2014
Collection Date: 11/13/2014 12:30:00 PM
Lab ID: 1411599-001
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**JME**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/18/2014 8:14:34 PM	16415
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/18/2014 8:14:34 PM	16415
Surr: DNOP	106	59-141		%REC	1	11/18/2014 8:14:34 PM	16415
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/18/2014 7:21:00 PM	R22618
Surr: BFB	89.9	80-120		%REC	1	11/18/2014 7:21:00 PM	R22618
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	0.35	0.10		mg/L	1	11/17/2014 10:20:44 PM	R22603
Chloride	890	50		mg/L	100	12/1/2014 9:40:13 PM	R22875
Bromide	5.3	0.10		mg/L	1	11/17/2014 10:20:44 PM	R22603
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	11/17/2014 10:20:44 PM	R22603
Sulfate	400	10		mg/L	20	11/17/2014 10:33:09 PM	R22603
Nitrate+Nitrite as N	19	1.0	*	mg/L	5	11/26/2014 12:58:03 PM	R22848
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.041	0.0020		mg/L	1	11/24/2014 7:04:51 PM	R22755
Cadmium	ND	0.0020		mg/L	1	11/24/2014 7:04:51 PM	R22755
Calcium	37	1.0		mg/L	1	11/24/2014 7:04:51 PM	R22755
Chromium	ND	0.0060		mg/L	1	11/24/2014 7:04:51 PM	R22755
Copper	ND	0.0060		mg/L	1	11/24/2014 7:04:51 PM	R22755
Iron	ND	0.020		mg/L	1	11/24/2014 7:04:51 PM	R22755
Magnesium	6.1	1.0		mg/L	1	11/24/2014 7:04:51 PM	R22755
Manganese	ND	0.0020		mg/L	1	11/24/2014 7:04:51 PM	R22755
Potassium	3.0	1.0		mg/L	1	11/24/2014 7:04:51 PM	R22755
Silver	ND	0.0050		mg/L	1	11/24/2014 7:04:51 PM	R22755
Sodium	880	20		mg/L	20	11/25/2014 2:39:34 PM	R22813
Zinc	0.089	0.010		mg/L	1	11/24/2014 7:04:51 PM	R22755
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.11	0.0020		mg/L	1	11/20/2014 6:49:10 PM	16487
Cadmium	ND	0.0020		mg/L	1	11/20/2014 6:49:10 PM	16487
Chromium	0.010	0.0060		mg/L	1	11/20/2014 6:49:10 PM	16487
Copper	ND	0.0060		mg/L	1	11/20/2014 6:49:10 PM	16487
Iron	2.1	0.10	*	mg/L	5	11/24/2014 11:41:01 AM	16487
Manganese	0.070	0.0020	*	mg/L	1	11/20/2014 6:49:10 PM	16487
Silver	ND	0.0050		mg/L	1	11/20/2014 6:49:10 PM	16487
Zinc	0.063	0.010		mg/L	1	11/20/2014 6:49:10 PM	16487
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	12/2/2014 3:50:25 PM	R22885

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-3
Project: Q4 2014
Collection Date: 11/13/2014 12:30:00 PM
Lab ID: 1411599-001
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.010		mg/L	10	12/2/2014 3:50:25 PM	R22885
Selenium	ND	0.050		mg/L	50	12/4/2014 12:01:45 PM	R22933
Uranium	0.039	0.010	*	mg/L	10	12/2/2014 3:50:25 PM	R22885
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.050		mg/L	50	12/3/2014 3:40:27 PM	16487
Lead	0.0034	0.0010		mg/L	1	11/26/2014 3:21:33 PM	16487
Selenium	ND	0.050		mg/L	50	12/3/2014 3:40:27 PM	16487
Uranium	0.039	0.0010	*	mg/L	1	11/26/2014 3:21:33 PM	16487
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/26/2014 3:13:54 PM	16593
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Acenaphthylene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Aniline	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Anthracene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Azobenzene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Benz(a)anthracene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Benzo(a)pyrene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Benzo(b)fluoranthene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Benzo(k)fluoranthene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Benzoic acid	ND	20		µg/L	1	11/20/2014 12:29:37 PM	16481
Benzyl alcohol	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Butyl benzyl phthalate	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Carbazole	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
4-Chloroaniline	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
2-Chloronaphthalene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
2-Chlorophenol	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Chrysene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Di-n-butyl phthalate	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Di-n-octyl phthalate	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-3
Project: Q4 2014
Collection Date: 11/13/2014 12:30:00 PM
Lab ID: 1411599-001
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Dibenzofuran	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
1,2-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
1,3-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
1,4-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Diethyl phthalate	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Dimethyl phthalate	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
2,4-Dichlorophenol	ND	20		µg/L	1	11/20/2014 12:29:37 PM	16481
2,4-Dimethylphenol	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/20/2014 12:29:37 PM	16481
2,4-Dinitrophenol	ND	20		µg/L	1	11/20/2014 12:29:37 PM	16481
2,4-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
2,6-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Fluoranthene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Fluorene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Hexachlorobenzene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Hexachlorobutadiene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Hexachloroethane	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Isophorone	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
1-Methylnaphthalene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
2-Methylnaphthalene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
2-Methylphenol	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
3+4-Methylphenol	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
N-Nitrosodimethylamine	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Naphthalene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
2-Nitroaniline	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
3-Nitroaniline	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
4-Nitroaniline	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Nitrobenzene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
2-Nitrophenol	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
4-Nitrophenol	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Pentachlorophenol	ND	20		µg/L	1	11/20/2014 12:29:37 PM	16481
Phenanthrene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Phenol	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-3
Project: Q4 2014
Collection Date: 11/13/2014 12:30:00 PM
Lab ID: 1411599-001
Matrix: AQUEOUS
Received Date: 11/15/2014 9:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Pyrene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Pyridine	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/20/2014 12:29:37 PM	16481
Surr: 2-Fluorophenol	21.7	17.6-104		%REC	1	11/20/2014 12:29:37 PM	16481
Surr: Phenol-d5	38.5	17.7-89.9		%REC	1	11/20/2014 12:29:37 PM	16481
Surr: 2,4,6-Tribromophenol	19.2	16.3-122		%REC	1	11/20/2014 12:29:37 PM	16481
Surr: Nitrobenzene-d5	78.6	45.3-117		%REC	1	11/20/2014 12:29:37 PM	16481
Surr: 2-Fluorobiphenyl	74.5	43-113		%REC	1	11/20/2014 12:29:37 PM	16481
Surr: 4-Terphenyl-d14	83.0	47.6-122		%REC	1	11/20/2014 12:29:37 PM	16481
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	11/21/2014 1:30:34 AM	R22685
Toluene	ND	1.0		µg/L	1	11/21/2014 1:30:34 AM	R22685
Ethylbenzene	ND	1.0		µg/L	1	11/21/2014 1:30:34 AM	R22685
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/21/2014 1:30:34 AM	R22685
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2014 1:30:34 AM	R22685
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/21/2014 1:30:34 AM	R22685
Xylenes, Total	ND	1.5		µg/L	1	11/21/2014 1:30:34 AM	R22685
Surr: 1,2-Dichloroethane-d4	99.4	70-130		%REC	1	11/21/2014 1:30:34 AM	R22685
Surr: 4-Bromofluorobenzene	99.6	70-130		%REC	1	11/21/2014 1:30:34 AM	R22685
Surr: Dibromofluoromethane	90.0	70-130		%REC	1	11/21/2014 1:30:34 AM	R22685
Surr: Toluene-d8	91.8	70-130		%REC	1	11/21/2014 1:30:34 AM	R22685

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411599**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22755** RunNo: **22755**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671448** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22755** RunNo: **22755**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671449** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.6	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.8	85	115			
Calcium	50	1.0	50.00	0	100	85	115			
Chromium	0.48	0.0060	0.5000	0	96.1	85	115			
Copper	0.49	0.0060	0.5000	0	97.6	85	115			
Iron	0.49	0.020	0.5000	0	97.8	85	115			
Magnesium	50	1.0	50.00	0	101	85	115			
Manganese	0.47	0.0020	0.5000	0	93.5	85	115			
Potassium	49	1.0	50.00	0	97.3	85	115			
Silver	0.10	0.0050	0.1000	0	104	85	115			
Zinc	0.48	0.010	0.5000	0	96.3	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22813** RunNo: **22813**
Prep Date: Analysis Date: **11/25/2014** SeqNo: **673337** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411599**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**			
Client ID: **LCSW**	Batch ID: **R22813**	RunNo: **22813**			
Prep Date:	Analysis Date: **11/25/2014**	SeqNo: **673338**	Units: **mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	51	1.0	50.00	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411599**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB-16487** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **16487** RunNo: **22687**
Prep Date: **11/20/2014** Analysis Date: **11/20/2014** SeqNo: **669092** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-16487** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **16487** RunNo: **22687**
Prep Date: **11/20/2014** Analysis Date: **11/20/2014** SeqNo: **669093** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.0	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.0	85	115			
Chromium	0.48	0.0060	0.5000	0	96.8	85	115			
Copper	0.49	0.0060	0.5000	0	98.9	85	115			
Iron	0.51	0.020	0.5000	0	101	85	115			
Manganese	0.48	0.0020	0.5000	0	95.7	85	115			
Silver	0.11	0.0050	0.1000	0	108	85	115			
Zinc	0.48	0.010	0.5000	0	96.7	85	115			

Sample ID **1411599-001GMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **NAPIS-3** Batch ID: **16487** RunNo: **22687**
Prep Date: **11/20/2014** Analysis Date: **11/20/2014** SeqNo: **669226** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.59	0.0020	0.5000	0.1060	96.0	70	130			
Cadmium	0.49	0.0020	0.5000	0	97.2	70	130			
Chromium	0.49	0.0060	0.5000	0.009950	95.7	70	130			
Copper	0.57	0.0060	0.5000	0.005830	112	70	130			
Manganese	0.54	0.0020	0.5000	0.07036	93.5	70	130			
Silver	0.11	0.0050	0.1000	0	113	70	130			
Zinc	0.54	0.010	0.5000	0.06255	94.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411599**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **1411599-001GMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **NAPIS-3** Batch ID: **16487** RunNo: **22687**
Prep Date: **11/20/2014** Analysis Date: **11/20/2014** SeqNo: **669227** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.58	0.0020	0.5000	0.1060	94.5	70	130	1.21	20	
Cadmium	0.49	0.0020	0.5000	0	97.3	70	130	0.0617	20	
Chromium	0.49	0.0060	0.5000	0.009950	95.9	70	130	0.192	20	
Copper	0.56	0.0060	0.5000	0.005830	111	70	130	0.595	20	
Manganese	0.54	0.0020	0.5000	0.07036	92.9	70	130	0.565	20	
Silver	0.11	0.0050	0.1000	0	111	70	130	1.04	20	
Zinc	0.54	0.010	0.5000	0.06255	94.6	70	130	0.0877	20	

Sample ID **1411599-001GMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **NAPIS-3** Batch ID: **16487** RunNo: **22752**
Prep Date: **11/20/2014** Analysis Date: **11/24/2014** SeqNo: **671351** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	3.6	0.10	0.5000	2.134	299	70	130			S

Sample ID **1411599-001GMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **NAPIS-3** Batch ID: **16487** RunNo: **22752**
Prep Date: **11/20/2014** Analysis Date: **11/24/2014** SeqNo: **671355** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	3.5	0.10	0.5000	2.134	282	70	130	2.27	20	S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411599**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22885** RunNo: **22885**
Prep Date: Analysis Date: **12/2/2014** SeqNo: **675799** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.7	85	115			
Lead	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.026	0.0010	0.02500	0	103	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22885** RunNo: **22885**
Prep Date: Analysis Date: **12/2/2014** SeqNo: **675800** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	100	85	115			
Lead	0.025	0.0010	0.02500	0	98.4	85	115			
Uranium	0.026	0.0010	0.02500	0	102	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22885** RunNo: **22885**
Prep Date: Analysis Date: **12/2/2014** SeqNo: **675801** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22885** RunNo: **22885**
Prep Date: Analysis Date: **12/2/2014** SeqNo: **675802** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22933** RunNo: **22933**
Prep Date: Analysis Date: **12/4/2014** SeqNo: **677289** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.024	0.0010	0.02500	0	94.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411599**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**R22933**	RunNo:	**22933**					
Prep Date:		Analysis Date:	**12/4/2014**	SeqNo:	**677290**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.024	0.0010	0.02500	0	95.5	85	115			

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**R22933**	RunNo:	**22933**					
Prep Date:		Analysis Date:	**12/4/2014**	SeqNo:	**677291**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**R22933**	RunNo:	**22933**					
Prep Date:		Analysis Date:	**12/4/2014**	SeqNo:	**677292**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411599**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LLLCS-16487** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **16487** RunNo: **22842**
Prep Date: **11/20/2014** Analysis Date: **11/26/2014** SeqNo: **674131** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0	103	85	115			
Lead	0.026	0.0010	0.02500	0	105	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.026	0.0010	0.02500	0	104	85	115			

Sample ID **MB-16487** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **16487** RunNo: **22842**
Prep Date: **11/20/2014** Analysis Date: **11/26/2014** SeqNo: **674136** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411599**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**MB-16593**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**						
Client ID:	**PBW**	Batch ID:	**16593**	RunNo:	**22825**						
Prep Date:	**11/26/2014**	Analysis Date:	**11/26/2014**	SeqNo:	**673696**	Units:	**mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		ND	0.00020								

Sample ID	**LCS-16593**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**						
Client ID:	**LCSW**	Batch ID:	**16593**	RunNo:	**22825**						
Prep Date:	**11/26/2014**	Analysis Date:	**11/26/2014**	SeqNo:	**673697**	Units:	**mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.0051	0.00020	0.005000	0	102	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411599**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22603** RunNo: **22603**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **666596** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R22603** RunNo: **22603**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **666597** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	96.7	90	110			
Bromide	2.5	0.10	2.500	0	99.7	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	97.5	90	110			
Sulfate	9.6	0.50	10.00	0	96.1	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22603** RunNo: **22603**
Prep Date: Analysis Date: **11/18/2014** SeqNo: **666650** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R22603** RunNo: **22603**
Prep Date: Analysis Date: **11/18/2014** SeqNo: **666651** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	97.4	90	110			
Bromide	2.5	0.10	2.500	0	102	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	99.7	90	110			
Sulfate	9.8	0.50	10.00	0	98.2	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22848** RunNo: **22848**
Prep Date: Analysis Date: **11/26/2014** SeqNo: **674415** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411599**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R22848**	RunNo: **22848**							
Prep Date:	Analysis Date: **11/26/2014**	SeqNo: **674415**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R22848**	RunNo: **22848**							
Prep Date:	Analysis Date: **11/26/2014**	SeqNo: **674416**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.6	0.20	3.500	0	104	90	110			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R22875**	RunNo: **22875**							
Prep Date:	Analysis Date: **12/1/2014**	SeqNo: **675391**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R22875**	RunNo: **22875**							
Prep Date:	Analysis Date: **12/1/2014**	SeqNo: **675392**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	97.0	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411599**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**MB-16415**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Diesel Range**					
Client ID:	**PBW**	Batch ID:	**16415**	RunNo:	**22594**					
Prep Date:	**11/17/2014**	Analysis Date:	**11/18/2014**	SeqNo:	**666747**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.0		1.000		101	59	141			

Sample ID	**LCS-16415**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Diesel Range**					
Client ID:	**LCSW**	Batch ID:	**16415**	RunNo:	**22594**					
Prep Date:	**11/17/2014**	Analysis Date:	**11/18/2014**	SeqNo:	**666748**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.7	1.0	5.000	0	93.6	69.7	142			
Surr: DNOP	0.60		0.5000		119	59	141			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411599**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBW**	Batch ID:	**R22618**	RunNo:	**22618**					
Prep Date:		Analysis Date:	**11/18/2014**	SeqNo:	**667070**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		ND	0.050								
Surr: BFB		18		20.00		88.4	80	120			

Sample ID	**2.5UG GRO LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSW**	Batch ID:	**R22618**	RunNo:	**22618**					
Prep Date:		Analysis Date:	**11/18/2014**	SeqNo:	**667071**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		0.46	0.050	0.5000	0	91.8	80	120			
Surr: BFB		19		20.00		94.0	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411599**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **5mL-rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22685** RunNo: **22685**
Prep Date: Analysis Date: **11/20/2014** SeqNo: **668946** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.0		10.00		90.3	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	8.9		10.00		89.4	70	130			
Surr: Toluene-d8	9.1		10.00		91.5	70	130			

Sample ID **100ng Lcs200ngAnn** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22685** RunNo: **22685**
Prep Date: Analysis Date: **11/20/2014** SeqNo: **668948** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	22	1.0	20.00	0	111	80	120			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.0	70	130			
Surr: 4-Bromofluorobenzene	9.0		10.00		90.4	70	130			
Surr: Dibromofluoromethane	9.4		10.00		93.5	70	130			
Surr: Toluene-d8	9.9		10.00		98.7	70	130			

Sample ID **b2** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22685** RunNo: **22685**
Prep Date: Analysis Date: **11/20/2014** SeqNo: **668977** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		91.2	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.7	70	130			
Surr: Toluene-d8	8.8		10.00		88.3	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411599**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **LCSW**	Batch ID: **R22685**	RunNo: **22685**			
Prep Date:	Analysis Date: **11/21/2014**	SeqNo: **668979**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	22	1.0	20.00	0	109	80	120			
Surr: 1,2-Dichloroethane-d4	10		10.00		99.7	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.9	70	130			
Surr: Dibromofluoromethane	9.2		10.00		92.0	70	130			
Surr: Toluene-d8	10		10.00		99.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411599**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **mb-16481**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **16481**	RunNo: **22682**			
Prep Date: **11/19/2014**	Analysis Date: **11/20/2014**	SeqNo: **668827**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	10	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411599**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**mb-16481**	SampType:	**MBLK**	TestCode:	**EPA Method 8270C: Semivolatiles**		
Client ID:	**PBW**	Batch ID:	**16481**	RunNo:	**22682**		
Prep Date:	**11/19/2014**	Analysis Date:	**11/20/2014**	SeqNo:	**668827**	Units:	**µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	150		200.0		72.8	17.6	104			
Surr: Phenol-d5	140		200.0		70.0	17.7	89.9			
Surr: 2,4,6-Tribromophenol	160		200.0		81.6	16.3	122			
Surr: Nitrobenzene-d5	70		100.0		69.6	45.3	117			
Surr: 2-Fluorobiphenyl	74		100.0		74.0	43	113			
Surr: 4-Terphenyl-d14	99		100.0		99.0	47.6	122			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411599**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **lcs-16481** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **16481** RunNo: **22682**
Prep Date: **11/19/2014** Analysis Date: **11/20/2014** SeqNo: **668828** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	80	10	100.0	0	79.8	47.9	114			
4-Chloro-3-methylphenol	180	10	200.0	0	88.4	51.7	122			
2-Chlorophenol	150	10	200.0	0	73.0	40.7	113			
1,4-Dichlorobenzene	70	10	100.0	0	69.9	39.6	99.9			
2,4-Dinitrotoluene	70	10	100.0	0	70.1	40.8	113			
N-Nitrosodi-n-propylamine	79	10	100.0	0	79.0	51.2	111			
4-Nitrophenol	170	10	200.0	0	85.4	15.7	86.9			
Pentachlorophenol	120	20	200.0	0	60.0	21.6	104			
Phenol	160	10	200.0	0	80.1	28.6	71.7			S
Pyrene	76	10	100.0	0	75.8	54.2	128			
1,2,4-Trichlorobenzene	72	10	100.0	0	72.1	40.9	101			
Surr: 2-Fluorophenol	130		200.0		63.8	17.6	104			
Surr: Phenol-d5	130		200.0		66.5	17.7	89.9			
Surr: 2,4,6-Tribromophenol	160		200.0		82.5	16.3	122			
Surr: Nitrobenzene-d5	67		100.0		66.8	45.3	117			
Surr: 2-Fluorobiphenyl	72		100.0		72.0	43	113			
Surr: 4-Terphenyl-d14	81		100.0		81.0	47.6	122			

Sample ID **lcsd-16481** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **16481** RunNo: **22682**
Prep Date: **11/19/2014** Analysis Date: **11/20/2014** SeqNo: **668829** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	83	10	100.0	0	82.9	47.9	114	3.83	27.2	
4-Chloro-3-methylphenol	160	10	200.0	0	82.2	51.7	122	7.36	25.9	
2-Chlorophenol	140	10	200.0	0	71.6	40.7	113	1.87	22.5	
1,4-Dichlorobenzene	69	10	100.0	0	69.3	39.6	99.9	0.948	24.6	
2,4-Dinitrotoluene	71	10	100.0	0	70.8	40.8	113	0.966	25.3	
N-Nitrosodi-n-propylamine	77	10	100.0	0	77.0	51.2	111	2.61	23.6	
4-Nitrophenol	180	10	200.0	0	88.7	15.7	86.9	3.77	34.7	S
Pentachlorophenol	130	20	200.0	0	63.1	21.6	104	4.97	32.8	
Phenol	160	10	200.0	0	78.3	28.6	71.7	2.37	25.5	S
Pyrene	81	10	100.0	0	81.1	54.2	128	6.83	31.4	
1,2,4-Trichlorobenzene	70	10	100.0	0	70.0	40.9	101	2.96	25.9	
Surr: 2-Fluorophenol	120		200.0		62.4	17.6	104	0	0	
Surr: Phenol-d5	130		200.0		64.7	17.7	89.9	0	0	
Surr: 2,4,6-Tribromophenol	170		200.0		85.0	16.3	122	0	0	
Surr: Nitrobenzene-d5	66		100.0		66.0	45.3	117	0	0	
Surr: 2-Fluorobiphenyl	74		100.0		74.2	43	113	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411599**
11-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**lcsd-16481**	SampType:	**LCSD**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**LCSS02**	Batch ID:	**16481**	RunNo:	**22682**
Prep Date:	**11/19/2014**	Analysis Date:	**11/20/2014**	SeqNo:	**668829** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	89		100.0		89.4	47.6	122	0	0	

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1411599 RcptNo: 1

Received by/date: SM 11/15/14

Logged By: **Ashley Gallegos** 11/15/2014 9:15:00 AM

Completed By: **Ashley Gallegos** 11/17/2014 9:44:26 AM

Reviewed By: CS 11/17/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☑
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 2 (<2 or >12 unless noted)
Adjusted? No
Checked by:

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.9	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

? Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

Q4 2014

Project #:

NAPIS-1,-2,-3,KA-3

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.9°C

HALL ENVIRONI
ANALYSIS LABO
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM
Tel. 505-345-3975 Fax 505-345-41

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1411599	8021 + MTBE	8015B extended	8270 + phenols	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	Major Cations/Anions				
11-13-14	1230	AQ	NAPIS-3	11		-001	X	X	X	X	X	X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
11-15-14	945	Pat Lawrence / Pat Lawrence	Stacey MC	11/15/14	9:15
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 28, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: Q1-2014 Groundwater Sampling OrderNo.: 1403354

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 7 sample(s) on 3/10/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1403354**
Date Reported: **3/28/2014**

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-1
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/10/2014 12:25:00 PM
Lab ID: 1403354-001
Matrix: AQUEOUS
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	3/12/2014 5:01:47 AM	12114
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	3/12/2014 5:01:47 AM	12114
Surr: DNOP	115	62.7-145		%REC	1	3/12/2014 5:01:47 AM	12114
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**JMP**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	3/12/2014 11:29:30 PM	R17249
Surr: BFB	83.5	80.4-118		%REC	1	3/12/2014 11:29:30 PM	R17249
EPA METHOD 8021B: VOLATILES						Analyst:	**JMP**
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	3/12/2014 11:29:30 PM	R17249
Benzene	ND	1.0		µg/L	1	3/12/2014 11:29:30 PM	R17249
Toluene	ND	1.0		µg/L	1	3/12/2014 11:29:30 PM	R17249
Ethylbenzene	ND	1.0		µg/L	1	3/12/2014 11:29:30 PM	R17249
Xylenes, Total	ND	2.0		µg/L	1	3/12/2014 11:29:30 PM	R17249
Surr: 4-Bromofluorobenzene	99.9	82.9-139		%REC	1	3/12/2014 11:29:30 PM	R17249
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	ND	0.50		mg/L	5	3/12/2014 1:26:00 AM	R17243
Chloride	79	2.5		mg/L	5	3/12/2014 1:26:00 AM	R17243
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	3/12/2014 1:26:00 AM	R17243
Bromide	1.7	0.50		mg/L	5	3/12/2014 1:26:00 AM	R17243
Nitrogen, Nitrate (As N)	29	0.50	*	mg/L	5	3/12/2014 1:26:00 AM	R17243
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	3/12/2014 1:26:00 AM	R17243
Sulfate	180	2.5		mg/L	5	3/12/2014 1:26:00 AM	R17243
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.12	0.0020		mg/L	1	3/13/2014 1:33:33 PM	R17289
Cadmium	ND	0.0020		mg/L	1	3/13/2014 1:33:33 PM	R17289
Calcium	95	1.0		mg/L	1	3/13/2014 1:33:33 PM	R17289
Chromium	ND	0.0060		mg/L	1	3/13/2014 1:33:33 PM	R17289
Copper	ND	0.0060		mg/L	1	3/13/2014 1:33:33 PM	R17289
Iron	ND	0.020		mg/L	1	3/13/2014 1:33:33 PM	R17289
Magnesium	17	1.0		mg/L	1	3/13/2014 1:33:33 PM	R17289
Manganese	0.053	0.0020	*	mg/L	1	3/13/2014 1:33:33 PM	R17289
Potassium	ND	1.0		mg/L	1	3/13/2014 1:33:33 PM	R17289
Silver	ND	0.0050		mg/L	1	3/13/2014 1:33:33 PM	R17289
Sodium	330	5.0		mg/L	5	3/13/2014 1:35:21 PM	R17289
Zinc	0.017	0.010		mg/L	1	3/13/2014 1:33:33 PM	R17289
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.14	0.0020		mg/L	1	3/13/2014 5:39:28 PM	12123
Cadmium	ND	0.0020		mg/L	1	3/13/2014 5:39:28 PM	12123

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-1
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/10/2014 12:25:00 PM
Lab ID: 1403354-001
Matrix: AQUEOUS
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Chromium	ND	0.0060		mg/L	1	3/13/2014 5:39:28 PM	12123
Copper	ND	0.0060		mg/L	1	3/13/2014 5:39:28 PM	12123
Iron	0.28	0.020		mg/L	1	3/13/2014 5:39:28 PM	12123
Manganese	0.095	0.0020	*	mg/L	1	3/13/2014 5:39:28 PM	12123
Silver	ND	0.0050		mg/L	1	3/13/2014 5:39:28 PM	12123
Zinc	0.012	0.010		mg/L	1	3/13/2014 5:39:28 PM	12123
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	3/19/2014 2:19:52 PM	R17423
Lead	ND	0.0010		mg/L	1	3/18/2014 2:40:17 PM	R17401
Selenium	ND	0.0050		mg/L	5	3/19/2014 2:19:52 PM	R17423
Uranium	0.013	0.0010		mg/L	1	3/18/2014 2:40:17 PM	R17401
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0018	0.0010		mg/L	1	3/17/2014 4:15:01 PM	12123
Lead	ND	0.0010		mg/L	1	3/17/2014 4:15:01 PM	12123
Selenium	0.0055	0.0010		mg/L	1	3/17/2014 4:15:01 PM	12123
Uranium	0.013	0.0010		mg/L	1	3/17/2014 4:15:01 PM	12123
EPA METHOD 245.1: MERCURY						Analyst:	**JML**
Mercury	ND	0.00020		mg/L	1	3/12/2014 12:44:22 PM	12133
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Acenaphthylene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Aniline	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Anthracene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Azobenzene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Benz(a)anthracene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Benzo(a)pyrene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Benzo(b)fluoranthene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Benzo(g,h,i)perylene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Benzo(k)fluoranthene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Benzoic acid	ND	20		µg/L	1	3/12/2014 3:54:58 PM	12139
Benzyl alcohol	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Bis(2-chloroethyl)ether	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
4-Bromophenyl phenyl ether	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Butyl benzyl phthalate	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139

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Collection Date: 3/10/2014 12:25:00 PM
Lab ID: 1403354-001
Matrix: AQUEOUS
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Carbazole	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
4-Chloro-3-methylphenol	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
4-Chloroaniline	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
2-Chloronaphthalene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
2-Chlorophenol	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Chrysene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Di-n-butyl phthalate	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Di-n-octyl phthalate	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Dibenz(a,h)anthracene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Dibenzofuran	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
1,2-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
1,3-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
1,4-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
3,3´-Dichlorobenzidine	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Diethyl phthalate	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Dimethyl phthalate	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
2,4-Dichlorophenol	ND	20		µg/L	1	3/12/2014 3:54:58 PM	12139
2,4-Dimethylphenol	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	3/12/2014 3:54:58 PM	12139
2,4-Dinitrophenol	ND	20		µg/L	1	3/12/2014 3:54:58 PM	12139
2,4-Dinitrotoluene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
2,6-Dinitrotoluene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Fluoranthene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Fluorene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Hexachlorobenzene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Hexachlorobutadiene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Hexachlorocyclopentadiene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Hexachloroethane	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Isophorone	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
1-Methylnaphthalene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
2-Methylnaphthalene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
2-Methylphenol	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
3+4-Methylphenol	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
N-Nitrosodimethylamine	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
N-Nitrosodiphenylamine	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Naphthalene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139

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Matrix: AQUEOUS
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2-Nitroaniline	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
3-Nitroaniline	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
4-Nitroaniline	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Nitrobenzene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
2-Nitrophenol	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
4-Nitrophenol	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Pentachlorophenol	ND	20		µg/L	1	3/12/2014 3:54:58 PM	12139
Phenanthrene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Phenol	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Pyrene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Pyridine	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
1,2,4-Trichlorobenzene	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
2,4,5-Trichlorophenol	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
2,4,6-Trichlorophenol	ND	10		µg/L	1	3/12/2014 3:54:58 PM	12139
Surr: 2-Fluorophenol	68.6	22.7-98		%REC	1	3/12/2014 3:54:58 PM	12139
Surr: Phenol-d5	49.6	23.4-74.9		%REC	1	3/12/2014 3:54:58 PM	12139
Surr: 2,4,6-Tribromophenol	99.4	23.3-111		%REC	1	3/12/2014 3:54:58 PM	12139
Surr: Nitrobenzene-d5	97.8	36.8-111		%REC	1	3/12/2014 3:54:58 PM	12139
Surr: 2-Fluorobiphenyl	93.6	38.3-110		%REC	1	3/12/2014 3:54:58 PM	12139
Surr: 4-Terphenyl-d14	89.2	52.1-116		%REC	1	3/12/2014 3:54:58 PM	12139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-2
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/10/2014 10:20:00 AM
Lab ID: 1403354-002
Matrix: AQUEOUS
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	1.8	1.0		mg/L	1	3/12/2014 5:23:33 AM	12114
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	3/12/2014 5:23:33 AM	12114
Surr: DNOP	109	62.7-145		%REC	1	3/12/2014 5:23:33 AM	12114
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**JMP**
Gasoline Range Organics (GRO)	0.64	0.10		mg/L	2	3/13/2014 12:26:36 AM	R17249
Surr: BFB	110	80.4-118		%REC	2	3/13/2014 12:26:36 AM	R17249
EPA METHOD 8021B: VOLATILES						Analyst:	**JMP**
Methyl tert-butyl ether (MTBE)	210	25		µg/L	10	3/12/2014 11:58:02 PM	R17249
Benzene	67	2.0		µg/L	2	3/13/2014 12:26:36 AM	R17249
Toluene	ND	2.0		µg/L	2	3/13/2014 12:26:36 AM	R17249
Ethylbenzene	28	2.0		µg/L	2	3/13/2014 12:26:36 AM	R17249
Xylenes, Total	ND	4.0		µg/L	2	3/13/2014 12:26:36 AM	R17249
Surr: 4-Bromofluorobenzene	122	82.9-139		%REC	2	3/13/2014 12:26:36 AM	R17249
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	1.5	1.0		mg/L	10	3/12/2014 2:15:38 AM	R17243
Chloride	220	50		mg/L	100	3/12/2014 2:28:03 AM	R17243
Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	3/12/2014 2:15:38 AM	R17243
Bromide	1.6	1.0		mg/L	10	3/12/2014 2:15:38 AM	R17243
Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	3/12/2014 2:15:38 AM	R17243
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	3/12/2014 2:15:38 AM	R17243
Sulfate	10	5.0		mg/L	10	3/12/2014 2:15:38 AM	R17243
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	1.8	0.010		mg/L	5	3/13/2014 1:38:46 PM	R17289
Cadmium	ND	0.0020		mg/L	1	3/13/2014 1:37:11 PM	R17289
Calcium	88	1.0		mg/L	1	3/13/2014 1:37:11 PM	R17289
Chromium	ND	0.0060		mg/L	1	3/13/2014 1:37:11 PM	R17289
Copper	ND	0.0060		mg/L	1	3/13/2014 1:37:11 PM	R17289
Iron	1.8	0.10	*	mg/L	5	3/13/2014 1:38:46 PM	R17289
Magnesium	17	1.0		mg/L	1	3/13/2014 1:37:11 PM	R17289
Manganese	1.2	0.010	*	mg/L	5	3/13/2014 1:38:46 PM	R17289
Potassium	ND	1.0		mg/L	1	3/13/2014 1:37:11 PM	R17289
Silver	ND	0.0050		mg/L	1	3/13/2014 1:37:11 PM	R17289
Sodium	350	5.0		mg/L	5	3/13/2014 1:38:46 PM	R17289
Zinc	0.012	0.010		mg/L	1	3/13/2014 1:37:11 PM	R17289
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	1.5	0.010		mg/L	5	3/13/2014 6:01:06 PM	12123
Cadmium	ND	0.0020		mg/L	1	3/13/2014 5:59:25 PM	12123

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-2
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/10/2014 10:20:00 AM
Lab ID: 1403354-002
Matrix: AQUEOUS
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Chromium	ND	0.0060		mg/L	1	3/13/2014 5:59:25 PM	12123
Copper	ND	0.0060		mg/L	1	3/13/2014 5:59:25 PM	12123
Iron	2.9	0.10	*	mg/L	5	3/13/2014 6:01:06 PM	12123
Manganese	1.4	0.010	*	mg/L	5	3/13/2014 6:01:06 PM	12123
Silver	ND	0.0050		mg/L	1	3/13/2014 5:59:25 PM	12123
Zinc	ND	0.010		mg/L	1	3/13/2014 5:59:25 PM	12123
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0053	0.0050		mg/L	5	3/19/2014 2:22:37 PM	R17423
Lead	ND	0.0010		mg/L	1	3/18/2014 2:45:00 PM	R17401
Selenium	ND	0.0050		mg/L	5	3/19/2014 2:22:37 PM	R17423
Uranium	ND	0.0010		mg/L	1	3/18/2014 2:45:00 PM	R17401
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0060	0.0050		mg/L	5	3/17/2014 5:29:17 PM	12123
Lead	ND	0.0010		mg/L	1	3/17/2014 4:20:19 PM	12123
Selenium	0.0071	0.0050		mg/L	5	3/17/2014 5:29:17 PM	12123
Uranium	ND	0.0010		mg/L	1	3/17/2014 4:20:19 PM	12123
EPA METHOD 245.1: MERCURY						Analyst:	**JML**
Mercury	ND	0.00020		mg/L	1	3/12/2014 12:46:06 PM	12133
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Acenaphthylene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Aniline	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Anthracene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Azobenzene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Benz(a)anthracene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Benzo(a)pyrene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Benzo(b)fluoranthene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Benzo(g,h,i)perylene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Benzo(k)fluoranthene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Benzoic acid	ND	20		µg/L	1	3/12/2014 8:45:29 PM	12139
Benzyl alcohol	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Bis(2-chloroethyl)ether	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
4-Bromophenyl phenyl ether	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Butyl benzyl phthalate	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-2
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/10/2014 10:20:00 AM
Lab ID: 1403354-002
Matrix: AQUEOUS
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Carbazole	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
4-Chloro-3-methylphenol	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
4-Chloroaniline	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
2-Chloronaphthalene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
2-Chlorophenol	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Chrysene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Di-n-butyl phthalate	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Di-n-octyl phthalate	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Dibenz(a,h)anthracene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Dibenzofuran	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
1,2-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
1,3-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
1,4-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
3,3´-Dichlorobenzidine	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Diethyl phthalate	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Dimethyl phthalate	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
2,4-Dichlorophenol	ND	20		µg/L	1	3/12/2014 8:45:29 PM	12139
2,4-Dimethylphenol	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	3/12/2014 8:45:29 PM	12139
2,4-Dinitrophenol	ND	20		µg/L	1	3/12/2014 8:45:29 PM	12139
2,4-Dinitrotoluene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
2,6-Dinitrotoluene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Fluoranthene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Fluorene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Hexachlorobenzene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Hexachlorobutadiene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Hexachlorocyclopentadiene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Hexachloroethane	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Isophorone	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
1-Methylnaphthalene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
2-Methylnaphthalene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
2-Methylphenol	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
3+4-Methylphenol	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
N-Nitrosodimethylamine	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
N-Nitrosodiphenylamine	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Naphthalene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-2
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/10/2014 10:20:00 AM
Lab ID: 1403354-002
Matrix: AQUEOUS
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2-Nitroaniline	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
3-Nitroaniline	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
4-Nitroaniline	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Nitrobenzene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
2-Nitrophenol	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
4-Nitrophenol	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Pentachlorophenol	ND	20		µg/L	1	3/12/2014 8:45:29 PM	12139
Phenanthrene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Phenol	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Pyrene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Pyridine	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
1,2,4-Trichlorobenzene	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
2,4,5-Trichlorophenol	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
2,4,6-Trichlorophenol	ND	10		µg/L	1	3/12/2014 8:45:29 PM	12139
Surr: 2-Fluorophenol	54.0	22.7-98		%REC	1	3/12/2014 8:45:29 PM	12139
Surr: Phenol-d5	39.5	23.4-74.9		%REC	1	3/12/2014 8:45:29 PM	12139
Surr: 2,4,6-Tribromophenol	91.8	23.3-111		%REC	1	3/12/2014 8:45:29 PM	12139
Surr: Nitrobenzene-d5	82.3	36.8-111		%REC	1	3/12/2014 8:45:29 PM	12139
Surr: 2-Fluorobiphenyl	72.9	38.3-110		%REC	1	3/12/2014 8:45:29 PM	12139
Surr: 4-Terphenyl-d14	78.4	52.1-116		%REC	1	3/12/2014 8:45:29 PM	12139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-3
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/10/2014 11:45:00 AM
Lab ID: 1403354-004
Matrix: AQUEOUS
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	3/12/2014 5:45:37 AM	12114
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	3/12/2014 5:45:37 AM	12114
Surr: DNOP	121	62.7-145		%REC	1	3/12/2014 5:45:37 AM	12114
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**JMP**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	3/13/2014 1:23:42 AM	R17249
Surr: BFB	83.2	80.4-118		%REC	1	3/13/2014 1:23:42 AM	R17249
EPA METHOD 8021B: VOLATILES						Analyst:	**JMP**
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	3/13/2014 1:23:42 AM	R17249
Benzene	ND	1.0		µg/L	1	3/13/2014 1:23:42 AM	R17249
Toluene	ND	1.0		µg/L	1	3/13/2014 1:23:42 AM	R17249
Ethylbenzene	ND	1.0		µg/L	1	3/13/2014 1:23:42 AM	R17249
Xylenes, Total	ND	2.0		µg/L	1	3/13/2014 1:23:42 AM	R17249
Surr: 4-Bromofluorobenzene	97.9	82.9-139		%REC	1	3/13/2014 1:23:42 AM	R17249
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	ND	0.50		mg/L	5	3/12/2014 2:40:28 AM	R17243
Chloride	920	50		mg/L	100	3/17/2014 7:52:47 PM	R17389
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	3/12/2014 2:40:28 AM	R17243
Bromide	4.9	0.50		mg/L	5	3/12/2014 2:40:28 AM	R17243
Nitrogen, Nitrate (As N)	20	0.50	*	mg/L	5	3/12/2014 2:40:28 AM	R17243
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	3/12/2014 2:40:28 AM	R17243
Sulfate	430	10		mg/L	20	3/12/2014 2:52:53 AM	R17243
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.053	0.0020		mg/L	1	3/13/2014 1:46:13 PM	R17289
Cadmium	ND	0.0020		mg/L	1	3/13/2014 1:46:13 PM	R17289
Calcium	40	1.0		mg/L	1	3/13/2014 1:46:13 PM	R17289
Chromium	ND	0.0060		mg/L	1	3/13/2014 1:46:13 PM	R17289
Copper	ND	0.0060		mg/L	1	3/13/2014 1:46:13 PM	R17289
Iron	0.24	0.020		mg/L	1	3/13/2014 1:46:13 PM	R17289
Magnesium	6.5	1.0		mg/L	1	3/13/2014 1:46:13 PM	R17289
Manganese	0.0073	0.0020		mg/L	1	3/13/2014 1:46:13 PM	R17289
Potassium	3.5	1.0		mg/L	1	3/13/2014 1:46:13 PM	R17289
Silver	ND	0.0050		mg/L	1	3/17/2014 2:03:12 PM	R17380
Sodium	890	10		mg/L	10	3/13/2014 1:48:04 PM	R17289
Zinc	0.017	0.010		mg/L	1	3/13/2014 1:46:13 PM	R17289
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.22	0.0020		mg/L	1	3/13/2014 6:02:56 PM	12123
Cadmium	ND	0.0020		mg/L	1	3/13/2014 6:02:56 PM	12123

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-3
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/10/2014 11:45:00 AM
Lab ID: 1403354-004
Matrix: AQUEOUS
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Chromium	0.013	0.0060		mg/L	1	3/13/2014 6:02:56 PM	12123
Copper	0.0073	0.0060		mg/L	1	3/13/2014 6:02:56 PM	12123
Iron	4.3	0.10	*	mg/L	5	3/13/2014 6:04:44 PM	12123
Manganese	0.12	0.0020	*	mg/L	1	3/13/2014 6:02:56 PM	12123
Silver	ND	0.0050		mg/L	1	3/13/2014 6:02:56 PM	12123
Zinc	0.091	0.010		mg/L	1	3/13/2014 6:02:56 PM	12123
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	3/19/2014 2:30:57 PM	R17423
Lead	ND	0.0010		mg/L	1	3/18/2014 3:08:40 PM	R17401
Selenium	0.011	0.010		mg/L	10	3/19/2014 2:30:57 PM	R17423
Uranium	0.039	0.0010	*	mg/L	1	3/18/2014 3:08:40 PM	R17401
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	3/17/2014 5:34:35 PM	12123
Lead	0.0053	0.0010		mg/L	1	3/17/2014 4:25:37 PM	12123
Selenium	0.027	0.010		mg/L	10	3/17/2014 5:34:35 PM	12123
Uranium	0.036	0.0010	*	mg/L	1	3/17/2014 4:25:37 PM	12123
EPA METHOD 245.1: MERCURY						Analyst:	**JML**
Mercury	ND	0.00020		mg/L	1	3/12/2014 12:47:50 PM	12133
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Acenaphthylene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Aniline	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Anthracene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Azobenzene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Benz(a)anthracene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Benzo(a)pyrene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Benzo(b)fluoranthene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Benzo(g,h,i)perylene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Benzo(k)fluoranthene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Benzoic acid	ND	20		µg/L	1	3/12/2014 12:31:58 PM	12139
Benzyl alcohol	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Bis(2-chloroethyl)ether	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
4-Bromophenyl phenyl ether	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Butyl benzyl phthalate	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-3
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/10/2014 11:45:00 AM
Lab ID: 1403354-004
Matrix: AQUEOUS
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Carbazole	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
4-Chloro-3-methylphenol	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
4-Chloroaniline	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
2-Chloronaphthalene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
2-Chlorophenol	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Chrysene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Di-n-butyl phthalate	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Di-n-octyl phthalate	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Dibenz(a,h)anthracene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Dibenzofuran	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
1,2-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
1,3-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
1,4-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
3,3´-Dichlorobenzidine	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Diethyl phthalate	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Dimethyl phthalate	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
2,4-Dichlorophenol	ND	20		µg/L	1	3/12/2014 12:31:58 PM	12139
2,4-Dimethylphenol	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	3/12/2014 12:31:58 PM	12139
2,4-Dinitrophenol	ND	20		µg/L	1	3/12/2014 12:31:58 PM	12139
2,4-Dinitrotoluene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
2,6-Dinitrotoluene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Fluoranthene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Fluorene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Hexachlorobenzene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Hexachlorobutadiene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Hexachlorocyclopentadiene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Hexachloroethane	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Isophorone	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
1-Methylnaphthalene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
2-Methylnaphthalene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
2-Methylphenol	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
3+4-Methylphenol	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
N-Nitrosodimethylamine	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
N-Nitrosodiphenylamine	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Naphthalene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-3
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/10/2014 11:45:00 AM
Lab ID: 1403354-004
Matrix: AQUEOUS
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2-Nitroaniline	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
3-Nitroaniline	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
4-Nitroaniline	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Nitrobenzene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
2-Nitrophenol	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
4-Nitrophenol	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Pentachlorophenol	ND	20		µg/L	1	3/12/2014 12:31:58 PM	12139
Phenanthrene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Phenol	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Pyrene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Pyridine	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
1,2,4-Trichlorobenzene	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
2,4,5-Trichlorophenol	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
2,4,6-Trichlorophenol	ND	10		µg/L	1	3/12/2014 12:31:58 PM	12139
Surr: 2-Fluorophenol	59.3	22.7-98		%REC	1	3/12/2014 12:31:58 PM	12139
Surr: Phenol-d5	40.3	23.4-74.9		%REC	1	3/12/2014 12:31:58 PM	12139
Surr: 2,4,6-Tribromophenol	84.0	23.3-111		%REC	1	3/12/2014 12:31:58 PM	12139
Surr: Nitrobenzene-d5	87.7	36.8-111		%REC	1	3/12/2014 12:31:58 PM	12139
Surr: 2-Fluorobiphenyl	84.1	38.3-110		%REC	1	3/12/2014 12:31:58 PM	12139
Surr: 4-Terphenyl-d14	83.5	52.1-116		%REC	1	3/12/2014 12:31:58 PM	12139

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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: KA-3
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/10/2014 11:10:00 AM
Lab ID: 1403354-005
Matrix: AQUEOUS
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	3/12/2014 6:07:32 AM	12114
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	3/12/2014 6:07:32 AM	12114
Surr: DNOP	126	62.7-145		%REC	1	3/12/2014 6:07:32 AM	12114
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**JMP**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	3/13/2014 1:52:12 AM	R17249
Surr: BFB	82.8	80.4-118		%REC	1	3/13/2014 1:52:12 AM	R17249
EPA METHOD 8021B: VOLATILES						Analyst:	**JMP**
Methyl tert-butyl ether (MTBE)	3.9	2.5		µg/L	1	3/13/2014 1:52:12 AM	R17249
Benzene	ND	1.0		µg/L	1	3/13/2014 1:52:12 AM	R17249
Toluene	ND	1.0		µg/L	1	3/13/2014 1:52:12 AM	R17249
Ethylbenzene	ND	1.0		µg/L	1	3/13/2014 1:52:12 AM	R17249
Xylenes, Total	ND	2.0		µg/L	1	3/13/2014 1:52:12 AM	R17249
Surr: 4-Bromofluorobenzene	96.4	82.9-139		%REC	1	3/13/2014 1:52:12 AM	R17249
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	1.1	0.50		mg/L	5	3/12/2014 3:05:18 AM	R17243
Chloride	140	10		mg/L	20	3/12/2014 3:17:44 AM	R17243
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	3/12/2014 3:05:18 AM	R17243
Bromide	1.8	0.50		mg/L	5	3/12/2014 3:05:18 AM	R17243
Nitrogen, Nitrate (As N)	13	0.50	*	mg/L	5	3/12/2014 3:05:18 AM	R17243
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	3/12/2014 3:05:18 AM	R17243
Sulfate	72	2.5		mg/L	5	3/12/2014 3:05:18 AM	R17243
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.093	0.0020		mg/L	1	3/13/2014 1:49:54 PM	R17289
Cadmium	ND	0.0020		mg/L	1	3/13/2014 1:49:54 PM	R17289
Calcium	68	1.0		mg/L	1	3/13/2014 1:49:54 PM	R17289
Chromium	ND	0.0060		mg/L	1	3/13/2014 1:49:54 PM	R17289
Copper	ND	0.0060		mg/L	1	3/13/2014 1:49:54 PM	R17289
Iron	ND	0.020		mg/L	1	3/13/2014 1:49:54 PM	R17289
Magnesium	11	1.0		mg/L	1	3/13/2014 1:49:54 PM	R17289
Manganese	0.38	0.0020	*	mg/L	1	3/13/2014 1:49:54 PM	R17289
Potassium	1.1	1.0		mg/L	1	3/13/2014 1:49:54 PM	R17289
Silver	ND	0.0050		mg/L	1	3/17/2014 2:05:05 PM	R17380
Sodium	330	10		mg/L	10	3/13/2014 1:51:42 PM	R17289
Zinc	0.012	0.010		mg/L	1	3/13/2014 1:49:54 PM	R17289
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.11	0.0020		mg/L	1	3/13/2014 6:06:35 PM	12123
Cadmium	ND	0.0020		mg/L	1	3/13/2014 6:06:35 PM	12123

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: KA-3
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/10/2014 11:10:00 AM
Lab ID: 1403354-005
Matrix: AQUEOUS
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Chromium	ND	0.0060		mg/L	1	3/13/2014 6:06:35 PM	12123
Copper	ND	0.0060		mg/L	1	3/13/2014 6:06:35 PM	12123
Iron	0.95	0.020	*	mg/L	1	3/13/2014 6:06:35 PM	12123
Manganese	0.26	0.0020	*	mg/L	1	3/13/2014 6:06:35 PM	12123
Silver	ND	0.0050		mg/L	1	3/13/2014 6:06:35 PM	12123
Zinc	0.016	0.010		mg/L	1	3/13/2014 6:06:35 PM	12123
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	3/19/2014 2:33:42 PM	R17423
Lead	ND	0.0010		mg/L	1	3/18/2014 3:13:23 PM	R17401
Selenium	ND	0.0050		mg/L	5	3/19/2014 2:33:42 PM	R17423
Uranium	0.048	0.0050	*	mg/L	5	3/19/2014 2:33:42 PM	R17423
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	3/17/2014 5:39:53 PM	12123
Lead	ND	0.0010		mg/L	1	3/17/2014 4:30:54 PM	12123
Selenium	0.0082	0.0050		mg/L	5	3/17/2014 5:39:53 PM	12123
Uranium	0.089	0.0050	*	mg/L	5	3/17/2014 5:39:53 PM	12123
EPA METHOD 245.1: MERCURY						Analyst:	**JML**
Mercury	ND	0.00020		mg/L	1	3/12/2014 12:49:34 PM	12133
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Acenaphthylene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Aniline	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Anthracene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Azobenzene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Benz(a)anthracene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Benzo(a)pyrene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Benzo(b)fluoranthene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Benzo(g,h,i)perylene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Benzo(k)fluoranthene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Benzoic acid	ND	20		µg/L	1	3/12/2014 6:19:42 PM	12139
Benzyl alcohol	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Bis(2-chloroethyl)ether	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
4-Bromophenyl phenyl ether	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Butyl benzyl phthalate	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: KA-3
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Collection Date: 3/10/2014 11:10:00 AM
Lab ID: 1403354-005
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Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Carbazole	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
4-Chloro-3-methylphenol	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
4-Chloroaniline	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
2-Chloronaphthalene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
2-Chlorophenol	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Chrysene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Di-n-butyl phthalate	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Di-n-octyl phthalate	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Dibenz(a,h)anthracene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Dibenzofuran	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
1,2-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
1,3-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
1,4-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
3,3´-Dichlorobenzidine	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Diethyl phthalate	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Dimethyl phthalate	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
2,4-Dichlorophenol	ND	20		µg/L	1	3/12/2014 6:19:42 PM	12139
2,4-Dimethylphenol	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	3/12/2014 6:19:42 PM	12139
2,4-Dinitrophenol	ND	20		µg/L	1	3/12/2014 6:19:42 PM	12139
2,4-Dinitrotoluene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
2,6-Dinitrotoluene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Fluoranthene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Fluorene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Hexachlorobenzene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Hexachlorobutadiene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Hexachlorocyclopentadiene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Hexachloroethane	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Isophorone	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
1-Methylnaphthalene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
2-Methylnaphthalene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
2-Methylphenol	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
3+4-Methylphenol	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
N-Nitrosodimethylamine	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
N-Nitrosodiphenylamine	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Naphthalene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: KA-3
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/10/2014 11:10:00 AM
Lab ID: 1403354-005
Matrix: AQUEOUS
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2-Nitroaniline	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
3-Nitroaniline	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
4-Nitroaniline	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Nitrobenzene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
2-Nitrophenol	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
4-Nitrophenol	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Pentachlorophenol	ND	20		µg/L	1	3/12/2014 6:19:42 PM	12139
Phenanthrene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Phenol	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Pyrene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Pyridine	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
1,2,4-Trichlorobenzene	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
2,4,5-Trichlorophenol	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
2,4,6-Trichlorophenol	ND	10		µg/L	1	3/12/2014 6:19:42 PM	12139
Surr: 2-Fluorophenol	51.6	22.7-98		%REC	1	3/12/2014 6:19:42 PM	12139
Surr: Phenol-d5	39.8	23.4-74.9		%REC	1	3/12/2014 6:19:42 PM	12139
Surr: 2,4,6-Tribromophenol	87.6	23.3-111		%REC	1	3/12/2014 6:19:42 PM	12139
Surr: Nitrobenzene-d5	95.3	36.8-111		%REC	1	3/12/2014 6:19:42 PM	12139
Surr: 2-Fluorobiphenyl	81.6	38.3-110		%REC	1	3/12/2014 6:19:42 PM	12139
Surr: 4-Terphenyl-d14	81.4	52.1-116		%REC	1	3/12/2014 6:19:42 PM	12139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/10/2014 1:15:00 PM
Lab ID: 1403354-006
Matrix: AQUEOUS
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	6.4	1.0		mg/L	1	3/12/2014 6:29:30 AM	12114
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	3/12/2014 6:29:30 AM	12114
Surr: DNOP	112	62.7-145		%REC	1	3/12/2014 6:29:30 AM	12114
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**JMP**
Gasoline Range Organics (GRO)	0.71	0.050		mg/L	1	3/13/2014 2:20:43 AM	R17249
Surr: BFB	203	80.4-118	S	%REC	1	3/13/2014 2:20:43 AM	R17249
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	1.7	1.0		mg/L	10	3/12/2014 3:30:09 AM	R17243
Chloride	1700	100		mg/L	200	3/17/2014 8:05:11 PM	R17389
Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	3/12/2014 3:30:09 AM	R17243
Bromide	4.8	1.0		mg/L	10	3/12/2014 3:30:09 AM	R17243
Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	3/12/2014 3:30:09 AM	R17243
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	3/12/2014 3:30:09 AM	R17243
Sulfate	37	5.0		mg/L	10	3/12/2014 3:30:09 AM	R17243
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.61	0.0020		mg/L	1	3/13/2014 1:53:31 PM	R17289
Cadmium	ND	0.0020		mg/L	1	3/13/2014 1:53:31 PM	R17289
Calcium	160	5.0		mg/L	5	3/13/2014 1:55:14 PM	R17289
Chromium	ND	0.0060		mg/L	1	3/13/2014 1:53:31 PM	R17289
Copper	ND	0.0060		mg/L	1	3/13/2014 1:53:31 PM	R17289
Iron	5.4	0.40	*	mg/L	20	3/13/2014 1:56:59 PM	R17289
Magnesium	28	1.0		mg/L	1	3/13/2014 1:53:31 PM	R17289
Manganese	2.0	0.010	*	mg/L	5	3/13/2014 1:55:14 PM	R17289
Potassium	4.5	1.0		mg/L	1	3/13/2014 1:53:31 PM	R17289
Silver	ND	0.0050		mg/L	1	3/17/2014 2:06:55 PM	R17380
Sodium	1300	20		mg/L	20	3/13/2014 1:56:59 PM	R17289
Zinc	0.046	0.010		mg/L	1	3/13/2014 1:53:31 PM	R17289
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.71	0.0020		mg/L	1	3/13/2014 6:10:03 PM	12123
Cadmium	ND	0.0020		mg/L	1	3/13/2014 6:10:03 PM	12123
Chromium	0.011	0.0060		mg/L	1	3/13/2014 6:10:03 PM	12123
Copper	0.025	0.0060		mg/L	1	3/13/2014 6:10:03 PM	12123
Iron	8.6	1.0	*	mg/L	50	3/13/2014 6:13:37 PM	12123
Manganese	2.1	0.010	*	mg/L	5	3/13/2014 6:11:58 PM	12123
Silver	ND	0.0050		mg/L	1	3/13/2014 6:10:03 PM	12123
Zinc	0.054	0.010		mg/L	1	3/13/2014 6:10:03 PM	12123
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/10/2014 1:15:00 PM
Lab ID: 1403354-006
Matrix: AQUEOUS
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0083	0.0050		mg/L	5	3/19/2014 2:36:28 PM	R17423
Lead	0.0079	0.0050		mg/L	5	3/18/2014 3:18:06 PM	R17401
Selenium	0.0084	0.0050		mg/L	5	3/19/2014 2:36:28 PM	R17423
Uranium	0.039	0.0050	*	mg/L	5	3/18/2014 3:18:06 PM	R17401
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.013	0.010	*	mg/L	10	3/17/2014 5:45:13 PM	12123
Lead	0.017	0.0010	*	mg/L	1	3/17/2014 4:36:12 PM	12123
Selenium	0.026	0.010		mg/L	10	3/17/2014 5:45:13 PM	12123
Uranium	0.039	0.0010	*	mg/L	1	3/17/2014 4:36:12 PM	12123
EPA METHOD 245.1: MERCURY						Analyst:	**JML**
Mercury	ND	0.00020		mg/L	1	3/12/2014 12:51:19 PM	12133
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Acenaphthylene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Aniline	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Anthracene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Azobenzene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Benz(a)anthracene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Benzo(a)pyrene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Benzo(b)fluoranthene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Benzo(g,h,i)perylene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Benzo(k)fluoranthene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Benzoic acid	ND	20		µg/L	1	3/12/2014 1:00:58 PM	12139
Benzyl alcohol	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Bis(2-chloroethyl)ether	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
4-Bromophenyl phenyl ether	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Butyl benzyl phthalate	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Carbazole	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
4-Chloro-3-methylphenol	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
4-Chloroaniline	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
2-Chloronaphthalene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
2-Chlorophenol	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Chrysene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Di-n-butyl phthalate	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/10/2014 1:15:00 PM
Lab ID: 1403354-006
Matrix: AQUEOUS
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Di-n-octyl phthalate	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Dibenz(a,h)anthracene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Dibenzofuran	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
1,2-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
1,3-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
1,4-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
3,3´-Dichlorobenzidine	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Diethyl phthalate	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Dimethyl phthalate	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
2,4-Dichlorophenol	ND	20		µg/L	1	3/12/2014 1:00:58 PM	12139
2,4-Dimethylphenol	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	3/12/2014 1:00:58 PM	12139
2,4-Dinitrophenol	ND	20		µg/L	1	3/12/2014 1:00:58 PM	12139
2,4-Dinitrotoluene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
2,6-Dinitrotoluene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Fluoranthene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Fluorene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Hexachlorobenzene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Hexachlorobutadiene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Hexachlorocyclopentadiene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Hexachloroethane	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Isophorone	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
1-Methylnaphthalene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
2-Methylnaphthalene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
2-Methylphenol	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
3+4-Methylphenol	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
N-Nitrosodimethylamine	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
N-Nitrosodiphenylamine	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Naphthalene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
2-Nitroaniline	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
3-Nitroaniline	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
4-Nitroaniline	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Nitrobenzene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
2-Nitrophenol	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
4-Nitrophenol	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Pentachlorophenol	ND	20		µg/L	1	3/12/2014 1:00:58 PM	12139
Phenanthrene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/10/2014 1:15:00 PM
Lab ID: 1403354-006
Matrix: AQUEOUS
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Phenol	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Pyrene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Pyridine	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
1,2,4-Trichlorobenzene	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
2,4,5-Trichlorophenol	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
2,4,6-Trichlorophenol	ND	10		µg/L	1	3/12/2014 1:00:58 PM	12139
Surr: 2-Fluorophenol	51.1	22.7-98		%REC	1	3/12/2014 1:00:58 PM	12139
Surr: Phenol-d5	36.9	23.4-74.9		%REC	1	3/12/2014 1:00:58 PM	12139
Surr: 2,4,6-Tribromophenol	79.8	23.3-111		%REC	1	3/12/2014 1:00:58 PM	12139
Surr: Nitrobenzene-d5	81.1	36.8-111		%REC	1	3/12/2014 1:00:58 PM	12139
Surr: 2-Fluorobiphenyl	76.9	38.3-110		%REC	1	3/12/2014 1:00:58 PM	12139
Surr: 4-Terphenyl-d14	79.1	52.1-116		%REC	1	3/12/2014 1:00:58 PM	12139
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	70	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
Toluene	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
Ethylbenzene	6.8	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
Methyl tert-butyl ether (MTBE)	450	10		µg/L	10	3/13/2014 12:35:59 PM	R17303
1,2,4-Trimethylbenzene	2.5	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
Naphthalene	ND	2.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
1-Methylnaphthalene	13	4.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
2-Methylnaphthalene	ND	4.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
Acetone	16	10		µg/L	1	3/17/2014 2:23:38 PM	R17375
Bromobenzene	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
Bromodichloromethane	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
Bromoform	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
Bromomethane	ND	3.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
2-Butanone	ND	10		µg/L	1	3/17/2014 2:23:38 PM	R17375
Carbon disulfide	ND	10		µg/L	1	3/17/2014 2:23:38 PM	R17375
Carbon Tetrachloride	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
Chlorobenzene	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
Chloroethane	ND	2.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
Chloroform	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
Chloromethane	ND	3.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
2-Chlorotoluene	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
4-Chlorotoluene	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
cis-1,2-DCE	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/10/2014 1:15:00 PM
Lab ID: 1403354-006
Matrix: AQUEOUS
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
Dibromochloromethane	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
Dibromomethane	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
1,1-Dichloroethane	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
1,1-Dichloroethene	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
1,2-Dichloropropane	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
1,3-Dichloropropane	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
2,2-Dichloropropane	ND	2.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
1,1-Dichloropropene	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
Hexachlorobutadiene	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
2-Hexanone	ND	10		µg/L	1	3/17/2014 2:23:38 PM	R17375
Isopropylbenzene	1.5	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
4-Isopropyltoluene	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
4-Methyl-2-pentanone	ND	10		µg/L	1	3/17/2014 2:23:38 PM	R17375
Methylene Chloride	ND	3.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
n-Butylbenzene	ND	3.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
n-Propylbenzene	1.6	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
sec-Butylbenzene	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
Styrene	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
tert-Butylbenzene	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
trans-1,2-DCE	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
Trichlorofluoromethane	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
Vinyl chloride	ND	1.0		µg/L	1	3/17/2014 2:23:38 PM	R17375
Xylenes, Total	3.3	1.5		µg/L	1	3/17/2014 2:23:38 PM	R17375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/10/2014 1:15:00 PM
Lab ID: 1403354-006
Matrix: AQUEOUS
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Surr: 1,2-Dichloroethane-d4	93.9	70-130		%REC	1	3/17/2014 2:23:38 PM	R17375
Surr: 4-Bromofluorobenzene	101	70-130		%REC	1	3/17/2014 2:23:38 PM	R17375
Surr: Dibromofluoromethane	113	70-130		%REC	1	3/17/2014 2:23:38 PM	R17375
Surr: Toluene-d8	93.6	70-130		%REC	1	3/17/2014 2:23:38 PM	R17375

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group#3-
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/10/2014 9:25:00 AM
Lab ID: 1403354-007
Matrix: AQUEOUS
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
Toluene	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
Ethylbenzene	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
Naphthalene	ND	2.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
1-Methylnaphthalene	ND	4.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
2-Methylnaphthalene	ND	4.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
Acetone	ND	10		µg/L	1	3/11/2014 8:51:55 PM	R17242
Bromobenzene	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
Bromodichloromethane	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
Bromoform	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
Bromomethane	ND	3.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
2-Butanone	ND	10		µg/L	1	3/11/2014 8:51:55 PM	R17242
Carbon disulfide	ND	10		µg/L	1	3/11/2014 8:51:55 PM	R17242
Carbon Tetrachloride	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
Chlorobenzene	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
Chloroethane	ND	2.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
Chloroform	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
Chloromethane	ND	3.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
2-Chlorotoluene	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
4-Chlorotoluene	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
cis-1,2-DCE	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
Dibromochloromethane	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
Dibromomethane	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
1,1-Dichloroethane	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
1,1-Dichloroethene	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
1,2-Dichloropropane	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
1,3-Dichloropropane	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
2,2-Dichloropropane	ND	2.0		µg/L	1	3/11/2014 8:51:55 PM	R17242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group#3-
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/10/2014 9:25:00 AM
Lab ID: 1403354-007
Matrix: AQUEOUS
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
Hexachlorobutadiene	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
2-Hexanone	ND	10		µg/L	1	3/11/2014 8:51:55 PM	R17242
Isopropylbenzene	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
4-Isopropyltoluene	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
4-Methyl-2-pentanone	ND	10		µg/L	1	3/11/2014 8:51:55 PM	R17242
Methylene Chloride	ND	3.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
n-Butylbenzene	ND	3.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
n-Propylbenzene	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
sec-Butylbenzene	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
Styrene	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
tert-Butylbenzene	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
trans-1,2-DCE	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
Trichlorofluoromethane	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
Vinyl chloride	ND	1.0		µg/L	1	3/11/2014 8:51:55 PM	R17242
Xylenes, Total	ND	1.5		µg/L	1	3/11/2014 8:51:55 PM	R17242
Surr: 1,2-Dichloroethane-d4	89.6	70-130		%REC	1	3/11/2014 8:51:55 PM	R17242
Surr: 4-Bromofluorobenzene	98.9	70-130		%REC	1	3/11/2014 8:51:55 PM	R17242
Surr: Dibromofluoromethane	99.1	70-130		%REC	1	3/11/2014 8:51:55 PM	R17242
Surr: Toluene-d8	92.8	70-130		%REC	1	3/11/2014 8:51:55 PM	R17242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup **Client Sample ID:** TRIP BLANK
Project: Q1-2014 Groundwater Sampling **Collection Date:**
Lab ID: 1403354-008 **Matrix:** TRIP BLANK **Received Date:** 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
Toluene	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
Ethylbenzene	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
Naphthalene	ND	2.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
1-Methylnaphthalene	ND	4.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
2-Methylnaphthalene	ND	4.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
Acetone	ND	10		µg/L	1	3/11/2014 9:19:52 PM	R17242
Bromobenzene	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
Bromodichloromethane	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
Bromoform	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
Bromomethane	ND	3.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
2-Butanone	ND	10		µg/L	1	3/11/2014 9:19:52 PM	R17242
Carbon disulfide	ND	10		µg/L	1	3/11/2014 9:19:52 PM	R17242
Carbon Tetrachloride	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
Chlorobenzene	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
Chloroethane	ND	2.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
Chloroform	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
Chloromethane	ND	3.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
2-Chlorotoluene	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
4-Chlorotoluene	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
cis-1,2-DCE	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
Dibromochloromethane	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
Dibromomethane	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
1,1-Dichloroethane	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
1,1-Dichloroethene	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
1,2-Dichloropropane	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
1,3-Dichloropropane	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
2,2-Dichloropropane	ND	2.0		µg/L	1	3/11/2014 9:19:52 PM	R17242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: Q1-2014 Groundwater Sampling
Collection Date:
Lab ID: 1403354-008
Matrix: TRIP BLANK
Received Date: 3/10/2014 4:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
Hexachlorobutadiene	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
2-Hexanone	ND	10		µg/L	1	3/11/2014 9:19:52 PM	R17242
Isopropylbenzene	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
4-Isopropyltoluene	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
4-Methyl-2-pentanone	ND	10		µg/L	1	3/11/2014 9:19:52 PM	R17242
Methylene Chloride	ND	3.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
n-Butylbenzene	ND	3.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
n-Propylbenzene	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
sec-Butylbenzene	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
Styrene	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
tert-Butylbenzene	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
trans-1,2-DCE	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
Trichlorofluoromethane	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
Vinyl chloride	ND	1.0		µg/L	1	3/11/2014 9:19:52 PM	R17242
Xylenes, Total	ND	1.5		µg/L	1	3/11/2014 9:19:52 PM	R17242
Surr: 1,2-Dichloroethane-d4	90.5	70-130		%REC	1	3/11/2014 9:19:52 PM	R17242
Surr: 4-Bromofluorobenzene	97.2	70-130		%REC	1	3/11/2014 9:19:52 PM	R17242
Surr: Dibromofluoromethane	97.2	70-130		%REC	1	3/11/2014 9:19:52 PM	R17242
Surr: Toluene-d8	92.5	70-130		%REC	1	3/11/2014 9:19:52 PM	R17242

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	140313052
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1403354
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	140313052-001	**Sampling Date**	3/10/2014	**Date/Time Received**	3/13/2014	1:26 PM
Client Sample ID	1403354-006H / OAPIS-1	**Sampling Time**	1:15 PM			
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	0.0846	mg/L	0.01	3/20/2014	CRW	EPA 335.4	

Authorized Signature

John Coddington, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403354**
28-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17289** RunNo: **17289**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498058** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17289** RunNo: **17289**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498059** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.9	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.4	85	115			
Calcium	50	1.0	50.00	0	101	85	115			
Chromium	0.48	0.0060	0.5000	0	96.2	85	115			
Copper	0.48	0.0060	0.5000	0	96.5	85	115			
Iron	0.48	0.020	0.5000	0	95.5	85	115			
Magnesium	51	1.0	50.00	0	103	85	115			
Manganese	0.48	0.0020	0.5000	0	95.4	85	115			
Potassium	50	1.0	50.00	0	100	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Sodium	51	1.0	50.00	0	101	85	115			
Zinc	0.49	0.010	0.5000	0	97.2	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17380** RunNo: **17380**
Prep Date: Analysis Date: **3/17/2014** SeqNo: **500508** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403354**
28-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17380** RunNo: **17380**
Prep Date: Analysis Date: **3/17/2014** SeqNo: **500509** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	104	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17380** RunNo: **17380**
Prep Date: Analysis Date: **3/17/2014** SeqNo: **500673** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17380** RunNo: **17380**
Prep Date: Analysis Date: **3/17/2014** SeqNo: **500674** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403354**
28-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **1403354-001DMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **NAPIS-1** Batch ID: **12123** RunNo: **17291**
Prep Date: **3/11/2014** Analysis Date: **3/13/2014** SeqNo: **498233** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.64	0.0020	0.5000	0.1369	101	70	130			
Cadmium	0.50	0.0020	0.5000	0	99.1	70	130			
Chromium	0.49	0.0060	0.5000	0	98.1	70	130			
Copper	0.52	0.0060	0.5000	0	103	70	130			
Iron	0.89	0.020	0.5000	0.2846	121	70	130			
Manganese	0.62	0.0020	0.5000	0.09476	105	70	130			
Silver	0.096	0.0050	0.1000	0	96.0	70	130			
Zinc	0.52	0.010	0.5000	0.01156	102	70	130			

Sample ID **1403354-001DMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **NAPIS-1** Batch ID: **12123** RunNo: **17291**
Prep Date: **3/11/2014** Analysis Date: **3/13/2014** SeqNo: **498234** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.63	0.0020	0.5000	0.1369	98.2	70	130	2.12	20	
Cadmium	0.48	0.0020	0.5000	0	97.0	70	130	2.18	20	
Chromium	0.49	0.0060	0.5000	0	97.3	70	130	0.895	20	
Copper	0.50	0.0060	0.5000	0	101	70	130	2.22	20	
Iron	0.88	0.020	0.5000	0.2846	120	70	130	0.786	20	
Manganese	0.59	0.0020	0.5000	0.09476	99.5	70	130	4.36	20	
Silver	0.095	0.0050	0.1000	0	94.6	70	130	1.46	20	
Zinc	0.52	0.010	0.5000	0.01156	101	70	130	0.729	20	

Sample ID **MB-12123** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **12123** RunNo: **17291**
Prep Date: **3/11/2014** Analysis Date: **3/13/2014** SeqNo: **498282** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403354**
28-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **LCS-12123** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **12123** RunNo: **17291**
Prep Date: **3/11/2014** Analysis Date: **3/13/2014** SeqNo: **498283** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.7	85	115			
Cadmium	0.49	0.0020	0.5000	0	99.0	85	115			
Chromium	0.49	0.0060	0.5000	0	97.9	85	115			
Copper	0.49	0.0060	0.5000	0	98.3	85	115			
Iron	0.53	0.020	0.5000	0	106	85	115			
Manganese	0.50	0.0020	0.5000	0	99.2	85	115			
Silver	0.098	0.0050	0.1000	0	98.2	85	115			
Zinc	0.51	0.010	0.5000	0	103	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403354**
28-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17401** RunNo: **17401**
Prep Date: Analysis Date: **3/18/2014** SeqNo: **501192** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.025	0.0010	0.02500	0	102	85	115			
Uranium	0.025	0.0010	0.02500	0	100	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17401** RunNo: **17401**
Prep Date: Analysis Date: **3/18/2014** SeqNo: **501193** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.028	0.0010	0.02500	0	110	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17401** RunNo: **17401**
Prep Date: Analysis Date: **3/18/2014** SeqNo: **501194** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17401** RunNo: **17401**
Prep Date: Analysis Date: **3/18/2014** SeqNo: **501195** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17423** RunNo: **17423**
Prep Date: Analysis Date: **3/19/2014** SeqNo: **502016** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.7	85	115			
Selenium	0.024	0.0010	0.02500	0	97.2	85	115			
Uranium	0.025	0.0010	0.02500	0	98.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403354**
28-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17423** RunNo: **17423**
Prep Date: Analysis Date: **3/19/2014** SeqNo: **502017** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.1	85	115			
Selenium	0.024	0.0010	0.02500	0	97.2	85	115			
Uranium	0.025	0.0010	0.02500	0	99.8	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17423** RunNo: **17423**
Prep Date: Analysis Date: **3/19/2014** SeqNo: **502018** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17423** RunNo: **17423**
Prep Date: Analysis Date: **3/19/2014** SeqNo: **502019** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403354**
28-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **LLLCS-12123** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **12123** RunNo: **17381**
Prep Date: **3/11/2014** Analysis Date: **3/17/2014** SeqNo: **500705** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.2	85	115			
Lead	0.025	0.0010	0.02500	0	98.9	85	115			
Selenium	0.023	0.0010	0.02500	0	91.4	85	115			
Uranium	0.026	0.0010	0.02500	0	104	85	115			

Sample ID **MB-12123** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **12123** RunNo: **17381**
Prep Date: **3/11/2014** Analysis Date: **3/17/2014** SeqNo: **500708** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403354**
28-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID	**MB-12133**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**
Client ID:	**PBW**	Batch ID:	**12133**	RunNo:	**17250**
Prep Date:	**3/11/2014**	Analysis Date:	**3/12/2014**	SeqNo:	**496787** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-12133**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**
Client ID:	**LCSW**	Batch ID:	**12133**	RunNo:	**17250**
Prep Date:	**3/11/2014**	Analysis Date:	**3/12/2014**	SeqNo:	**496788** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0053	0.00020	0.005000	0	106	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403354**
28-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R17243** RunNo: **17243**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496494** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R17243** RunNo: **17243**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496495** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	103	90	110			
Chloride	4.8	0.50	5.000	0	95.9	90	110			
Nitrogen, Nitrite (As N)	0.99	0.10	1.000	0	98.5	90	110			
Bromide	2.5	0.10	2.500	0	101	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	102	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	97.4	90	110			
Sulfate	9.8	0.50	10.00	0	97.6	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R17389** RunNo: **17389**
Prep Date: Analysis Date: **3/17/2014** SeqNo: **500825** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R17389** RunNo: **17389**
Prep Date: Analysis Date: **3/17/2014** SeqNo: **500826** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	97.8	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403354**
28-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **MB-12114**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **PBW**	Batch ID: **12114**	RunNo: **17227**
Prep Date: **3/11/2014**	Analysis Date: **3/12/2014**	SeqNo: **496413** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.0		1.000		99.8	62.7	145			

Sample ID **LCSD-12114**	SampType: **LCSD**	TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSS02**	Batch ID: **12114**	RunNo: **17227**
Prep Date: **3/11/2014**	Analysis Date: **3/12/2014**	SeqNo: **496415** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.6	1.0	5.000	0	112	78.6	146	34.2	26.5	R
Surr: DNOP	0.62		0.5000		123	62.7	145	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403354**
28-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW** Batch ID: **R17249** RunNo: **17249**
Prep Date: Analysis Date: **3/12/2014** SeqNo: **497282** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	17		20.00		84.7	80.4	118			

Sample ID **2.5UG GRO LCS** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW** Batch ID: **R17249** RunNo: **17249**
Prep Date: Analysis Date: **3/12/2014** SeqNo: **497283** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.49	0.050	0.5000	0	97.8	80	120			
Surr: BFB	18		20.00		91.5	80.4	118			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403354**
28-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW** Batch ID: **R17249** RunNo: **17249**
Prep Date: Analysis Date: **3/12/2014** SeqNo: **497334** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5								
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	20		20.00		101	82.9	139			

Sample ID **100NG BTEX LCS** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW** Batch ID: **R17249** RunNo: **17249**
Prep Date: Analysis Date: **3/12/2014** SeqNo: **497340** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	19	2.5	20.00	0	96.8	71.1	128			
Benzene	24	1.0	20.00	0	118	80	120			
Toluene	24	1.0	20.00	0	121	80	120			S
Ethylbenzene	23	1.0	20.00	0	117	80	120			
Xylenes, Total	71	2.0	60.00	0	118	80	120			
Surr: 4-Bromofluorobenzene	21		20.00		104	82.9	139			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403354**
28-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **5ml-rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R17242**	RunNo: **17242**			
Prep Date:	Analysis Date: **3/11/2014**	SeqNo: **496423**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403354**
28-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **5ml-rb2** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R17242** RunNo: **17242**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496423** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.0	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		94.4	70	130			
Surr: Dibromofluoromethane	8.1		10.00		80.5	70	130			
Surr: Toluene-d8	9.3		10.00		93.0	70	130			

Sample ID **100ngLCS200ngAnn** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R17242** RunNo: **17242**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496454** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	110	70	130			
Toluene	19	1.0	20.00	0	96.9	80	120			
Chlorobenzene	19	1.0	20.00	0	94.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403354**
28-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **100ngLCS200ngAnn** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R17242** RunNo: **17242**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496454** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22	1.0	20.00	0	109	90	143			
Trichloroethene (TCE)	20	1.0	20.00	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		93.7	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		91.2	70	130			
Surr: Dibromofluoromethane	8.6		10.00		85.8	70	130			
Surr: Toluene-d8	9.0		10.00		90.5	70	130			

Sample ID **5mL-rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R17272** RunNo: **17272**
Prep Date: Analysis Date: **3/12/2014** SeqNo: **497522** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.3		10.00		92.7	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		94.8	70	130			
Surr: Dibromofluoromethane	10		10.00		100	70	130			
Surr: Toluene-d8	9.1		10.00		91.2	70	130			

Sample ID **100ng LCS2** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R17272** RunNo: **17272**
Prep Date: Analysis Date: **3/12/2014** SeqNo: **497524** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.5	70	130			
Surr: 4-Bromofluorobenzene	9.0		10.00		89.7	70	130			
Surr: Dibromofluoromethane	9.7		10.00		97.3	70	130			
Surr: Toluene-d8	9.1		10.00		90.8	70	130			

Sample ID **5mL-rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R17303** RunNo: **17303**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498461** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	1.0								
Surr: 1,2-Dichloroethane-d4	8.8		10.00		88.0	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.4	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.6	70	130			
Surr: Toluene-d8	9.0		10.00		89.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403354**
28-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **100ng LCS** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R17303** RunNo: **17303**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498463** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.0		10.00		89.5	70	130			
Surr: 4-Bromofluorobenzene	8.8		10.00		87.9	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.0	70	130			
Surr: Toluene-d8	9.0		10.00		90.1	70	130			

Sample ID **5mL-rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R17375** RunNo: **17375**
Prep Date: Analysis Date: **3/17/2014** SeqNo: **500366** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403354**
28-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R17375**	RunNo: **17375**	
Prep Date:	Analysis Date: **3/17/2014**	SeqNo: **500366**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.2	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	9.7		10.00		97.0	70	130			
Surr: Toluene-d8	9.3		10.00		92.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403354**
28-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **100ng LCS** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R17375** RunNo: **17375**
Prep Date: Analysis Date: **3/17/2014** SeqNo: **500403** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	110	70	130			
Toluene	22	1.0	20.00	0	109	80	120			
Chlorobenzene	21	1.0	20.00	0	107	70	130			
1,1-Dichloroethene	25	1.0	20.00	0	126	90	143			
Trichloroethene (TCE)	19	1.0	20.00	0	95.2	70	130			
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.2	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		90.5	70	130			
Surr: Dibromofluoromethane	9.4		10.00		94.4	70	130			
Surr: Toluene-d8	9.4		10.00		93.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403354**
28-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **MB-12139**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **12139**	RunNo: **17268**			
Prep Date: **3/12/2014**	Analysis Date: **3/12/2014**	SeqNo: **497414**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403354**
28-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **MB-12139**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **12139**	RunNo: **17268**			
Prep Date: **3/12/2014**	Analysis Date: **3/12/2014**	SeqNo: **497414**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	140		200.0		70.8	22.7	98			
Surr: Phenol-d5	100		200.0		50.6	23.4	74.9			
Surr: 2,4,6-Tribromophenol	210		200.0		104	23.3	111			
Surr: Nitrobenzene-d5	95		100.0		95.2	36.8	111			
Surr: 2-Fluorobiphenyl	87		100.0		87.3	38.3	110			
Surr: 4-Terphenyl-d14	92		100.0		91.7	52.1	116			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403354**
28-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **LCS-12139** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **12139** RunNo: **17268**
Prep Date: **3/12/2014** Analysis Date: **3/12/2014** SeqNo: **497415** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	88	10	100.0	0	88.4	48	101			
4-Chloro-3-methylphenol	160	10	200.0	0	82.4	47.9	109			
2-Chlorophenol	170	10	200.0	0	85.9	40	105			
1,4-Dichlorobenzene	99	10	100.0	0	98.8	40.8	94.3			S
2,4-Dinitrotoluene	78	10	100.0	0	77.8	28.3	131			
N-Nitrosodi-n-propylamine	110	10	100.0	0	107	46.2	119			
4-Nitrophenol	93	10	200.0	0	46.6	10.5	67.9			
Pentachlorophenol	130	20	200.0	0	65.3	22.4	81.1			
Phenol	110	10	200.0	0	54.4	21.4	72.9			
Pyrene	78	10	100.0	0	77.8	46.9	109			
1,2,4-Trichlorobenzene	83	10	100.0	0	83.0	43.1	98.4			
Surr: 2-Fluorophenol	140		200.0		71.0	22.7	98			
Surr: Phenol-d5	100		200.0		52.4	23.4	74.9			
Surr: 2,4,6-Tribromophenol	210		200.0		105	23.3	111			
Surr: Nitrobenzene-d5	92		100.0		91.9	36.8	111			
Surr: 2-Fluorobiphenyl	88		100.0		87.7	38.3	110			
Surr: 4-Terphenyl-d14	98		100.0		98.4	52.1	116			

Sample ID **1403354-002gms** SampType: **MS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **NAPIS-2** Batch ID: **12139** RunNo: **17268**
Prep Date: **3/12/2014** Analysis Date: **3/12/2014** SeqNo: **497433** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	81	10	100.0	2.960	78.5	52.5	94.5			
4-Chloro-3-methylphenol	170	10	200.0	0	87.0	45	103			
2-Chlorophenol	110	10	200.0	0	55.6	32.3	101			
1,4-Dichlorobenzene	68	10	100.0	0	67.5	34.5	97.5			
2,4-Dinitrotoluene	85	10	100.0	0	84.6	20.1	123			
N-Nitrosodi-n-propylamine	80	10	100.0	0	79.9	26.9	131			
4-Nitrophenol	68	10	200.0	0	34.2	11.6	55.4			
Pentachlorophenol	130	20	200.0	5.380	62.2	17.6	88.9			
Phenol	62	10	200.0	0	31.0	18.4	66.5			
Pyrene	72	10	100.0	0	71.9	43.1	111			
1,2,4-Trichlorobenzene	62	10	100.0	0	61.9	38.8	95.6			
Surr: 2-Fluorophenol	75		200.0		37.6	22.7	98			
Surr: Phenol-d5	57		200.0		28.5	23.4	74.9			
Surr: 2,4,6-Tribromophenol	170		200.0		86.5	23.3	111			
Surr: Nitrobenzene-d5	65		100.0		65.0	36.8	111			
Surr: 2-Fluorobiphenyl	73		100.0		73.3	38.3	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403354**
28-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **1403354-002gms** SampType: **MS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **NAPIS-2** Batch ID: **12139** RunNo: **17268**
Prep Date: **3/12/2014** Analysis Date: **3/12/2014** SeqNo: **497433** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	70		100.0		70.5	52.1	116			

Sample ID **1403354-002gmsd** SampType: **MSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **NAPIS-2** Batch ID: **12139** RunNo: **17268**
Prep Date: **3/12/2014** Analysis Date: **3/12/2014** SeqNo: **497434** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	80	10	100.0	2.960	76.7	52.5	94.5	2.21	20	
4-Chloro-3-methylphenol	200	10	200.0	0	98.5	45	103	12.4	20	
2-Chlorophenol	120	10	200.0	0	59.0	32.3	101	5.92	20	
1,4-Dichlorobenzene	71	10	100.0	0	70.6	34.5	97.5	4.46	20	
2,4-Dinitrotoluene	82	10	100.0	0	81.6	20.1	123	3.66	20	
N-Nitrosodi-n-propylamine	83	10	100.0	0	82.8	26.9	131	3.52	20	
4-Nitrophenol	74	10	200.0	0	36.8	11.6	55.4	7.19	20	
Pentachlorophenol	140	20	200.0	5.380	67.5	17.6	88.9	7.94	20	
Phenol	70	10	200.0	0	35.2	18.4	66.5	12.5	20	
Pyrene	75	10	100.0	0	75.0	43.1	111	4.22	20	
1,2,4-Trichlorobenzene	71	10	100.0	0	71.1	38.8	95.6	13.9	20	
Surr: 2-Fluorophenol	85		200.0		42.7	22.7	98	0	0	
Surr: Phenol-d5	64		200.0		32.1	23.4	74.9	0	0	
Surr: 2,4,6-Tribromophenol	170		200.0		87.0	23.3	111	0	0	
Surr: Nitrobenzene-d5	69		100.0		69.0	36.8	111	0	0	
Surr: 2-Fluorobiphenyl	65		100.0		65.1	38.3	110	0	0	
Surr: 4-Terphenyl-d14	72		100.0		71.9	52.1	116	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1403354 RcptNo: 1

Received by/date: 03/10/14

Logged By: **Lindsay Mangin** 3/10/2014 4:10:00 PM

Completed By: **Lindsay Mangin** 3/10/2014 4:44:06 PM

Reviewed By: 03/11/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 12.1
(<2 or >12 unless noted)
Adjusted?
Checked by:

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.6	Good	Not Present			

Chain-of-Custody Record

Client: Western Refining

Mailing Address: Rt 3 Box 7
Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-722-0210

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other _____
☐ EDD (Type) _____

Turn-Around Time:
☐ Standard ☐ Rush _____

Project Name: Q1-2014 Groundwater Sampling

Project #: Quarterly Sampling

Project Manager: Cheryl Johnson

Sampler:
On Ice: ☒ Yes ☐ No
Sample Temperature: 4.6

www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1403354			8015B (DRO/GRO)	WQCC Metals (Total and Dissolved)	8270 + Phenols		Total Cyanide									Air Bubbles (Y or N)
3/10/14	1225		NAPIS-1			-001		x	x	x	x	x										
3/10/14	1020		NAPIS-2 (FAILED TGC)			-002		x	x	x	x	x										
3/10/14	1145		NAPIS-3			-003		x	x	x	x	x										
3/10/14	1110		KA-3			-004		x	x	x	x	x										
3/10/14	1315		OAPIS-1			-005	x		x	x	x	x	x									
3/10/14	0925	W	FB-Group#3-			-006	x															
~~3/10/14~~	~~1020~~		~~QC~~								~~X~~											
			Trip Blank	03/11/14		-008	x															

Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
3/10/14	1610	Tom Flores		03/10/14	1610	
Date:	Time:	Relinquished by:	Received by:	Date	Time	

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 06, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: 2014 Annual GW OrderNo.: 1409803

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 6 sample(s) on 9/16/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1409803**
Date Reported: **10/6/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: KA-3
Project: 2014 Annual GW
Collection Date: 9/11/2014 9:50:00 AM
Lab ID: 1409803-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/18/2014 1:07:16 PM	15312
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/18/2014 1:07:16 PM	15312
Surr: DNOP	100	59-141		%REC	1	9/18/2014 1:07:16 PM	15312
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**DJF**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/17/2014 7:00:35 PM	R21267
Surr: BFB	92.9	70.9-130		%REC	1	9/17/2014 7:00:35 PM	R21267
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	0.45	0.10		mg/L	1	9/17/2014 1:01:28 PM	R21277
Chloride	760	50		mg/L	100	9/19/2014 5:46:40 AM	R21321
Bromide	4.4	0.10		mg/L	1	9/17/2014 1:01:28 PM	R21277
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/17/2014 1:01:28 PM	R21277
Sulfate	420	10		mg/L	20	9/17/2014 1:38:41 PM	R21277
Nitrate+Nitrite as N	19	1.0	*	mg/L	5	9/18/2014 4:02:43 AM	R21283
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.041	0.0020		mg/L	1	9/18/2014 1:42:44 PM	R21290
Cadmium	ND	0.0020		mg/L	1	9/18/2014 1:42:44 PM	R21290
Calcium	43	1.0		mg/L	1	9/18/2014 1:42:44 PM	R21290
Chromium	ND	0.0060		mg/L	1	9/18/2014 1:42:44 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 1:42:44 PM	R21290
Iron	ND	0.020		mg/L	1	9/18/2014 1:42:44 PM	R21290
Magnesium	6.9	1.0		mg/L	1	9/18/2014 1:42:44 PM	R21290
Manganese	ND	0.0020		mg/L	1	9/19/2014 4:27:49 PM	R21336
Potassium	5.2	1.0		mg/L	1	9/18/2014 1:42:44 PM	R21290
Silver	ND	0.0050		mg/L	1	9/24/2014 12:31:02 PM	R21433
Sodium	910	20		mg/L	20	9/19/2014 4:29:40 PM	R21336
Zinc	ND	0.010		mg/L	1	9/19/2014 4:27:49 PM	R21336
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.070	0.0020		mg/L	1	9/18/2014 4:31:52 PM	15343
Cadmium	ND	0.0020		mg/L	1	9/18/2014 4:31:52 PM	15343
Chromium	ND	0.0060		mg/L	1	9/18/2014 4:31:52 PM	15343
Copper	0.0084	0.0060		mg/L	1	9/18/2014 4:31:52 PM	15343
Iron	1.0	0.10	*	mg/L	5	9/18/2014 5:14:36 PM	15343
Manganese	0.035	0.0020		mg/L	1	9/18/2014 4:31:52 PM	15343
Silver	ND	0.0050		mg/L	1	9/18/2014 4:31:52 PM	15343
Zinc	0.018	0.010		mg/L	1	9/18/2014 4:31:52 PM	15343
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.011	0.010	*	mg/L	10	9/26/2014 2:11:05 PM	R21493

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: KA-3
Project: 2014 Annual GW
Collection Date: 9/11/2014 9:50:00 AM
Lab ID: 1409803-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.010		mg/L	10	9/29/2014 4:34:31 PM	R21527
Selenium	0.035	0.010		mg/L	10	9/26/2014 2:11:05 PM	R21493
Uranium	0.039	0.010	*	mg/L	10	9/29/2014 4:34:31 PM	R21527
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.011	0.010	*	mg/L	10	9/29/2014 12:55:50 PM	15343
Lead	0.0015	0.0010		mg/L	1	9/23/2014 5:48:17 PM	15343
Selenium	0.034	0.010		mg/L	10	9/29/2014 12:55:50 PM	15343
Uranium	0.047	0.0010	*	mg/L	1	9/23/2014 5:48:17 PM	15343
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/24/2014 10:42:48 AM	15449
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Acenaphthylene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Aniline	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Anthracene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Azobenzene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Benz(a)anthracene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Benzo(a)pyrene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Benzo(b)fluoranthene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Benzo(k)fluoranthene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Benzoic acid	ND	20		µg/L	1	9/18/2014 6:56:16 PM	15342
Benzyl alcohol	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Butyl benzyl phthalate	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Carbazole	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
4-Chloroaniline	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
2-Chloronaphthalene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
2-Chlorophenol	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Chrysene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Di-n-butyl phthalate	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Di-n-octyl phthalate	ND	20		µg/L	1	9/18/2014 6:56:16 PM	15342

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: KA-3
Project: 2014 Annual GW
Collection Date: 9/11/2014 9:50:00 AM
Lab ID: 1409803-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Dibenzofuran	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
1,2-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
1,3-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
1,4-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Diethyl phthalate	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Dimethyl phthalate	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
2,4-Dichlorophenol	ND	20		µg/L	1	9/18/2014 6:56:16 PM	15342
2,4-Dimethylphenol	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/18/2014 6:56:16 PM	15342
2,4-Dinitrophenol	ND	20		µg/L	1	9/18/2014 6:56:16 PM	15342
2,4-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
2,6-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Fluoranthene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Fluorene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Hexachlorobenzene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Hexachlorobutadiene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Hexachloroethane	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Isophorone	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
1-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
2-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
2-Methylphenol	ND	20		µg/L	1	9/18/2014 6:56:16 PM	15342
3+4-Methylphenol	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
N-Nitrosodimethylamine	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Naphthalene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
2-Nitroaniline	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
3-Nitroaniline	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
4-Nitroaniline	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Nitrobenzene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
2-Nitrophenol	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
4-Nitrophenol	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Pentachlorophenol	ND	20		µg/L	1	9/18/2014 6:56:16 PM	15342
Phenanthrene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Phenol	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: KA-3
Project: 2014 Annual GW
Collection Date: 9/11/2014 9:50:00 AM
Lab ID: 1409803-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyrene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Pyridine	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/18/2014 6:56:16 PM	15342
Surr: 2-Fluorophenol	59.7	12.1-85.8		%REC	1	9/18/2014 6:56:16 PM	15342
Surr: Phenol-d5	52.4	17.7-65.8		%REC	1	9/18/2014 6:56:16 PM	15342
Surr: 2,4,6-Tribromophenol	64.7	26-138		%REC	1	9/18/2014 6:56:16 PM	15342
Surr: Nitrobenzene-d5	72.6	47.5-119		%REC	1	9/18/2014 6:56:16 PM	15342
Surr: 2-Fluorobiphenyl	69.5	48.1-106		%REC	1	9/18/2014 6:56:16 PM	15342
Surr: 4-Terphenyl-d14	78.4	44-113		%REC	1	9/18/2014 6:56:16 PM	15342
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
Toluene	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
Ethylbenzene	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
Naphthalene	ND	2.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
1-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
2-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
Acetone	ND	10		µg/L	1	9/19/2014 3:11:47 AM	R21295
Bromobenzene	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
Bromodichloromethane	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
Bromoform	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
Bromomethane	ND	3.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
2-Butanone	ND	10		µg/L	1	9/19/2014 3:11:47 AM	R21295
Carbon disulfide	ND	10		µg/L	1	9/19/2014 3:11:47 AM	R21295
Carbon Tetrachloride	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
Chlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
Chloroethane	ND	2.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
Chloroform	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
Chloromethane	ND	3.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
2-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
4-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
cis-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: KA-3
Project: 2014 Annual GW
Collection Date: 9/11/2014 9:50:00 AM
Lab ID: 1409803-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
Dibromochloromethane	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
Dibromomethane	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
1,1-Dichloroethane	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
1,1-Dichloroethene	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
1,2-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
1,3-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
2,2-Dichloropropane	ND	2.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
1,1-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
Hexachlorobutadiene	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
2-Hexanone	ND	10		µg/L	1	9/19/2014 3:11:47 AM	R21295
Isopropylbenzene	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
4-Isopropyltoluene	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
4-Methyl-2-pentanone	ND	10		µg/L	1	9/19/2014 3:11:47 AM	R21295
Methylene Chloride	ND	3.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
n-Butylbenzene	ND	3.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
n-Propylbenzene	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
sec-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
Styrene	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
tert-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
trans-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
Trichlorofluoromethane	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
Vinyl chloride	ND	1.0		µg/L	1	9/19/2014 3:11:47 AM	R21295
Xylenes, Total	ND	1.5		µg/L	1	9/19/2014 3:11:47 AM	R21295
Surr: 1,2-Dichloroethane-d4	91.7	70-130		%REC	1	9/19/2014 3:11:47 AM	R21295

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: KA-3
Project: 2014 Annual GW
Collection Date: 9/11/2014 9:50:00 AM
Lab ID: 1409803-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Surr: 4-Bromofluorobenzene	105	70-130		%REC	1	9/19/2014 3:11:47 AM	R21295
Surr: Dibromofluoromethane	93.2	70-130		%REC	1	9/19/2014 3:11:47 AM	R21295
Surr: Toluene-d8	91.9	70-130		%REC	1	9/19/2014 3:11:47 AM	R21295

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-1
Project: 2014 Annual GW
Collection Date: 9/11/2014 10:15:00 AM
Lab ID: 1409803-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/18/2014 1:29:12 PM	15312
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/18/2014 1:29:12 PM	15312
Surr: DNOP	99.4	59-141		%REC	1	9/18/2014 1:29:12 PM	15312
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**DJF**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/17/2014 7:30:56 PM	R21267
Surr: BFB	92.7	70.9-130		%REC	1	9/17/2014 7:30:56 PM	R21267
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	0.46	0.10		mg/L	1	9/17/2014 2:15:55 PM	R21277
Chloride	91	10		mg/L	20	9/17/2014 2:28:20 PM	R21277
Bromide	1.1	0.10		mg/L	1	9/17/2014 2:15:55 PM	R21277
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/17/2014 2:15:55 PM	R21277
Sulfate	110	10		mg/L	20	9/17/2014 2:28:20 PM	R21277
Nitrate+Nitrite as N	7.1	1.0		mg/L	5	9/18/2014 4:52:21 AM	R21283
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.13	0.0020		mg/L	1	9/18/2014 1:44:48 PM	R21290
Cadmium	ND	0.0020		mg/L	1	9/18/2014 1:44:48 PM	R21290
Calcium	94	1.0		mg/L	1	9/18/2014 1:44:48 PM	R21290
Chromium	ND	0.0060		mg/L	1	9/18/2014 1:44:48 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 1:44:48 PM	R21290
Iron	ND	0.020		mg/L	1	9/18/2014 1:44:48 PM	R21290
Magnesium	16	1.0		mg/L	1	9/18/2014 1:44:48 PM	R21290
Manganese	0.13	0.0020	*	mg/L	1	9/19/2014 4:49:26 PM	R21336
Potassium	1.3	1.0		mg/L	1	9/18/2014 1:44:48 PM	R21290
Silver	ND	0.0050		mg/L	1	9/24/2014 12:33:06 PM	R21433
Sodium	330	10		mg/L	10	9/19/2014 4:51:16 PM	R21336
Zinc	0.010	0.010		mg/L	1	9/19/2014 4:49:26 PM	R21336
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.13	0.0020		mg/L	1	9/18/2014 4:38:57 PM	15343
Cadmium	ND	0.0020		mg/L	1	9/18/2014 4:38:57 PM	15343
Chromium	ND	0.0060		mg/L	1	9/18/2014 4:38:57 PM	15343
Copper	ND	0.0060		mg/L	1	9/18/2014 4:38:57 PM	15343
Iron	0.24	0.020		mg/L	1	9/18/2014 4:38:57 PM	15343
Manganese	0.12	0.0020	*	mg/L	1	9/18/2014 4:38:57 PM	15343
Silver	ND	0.0050		mg/L	1	9/18/2014 4:38:57 PM	15343
Zinc	ND	0.010		mg/L	1	9/18/2014 4:38:57 PM	15343
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	9/26/2014 2:14:11 PM	R21493

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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-1
Project: 2014 Annual GW
Collection Date: 9/11/2014 10:15:00 AM
Lab ID: 1409803-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.010		mg/L	10	9/29/2014 4:37:37 PM	R21527
Selenium	0.012	0.0050		mg/L	5	9/26/2014 2:14:11 PM	R21493
Uranium	ND	0.010		mg/L	10	9/29/2014 4:37:37 PM	R21527
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	9/29/2014 12:58:56 PM	15343
Lead	ND	0.0010		mg/L	1	9/23/2014 5:51:23 PM	15343
Selenium	0.012	0.010		mg/L	10	9/29/2014 12:58:56 PM	15343
Uranium	0.012	0.0010		mg/L	1	9/23/2014 5:51:23 PM	15343
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/24/2014 10:44:39 AM	15449
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Acenaphthylene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Aniline	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Anthracene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Azobenzene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Benz(a)anthracene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Benzo(a)pyrene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Benzo(b)fluoranthene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Benzo(k)fluoranthene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Benzoic acid	ND	20		µg/L	1	9/18/2014 7:25:18 PM	15342
Benzyl alcohol	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Butyl benzyl phthalate	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Carbazole	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
4-Chloroaniline	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
2-Chloronaphthalene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
2-Chlorophenol	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Chrysene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Di-n-butyl phthalate	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Di-n-octyl phthalate	ND	20		µg/L	1	9/18/2014 7:25:18 PM	15342

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-1
Project: 2014 Annual GW
Collection Date: 9/11/2014 10:15:00 AM
Lab ID: 1409803-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Dibenzofuran	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
1,2-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
1,3-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
1,4-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Diethyl phthalate	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Dimethyl phthalate	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
2,4-Dichlorophenol	ND	20		µg/L	1	9/18/2014 7:25:18 PM	15342
2,4-Dimethylphenol	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/18/2014 7:25:18 PM	15342
2,4-Dinitrophenol	ND	20		µg/L	1	9/18/2014 7:25:18 PM	15342
2,4-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
2,6-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Fluoranthene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Fluorene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Hexachlorobenzene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Hexachlorobutadiene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Hexachloroethane	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Isophorone	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
1-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
2-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
2-Methylphenol	ND	20		µg/L	1	9/18/2014 7:25:18 PM	15342
3+4-Methylphenol	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
N-Nitrosodimethylamine	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Naphthalene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
2-Nitroaniline	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
3-Nitroaniline	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
4-Nitroaniline	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Nitrobenzene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
2-Nitrophenol	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
4-Nitrophenol	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Pentachlorophenol	ND	20		µg/L	1	9/18/2014 7:25:18 PM	15342
Phenanthrene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Phenol	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-1
Project: 2014 Annual GW
Collection Date: 9/11/2014 10:15:00 AM
Lab ID: 1409803-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyrene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Pyridine	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/18/2014 7:25:18 PM	15342
Surr: 2-Fluorophenol	60.9	12.1-85.8		%REC	1	9/18/2014 7:25:18 PM	15342
Surr: Phenol-d5	51.0	17.7-65.8		%REC	1	9/18/2014 7:25:18 PM	15342
Surr: 2,4,6-Tribromophenol	60.7	26-138		%REC	1	9/18/2014 7:25:18 PM	15342
Surr: Nitrobenzene-d5	75.6	47.5-119		%REC	1	9/18/2014 7:25:18 PM	15342
Surr: 2-Fluorobiphenyl	70.1	48.1-106		%REC	1	9/18/2014 7:25:18 PM	15342
Surr: 4-Terphenyl-d14	73.8	44-113		%REC	1	9/18/2014 7:25:18 PM	15342
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	1.4	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
Toluene	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
Ethylbenzene	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
Naphthalene	ND	2.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
1-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
2-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
Acetone	ND	10		µg/L	1	9/19/2014 3:41:23 AM	R21295
Bromobenzene	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
Bromodichloromethane	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
Bromoform	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
Bromomethane	ND	3.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
2-Butanone	ND	10		µg/L	1	9/19/2014 3:41:23 AM	R21295
Carbon disulfide	ND	10		µg/L	1	9/19/2014 3:41:23 AM	R21295
Carbon Tetrachloride	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
Chlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
Chloroethane	ND	2.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
Chloroform	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
Chloromethane	ND	3.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
2-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
4-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
cis-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-1
Project: 2014 Annual GW
Collection Date: 9/11/2014 10:15:00 AM
Lab ID: 1409803-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
Dibromochloromethane	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
Dibromomethane	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
1,1-Dichloroethane	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
1,1-Dichloroethene	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
1,2-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
1,3-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
2,2-Dichloropropane	ND	2.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
1,1-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
Hexachlorobutadiene	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
2-Hexanone	ND	10		µg/L	1	9/19/2014 3:41:23 AM	R21295
Isopropylbenzene	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
4-Isopropyltoluene	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
4-Methyl-2-pentanone	ND	10		µg/L	1	9/19/2014 3:41:23 AM	R21295
Methylene Chloride	ND	3.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
n-Butylbenzene	ND	3.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
n-Propylbenzene	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
sec-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
Styrene	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
tert-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
trans-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
Trichlorofluoromethane	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
Vinyl chloride	ND	1.0		µg/L	1	9/19/2014 3:41:23 AM	R21295
Xylenes, Total	ND	1.5		µg/L	1	9/19/2014 3:41:23 AM	R21295
Surr: 1,2-Dichloroethane-d4	94.3	70-130		%REC	1	9/19/2014 3:41:23 AM	R21295

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-1
Project: 2014 Annual GW
Collection Date: 9/11/2014 10:15:00 AM
Lab ID: 1409803-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Surr: 4-Bromofluorobenzene	106	70-130		%REC	1	9/19/2014 3:41:23 AM	R21295
Surr: Dibromofluoromethane	97.1	70-130		%REC	1	9/19/2014 3:41:23 AM	R21295
Surr: Toluene-d8	88.5	70-130		%REC	1	9/19/2014 3:41:23 AM	R21295

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-3
Project: 2014 Annual GW
Collection Date: 9/11/2014 11:20:00 AM
Lab ID: 1409803-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/18/2014 1:51:12 PM	15312
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/18/2014 1:51:12 PM	15312
Surr: DNOP	97.6	59-141		%REC	1	9/18/2014 1:51:12 PM	15312
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**DJF**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/17/2014 8:01:08 PM	R21267
Surr: BFB	98.4	70.9-130		%REC	1	9/17/2014 8:01:08 PM	R21267
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	1.1	0.10		mg/L	1	9/17/2014 2:40:45 PM	R21277
Chloride	160	10		mg/L	20	9/17/2014 2:53:10 PM	R21277
Bromide	1.2	0.10		mg/L	1	9/17/2014 2:40:45 PM	R21277
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/17/2014 2:40:45 PM	R21277
Sulfate	61	10		mg/L	20	9/17/2014 2:53:10 PM	R21277
Nitrate+Nitrite as N	1.1	1.0		mg/L	5	9/18/2014 5:04:45 AM	R21283
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.22	0.0020		mg/L	1	9/18/2014 1:46:47 PM	R21290
Cadmium	ND	0.0020		mg/L	1	9/18/2014 1:46:47 PM	R21290
Calcium	63	1.0		mg/L	1	9/18/2014 1:46:47 PM	R21290
Chromium	ND	0.0060		mg/L	1	9/18/2014 1:46:47 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 1:46:47 PM	R21290
Iron	ND	0.020		mg/L	1	9/18/2014 1:46:47 PM	R21290
Magnesium	10	1.0		mg/L	1	9/18/2014 1:46:47 PM	R21290
Manganese	0.47	0.0020	*	mg/L	1	9/19/2014 4:53:06 PM	R21336
Potassium	1.6	1.0		mg/L	1	9/18/2014 1:46:47 PM	R21290
Silver	ND	0.0050		mg/L	1	9/24/2014 12:35:03 PM	R21433
Sodium	300	10		mg/L	10	9/19/2014 4:54:56 PM	R21336
Zinc	0.011	0.010		mg/L	1	9/19/2014 4:53:06 PM	R21336
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.22	0.0020		mg/L	1	9/18/2014 4:40:50 PM	15343
Cadmium	ND	0.0020		mg/L	1	9/18/2014 4:40:50 PM	15343
Chromium	ND	0.0060		mg/L	1	9/18/2014 4:40:50 PM	15343
Copper	ND	0.0060		mg/L	1	9/18/2014 4:40:50 PM	15343
Iron	0.14	0.020		mg/L	1	9/18/2014 4:40:50 PM	15343
Manganese	0.55	0.0020	*	mg/L	1	9/18/2014 4:40:50 PM	15343
Silver	ND	0.0050		mg/L	1	9/18/2014 4:40:50 PM	15343
Zinc	ND	0.010		mg/L	1	9/18/2014 4:40:50 PM	15343
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	9/26/2014 2:17:17 PM	R21493

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Qualifiers:

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S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-3
Project: 2014 Annual GW
Collection Date: 9/11/2014 11:20:00 AM
Lab ID: 1409803-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.010		mg/L	10	9/29/2014 4:40:43 PM	R21527
Selenium	0.0089	0.0050		mg/L	5	9/26/2014 2:17:17 PM	R21493
Uranium	0.014	0.010		mg/L	10	9/29/2014 4:40:43 PM	R21527
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	9/29/2014 1:02:02 PM	15343
Lead	ND	0.0010		mg/L	1	9/23/2014 5:54:28 PM	15343
Selenium	ND	0.010		mg/L	10	9/29/2014 1:02:02 PM	15343
Uranium	0.019	0.0010		mg/L	1	9/23/2014 5:54:28 PM	15343
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/24/2014 10:46:22 AM	15449
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Acenaphthylene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Aniline	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Anthracene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Azobenzene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Benz(a)anthracene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Benzo(a)pyrene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Benzo(b)fluoranthene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Benzo(k)fluoranthene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Benzoic acid	ND	20		µg/L	1	9/18/2014 7:54:14 PM	15342
Benzyl alcohol	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Butyl benzyl phthalate	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Carbazole	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
4-Chloroaniline	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
2-Chloronaphthalene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
2-Chlorophenol	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Chrysene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Di-n-butyl phthalate	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Di-n-octyl phthalate	ND	20		µg/L	1	9/18/2014 7:54:14 PM	15342

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-3
Project: 2014 Annual GW
Collection Date: 9/11/2014 11:20:00 AM
Lab ID: 1409803-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Dibenzofuran	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
1,2-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
1,3-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
1,4-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Diethyl phthalate	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Dimethyl phthalate	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
2,4-Dichlorophenol	ND	20		µg/L	1	9/18/2014 7:54:14 PM	15342
2,4-Dimethylphenol	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/18/2014 7:54:14 PM	15342
2,4-Dinitrophenol	ND	20		µg/L	1	9/18/2014 7:54:14 PM	15342
2,4-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
2,6-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Fluoranthene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Fluorene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Hexachlorobenzene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Hexachlorobutadiene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Hexachloroethane	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Isophorone	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
1-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
2-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
2-Methylphenol	ND	20		µg/L	1	9/18/2014 7:54:14 PM	15342
3+4-Methylphenol	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
N-Nitrosodimethylamine	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Naphthalene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
2-Nitroaniline	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
3-Nitroaniline	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
4-Nitroaniline	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Nitrobenzene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
2-Nitrophenol	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
4-Nitrophenol	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Pentachlorophenol	ND	20		µg/L	1	9/18/2014 7:54:14 PM	15342
Phenanthrene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Phenol	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-3
Project: 2014 Annual GW
Collection Date: 9/11/2014 11:20:00 AM
Lab ID: 1409803-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyrene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Pyridine	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/18/2014 7:54:14 PM	15342
Surr: 2-Fluorophenol	55.7	12.1-85.8		%REC	1	9/18/2014 7:54:14 PM	15342
Surr: Phenol-d5	50.5	17.7-65.8		%REC	1	9/18/2014 7:54:14 PM	15342
Surr: 2,4,6-Tribromophenol	61.2	26-138		%REC	1	9/18/2014 7:54:14 PM	15342
Surr: Nitrobenzene-d5	72.7	47.5-119		%REC	1	9/18/2014 7:54:14 PM	15342
Surr: 2-Fluorobiphenyl	70.1	48.1-106		%REC	1	9/18/2014 7:54:14 PM	15342
Surr: 4-Terphenyl-d14	78.8	44-113		%REC	1	9/18/2014 7:54:14 PM	15342
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	3.8	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
Toluene	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
Ethylbenzene	1.9	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
Methyl tert-butyl ether (MTBE)	11	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
Naphthalene	ND	2.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
1-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
2-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
Acetone	ND	10		µg/L	1	9/19/2014 4:11:03 AM	R21295
Bromobenzene	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
Bromodichloromethane	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
Bromoform	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
Bromomethane	ND	3.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
2-Butanone	ND	10		µg/L	1	9/19/2014 4:11:03 AM	R21295
Carbon disulfide	ND	10		µg/L	1	9/19/2014 4:11:03 AM	R21295
Carbon Tetrachloride	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
Chlorobenzene	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
Chloroethane	ND	2.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
Chloroform	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
Chloromethane	ND	3.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
2-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
4-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
cis-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-3
Project: 2014 Annual GW
Collection Date: 9/11/2014 11:20:00 AM
Lab ID: 1409803-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
Dibromochloromethane	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
Dibromomethane	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
1,1-Dichloroethane	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
1,1-Dichloroethene	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
1,2-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
1,3-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
2,2-Dichloropropane	ND	2.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
1,1-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
Hexachlorobutadiene	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
2-Hexanone	ND	10		µg/L	1	9/19/2014 4:11:03 AM	R21295
Isopropylbenzene	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
4-Isopropyltoluene	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
4-Methyl-2-pentanone	ND	10		µg/L	1	9/19/2014 4:11:03 AM	R21295
Methylene Chloride	ND	3.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
n-Butylbenzene	ND	3.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
n-Propylbenzene	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
sec-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
Styrene	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
tert-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
trans-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
Trichlorofluoromethane	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
Vinyl chloride	ND	1.0		µg/L	1	9/19/2014 4:11:03 AM	R21295
Xylenes, Total	ND	1.5		µg/L	1	9/19/2014 4:11:03 AM	R21295
Surr: 1,2-Dichloroethane-d4	91.1	70-130		%REC	1	9/19/2014 4:11:03 AM	R21295

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-3
Project: 2014 Annual GW
Collection Date: 9/11/2014 11:20:00 AM
Lab ID: 1409803-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Surr: 4-Bromofluorobenzene	98.1	70-130		%REC	1	9/19/2014 4:11:03 AM	R21295
Surr: Dibromofluoromethane	93.1	70-130		%REC	1	9/19/2014 4:11:03 AM	R21295
Surr: Toluene-d8	86.7	70-130		%REC	1	9/19/2014 4:11:03 AM	R21295

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-2
Project: 2014 Annual GW
Collection Date: 9/11/2014 11:35:00 AM
Lab ID: 1409803-004
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	1.3	1.0		mg/L	1	9/18/2014 2:13:02 PM	15312
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/18/2014 2:13:02 PM	15312
Surr: DNOP	96.4	59-141		%REC	1	9/18/2014 2:13:02 PM	15312
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**DJF**
Gasoline Range Organics (GRO)	0.41	0.050		mg/L	1	9/17/2014 8:31:17 PM	R21267
Surr: BFB	146	70.9-130	S	%REC	1	9/17/2014 8:31:17 PM	R21267
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	1.6	0.10		mg/L	1	9/17/2014 3:05:34 PM	R21277
Chloride	360	10	*	mg/L	20	9/17/2014 3:17:58 PM	R21277
Bromide	1.1	0.10		mg/L	1	9/17/2014 3:05:34 PM	R21277
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/17/2014 3:05:34 PM	R21277
Sulfate	11	0.50		mg/L	1	9/17/2014 3:05:34 PM	R21277
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/18/2014 5:17:09 AM	R21283
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	1.9	0.020		mg/L	10	9/19/2014 5:09:13 PM	R21336
Cadmium	ND	0.0020		mg/L	1	9/18/2014 1:48:45 PM	R21290
Calcium	98	1.0		mg/L	1	9/18/2014 1:48:45 PM	R21290
Chromium	ND	0.0060		mg/L	1	9/18/2014 1:48:45 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 1:48:45 PM	R21290
Iron	1.6	0.20	*	mg/L	10	9/19/2014 5:09:13 PM	R21336
Magnesium	18	1.0		mg/L	1	9/18/2014 1:48:45 PM	R21290
Manganese	1.2	0.020	*	mg/L	10	9/19/2014 5:09:13 PM	R21336
Potassium	1.1	1.0		mg/L	1	9/18/2014 1:48:45 PM	R21290
Silver	ND	0.0050		mg/L	1	9/24/2014 12:37:01 PM	R21433
Sodium	410	10		mg/L	10	9/19/2014 5:09:13 PM	R21336
Zinc	0.047	0.010		mg/L	1	9/19/2014 4:56:48 PM	R21336
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	2.1	0.010	*	mg/L	5	9/18/2014 5:16:33 PM	15343
Cadmium	ND	0.0020		mg/L	1	9/18/2014 4:42:43 PM	15343
Chromium	ND	0.0060		mg/L	1	9/18/2014 4:42:43 PM	15343
Copper	0.012	0.0060		mg/L	1	9/18/2014 4:42:43 PM	15343
Iron	3.5	0.10	*	mg/L	5	9/18/2014 5:16:33 PM	15343
Manganese	1.3	0.010	*	mg/L	5	9/18/2014 5:16:33 PM	15343
Silver	ND	0.0050		mg/L	1	9/18/2014 4:42:43 PM	15343
Zinc	0.017	0.010		mg/L	1	9/18/2014 4:42:43 PM	15343
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0070	0.0050		mg/L	5	9/26/2014 2:20:23 PM	R21493

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Qualifiers:

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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-2
Project: 2014 Annual GW
Collection Date: 9/11/2014 11:35:00 AM
Lab ID: 1409803-004
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.010		mg/L	10	9/29/2014 4:43:50 PM	R21527
Selenium	0.011	0.0050		mg/L	5	9/26/2014 2:20:23 PM	R21493
Uranium	ND	0.010		mg/L	10	9/29/2014 4:43:50 PM	R21527
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.010	0.010	*	mg/L	10	9/29/2014 1:05:08 PM	15343
Lead	0.0030	0.0010		mg/L	1	9/23/2014 5:57:34 PM	15343
Selenium	0.011	0.010		mg/L	10	9/29/2014 1:05:08 PM	15343
Uranium	ND	0.0010		mg/L	1	9/23/2014 5:57:34 PM	15343
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/24/2014 10:48:07 AM	15449
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Acenaphthylene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Aniline	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Anthracene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Azobenzene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Benz(a)anthracene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Benzo(a)pyrene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Benzo(b)fluoranthene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Benzo(k)fluoranthene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Benzoic acid	ND	20		µg/L	1	9/18/2014 8:23:17 PM	15342
Benzyl alcohol	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Butyl benzyl phthalate	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Carbazole	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
4-Chloroaniline	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
2-Chloronaphthalene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
2-Chlorophenol	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Chrysene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Di-n-butyl phthalate	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Di-n-octyl phthalate	ND	20		µg/L	1	9/18/2014 8:23:17 PM	15342

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-2
Project: 2014 Annual GW
Collection Date: 9/11/2014 11:35:00 AM
Lab ID: 1409803-004
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Dibenzofuran	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
1,2-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
1,3-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
1,4-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Diethyl phthalate	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Dimethyl phthalate	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
2,4-Dichlorophenol	ND	20		µg/L	1	9/18/2014 8:23:17 PM	15342
2,4-Dimethylphenol	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/18/2014 8:23:17 PM	15342
2,4-Dinitrophenol	ND	20		µg/L	1	9/18/2014 8:23:17 PM	15342
2,4-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
2,6-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Fluoranthene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Fluorene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Hexachlorobenzene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Hexachlorobutadiene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Hexachloroethane	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Isophorone	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
1-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
2-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
2-Methylphenol	ND	20		µg/L	1	9/18/2014 8:23:17 PM	15342
3+4-Methylphenol	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
N-Nitrosodimethylamine	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Naphthalene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
2-Nitroaniline	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
3-Nitroaniline	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
4-Nitroaniline	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Nitrobenzene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
2-Nitrophenol	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
4-Nitrophenol	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Pentachlorophenol	ND	20		µg/L	1	9/18/2014 8:23:17 PM	15342
Phenanthrene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Phenol	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-2
Project: 2014 Annual GW
Collection Date: 9/11/2014 11:35:00 AM
Lab ID: 1409803-004
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyrene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Pyridine	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/18/2014 8:23:17 PM	15342
Surr: 2-Fluorophenol	57.1	12.1-85.8		%REC	1	9/18/2014 8:23:17 PM	15342
Surr: Phenol-d5	51.3	17.7-65.8		%REC	1	9/18/2014 8:23:17 PM	15342
Surr: 2,4,6-Tribromophenol	67.1	26-138		%REC	1	9/18/2014 8:23:17 PM	15342
Surr: Nitrobenzene-d5	71.2	47.5-119		%REC	1	9/18/2014 8:23:17 PM	15342
Surr: 2-Fluorobiphenyl	73.8	48.1-106		%REC	1	9/18/2014 8:23:17 PM	15342
Surr: 4-Terphenyl-d14	78.2	44-113		%REC	1	9/18/2014 8:23:17 PM	15342
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	27	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
Toluene	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
Ethylbenzene	7.0	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
Methyl tert-butyl ether (MTBE)	290	10		µg/L	10	9/19/2014 4:40:43 AM	R21295
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
Naphthalene	4.0	2.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
1-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
2-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
Acetone	22	10		µg/L	1	9/19/2014 5:10:22 AM	R21295
Bromobenzene	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
Bromodichloromethane	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
Bromoform	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
Bromomethane	ND	3.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
2-Butanone	ND	10		µg/L	1	9/19/2014 5:10:22 AM	R21295
Carbon disulfide	ND	10		µg/L	1	9/19/2014 5:10:22 AM	R21295
Carbon Tetrachloride	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
Chlorobenzene	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
Chloroethane	ND	2.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
Chloroform	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
Chloromethane	ND	3.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
2-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
4-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
cis-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-2
Project: 2014 Annual GW
Collection Date: 9/11/2014 11:35:00 AM
Lab ID: 1409803-004
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
Dibromochloromethane	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
Dibromomethane	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
1,1-Dichloroethane	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
1,1-Dichloroethene	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
1,2-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
1,3-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
2,2-Dichloropropane	ND	2.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
1,1-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
Hexachlorobutadiene	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
2-Hexanone	ND	10		µg/L	1	9/19/2014 5:10:22 AM	R21295
Isopropylbenzene	1.1	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
4-Isopropyltoluene	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
4-Methyl-2-pentanone	ND	10		µg/L	1	9/19/2014 5:10:22 AM	R21295
Methylene Chloride	ND	3.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
n-Butylbenzene	ND	3.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
n-Propylbenzene	1.7	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
sec-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
Styrene	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
tert-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
trans-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
Trichlorofluoromethane	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
Vinyl chloride	ND	1.0		µg/L	1	9/19/2014 5:10:22 AM	R21295
Xylenes, Total	ND	1.5		µg/L	1	9/19/2014 5:10:22 AM	R21295
Surr: 1,2-Dichloroethane-d4	97.2	70-130		%REC	1	9/19/2014 5:10:22 AM	R21295

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-2
Project: 2014 Annual GW
Collection Date: 9/11/2014 11:35:00 AM
Lab ID: 1409803-004
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Surr: 4-Bromofluorobenzene	105	70-130		%REC	1	9/19/2014 5:10:22 AM	R21295
Surr: Dibromofluoromethane	96.2	70-130		%REC	1	9/19/2014 5:10:22 AM	R21295
Surr: Toluene-d8	86.7	70-130		%REC	1	9/19/2014 5:10:22 AM	R21295

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409803-005
Matrix: TRIP BLANK
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**DJF**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/17/2014 11:04:55 PM	R21267
Surr: BFB	92.8	70.9-130		%REC	1	9/17/2014 11:04:55 PM	R21267
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
Toluene	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
Ethylbenzene	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
Naphthalene	ND	2.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
1-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
2-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
Acetone	ND	10		µg/L	1	9/19/2014 5:40:01 AM	R21295
Bromobenzene	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
Bromodichloromethane	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
Bromoform	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
Bromomethane	ND	3.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
2-Butanone	ND	10		µg/L	1	9/19/2014 5:40:01 AM	R21295
Carbon disulfide	ND	10		µg/L	1	9/19/2014 5:40:01 AM	R21295
Carbon Tetrachloride	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
Chlorobenzene	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
Chloroethane	ND	2.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
Chloroform	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
Chloromethane	ND	3.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
2-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
4-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
cis-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
Dibromochloromethane	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
Dibromomethane	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
1,1-Dichloroethane	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
1,1-Dichloroethene	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409803-005
Matrix: TRIP BLANK
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
1,3-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
2,2-Dichloropropane	ND	2.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
1,1-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
Hexachlorobutadiene	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
2-Hexanone	ND	10		µg/L	1	9/19/2014 5:40:01 AM	R21295
Isopropylbenzene	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
4-Isopropyltoluene	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
4-Methyl-2-pentanone	ND	10		µg/L	1	9/19/2014 5:40:01 AM	R21295
Methylene Chloride	ND	3.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
n-Butylbenzene	ND	3.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
n-Propylbenzene	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
sec-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
Styrene	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
tert-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
trans-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
Trichlorofluoromethane	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
Vinyl chloride	ND	1.0		µg/L	1	9/19/2014 5:40:01 AM	R21295
Xylenes, Total	ND	1.5		µg/L	1	9/19/2014 5:40:01 AM	R21295
Surr: 1,2-Dichloroethane-d4	89.8	70-130		%REC	1	9/19/2014 5:40:01 AM	R21295
Surr: 4-Bromofluorobenzene	103	70-130		%REC	1	9/19/2014 5:40:01 AM	R21295
Surr: Dibromofluoromethane	90.1	70-130		%REC	1	9/19/2014 5:40:01 AM	R21295
Surr: Toluene-d8	86.8	70-130		%REC	1	9/19/2014 5:40:01 AM	R21295

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BD-NAPIS-9/11/14
Project: 2014 Annual GW
Collection Date: 9/11/2014
Lab ID: 1409803-006
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Acenaphthylene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Aniline	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Anthracene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Azobenzene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Benz(a)anthracene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Benzo(a)pyrene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Benzo(b)fluoranthene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Benzo(k)fluoranthene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Benzoic acid	ND	20		µg/L	1	9/19/2014 3:01:31 AM	15359
Benzyl alcohol	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Butyl benzyl phthalate	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Carbazole	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
4-Chloroaniline	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
2-Chloronaphthalene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
2-Chlorophenol	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Chrysene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Di-n-butyl phthalate	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Di-n-octyl phthalate	ND	20		µg/L	1	9/19/2014 3:01:31 AM	15359
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Dibenzofuran	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
1,2-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
1,3-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
1,4-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Diethyl phthalate	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Dimethyl phthalate	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
2,4-Dichlorophenol	ND	20		µg/L	1	9/19/2014 3:01:31 AM	15359
2,4-Dimethylphenol	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/19/2014 3:01:31 AM	15359
2,4-Dinitrophenol	ND	20		µg/L	1	9/19/2014 3:01:31 AM	15359

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BD-NAPIS-9/11/14
Project: 2014 Annual GW
Collection Date: 9/11/2014
Lab ID: 1409803-006
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2,4-Dinitrotoluene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
2,6-Dinitrotoluene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Fluoranthene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Fluorene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Hexachlorobenzene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Hexachlorobutadiene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Hexachloroethane	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Isophorone	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
1-Methylnaphthalene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
2-Methylnaphthalene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
2-Methylphenol	ND	20		µg/L	1	9/19/2014 3:01:31 AM	15359
3+4-Methylphenol	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
N-Nitrosodimethylamine	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Naphthalene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
2-Nitroaniline	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
3-Nitroaniline	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
4-Nitroaniline	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Nitrobenzene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
2-Nitrophenol	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
4-Nitrophenol	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Pentachlorophenol	ND	20		µg/L	1	9/19/2014 3:01:31 AM	15359
Phenanthrene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Phenol	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Pyrene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Pyridine	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/19/2014 3:01:31 AM	15359
Surr: 2-Fluorophenol	48.2	12.1-85.8		%REC	1	9/19/2014 3:01:31 AM	15359
Surr: Phenol-d5	43.9	17.7-65.8		%REC	1	9/19/2014 3:01:31 AM	15359
Surr: 2,4,6-Tribromophenol	45.9	26-138		%REC	1	9/19/2014 3:01:31 AM	15359
Surr: Nitrobenzene-d5	61.2	47.5-119		%REC	1	9/19/2014 3:01:31 AM	15359
Surr: 2-Fluorobiphenyl	59.1	48.1-106		%REC	1	9/19/2014 3:01:31 AM	15359
Surr: 4-Terphenyl-d14	61.5	44-113		%REC	1	9/19/2014 3:01:31 AM	15359

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409803**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621146** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Potassium	ND	1.0								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621147** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.6	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.0	85	115			
Calcium	49	1.0	50.00	0	97.2	85	115			
Chromium	0.48	0.0060	0.5000	0	96.8	85	115			
Copper	0.49	0.0060	0.5000	0	97.1	85	115			
Iron	0.50	0.020	0.5000	0	100	85	115			
Magnesium	49	1.0	50.00	0	97.8	85	115			
Potassium	48	1.0	50.00	0	96.0	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621149** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Potassium	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409803**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621150** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.7	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.8	85	115			
Calcium	48	1.0	50.00	0	96.8	85	115			
Chromium	0.48	0.0060	0.5000	0	96.4	85	115			
Copper	0.48	0.0060	0.5000	0	95.5	85	115			
Iron	0.50	0.020	0.5000	0	99.0	85	115			
Magnesium	49	1.0	50.00	0	97.7	85	115			
Potassium	48	1.0	50.00	0	96.3	85	115			

Sample ID **LCS TEST** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621170** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	101	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.6	85	115			
Calcium	50	1.0	50.00	0	99.9	85	115			
Chromium	0.49	0.0060	0.5000	0	98.7	85	115			
Copper	0.49	0.0060	0.5000	0	97.3	85	115			
Iron	0.50	0.020	0.5000	0	101	85	115			
Magnesium	50	1.0	50.00	0	99.5	85	115			
Potassium	50	1.0	50.00	0	99.2	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622776** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Iron	ND	0.020								
Manganese	ND	0.0020								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622777** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.46	0.0020	0.5000	0	91.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409803**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622777** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.47	0.020	0.5000	0	93.2	85	115			
Manganese	0.45	0.0020	0.5000	0	89.7	85	115			
Sodium	50	1.0	50.00	0	99.3	85	115			
Zinc	0.46	0.010	0.5000	0	91.8	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622779** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Iron	ND	0.020								
Manganese	ND	0.0020								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622780** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.0020	0.5000	0	94.1	85	115			
Iron	0.48	0.020	0.5000	0	95.4	85	115			
Manganese	0.46	0.0020	0.5000	0	91.5	85	115			
Sodium	49	1.0	50.00	0	98.5	85	115			
Zinc	0.47	0.010	0.5000	0	93.7	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21433** RunNo: **21433**
Prep Date: Analysis Date: **9/24/2014** SeqNo: **626248** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21433** RunNo: **21433**
Prep Date: Analysis Date: **9/24/2014** SeqNo: **626249** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.097	0.0050	0.1000	0	97.0	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409803**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**								
Client ID: **PBW**	Batch ID: **R21433**	RunNo: **21433**								
Prep Date:	Analysis Date: **9/24/2014**	SeqNo: **626252**	Units: **mg/L**							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**								
Client ID: **LCSW**	Batch ID: **R21433**	RunNo: **21433**								
Prep Date:	Analysis Date: **9/24/2014**	SeqNo: **626253**	Units: **mg/L**							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409803**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB-15343** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **15343** RunNo: **21297**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621503** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-15343** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **15343** RunNo: **21297**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621504** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.2	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.6	85	115			
Chromium	0.49	0.0060	0.5000	0	98.1	85	115			
Copper	0.48	0.0060	0.5000	0	96.9	85	115			
Iron	0.48	0.020	0.5000	0	96.5	85	115			
Manganese	0.48	0.0020	0.5000	0	95.0	85	115			
Zinc	0.48	0.010	0.5000	0	96.9	85	115			

Sample ID **LCS Ag-15343** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **15343** RunNo: **21297**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621505** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409803**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628608** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.7	85	115			
Selenium	0.022	0.0010	0.02500	0	90.0	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628609** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	92.9	85	115			
Selenium	0.023	0.0010	0.02500	0	92.4	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628610** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628611** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21527** RunNo: **21527**
Prep Date: Analysis Date: **9/29/2014** SeqNo: **629894** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.025	0.0010	0.02500	0	99.4	85	115			
Uranium	0.025	0.0010	0.02500	0	101	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21527** RunNo: **21527**
Prep Date: Analysis Date: **9/29/2014** SeqNo: **629895** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409803**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**						
Client ID:	**LCSW**	Batch ID:	**R21527**	RunNo:	**21527**						
Prep Date:		Analysis Date:	**9/29/2014**	SeqNo:	**629895**	Units:	**mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead		0.025	0.0010	0.02500	0	101	85	115			
Uranium		0.025	0.0010	0.02500	0	101	85	115			

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**						
Client ID:	**PBW**	Batch ID:	**R21527**	RunNo:	**21527**						
Prep Date:		Analysis Date:	**9/29/2014**	SeqNo:	**629896**	Units:	**mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead		ND	0.0010								
Uranium		ND	0.0010								

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**						
Client ID:	**PBW**	Batch ID:	**R21527**	RunNo:	**21527**						
Prep Date:		Analysis Date:	**9/29/2014**	SeqNo:	**629897**	Units:	**mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead		ND	0.0010								
Uranium		ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409803**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**LLLCS-15343**	SampType:	**LCSLL**	TestCode:	**200.8 ICPMS Metals:Total**
Client ID:	**BatchQC**	Batch ID:	**15343**	RunNo:	**21376**
Prep Date:	**9/17/2014**	Analysis Date:	**9/23/2014**	SeqNo:	**624955** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0	104	85	115			
Lead	0.026	0.0010	0.02500	0	103	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.026	0.0010	0.02500	0	105	85	115			

Sample ID	**MB-15343**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**
Client ID:	**PBW**	Batch ID:	**15343**	RunNo:	**21376**
Prep Date:	**9/17/2014**	Analysis Date:	**9/23/2014**	SeqNo:	**624958** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409803**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**MB-15449**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**
Client ID:	**PBW**	Batch ID:	**15449**	RunNo:	**21410**
Prep Date:	**9/23/2014**	Analysis Date:	**9/24/2014**	SeqNo:	**625480** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-15449**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**
Client ID:	**LCSW**	Batch ID:	**15449**	RunNo:	**21410**
Prep Date:	**9/23/2014**	Analysis Date:	**9/24/2014**	SeqNo:	**625481** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.5	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409803**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R21277** RunNo: **21277**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **620661** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R21277** RunNo: **21277**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **620662** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	104	90	110			
Chloride	4.9	0.50	5.000	0	97.2	90	110			
Bromide	2.5	0.10	2.500	0	101	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	99.8	90	110			
Sulfate	10	0.50	10.00	0	99.6	90	110			

Sample ID **1409803-001EMS** SampType: **MS** TestCode: **EPA Method 300.0: Anions**
Client ID: **KA-3** Batch ID: **R21277** RunNo: **21277**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **620679** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.84	0.10	0.5000	0.4523	77.5	72.7	110			
Bromide	6.6	0.10	2.500	4.439	86.7	85.1	108			

Sample ID **1409803-001EMSD** SampType: **MSD** TestCode: **EPA Method 300.0: Anions**
Client ID: **KA-3** Batch ID: **R21277** RunNo: **21277**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **620680** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.85	0.10	0.5000	0.4523	79.1	72.7	110	0.984	20	
Bromide	6.6	0.10	2.500	4.439	87.5	85.1	108	0.320	20	

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R21277** RunNo: **21277**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **620708** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Bromide	ND	0.10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409803**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R21277** RunNo: **21277**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **620708** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R21277** RunNo: **21277**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **620709** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	96.8	90	110			
Bromide	2.3	0.10	2.500	0	93.0	90	110			
Phosphorus, Orthophosphate (As P	4.6	0.50	5.000	0	92.3	90	110			
Sulfate	9.2	0.50	10.00	0	91.7	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R21283** RunNo: **21283**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **621017** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R21283** RunNo: **21283**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **621018** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.4	0.20	3.500	0	97.6	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R21321** RunNo: **21321**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **622134** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R21321** RunNo: **21321**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **622135** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.9	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409803**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**MB-15312**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Diesel Range**					
Client ID:	**PBW**	Batch ID:	**15312**	RunNo:	**21248**					
Prep Date:	**9/16/2014**	Analysis Date:	**9/17/2014**	SeqNo:	**619740**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.99		1.000		99.1	59	141			

Sample ID	**LCS-15312**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Diesel Range**					
Client ID:	**LCSW**	Batch ID:	**15312**	RunNo:	**21248**					
Prep Date:	**9/16/2014**	Analysis Date:	**9/17/2014**	SeqNo:	**619860**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	101	69.7	142			
Surr: DNOP	0.49		0.5000		98.9	59	141			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409803**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**
Client ID:	**PBW**	Batch ID:	**R21267**	RunNo:	**21267**
Prep Date:		Analysis Date:	**9/17/2014**	SeqNo:	**620386** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		89.0	70.9	130			

Sample ID	**2.5UG GRO LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**
Client ID:	**LCSW**	Batch ID:	**R21267**	RunNo:	**21267**
Prep Date:		Analysis Date:	**9/17/2014**	SeqNo:	**620387** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.49	0.050	0.5000	0	98.4	80	120			
Surr: BFB	19		20.00		93.9	70.9	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409803**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R21295**	RunNo: **21295**			
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621332**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409803**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R21295**	RunNo: **21295**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621332** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.7	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	9.0		10.00		89.5	70	130			
Surr: Toluene-d8	9.5		10.00		94.8	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R21295**	RunNo: **21295**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621334** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130			
Toluene	19	1.0	20.00	0	94.5	80	120			
Chlorobenzene	19	1.0	20.00	0	93.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409803**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R21295**	RunNo: **21295**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621334** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22	1.0	20.00	0	109	82.6	131			
Trichloroethene (TCE)	17	1.0	20.00	0	85.2	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		91.5	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		94.5	70	130			
Surr: Dibromofluoromethane	9.2		10.00		92.4	70	130			
Surr: Toluene-d8	9.4		10.00		94.3	70	130			

Sample ID **b3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R21295**	RunNo: **21295**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621370** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409803**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **b3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R21295**	RunNo: **21295**	
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621370**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.3	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409803**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **b3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**							
Client ID: **PBW**	Batch ID: **R21295**	RunNo: **21295**							
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621370**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	11		10.00		108	70	130			
Surr: Dibromofluoromethane	9.7		10.00		96.6	70	130			
Surr: Toluene-d8	9.2		10.00		92.1	70	130			

Sample ID **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**							
Client ID: **LCSW**	Batch ID: **R21295**	RunNo: **21295**							
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621372**	Units: **µg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	70	130			
Toluene	19	1.0	20.00	0	95.8	80	120			
Chlorobenzene	20	1.0	20.00	0	97.9	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	122	82.6	131			
Trichloroethene (TCE)	18	1.0	20.00	0	91.7	70	130			
Surr: 1,2-Dichloroethane-d4	8.7		10.00		87.2	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		99.8	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.1	70	130			
Surr: Toluene-d8	9.3		10.00		92.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409803**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15342**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **15342**	RunNo: **21301**			
Prep Date: **9/17/2014**	Analysis Date: **9/18/2014**	SeqNo: **621609**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409803**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15342**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **15342**	RunNo: **21301**			
Prep Date: **9/17/2014**	Analysis Date: **9/18/2014**	SeqNo: **621609**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	93		200.0		46.3	12.1	85.8			
Surr: Phenol-d5	84		200.0		41.9	17.7	65.8			
Surr: 2,4,6-Tribromophenol	130		200.0		64.4	26	138			
Surr: Nitrobenzene-d5	66		100.0		65.5	47.5	119			
Surr: 2-Fluorobiphenyl	63		100.0		62.6	48.1	106			
Surr: 4-Terphenyl-d14	74		100.0		73.5	44	113			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409803**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **lcs-15342** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **15342** RunNo: **21301**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621610** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	58	10	100.0	0	58.1	47.9	114			
4-Chloro-3-methylphenol	130	10	200.0	0	62.8	51.7	122			
2-Chlorophenol	120	10	200.0	0	58.4	40.7	113			
1,4-Dichlorobenzene	50	10	100.0	0	50.4	39.6	99.9			
2,4-Dinitrotoluene	47	10	100.0	0	47.3	40.8	113			
N-Nitrosodi-n-propylamine	64	10	100.0	0	64.3	51.2	111			
4-Nitrophenol	66	10	200.0	0	32.8	15.7	86.9			
Pentachlorophenol	93	20	200.0	0	46.4	21.6	104			
Phenol	86	10	200.0	0	43.1	28.6	71.7			
Pyrene	64	10	100.0	0	64.2	54.2	128			
1,2,4-Trichlorobenzene	49	10	100.0	0	49.5	40.9	101			
Surr: 2-Fluorophenol	84		200.0		42.0	12.1	85.8			
Surr: Phenol-d5	80		200.0		39.9	17.7	65.8			
Surr: 2,4,6-Tribromophenol	110		200.0		55.7	26	138			
Surr: Nitrobenzene-d5	61		100.0		60.6	47.5	119			
Surr: 2-Fluorobiphenyl	57		100.0		56.6	48.1	106			
Surr: 4-Terphenyl-d14	67		100.0		66.5	44	113			

Sample ID **lcsd-15342** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **15342** RunNo: **21301**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621611** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	70	10	100.0	0	70.1	47.9	114	18.7	27.2	
4-Chloro-3-methylphenol	140	10	200.0	0	72.1	51.7	122	13.7	25.9	
2-Chlorophenol	110	10	200.0	0	55.9	40.7	113	4.29	22.5	
1,4-Dichlorobenzene	52	10	100.0	0	51.9	39.6	99.9	2.93	24.6	
2,4-Dinitrotoluene	71	10	100.0	0	70.6	40.8	113	39.5	25.3	R
N-Nitrosodi-n-propylamine	70	10	100.0	0	69.7	51.2	111	8.09	23.6	
4-Nitrophenol	69	10	200.0	0	34.4	15.7	86.9	4.53	34.7	
Pentachlorophenol	83	20	200.0	0	41.3	21.6	104	11.6	32.8	
Phenol	87	10	200.0	0	43.3	28.6	71.7	0.509	25.5	
Pyrene	82	10	100.0	0	82.0	54.2	128	24.4	31.4	
1,2,4-Trichlorobenzene	53	10	100.0	0	52.5	40.9	101	6.00	25.9	
Surr: 2-Fluorophenol	73		200.0		36.5	12.1	85.8	0	0	
Surr: Phenol-d5	77		200.0		38.4	17.7	65.8	0	0	
Surr: 2,4,6-Tribromophenol	110		200.0		53.7	26	138	0	0	
Surr: Nitrobenzene-d5	61		100.0		60.9	47.5	119	0	0	
Surr: 2-Fluorobiphenyl	64		100.0		63.6	48.1	106	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409803**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**lcsd-15342**	SampType:	**LCSD**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**LCSS02**	Batch ID:	**15342**	RunNo:	**21301**
Prep Date:	**9/17/2014**	Analysis Date:	**9/18/2014**	SeqNo:	**621611** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	85		100.0		84.6	44	113	0	0	

Sample ID	**mb-15359**	SampType:	**MBLK**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**PBW**	Batch ID:	**15359**	RunNo:	**21301**
Prep Date:	**9/18/2014**	Analysis Date:	**9/19/2014**	SeqNo:	**621631** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409803**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15359**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **15359**	RunNo: **21301**			
Prep Date: **9/18/2014**	Analysis Date: **9/19/2014**	SeqNo: **621631**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409803**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15359** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **15359** RunNo: **21301**
Prep Date: **9/18/2014** Analysis Date: **9/19/2014** SeqNo: **621631** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	38		200.0		18.9	12.1	85.8			
Surr: Phenol-d5	56		200.0		27.9	17.7	65.8			
Surr: 2,4,6-Tribromophenol	58		200.0		29.2	26	138			
Surr: Nitrobenzene-d5	54		100.0		54.0	47.5	119			
Surr: 2-Fluorobiphenyl	54		100.0		54.2	48.1	106			
Surr: 4-Terphenyl-d14	73		100.0		72.6	44	113			

Sample ID **lcs-15359** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **15359** RunNo: **21301**
Prep Date: **9/18/2014** Analysis Date: **9/19/2014** SeqNo: **621632** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	65	10	100.0	0	65.1	47.9	114			
4-Chloro-3-methylphenol	150	10	200.0	0	73.9	51.7	122			
2-Chlorophenol	140	10	200.0	0	69.8	40.7	113			
1,4-Dichlorobenzene	58	10	100.0	0	57.8	39.6	99.9			
2,4-Dinitrotoluene	57	10	100.0	0	57.3	40.8	113			
N-Nitrosodi-n-propylamine	74	10	100.0	0	74.1	51.2	111			
4-Nitrophenol	95	10	200.0	0	47.3	15.7	86.9			
Pentachlorophenol	130	20	200.0	0	67.4	21.6	104			
Phenol	110	10	200.0	0	53.1	28.6	71.7			
Pyrene	85	10	100.0	0	84.9	54.2	128			
1,2,4-Trichlorobenzene	57	10	100.0	0	56.5	40.9	101			
Surr: 2-Fluorophenol	98		200.0		48.9	12.1	85.8			
Surr: Phenol-d5	93		200.0		46.5	17.7	65.8			
Surr: 2,4,6-Tribromophenol	140		200.0		68.2	26	138			
Surr: Nitrobenzene-d5	69		100.0		69.4	47.5	119			
Surr: 2-Fluorobiphenyl	66		100.0		65.5	48.1	106			
Surr: 4-Terphenyl-d14	81		100.0		81.3	44	113			

Sample ID **lcsd-15359** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **15359** RunNo: **21301**
Prep Date: **9/18/2014** Analysis Date: **9/19/2014** SeqNo: **621633** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	56	10	100.0	0	56.2	47.9	114	14.7	27.2	
4-Chloro-3-methylphenol	130	10	200.0	0	65.3	51.7	122	12.4	25.9	
2-Chlorophenol	110	10	200.0	0	57.2	40.7	113	19.8	22.5	
1,4-Dichlorobenzene	45	10	100.0	0	45.1	39.6	99.9	24.6	24.6	R
2,4-Dinitrotoluene	50	10	100.0	0	49.6	40.8	113	14.6	25.3	

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409803**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **lcsd-15359** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **15359** RunNo: **21301**
Prep Date: **9/18/2014** Analysis Date: **9/19/2014** SeqNo: **621633** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodi-n-propylamine	65	10	100.0	0	64.6	51.2	111	13.7	23.6	
4-Nitrophenol	75	10	200.0	0	37.3	15.7	86.9	23.7	34.7	
Pentachlorophenol	110	20	200.0	0	52.6	21.6	104	24.7	32.8	
Phenol	89	10	200.0	0	44.5	28.6	71.7	17.7	25.5	
Pyrene	70	10	100.0	0	69.7	54.2	128	19.7	31.4	
1,2,4-Trichlorobenzene	47	10	100.0	0	46.7	40.9	101	18.9	25.9	
Surr: 2-Fluorophenol	80		200.0		39.8	12.1	85.8	0	0	
Surr: Phenol-d5	78		200.0		39.0	17.7	65.8	0	0	
Surr: 2,4,6-Tribromophenol	130		200.0		65.7	26	138	0	0	
Surr: Nitrobenzene-d5	59		100.0		59.2	47.5	119	0	0	
Surr: 2-Fluorobiphenyl	58		100.0		57.5	48.1	106	0	0	
Surr: 4-Terphenyl-d14	83		100.0		83.0	44	113	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Western Refining Gallup** Work Order Number: **1409803** RcptNo: 1

Received by/date: C.S. 09/16/14

Logged By: **Ashley Gallegos** **9/16/2014 5:03:00 PM** AG

Completed By: **Ashley Gallegos** **9/17/2014 8:01:48 AM** AG

Reviewed By: AT 09/17/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 12
(<2 or >12 unless noted)
Adjusted? No
Checked by: mg

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

2 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

2014 ~~2011~~ ANNUAL GW 09/17/14

Project #:

NAPIS-1,-2,-3,KA-3

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.1°

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1409803	8260 + MTBE	8015B extended	8270 + phenols	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	Major Cations/Anions							Air Bubbles (Y or N)
9/11/14	0950	H_2O	KA-3			-001	X	X	X	X	X	X							
9/11/14	1015	H_2O	NAPIS-1			-002	X	X	X	X	X	X							
9/11/14	1120	H_2O	NAPIS-3			-003	X	X	X	X	X	X							
9/11/14	1135	H_2O	NAPIS-2			-004	X	X	X	X	X	X							
			Trip Blank			~~-005~~ 5	X	X											
			AK 09/17/14			AK 09/17/14													
9/11/14		H_2O	BD-NAPIS-9/11/14			-006			X										

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/16/14	1450	[signature]	[signature]	9/16/14	1450
Date:	Time:	Relinquished by:	Received by:	Date	Time
9/16/14	1703	[signature]	Celina Sanchez	09/16/14	1703

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 27, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: 2014 2nd Quarter OrderNo.: 1406361

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 9 sample(s) on 6/6/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

John Caldwell

John Caldwell
Supervisor
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1406361**
Date Reported: **6/27/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-1
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 9:32:00 AM
Lab ID: 1406361-001
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	6/11/2014 2:33:19 AM	13579
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	6/11/2014 2:33:19 AM	13579
Surr: DNOP	104	62.7-145		%REC	1	6/11/2014 2:33:19 AM	13579
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	6/10/2014 1:02:52 AM	R19139
Surr: BFB	94.7	70.9-130		%REC	1	6/10/2014 1:02:52 AM	R19139
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	6/10/2014 1:02:52 AM	R19139
Benzene	ND	1.0		µg/L	1	6/10/2014 1:02:52 AM	R19139
Toluene	ND	1.0		µg/L	1	6/10/2014 1:02:52 AM	R19139
Ethylbenzene	ND	1.0		µg/L	1	6/10/2014 1:02:52 AM	R19139
Xylenes, Total	ND	2.0		µg/L	1	6/10/2014 1:02:52 AM	R19139
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/10/2014 1:02:52 AM	R19139
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/10/2014 1:02:52 AM	R19139
Surr: 4-Bromofluorobenzene	109	82.9-139		%REC	1	6/10/2014 1:02:52 AM	R19139
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	0.40	0.10		mg/L	1	6/9/2014 3:10:35 PM	R19165
Chloride	86	10		mg/L	20	6/9/2014 3:23:00 PM	R19165
Bromide	1.4	0.10		mg/L	1	6/9/2014 3:10:35 PM	R19165
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	6/9/2014 3:10:35 PM	R19165
Sulfate	140	10		mg/L	20	6/9/2014 3:23:00 PM	R19165
Nitrate+Nitrite as N	14	1.0	*	mg/L	5	6/10/2014 12:04:24 AM	R19165
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.12	0.0020		mg/L	1	6/10/2014 5:03:15 PM	R19167
Cadmium	ND	0.0020		mg/L	1	6/10/2014 5:03:15 PM	R19167
Chromium	ND	0.0060		mg/L	1	6/10/2014 5:03:15 PM	R19167
Copper	ND	0.0060		mg/L	1	6/10/2014 5:03:15 PM	R19167
Iron	0.025	0.020		mg/L	1	6/10/2014 5:03:15 PM	R19167
Manganese	0.059	0.0020	*	mg/L	1	6/10/2014 5:03:15 PM	R19167
Silver	ND	0.0050		mg/L	1	6/10/2014 5:03:15 PM	R19167
Zinc	ND	0.010		mg/L	1	6/10/2014 5:03:15 PM	R19167
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.15	0.0020		mg/L	1	6/17/2014 1:34:20 PM	13717
Cadmium	ND	0.0020		mg/L	1	6/17/2014 1:34:20 PM	13717
Calcium	83	1.0		mg/L	1	6/17/2014 1:34:20 PM	13717
Chromium	ND	0.0060		mg/L	1	6/17/2014 1:34:20 PM	13717
Copper	ND	0.0060		mg/L	1	6/17/2014 1:34:20 PM	13717

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-1
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 9:32:00 AM
Lab ID: 1406361-001
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Iron	1.2	0.10	*B	mg/L	5	6/18/2014 11:55:13 AM	13717
Magnesium	14	1.0		mg/L	1	6/17/2014 1:34:20 PM	13717
Manganese	0.12	0.0020	*	mg/L	1	6/18/2014 11:53:47 AM	13717
Potassium	3.7	1.0		mg/L	1	6/17/2014 1:34:20 PM	13717
Silver	ND	0.0050		mg/L	1	6/18/2014 5:18:31 PM	13717
Sodium	340	5.0		mg/L	5	6/18/2014 11:55:13 AM	13717
Zinc	0.012	0.010		mg/L	1	6/18/2014 11:53:47 AM	13717
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	6/18/2014 2:18:18 PM	R19364
Lead	ND	0.0010		mg/L	1	6/12/2014 3:49:40 PM	R19228
Selenium	0.013	0.0050		mg/L	5	6/18/2014 2:18:18 PM	R19364
Uranium	0.010	0.0010		mg/L	1	6/12/2014 3:49:40 PM	R19228
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	6/17/2014 3:09:40 PM	13717
Lead	ND	0.0050		mg/L	5	6/17/2014 3:09:40 PM	13717
Selenium	0.010	0.0050		mg/L	5	6/17/2014 3:09:40 PM	13717
Uranium	0.014	0.0050		mg/L	5	6/17/2014 3:09:40 PM	13717
EPA METHOD 245.1: MERCURY						Analyst:	**DBD**
Mercury	ND	0.00020		mg/L	1	6/17/2014 10:41:35 AM	13722
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Acenaphthylene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Aniline	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Anthracene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Azobenzene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Benz(a)anthracene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Benzo(a)pyrene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Benzo(b)fluoranthene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Benzo(g,h,i)perylene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Benzo(k)fluoranthene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Benzoic acid	ND	20		µg/L	1	6/10/2014 5:17:49 PM	13597
Benzyl alcohol	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Bis(2-chloroethyl)ether	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
4-Bromophenyl phenyl ether	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-1
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 9:32:00 AM
Lab ID: 1406361-001
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Butyl benzyl phthalate	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Carbazole	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
4-Chloro-3-methylphenol	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
4-Chloroaniline	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
2-Chloronaphthalene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
2-Chlorophenol	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Chrysene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Di-n-butyl phthalate	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Di-n-octyl phthalate	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Dibenz(a,h)anthracene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Dibenzofuran	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
1,2-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
1,3-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
1,4-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
3,3´-Dichlorobenzidine	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Diethyl phthalate	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Dimethyl phthalate	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
2,4-Dichlorophenol	ND	20		µg/L	1	6/10/2014 5:17:49 PM	13597
2,4-Dimethylphenol	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	6/10/2014 5:17:49 PM	13597
2,4-Dinitrophenol	ND	20		µg/L	1	6/10/2014 5:17:49 PM	13597
2,4-Dinitrotoluene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
2,6-Dinitrotoluene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Fluoranthene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Fluorene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Hexachlorobenzene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Hexachlorobutadiene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Hexachlorocyclopentadiene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Hexachloroethane	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Isophorone	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
1-Methylnaphthalene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
2-Methylnaphthalene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
2-Methylphenol	ND	20		µg/L	1	6/10/2014 5:17:49 PM	13597
3+4-Methylphenol	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
N-Nitrosodimethylamine	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
N-Nitrosodiphenylamine	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-1
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 9:32:00 AM
Lab ID: 1406361-001
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Naphthalene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
2-Nitroaniline	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
3-Nitroaniline	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
4-Nitroaniline	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Nitrobenzene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
2-Nitrophenol	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
4-Nitrophenol	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Pentachlorophenol	ND	20		µg/L	1	6/10/2014 5:17:49 PM	13597
Phenanthrene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Phenol	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Pyrene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Pyridine	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
1,2,4-Trichlorobenzene	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
2,4,5-Trichlorophenol	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
2,4,6-Trichlorophenol	ND	10		µg/L	1	6/10/2014 5:17:49 PM	13597
Surr: 2-Fluorophenol	50.0	12.1-85.8		%REC	1	6/10/2014 5:17:49 PM	13597
Surr: Phenol-d5	41.2	17.7-65.8		%REC	1	6/10/2014 5:17:49 PM	13597
Surr: 2,4,6-Tribromophenol	58.2	26-138		%REC	1	6/10/2014 5:17:49 PM	13597
Surr: Nitrobenzene-d5	74.4	47.5-119		%REC	1	6/10/2014 5:17:49 PM	13597
Surr: 2-Fluorobiphenyl	71.2	48.1-106		%REC	1	6/10/2014 5:17:49 PM	13597
Surr: 4-Terphenyl-d14	68.0	44-113		%REC	1	6/10/2014 5:17:49 PM	13597

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-2
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 11:46:00 AM
Lab ID: 1406361-002
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	1.5	1.0		mg/L	1	6/11/2014 2:54:44 AM	13579
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	6/11/2014 2:54:44 AM	13579
Surr: DNOP	98.9	62.7-145		%REC	1	6/11/2014 2:54:44 AM	13579
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	0.62	0.050		mg/L	1	6/10/2014 2:35:32 AM	R19139
Surr: BFB	181	70.9-130	S	%REC	1	6/10/2014 2:35:32 AM	R19139
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Methyl tert-butyl ether (MTBE)	200	12		µg/L	5	6/12/2014 1:42:32 PM	R19229
Benzene	86	1.0		µg/L	1	6/10/2014 2:35:32 AM	R19139
Toluene	2.1	1.0		µg/L	1	6/10/2014 2:35:32 AM	R19139
Ethylbenzene	28	1.0		µg/L	1	6/10/2014 2:35:32 AM	R19139
Xylenes, Total	3.7	2.0		µg/L	1	6/10/2014 2:35:32 AM	R19139
1,2,4-Trimethylbenzene	2.9	1.0		µg/L	1	6/10/2014 2:35:32 AM	R19139
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/10/2014 2:35:32 AM	R19139
Surr: 4-Bromofluorobenzene	156	82.9-139	S	%REC	1	6/10/2014 2:35:32 AM	R19139
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	1.3	0.10		mg/L	1	6/9/2014 3:35:25 PM	R19165
Chloride	330	10		mg/L	20	6/9/2014 3:47:50 PM	R19165
Bromide	0.94	0.10		mg/L	1	6/9/2014 3:35:25 PM	R19165
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	6/9/2014 3:35:25 PM	R19165
Sulfate	4.8	0.50		mg/L	1	6/9/2014 3:35:25 PM	R19165
Nitrate+Nitrite as N	ND	1.0		mg/L	5	6/10/2014 12:16:49 AM	R19165
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	1.6	0.010		mg/L	5	6/10/2014 5:16:39 PM	R19167
Cadmium	ND	0.0020		mg/L	1	6/10/2014 5:14:56 PM	R19167
Chromium	ND	0.0060		mg/L	1	6/10/2014 5:14:56 PM	R19167
Copper	ND	0.0060		mg/L	1	6/10/2014 5:14:56 PM	R19167
Iron	2.6	0.10	*	mg/L	5	6/10/2014 5:16:39 PM	R19167
Manganese	1.4	0.010	*	mg/L	5	6/10/2014 5:16:39 PM	R19167
Silver	ND	0.0050		mg/L	1	6/10/2014 5:14:56 PM	R19167
Zinc	ND	0.010		mg/L	1	6/10/2014 5:14:56 PM	R19167
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	2.0	0.010		mg/L	5	6/18/2014 12:04:07 PM	13717
Cadmium	ND	0.0020		mg/L	1	6/17/2014 1:36:02 PM	13717
Calcium	100	5.0		mg/L	5	6/18/2014 12:04:07 PM	13717
Chromium	ND	0.0060		mg/L	1	6/17/2014 1:36:02 PM	13717
Copper	0.0097	0.0060		mg/L	1	6/17/2014 1:36:02 PM	13717

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-2
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 11:46:00 AM
Lab ID: 1406361-002
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Iron	3.9	0.10	*B	mg/L	5	6/18/2014 12:04:07 PM	13717
Magnesium	19	1.0		mg/L	1	6/17/2014 1:36:02 PM	13717
Manganese	1.3	0.010	*	mg/L	5	6/18/2014 12:04:07 PM	13717
Potassium	3.4	1.0		mg/L	1	6/17/2014 1:36:02 PM	13717
Silver	ND	0.0050		mg/L	1	6/18/2014 5:20:11 PM	13717
Sodium	400	5.0		mg/L	5	6/18/2014 12:04:07 PM	13717
Zinc	0.013	0.010		mg/L	1	6/18/2014 12:02:36 PM	13717
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0064	0.0050		mg/L	5	6/18/2014 2:23:17 PM	R19364
Lead	ND	0.0050		mg/L	5	6/18/2014 2:23:17 PM	R19364
Selenium	0.010	0.0050		mg/L	5	6/18/2014 2:23:17 PM	R19364
Uranium	ND	0.0010		mg/L	1	6/25/2014 12:11:14 PM	R19508
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	6/17/2014 3:14:39 PM	13717
Lead	ND	0.0050		mg/L	5	6/17/2014 3:14:39 PM	13717
Selenium	0.0095	0.0050		mg/L	5	6/17/2014 3:14:39 PM	13717
Uranium	ND	0.0050		mg/L	5	6/17/2014 3:14:39 PM	13717
EPA METHOD 245.1: MERCURY						Analyst:	**DBD**
Mercury	ND	0.00020		mg/L	1	6/17/2014 10:43:20 AM	13722
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Acenaphthylene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Aniline	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Anthracene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Azobenzene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Benz(a)anthracene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Benzo(a)pyrene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Benzo(b)fluoranthene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Benzo(g,h,i)perylene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Benzo(k)fluoranthene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Benzoic acid	ND	20		µg/L	1	6/10/2014 5:47:10 PM	13597
Benzyl alcohol	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Bis(2-chloroethyl)ether	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
4-Bromophenyl phenyl ether	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597

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Collection Date: 6/5/2014 11:46:00 AM
Lab ID: 1406361-002
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Butyl benzyl phthalate	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Carbazole	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
4-Chloro-3-methylphenol	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
4-Chloroaniline	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
2-Chloronaphthalene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
2-Chlorophenol	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Chrysene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Di-n-butyl phthalate	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Di-n-octyl phthalate	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Dibenz(a,h)anthracene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Dibenzofuran	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
1,2-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
1,3-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
1,4-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
3,3´-Dichlorobenzidine	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Diethyl phthalate	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Dimethyl phthalate	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
2,4-Dichlorophenol	ND	20		µg/L	1	6/10/2014 5:47:10 PM	13597
2,4-Dimethylphenol	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	6/10/2014 5:47:10 PM	13597
2,4-Dinitrophenol	ND	20		µg/L	1	6/10/2014 5:47:10 PM	13597
2,4-Dinitrotoluene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
2,6-Dinitrotoluene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Fluoranthene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Fluorene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Hexachlorobenzene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Hexachlorobutadiene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Hexachlorocyclopentadiene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Hexachloroethane	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Isophorone	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
1-Methylnaphthalene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
2-Methylnaphthalene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
2-Methylphenol	ND	20		µg/L	1	6/10/2014 5:47:10 PM	13597
3+4-Methylphenol	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
N-Nitrosodimethylamine	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
N-Nitrosodiphenylamine	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-2
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 11:46:00 AM
Lab ID: 1406361-002
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Naphthalene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
2-Nitroaniline	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
3-Nitroaniline	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
4-Nitroaniline	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Nitrobenzene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
2-Nitrophenol	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
4-Nitrophenol	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Pentachlorophenol	ND	20		µg/L	1	6/10/2014 5:47:10 PM	13597
Phenanthrene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Phenol	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Pyrene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Pyridine	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
1,2,4-Trichlorobenzene	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
2,4,5-Trichlorophenol	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
2,4,6-Trichlorophenol	ND	10		µg/L	1	6/10/2014 5:47:10 PM	13597
Surr: 2-Fluorophenol	59.6	12.1-85.8		%REC	1	6/10/2014 5:47:10 PM	13597
Surr: Phenol-d5	53.0	17.7-65.8		%REC	1	6/10/2014 5:47:10 PM	13597
Surr: 2,4,6-Tribromophenol	83.7	26-138		%REC	1	6/10/2014 5:47:10 PM	13597
Surr: Nitrobenzene-d5	94.2	47.5-119		%REC	1	6/10/2014 5:47:10 PM	13597
Surr: 2-Fluorobiphenyl	91.6	48.1-106		%REC	1	6/10/2014 5:47:10 PM	13597
Surr: 4-Terphenyl-d14	85.6	44-113		%REC	1	6/10/2014 5:47:10 PM	13597

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: KA-3
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 8:40:00 AM
Lab ID: 1406361-003
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	6/11/2014 3:16:21 AM	13579
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	6/11/2014 3:16:21 AM	13579
Surr: DNOP	105	62.7-145		%REC	1	6/11/2014 3:16:21 AM	13579
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	6/10/2014 3:35:33 AM	R19139
Surr: BFB	99.6	70.9-130		%REC	1	6/10/2014 3:35:33 AM	R19139
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Methyl tert-butyl ether (MTBE)	5.6	2.5		µg/L	1	6/10/2014 3:35:33 AM	R19139
Benzene	ND	1.0		µg/L	1	6/10/2014 3:35:33 AM	R19139
Toluene	ND	1.0		µg/L	1	6/10/2014 3:35:33 AM	R19139
Ethylbenzene	ND	1.0		µg/L	1	6/10/2014 3:35:33 AM	R19139
Xylenes, Total	ND	2.0		µg/L	1	6/10/2014 3:35:33 AM	R19139
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/10/2014 3:35:33 AM	R19139
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/10/2014 3:35:33 AM	R19139
Surr: 4-Bromofluorobenzene	115	82.9-139		%REC	1	6/10/2014 3:35:33 AM	R19139
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	1.0	0.10		mg/L	1	6/9/2014 4:25:05 PM	R19165
Chloride	180	10		mg/L	20	6/9/2014 4:37:30 PM	R19165
Bromide	1.6	0.10		mg/L	1	6/9/2014 4:25:05 PM	R19165
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	6/9/2014 4:25:05 PM	R19165
Sulfate	95	10		mg/L	20	6/9/2014 4:37:30 PM	R19165
Nitrate+Nitrite as N	7.7	1.0		mg/L	5	6/10/2014 12:29:13 AM	R19165
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Calcium	62	1.0		mg/L	1	6/17/2014 1:39:33 PM	13717
Magnesium	15	1.0		mg/L	1	6/17/2014 1:39:33 PM	13717
Potassium	5.3	1.0		mg/L	1	6/17/2014 1:39:33 PM	13717
Sodium	390	5.0		mg/L	5	6/18/2014 12:05:44 PM	13717
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Acenaphthylene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Aniline	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Anthracene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Azobenzene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Benz(a)anthracene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Benzo(a)pyrene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Benzo(b)fluoranthene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Benzo(g,h,i)perylene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: KA-3
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 8:40:00 AM
Lab ID: 1406361-003
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Benzo(k)fluoranthene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Benzoic acid	ND	20		µg/L	1	6/10/2014 6:16:28 PM	13597
Benzyl alcohol	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Bis(2-chloroethyl)ether	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
4-Bromophenyl phenyl ether	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Butyl benzyl phthalate	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Carbazole	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
4-Chloro-3-methylphenol	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
4-Chloroaniline	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
2-Chloronaphthalene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
2-Chlorophenol	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Chrysene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Di-n-butyl phthalate	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Di-n-octyl phthalate	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Dibenz(a,h)anthracene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Dibenzofuran	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
1,2-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
1,3-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
1,4-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
3,3´-Dichlorobenzidine	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Diethyl phthalate	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Dimethyl phthalate	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
2,4-Dichlorophenol	ND	20		µg/L	1	6/10/2014 6:16:28 PM	13597
2,4-Dimethylphenol	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	6/10/2014 6:16:28 PM	13597
2,4-Dinitrophenol	ND	20		µg/L	1	6/10/2014 6:16:28 PM	13597
2,4-Dinitrotoluene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
2,6-Dinitrotoluene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Fluoranthene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Fluorene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Hexachlorobenzene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Hexachlorobutadiene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Hexachlorocyclopentadiene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Hexachloroethane	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: KA-3
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 8:40:00 AM
Lab ID: 1406361-003
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Isophorone	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
1-Methylnaphthalene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
2-Methylnaphthalene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
2-Methylphenol	ND	20		µg/L	1	6/10/2014 6:16:28 PM	13597
3+4-Methylphenol	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
N-Nitrosodimethylamine	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
N-Nitrosodiphenylamine	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Naphthalene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
2-Nitroaniline	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
3-Nitroaniline	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
4-Nitroaniline	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Nitrobenzene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
2-Nitrophenol	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
4-Nitrophenol	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Pentachlorophenol	ND	20		µg/L	1	6/10/2014 6:16:28 PM	13597
Phenanthrene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Phenol	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Pyrene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Pyridine	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
1,2,4-Trichlorobenzene	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
2,4,5-Trichlorophenol	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
2,4,6-Trichlorophenol	ND	10		µg/L	1	6/10/2014 6:16:28 PM	13597
Surr: 2-Fluorophenol	43.8	12.1-85.8		%REC	1	6/10/2014 6:16:28 PM	13597
Surr: Phenol-d5	36.8	17.7-65.8		%REC	1	6/10/2014 6:16:28 PM	13597
Surr: 2,4,6-Tribromophenol	59.6	26-138		%REC	1	6/10/2014 6:16:28 PM	13597
Surr: Nitrobenzene-d5	69.1	47.5-119		%REC	1	6/10/2014 6:16:28 PM	13597
Surr: 2-Fluorobiphenyl	68.5	48.1-106		%REC	1	6/10/2014 6:16:28 PM	13597
Surr: 4-Terphenyl-d14	67.4	44-113		%REC	1	6/10/2014 6:16:28 PM	13597

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-3
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 8:28:00 AM
Lab ID: 1406361-004
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	6/11/2014 3:37:46 AM	13579
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	6/11/2014 3:37:46 AM	13579
Surr: DNOP	116	62.7-145		%REC	1	6/11/2014 3:37:46 AM	13579
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	6/12/2014 2:12:56 PM	R19229
Surr: BFB	98.6	70.9-130		%REC	1	6/12/2014 2:12:56 PM	R19229
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	6/12/2014 2:12:56 PM	R19229
Benzene	ND	1.0		µg/L	1	6/12/2014 2:12:56 PM	R19229
Toluene	ND	1.0		µg/L	1	6/12/2014 2:12:56 PM	R19229
Ethylbenzene	ND	1.0		µg/L	1	6/12/2014 2:12:56 PM	R19229
Xylenes, Total	ND	2.0		µg/L	1	6/12/2014 2:12:56 PM	R19229
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/12/2014 2:12:56 PM	R19229
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/12/2014 2:12:56 PM	R19229
Surr: 4-Bromofluorobenzene	111	82.9-139		%REC	1	6/12/2014 2:12:56 PM	R19229
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	0.30	0.10		mg/L	1	6/9/2014 4:49:54 PM	R19165
Chloride	910	50		mg/L	100	6/11/2014 1:16:02 AM	R19191
Bromide	5.3	0.10		mg/L	1	6/9/2014 4:49:54 PM	R19165
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	6/9/2014 4:49:54 PM	R19165
Sulfate	400	10		mg/L	20	6/9/2014 5:02:19 PM	R19165
Nitrate+Nitrite as N	19	1.0	*	mg/L	5	6/10/2014 12:41:37 AM	R19165
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.094	0.0020		mg/L	1	6/10/2014 5:26:41 PM	R19167
Cadmium	ND	0.0020		mg/L	1	6/10/2014 5:26:41 PM	R19167
Chromium	0.0073	0.0060		mg/L	1	6/10/2014 5:26:41 PM	R19167
Copper	ND	0.0060		mg/L	1	6/12/2014 4:17:21 PM	R19227
Iron	2.6	0.10	*	mg/L	5	6/10/2014 5:28:32 PM	R19167
Manganese	0.058	0.0020	*	mg/L	1	6/10/2014 5:26:41 PM	R19167
Silver	ND	0.0050		mg/L	1	6/12/2014 4:17:21 PM	R19227
Zinc	0.070	0.010		mg/L	1	6/10/2014 5:26:41 PM	R19167
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.23	0.0020		mg/L	1	6/17/2014 1:41:20 PM	13717
Cadmium	ND	0.0020		mg/L	1	6/17/2014 1:41:20 PM	13717
Calcium	55	1.0		mg/L	1	6/17/2014 1:41:20 PM	13717
Chromium	0.016	0.0060		mg/L	1	6/17/2014 1:41:20 PM	13717
Copper	ND	0.0060		mg/L	1	6/17/2014 1:41:20 PM	13717

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-3
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 8:28:00 AM
Lab ID: 1406361-004
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Iron	5.8	0.20	*B	mg/L	10	6/18/2014 12:08:39 PM	13717
Magnesium	9.0	1.0		mg/L	1	6/17/2014 1:41:20 PM	13717
Manganese	0.16	0.0020	*	mg/L	1	6/18/2014 12:07:09 PM	13717
Potassium	9.8	1.0		mg/L	1	6/17/2014 1:41:20 PM	13717
Silver	ND	0.0050		mg/L	1	6/18/2014 5:21:46 PM	13717
Sodium	920	10		mg/L	10	6/18/2014 12:08:39 PM	13717
Zinc	0.14	0.010		mg/L	1	6/18/2014 12:07:09 PM	13717
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.011	0.010	*	mg/L	10	6/19/2014 5:21:20 PM	R19391
Lead	ND	0.010		mg/L	10	6/19/2014 5:21:20 PM	R19391
Selenium	0.045	0.010		mg/L	10	6/19/2014 5:21:20 PM	R19391
Uranium	0.034	0.010	*	mg/L	10	6/19/2014 5:21:20 PM	R19391
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0076	0.0050		mg/L	5	6/17/2014 3:24:37 PM	13717
Lead	0.0073	0.0050		mg/L	5	6/17/2014 3:24:37 PM	13717
Selenium	0.032	0.0050		mg/L	5	6/17/2014 3:24:37 PM	13717
Uranium	0.032	0.0050	*	mg/L	5	6/17/2014 3:24:37 PM	13717
EPA METHOD 245.1: MERCURY						Analyst:	**DBD**
Mercury	ND	0.00020		mg/L	1	6/17/2014 10:48:47 AM	13722
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Acenaphthylene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Aniline	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Anthracene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Azobenzene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Benz(a)anthracene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Benzo(a)pyrene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Benzo(b)fluoranthene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Benzo(g,h,i)perylene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Benzo(k)fluoranthene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Benzoic acid	ND	20		µg/L	1	6/10/2014 6:45:47 PM	13597
Benzyl alcohol	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Bis(2-chloroethyl)ether	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
4-Bromophenyl phenyl ether	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-3
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 8:28:00 AM
Lab ID: 1406361-004
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Butyl benzyl phthalate	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Carbazole	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
4-Chloro-3-methylphenol	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
4-Chloroaniline	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
2-Chloronaphthalene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
2-Chlorophenol	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Chrysene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Di-n-butyl phthalate	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Di-n-octyl phthalate	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Dibenz(a,h)anthracene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Dibenzofuran	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
1,2-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
1,3-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
1,4-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
3,3´-Dichlorobenzidine	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Diethyl phthalate	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Dimethyl phthalate	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
2,4-Dichlorophenol	ND	20		µg/L	1	6/10/2014 6:45:47 PM	13597
2,4-Dimethylphenol	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	6/10/2014 6:45:47 PM	13597
2,4-Dinitrophenol	ND	20		µg/L	1	6/10/2014 6:45:47 PM	13597
2,4-Dinitrotoluene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
2,6-Dinitrotoluene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Fluoranthene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Fluorene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Hexachlorobenzene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Hexachlorobutadiene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Hexachlorocyclopentadiene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Hexachloroethane	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Isophorone	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
1-Methylnaphthalene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
2-Methylnaphthalene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
2-Methylphenol	ND	20		µg/L	1	6/10/2014 6:45:47 PM	13597
3+4-Methylphenol	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
N-Nitrosodimethylamine	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
N-Nitrosodiphenylamine	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: NAPIS-3
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 8:28:00 AM
Lab ID: 1406361-004
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Naphthalene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
2-Nitroaniline	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
3-Nitroaniline	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
4-Nitroaniline	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Nitrobenzene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
2-Nitrophenol	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
4-Nitrophenol	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Pentachlorophenol	ND	20		µg/L	1	6/10/2014 6:45:47 PM	13597
Phenanthrene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Phenol	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Pyrene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Pyridine	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
1,2,4-Trichlorobenzene	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
2,4,5-Trichlorophenol	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
2,4,6-Trichlorophenol	ND	10		µg/L	1	6/10/2014 6:45:47 PM	13597
Surr: 2-Fluorophenol	49.5	12.1-85.8		%REC	1	6/10/2014 6:45:47 PM	13597
Surr: Phenol-d5	39.9	17.7-65.8		%REC	1	6/10/2014 6:45:47 PM	13597
Surr: 2,4,6-Tribromophenol	59.5	26-138		%REC	1	6/10/2014 6:45:47 PM	13597
Surr: Nitrobenzene-d5	80.1	47.5-119		%REC	1	6/10/2014 6:45:47 PM	13597
Surr: 2-Fluorobiphenyl	73.6	48.1-106		%REC	1	6/10/2014 6:45:47 PM	13597
Surr: 4-Terphenyl-d14	71.2	44-113		%REC	1	6/10/2014 6:45:47 PM	13597

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: WEST LDU
Project: 2014 2nd Quarter
Collection Date: 6/3/2014 3:56:00 PM
Lab ID: 1406361-005
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	8.0	1.0		mg/L	1	6/11/2014 3:59:18 AM	13579
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	6/11/2014 3:59:18 AM	13579
Surr: DNOP	93.5	62.7-145		%REC	1	6/11/2014 3:59:18 AM	13579
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	12	1.0		mg/L	20	6/13/2014 1:43:57 PM	R19246
Surr: BFB	128	70.9-130		%REC	20	6/13/2014 1:43:57 PM	R19246
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Methyl tert-butyl ether (MTBE)	ND	50		µg/L	20	6/13/2014 1:43:57 PM	R19246
Benzene	520	20		µg/L	20	6/13/2014 1:43:57 PM	R19246
Toluene	35	20		µg/L	20	6/13/2014 1:43:57 PM	R19246
Ethylbenzene	180	20		µg/L	20	6/13/2014 1:43:57 PM	R19246
Xylenes, Total	2800	40		µg/L	20	6/13/2014 1:43:57 PM	R19246
1,2,4-Trimethylbenzene	760	20		µg/L	20	6/13/2014 1:43:57 PM	R19246
1,3,5-Trimethylbenzene	250	20		µg/L	20	6/13/2014 1:43:57 PM	R19246
Surr: 4-Bromofluorobenzene	137	82.9-139		%REC	20	6/13/2014 1:43:57 PM	R19246
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.082	0.0020		mg/L	1	6/10/2014 5:30:23 PM	R19167
Cadmium	ND	0.0020		mg/L	1	6/10/2014 5:30:23 PM	R19167
Chromium	0.043	0.0060		mg/L	1	6/10/2014 5:30:23 PM	R19167
Copper	ND	0.0060		mg/L	1	6/10/2014 5:30:23 PM	R19167
Iron	0.92	0.020	*	mg/L	1	6/10/2014 5:30:23 PM	R19167
Manganese	1.9	0.010	*	mg/L	5	6/10/2014 5:32:05 PM	R19167
Silver	ND	0.0050		mg/L	1	6/12/2014 4:19:09 PM	R19227
Zinc	0.022	0.010		mg/L	1	6/10/2014 5:30:23 PM	R19167
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.15	0.0020		mg/L	1	6/17/2014 1:43:08 PM	13717
Cadmium	ND	0.0020		mg/L	1	6/17/2014 1:43:08 PM	13717
Chromium	0.058	0.0060		mg/L	1	6/17/2014 1:43:08 PM	13717
Copper	ND	0.0060		mg/L	1	6/17/2014 1:43:08 PM	13717
Iron	16	0.40	*B	mg/L	20	6/18/2014 12:13:14 PM	13717
Manganese	2.0	0.010	*	mg/L	5	6/18/2014 12:11:44 PM	13717
Silver	ND	0.0050		mg/L	1	6/18/2014 5:30:24 PM	13717
Zinc	0.50	0.010		mg/L	1	6/18/2014 12:10:16 PM	13717
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0020		mg/L	2	6/12/2014 4:04:56 PM	R19228
Lead	ND	0.0010		mg/L	1	6/25/2014 12:13:39 PM	R19508
Selenium	0.0027	0.0020		mg/L	2	6/12/2014 4:04:56 PM	R19228

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: WEST LDU
Project: 2014 2nd Quarter
Collection Date: 6/3/2014 3:56:00 PM
Lab ID: 1406361-005
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Uranium	0.0011	0.0010		mg/L	1	6/25/2014 12:13:39 PM	R19508
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	6/17/2014 3:29:36 PM	13717
Lead	ND	0.0050		mg/L	5	6/17/2014 3:29:36 PM	13717
Selenium	ND	0.0050		mg/L	5	6/17/2014 3:29:36 PM	13717
Uranium	ND	0.0050		mg/L	5	6/17/2014 3:29:36 PM	13717
EPA METHOD 245.1: MERCURY						Analyst:	**DBD**
Mercury	ND	0.00020		mg/L	1	6/17/2014 10:50:33 AM	13722

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EAST LDU
Project: 2014 2nd Quarter
Collection Date: 6/3/2014 3:40:00 PM
Lab ID: 1406361-006
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	29	1.0		mg/L	1	6/11/2014 4:20:47 AM	13579
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	6/11/2014 4:20:47 AM	13579
Surr: DNOP	89.9	62.7-145		%REC	1	6/11/2014 4:20:47 AM	13579
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	130	10		mg/L	200	6/12/2014 3:43:26 PM	R19229
Surr: BFB	122	70.9-130		%REC	200	6/12/2014 3:43:26 PM	R19229
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Methyl tert-butyl ether (MTBE)	ND	500		µg/L	200	6/12/2014 3:43:26 PM	R19229
Benzene	8900	200		µg/L	200	6/12/2014 3:43:26 PM	R19229
Toluene	21000	2000		µg/L	2E	6/12/2014 3:13:26 PM	R19229
Ethylbenzene	2300	200		µg/L	200	6/12/2014 3:43:26 PM	R19229
Xylenes, Total	19000	400		µg/L	200	6/12/2014 3:43:26 PM	R19229
1,2,4-Trimethylbenzene	3600	200		µg/L	200	6/12/2014 3:43:26 PM	R19229
1,3,5-Trimethylbenzene	1200	200		µg/L	200	6/12/2014 3:43:26 PM	R19229
Surr: 4-Bromofluorobenzene	130	82.9-139		%REC	200	6/12/2014 3:43:26 PM	R19229
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.32	0.0020		mg/L	1	6/10/2014 5:33:50 PM	R19167
Cadmium	ND	0.0020		mg/L	1	6/10/2014 5:33:50 PM	R19167
Chromium	0.52	0.0060	*	mg/L	1	6/10/2014 5:33:50 PM	R19167
Copper	ND	0.0060		mg/L	1	6/10/2014 5:33:50 PM	R19167
Iron	0.025	0.020		mg/L	1	6/10/2014 5:33:50 PM	R19167
Manganese	1.5	0.010	*	mg/L	5	6/10/2014 5:35:47 PM	R19167
Silver	ND	0.0050		mg/L	1	6/12/2014 4:20:51 PM	R19227
Zinc	0.021	0.010		mg/L	1	6/10/2014 5:33:50 PM	R19167
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.33	0.0020		mg/L	1	6/17/2014 1:57:12 PM	13717
Cadmium	ND	0.0020		mg/L	1	6/17/2014 1:57:12 PM	13717
Chromium	0.54	0.0060	*	mg/L	1	6/17/2014 1:57:12 PM	13717
Copper	ND	0.0060		mg/L	1	6/17/2014 1:57:12 PM	13717
Iron	1.1	0.10	*B	mg/L	5	6/18/2014 12:16:22 PM	13717
Manganese	1.5	0.010	*	mg/L	5	6/18/2014 12:16:22 PM	13717
Silver	ND	0.0050		mg/L	1	6/18/2014 5:32:00 PM	13717
Zinc	0.027	0.010		mg/L	1	6/18/2014 12:14:52 PM	13717
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.021	0.0050	*	mg/L	5	6/12/2014 4:07:59 PM	R19228
Lead	ND	0.0050		mg/L	5	6/25/2014 12:16:03 PM	R19508
Selenium	0.056	0.0050	*	mg/L	5	6/12/2014 4:07:59 PM	R19228

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EAST LDU
Project: 2014 2nd Quarter
Collection Date: 6/3/2014 3:40:00 PM
Lab ID: 1406361-006
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Uranium	ND	0.0050		mg/L	5	6/25/2014 12:16:03 PM	R19508
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.019	0.0050	*	mg/L	5	6/17/2014 5:34:24 PM	13717
Lead	ND	0.0050		mg/L	5	6/17/2014 5:34:24 PM	13717
Selenium	ND	0.0050		mg/L	5	6/17/2014 5:34:24 PM	13717
Uranium	ND	0.0050		mg/L	5	6/17/2014 5:34:24 PM	13717
EPA METHOD 245.1: MERCURY						Analyst:	**DBD**
Mercury	ND	0.00020		mg/L	1	6/17/2014 10:52:21 AM	13722

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-GROUP1-6/5/14
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 12:40:00 PM
Lab ID: 1406361-007
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	6/12/2014 4:43:33 PM	R19229
Benzene	ND	1.0		µg/L	1	6/12/2014 4:43:33 PM	R19229
Toluene	ND	1.0		µg/L	1	6/12/2014 4:43:33 PM	R19229
Ethylbenzene	ND	1.0		µg/L	1	6/12/2014 4:43:33 PM	R19229
Xylenes, Total	ND	2.0		µg/L	1	6/12/2014 4:43:33 PM	R19229
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/12/2014 4:43:33 PM	R19229
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/12/2014 4:43:33 PM	R19229
Surr: 4-Bromofluorobenzene	108	82.9-139		%REC	1	6/12/2014 4:43:33 PM	R19229

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BD-NAPIS-6/5/14
Project: 2014 2nd Quarter
Collection Date: 6/5/2014
Lab ID: 1406361-008
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Acenaphthylene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Aniline	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Anthracene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Azobenzene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Benz(a)anthracene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Benzo(a)pyrene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Benzo(b)fluoranthene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Benzo(g,h,i)perylene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Benzo(k)fluoranthene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Benzoic acid	ND	20		µg/L	1	6/10/2014 7:14:59 PM	13597
Benzyl alcohol	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Bis(2-chloroethyl)ether	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
4-Bromophenyl phenyl ether	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Butyl benzyl phthalate	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Carbazole	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
4-Chloro-3-methylphenol	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
4-Chloroaniline	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
2-Chloronaphthalene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
2-Chlorophenol	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Chrysene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Di-n-butyl phthalate	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Di-n-octyl phthalate	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Dibenz(a,h)anthracene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Dibenzofuran	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
1,2-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
1,3-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
1,4-Dichlorobenzene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
3,3´-Dichlorobenzidine	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Diethyl phthalate	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Dimethyl phthalate	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
2,4-Dichlorophenol	ND	20		µg/L	1	6/10/2014 7:14:59 PM	13597
2,4-Dimethylphenol	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	6/10/2014 7:14:59 PM	13597
2,4-Dinitrophenol	ND	20		µg/L	1	6/10/2014 7:14:59 PM	13597

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BD-NAPIS-6/5/14
Project: 2014 2nd Quarter
Collection Date: 6/5/2014
Lab ID: 1406361-008
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2,4-Dinitrotoluene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
2,6-Dinitrotoluene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Fluoranthene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Fluorene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Hexachlorobenzene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Hexachlorobutadiene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Hexachlorocyclopentadiene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Hexachloroethane	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Isophorone	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
1-Methylnaphthalene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
2-Methylnaphthalene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
2-Methylphenol	ND	20		µg/L	1	6/10/2014 7:14:59 PM	13597
3+4-Methylphenol	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
N-Nitrosodimethylamine	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
N-Nitrosodiphenylamine	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Naphthalene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
2-Nitroaniline	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
3-Nitroaniline	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
4-Nitroaniline	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Nitrobenzene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
2-Nitrophenol	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
4-Nitrophenol	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Pentachlorophenol	ND	20		µg/L	1	6/10/2014 7:14:59 PM	13597
Phenanthrene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Phenol	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Pyrene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Pyridine	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
1,2,4-Trichlorobenzene	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
2,4,5-Trichlorophenol	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
2,4,6-Trichlorophenol	ND	10		µg/L	1	6/10/2014 7:14:59 PM	13597
Surr: 2-Fluorophenol	49.6	12.1-85.8		%REC	1	6/10/2014 7:14:59 PM	13597
Surr: Phenol-d5	41.8	17.7-65.8		%REC	1	6/10/2014 7:14:59 PM	13597
Surr: 2,4,6-Tribromophenol	67.8	26-138		%REC	1	6/10/2014 7:14:59 PM	13597
Surr: Nitrobenzene-d5	86.1	47.5-119		%REC	1	6/10/2014 7:14:59 PM	13597
Surr: 2-Fluorobiphenyl	79.6	48.1-106		%REC	1	6/10/2014 7:14:59 PM	13597
Surr: 4-Terphenyl-d14	73.7	44-113		%REC	1	6/10/2014 7:14:59 PM	13597

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Trip Blank
Project: 2014 2nd Quarter
Collection Date:
Lab ID: 1406361-009
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	6/12/2014 5:13:42 PM	R19229
Surr: BFB	94.7	70.9-130		%REC	1	6/12/2014 5:13:42 PM	R19229
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	6/12/2014 5:13:42 PM	R19229
Benzene	ND	1.0		µg/L	1	6/12/2014 5:13:42 PM	R19229
Toluene	ND	1.0		µg/L	1	6/12/2014 5:13:42 PM	R19229
Ethylbenzene	ND	1.0		µg/L	1	6/12/2014 5:13:42 PM	R19229
Xylenes, Total	ND	2.0		µg/L	1	6/12/2014 5:13:42 PM	R19229
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/12/2014 5:13:42 PM	R19229
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/12/2014 5:13:42 PM	R19229
Surr: 4-Bromofluorobenzene	106	82.9-139		%REC	1	6/12/2014 5:13:42 PM	R19229

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406361**
27-Jun-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19167** RunNo: **19167**
Prep Date: Analysis Date: **6/10/2014** SeqNo: **554043** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19167** RunNo: **19167**
Prep Date: Analysis Date: **6/10/2014** SeqNo: **554044** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.4	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.8	85	115			
Chromium	0.50	0.0060	0.5000	0	99.6	85	115			
Copper	0.49	0.0060	0.5000	0	97.1	85	115			
Iron	0.53	0.020	0.5000	0	107	85	115			
Manganese	0.50	0.0020	0.5000	0	100	85	115			
Silver	0.10	0.0050	0.1000	0	100	85	115			
Zinc	0.53	0.010	0.5000	0	106	85	115			

Sample ID **1406361-001FMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **NAPIS-1** Batch ID: **R19167** RunNo: **19167**
Prep Date: Analysis Date: **6/10/2014** SeqNo: **554330** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.60	0.0020	0.5000	0.1224	95.4	70	130			
Cadmium	0.47	0.0020	0.5000	0	94.3	70	130			
Chromium	0.47	0.0060	0.5000	0	94.6	70	130			
Copper	0.48	0.0060	0.5000	0	95.4	70	130			
Iron	0.52	0.020	0.5000	0.02480	99.5	70	130			
Manganese	0.55	0.0020	0.5000	0.05855	97.6	70	130			
Silver	0.089	0.0050	0.1000	0.002550	86.1	70	130			
Zinc	0.51	0.010	0.5000	0.009880	99.3	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406361**
27-Jun-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **1406361-001FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **NAPIS-1** Batch ID: **R19167** RunNo: **19167**
Prep Date: Analysis Date: **6/10/2014** SeqNo: **554331** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.58	0.0020	0.5000	0.1224	92.2	70	130	2.72	20	
Cadmium	0.46	0.0020	0.5000	0	91.3	70	130	3.26	20	
Chromium	0.46	0.0060	0.5000	0	92.4	70	130	2.30	20	
Copper	0.46	0.0060	0.5000	0	92.1	70	130	3.49	20	
Iron	0.51	0.020	0.5000	0.02480	96.7	70	130	2.71	20	
Manganese	0.53	0.0020	0.5000	0.05855	94.6	70	130	2.75	20	
Silver	0.086	0.0050	0.1000	0.002550	83.5	70	130	2.95	20	
Zinc	0.50	0.010	0.5000	0.009880	97.7	70	130	1.64	20	

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19227** RunNo: **19227**
Prep Date: Analysis Date: **6/12/2014** SeqNo: **555952** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	ND	0.0060								
Silver	ND	0.0050								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19227** RunNo: **19227**
Prep Date: Analysis Date: **6/12/2014** SeqNo: **555953** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.49	0.0060	0.5000	0	98.2	85	115			
Silver	0.099	0.0050	0.1000	0	98.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406361**
27-Jun-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **MB-13717** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **13717** RunNo: **19331**
Prep Date: **6/16/2014** Analysis Date: **6/17/2014** SeqNo: **558754** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS-13717** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **13717** RunNo: **19331**
Prep Date: **6/16/2014** Analysis Date: **6/17/2014** SeqNo: **558755** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.6	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.4	85	115			
Calcium	51	1.0	50.00	0	101	85	115			
Chromium	0.49	0.0060	0.5000	0	97.5	85	115			
Copper	0.49	0.0060	0.5000	0	97.9	85	115			
Magnesium	51	1.0	50.00	0	101	85	115			
Manganese	0.51	0.0020	0.5000	0	101	85	115			
Silver	0.098	0.0050	0.1000	0	98.0	85	115			
Sodium	50	1.0	50.00	0	99.8	85	115			
Zinc	0.51	0.010	0.5000	0	103	85	115			

Sample ID **MB-13717** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **13717** RunNo: **19331**
Prep Date: **6/16/2014** Analysis Date: **6/17/2014** SeqNo: **558756** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	ND	1.0								

Sample ID **LCS-13717** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **13717** RunNo: **19331**
Prep Date: **6/16/2014** Analysis Date: **6/17/2014** SeqNo: **558757** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	50	1.0	50.00	0	99.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406361**
27-Jun-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID	**MB-13717**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**PBW**	Batch ID:	**13717**	RunNo:	**19357**
Prep Date:	**6/16/2014**	Analysis Date:	**6/18/2014**	SeqNo:	**559813** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.021	0.020								

Sample ID	**LCS-13717**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**LCSW**	Batch ID:	**13717**	RunNo:	**19357**
Prep Date:	**6/16/2014**	Analysis Date:	**6/18/2014**	SeqNo:	**559814** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.53	0.020	0.5000	0	107	85	115			B

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406361**
27-Jun-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19228** RunNo: **19228**
Prep Date: Analysis Date: **6/12/2014** SeqNo: **556140** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.1	85	115			
Lead	0.024	0.0010	0.02500	0	96.9	85	115			
Selenium	0.024	0.0010	0.02500	0	97.0	85	115			
Uranium	0.024	0.0010	0.02500	0	97.0	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19228** RunNo: **19228**
Prep Date: Analysis Date: **6/12/2014** SeqNo: **556141** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	100	85	115			
Selenium	0.026	0.0010	0.02500	0	103	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19228** RunNo: **19228**
Prep Date: Analysis Date: **6/12/2014** SeqNo: **556142** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19228** RunNo: **19228**
Prep Date: Analysis Date: **6/12/2014** SeqNo: **556143** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19364** RunNo: **19364**
Prep Date: Analysis Date: **6/18/2014** SeqNo: **560092** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.5	85	115			
Lead	0.024	0.0010	0.02500	0	94.8	85	115			
Selenium	0.024	0.0010	0.02500	0	97.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406361**
27-Jun-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19364** RunNo: **19364**
Prep Date: Analysis Date: **6/18/2014** SeqNo: **560093** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.022	0.0010	0.02500	0	89.7	85	115			
Lead	0.023	0.0010	0.02500	0	93.9	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19364** RunNo: **19364**
Prep Date: Analysis Date: **6/18/2014** SeqNo: **560094** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19364** RunNo: **19364**
Prep Date: Analysis Date: **6/18/2014** SeqNo: **560095** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19391** RunNo: **19391**
Prep Date: Analysis Date: **6/19/2014** SeqNo: **561037** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.7	85	115			
Lead	0.025	0.0010	0.02500	0	99.4	85	115			
Selenium	0.025	0.0010	0.02500	0	98.7	85	115			
Uranium	0.024	0.0010	0.02500	0	96.0	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19391** RunNo: **19391**
Prep Date: Analysis Date: **6/19/2014** SeqNo: **561038** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406361**
27-Jun-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19508** RunNo: **19508**
Prep Date: Analysis Date: **6/25/2014** SeqNo: **564692** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.025	0.0010	0.02500	0	99.1	85	115			
Uranium	0.025	0.0010	0.02500	0	100	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19508** RunNo: **19508**
Prep Date: Analysis Date: **6/25/2014** SeqNo: **564693** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.025	0.0010	0.02500	0	99.4	85	115			
Uranium	0.025	0.0010	0.02500	0	99.1	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19508** RunNo: **19508**
Prep Date: Analysis Date: **6/25/2014** SeqNo: **564694** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19508** RunNo: **19508**
Prep Date: Analysis Date: **6/25/2014** SeqNo: **564695** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406361**
27-Jun-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **LLLCS-13717** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **13717** RunNo: **19343**
Prep Date: **6/16/2014** Analysis Date: **6/17/2014** SeqNo: **559197** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	101	85	115			
Lead	0.025	0.0010	0.02500	0	98.4	85	115			
Selenium	0.025	0.0010	0.02500	0	100	85	115			
Uranium	0.023	0.0010	0.02500	0	93.0	85	115			

Sample ID **MB-13717** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **13717** RunNo: **19343**
Prep Date: **6/16/2014** Analysis Date: **6/17/2014** SeqNo: **559199** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406361**
27-Jun-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID	**MB-13722**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**
Client ID:	**PBW**	Batch ID:	**13722**	RunNo:	**19315**
Prep Date:	**6/16/2014**	Analysis Date:	**6/17/2014**	SeqNo:	**558343** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-13722**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**
Client ID:	**LCSW**	Batch ID:	**13722**	RunNo:	**19315**
Prep Date:	**6/16/2014**	Analysis Date:	**6/17/2014**	SeqNo:	**558344** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	98.8	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406361**
27-Jun-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R19165** RunNo: **19165**
Prep Date: Analysis Date: **6/9/2014** SeqNo: **553915** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R19165** RunNo: **19165**
Prep Date: Analysis Date: **6/9/2014** SeqNo: **553916** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	97.4	90	110			
Chloride	4.6	0.50	5.000	0	92.0	90	110			
Bromide	2.4	0.10	2.500	0	96.2	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.9	90	110			
Sulfate	9.4	0.50	10.00	0	93.5	90	110			
Nitrate+Nitrite as N	3.3	0.20	3.500	0	95.7	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R19191** RunNo: **19191**
Prep Date: Analysis Date: **6/10/2014** SeqNo: **554760** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R19191** RunNo: **19191**
Prep Date: Analysis Date: **6/10/2014** SeqNo: **554761** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000	0	91.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406361**
27-Jun-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **MB-13579** SampType: **MBLK** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **PBW** Batch ID: **13579** RunNo: **19152**
Prep Date: **6/9/2014** Analysis Date: **6/10/2014** SeqNo: **554461** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.0		1.000		103	62.7	145			

Sample ID **LCS-13579** SampType: **LCS** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSW** Batch ID: **13579** RunNo: **19152**
Prep Date: **6/9/2014** Analysis Date: **6/10/2014** SeqNo: **554463** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.7	1.0	5.000	0	114	78.6	146			
Surr: DNOP	0.49		0.5000		98.7	62.7	145			

Sample ID **LCSD-13579** SampType: **LCSD** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSS02** Batch ID: **13579** RunNo: **19152**
Prep Date: **6/9/2014** Analysis Date: **6/11/2014** SeqNo: **554464** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.2	1.0	5.000	0	125	78.6	146	8.97	26.5	
Surr: DNOP	0.53		0.5000		106	62.7	145	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406361**
27-Jun-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW** Batch ID: **R19139** RunNo: **19139**
Prep Date: Analysis Date: **6/9/2014** SeqNo: **553037** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		93.7	70.9	130			

Sample ID **2.5UG GRO LCS** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW** Batch ID: **R19139** RunNo: **19139**
Prep Date: Analysis Date: **6/9/2014** SeqNo: **553038** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.53	0.050	0.5000	0	106	80	120			
Surr: BFB	20		20.00		102	70.9	130			

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW** Batch ID: **R19229** RunNo: **19229**
Prep Date: Analysis Date: **6/12/2014** SeqNo: **556148** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		94.8	70.9	130			

Sample ID **2.5UG GRO LCS** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW** Batch ID: **R19229** RunNo: **19229**
Prep Date: Analysis Date: **6/12/2014** SeqNo: **556149** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.47	0.050	0.5000	0	93.6	80	120			
Surr: BFB	21		20.00		105	70.9	130			

Sample ID **1406361-005AMS** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **WEST LDU** Batch ID: **R19229** RunNo: **19229**
Prep Date: Analysis Date: **6/12/2014** SeqNo: **556154** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	63	5.0	50.00	11.46	103	79	121			
Surr: BFB	2200		2000		112	70.9	130			

Sample ID **1406361-005AMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **WEST LDU** Batch ID: **R19229** RunNo: **19229**
Prep Date: Analysis Date: **6/12/2014** SeqNo: **556155** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406361**
27-Jun-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **1406361-005AMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **WEST LDU** Batch ID: **R19229** RunNo: **19229**
Prep Date: Analysis Date: **6/12/2014** SeqNo: **556155** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	61	5.0	50.00	11.46	98.6	79	121	3.37	20	
Surr: BFB	2200		2000		111	70.9	130	0	0	

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW** Batch ID: **R19246** RunNo: **19246**
Prep Date: Analysis Date: **6/13/2014** SeqNo: **557095** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		94.9	70.9	130			

Sample ID **2.5UG GRO LCS** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW** Batch ID: **R19246** RunNo: **19246**
Prep Date: Analysis Date: **6/13/2014** SeqNo: **557096** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.51	0.050	0.5000	0	102	80	120			
Surr: BFB	22		20.00		111	70.9	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406361**
27-Jun-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW** Batch ID: **R19139** RunNo: **19139**
Prep Date: Analysis Date: **6/9/2014** SeqNo: **553068** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5								
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Surr: 4-Bromofluorobenzene	22		20.00		109	82.9	139			

Sample ID **100NG BTEX LCS** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW** Batch ID: **R19139** RunNo: **19139**
Prep Date: Analysis Date: **6/9/2014** SeqNo: **553069** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	21	2.5	20.00	0	105	71.1	128			
Benzene	21	1.0	20.00	0	106	80	120			
Toluene	21	1.0	20.00	0	106	80	120			
Ethylbenzene	21	1.0	20.00	0	106	80	120			
Xylenes, Total	64	2.0	60.00	0	107	80	120			
1,2,4-Trimethylbenzene	21	1.0	20.00	0	107	80	120			
1,3,5-Trimethylbenzene	22	1.0	20.00	0	111	80	120			
Surr: 4-Bromofluorobenzene	23		20.00		114	82.9	139			

Sample ID **1406361-001AMS** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **NAPIS-1** Batch ID: **R19139** RunNo: **19139**
Prep Date: Analysis Date: **6/10/2014** SeqNo: **553076** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	19	2.5	20.00	0.6040	90.9	62.4	135			
Benzene	21	1.0	20.00	0.5360	102	71	129			
Toluene	21	1.0	20.00	0	103	68.4	135			
Ethylbenzene	21	1.0	20.00	0	103	69.4	135			
Xylenes, Total	63	2.0	60.00	0	106	72.4	135			
1,2,4-Trimethylbenzene	21	1.0	20.00	0.2920	103	67.1	135			
1,3,5-Trimethylbenzene	21	1.0	20.00	0.2680	106	75.9	130			
Surr: 4-Bromofluorobenzene	24		20.00		121	82.9	139			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406361**
27-Jun-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **1406361-001AMSD** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **NAPIS-1** Batch ID: **R19139** RunNo: **19139**
Prep Date: Analysis Date: **6/10/2014** SeqNo: **553077** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	19	2.5	20.00	0.6040	92.4	62.4	135	1.55	20	
Benzene	21	1.0	20.00	0.5360	104	71	129	1.05	20	
Toluene	21	1.0	20.00	0	103	68.4	135	0.835	20	
Ethylbenzene	21	1.0	20.00	0	103	69.4	135	0.514	20	
Xylenes, Total	64	2.0	60.00	0	106	72.4	135	0.309	20	
1,2,4-Trimethylbenzene	21	1.0	20.00	0.2920	104	67.1	135	0.658	20	
1,3,5-Trimethylbenzene	22	1.0	20.00	0.2680	107	75.9	130	0.917	20	
Surr: 4-Bromofluorobenzene	24		20.00		121	82.9	139	0	0	

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW** Batch ID: **R19229** RunNo: **19229**
Prep Date: Analysis Date: **6/12/2014** SeqNo: **556211** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5								
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Surr: 4-Bromofluorobenzene	22		20.00		108	82.9	139			

Sample ID **1406361-004AMS** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **NAPIS-3** Batch ID: **R19229** RunNo: **19229**
Prep Date: Analysis Date: **6/12/2014** SeqNo: **556217** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	18	2.5	20.00	0	90.7	62.4	135			
Benzene	22	1.0	20.00	0.4380	108	71	129			
Toluene	22	1.0	20.00	0.4800	105	68.4	135			
Ethylbenzene	21	1.0	20.00	0	106	69.4	135			
Xylenes, Total	65	2.0	60.00	0.6520	108	72.4	135			
1,2,4-Trimethylbenzene	21	1.0	20.00	0	107	67.1	135			
1,3,5-Trimethylbenzene	22	1.0	20.00	0.5020	108	75.9	130			
Surr: 4-Bromofluorobenzene	25		20.00		124	82.9	139			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406361**
27-Jun-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **1406361-004AMSD** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **NAPIS-3** Batch ID: **R19229** RunNo: **19229**
Prep Date: Analysis Date: **6/12/2014** SeqNo: **556219** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	18	2.5	20.00	0	89.0	62.4	135	1.96	20	
Benzene	21	1.0	20.00	0.4380	104	71	129	3.47	20	
Toluene	21	1.0	20.00	0.4800	103	68.4	135	2.13	20	
Ethylbenzene	21	1.0	20.00	0	104	69.4	135	1.77	20	
Xylenes, Total	64	2.0	60.00	0.6520	105	72.4	135	2.47	20	
1,2,4-Trimethylbenzene	21	1.0	20.00	0	106	67.1	135	1.06	20	
1,3,5-Trimethylbenzene	22	1.0	20.00	0.5020	105	75.9	130	2.22	20	
Surr: 4-Bromofluorobenzene	24		20.00		120	82.9	139	0	0	

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW** Batch ID: **R19246** RunNo: **19246**
Prep Date: Analysis Date: **6/13/2014** SeqNo: **557139** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5								
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Surr: 4-Bromofluorobenzene	22		20.00		110	82.9	139			

Sample ID **100NG BTEX LCS** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW** Batch ID: **R19246** RunNo: **19246**
Prep Date: Analysis Date: **6/13/2014** SeqNo: **557140** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	18	2.5	20.00	0	92.3	71.1	128			
Benzene	21	1.0	20.00	0	106	80	120			
Toluene	21	1.0	20.00	0	105	80	120			
Ethylbenzene	21	1.0	20.00	0	104	80	120			
Xylenes, Total	64	2.0	60.00	0	107	80	120			
1,2,4-Trimethylbenzene	21	1.0	20.00	0	105	80	120			
1,3,5-Trimethylbenzene	22	1.0	20.00	0	109	80	120			
Surr: 4-Bromofluorobenzene	24		20.00		121	82.9	139			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406361**
27-Jun-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **mb-13597**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **13597**	RunNo: **19174**			
Prep Date: **6/10/2014**	Analysis Date: **6/10/2014**	SeqNo: **554254**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406361**
27-Jun-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **mb-13597**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **13597**	RunNo: **19174**			
Prep Date: **6/10/2014**	Analysis Date: **6/10/2014**	SeqNo: **554254**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	130		200.0		62.8	12.1	85.8			
Surr: Phenol-d5	110		200.0		54.1	17.7	65.8			
Surr: 2,4,6-Tribromophenol	180		200.0		88.5	26	138			
Surr: Nitrobenzene-d5	98		100.0		98.1	47.5	119			
Surr: 2-Fluorobiphenyl	97		100.0		96.7	48.1	106			
Surr: 4-Terphenyl-d14	96		100.0		96.2	44	113			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406361**
27-Jun-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **lcs-13597** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **13597** RunNo: **19174**
Prep Date: **6/10/2014** Analysis Date: **6/10/2014** SeqNo: **554255** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	74	10	100.0	0	74.1	50.3	109			
4-Chloro-3-methylphenol	140	10	200.0	0	67.6	51.2	113			
2-Chlorophenol	120	10	200.0	0	57.6	48.5	104			
1,4-Dichlorobenzene	69	10	100.0	0	68.8	39.5	106			
2,4-Dinitrotoluene	69	10	100.0	0	68.7	45.4	107			
N-Nitrosodi-n-propylamine	77	10	100.0	0	77.1	50.4	119			
4-Nitrophenol	70	10	200.0	0	35.1	15.5	62.2			
Pentachlorophenol	71	20	200.0	0	35.5	23.5	93.5			
Phenol	97	10	200.0	0	48.7	26.8	65.6			
Pyrene	81	10	100.0	0	81.4	54.4	108			
1,2,4-Trichlorobenzene	67	10	100.0	0	66.7	39.9	106			
Surr: 2-Fluorophenol	88		200.0		43.8	12.1	85.8			
Surr: Phenol-d5	110		200.0		53.2	17.7	65.8			
Surr: 2,4,6-Tribromophenol	93		200.0		46.5	26	138			
Surr: Nitrobenzene-d5	75		100.0		74.8	47.5	119			
Surr: 2-Fluorobiphenyl	72		100.0		72.0	48.1	106			
Surr: 4-Terphenyl-d14	75		100.0		75.4	44	113			

Sample ID **lcsd-13597** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **13597** RunNo: **19174**
Prep Date: **6/10/2014** Analysis Date: **6/10/2014** SeqNo: **554256** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	67	10	100.0	0	66.7	50.3	109	10.4	27.2	
4-Chloro-3-methylphenol	140	10	200.0	0	68.5	51.2	113	1.34	25.9	
2-Chlorophenol	100	10	200.0	0	51.9	48.5	104	10.5	22.5	
1,4-Dichlorobenzene	60	10	100.0	0	60.2	39.5	106	13.3	24.6	
2,4-Dinitrotoluene	65	10	100.0	0	65.2	45.4	107	5.17	25.3	
N-Nitrosodi-n-propylamine	65	10	100.0	0	64.6	50.4	119	17.6	23.6	
4-Nitrophenol	73	10	200.0	0	36.3	15.5	62.2	3.33	34.7	
Pentachlorophenol	66	20	200.0	0	33.1	23.5	93.5	7.12	32.8	
Phenol	93	10	200.0	0	46.3	26.8	65.6	5.03	25.5	
Pyrene	91	10	100.0	0	91.4	54.4	108	11.6	31.4	
1,2,4-Trichlorobenzene	58	10	100.0	0	58.0	39.9	106	13.9	25.9	
Surr: 2-Fluorophenol	84		200.0		41.9	12.1	85.8	0	0	
Surr: Phenol-d5	99		200.0		49.7	17.7	65.8	0	0	
Surr: 2,4,6-Tribromophenol	82		200.0		40.8	26	138	0	0	
Surr: Nitrobenzene-d5	66		100.0		65.8	47.5	119	0	0	
Surr: 2-Fluorobiphenyl	64		100.0		63.7	48.1	106	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406361**
27-Jun-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID	**lcsd-13597**	SampType:	**LCSD**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**LCSS02**	Batch ID:	**13597**	RunNo:	**19174**
Prep Date:	**6/10/2014**	Analysis Date:	**6/10/2014**	SeqNo:	**554256** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	74		100.0		73.9	44	113	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1406361 RcptNo: 1

Received by/date: MG 06/06/14
Logged By: **Michelle Garcia** 6/6/2014 3:50:00 PM Michelle Garcia
Completed By: **Michelle Garcia** 6/9/2014 8:30:07 AM Michelle Garcia
Reviewed By: 06/09/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☑ MG 06/09
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☑ CS 06/09/14
9. Was preservative added to bottles? Yes ☑ No ☑ NA ☐

metals analysis: Added 1 ml HNO_3 to -006C for an acceptable pH. Held in login for 24 hour.

10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
(Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
(If no, notify customer for authorization.)

# of preserved bottles checked for pH: ~~11~~ 13 CS 06/09/14
(<2 or >12 unless noted)
Adjusted? yes
Checked by: CS

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks: FOR CATION ANALYSIS: POURED OFF FROM -003D (1 OF 2) FOR FRACTION -003E

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Not Present			

+ ADDED 1mL HNO_3 FOR ACCEPTABLE pH. HELD IN LOGIN FOR 24 HOURS AFTER PRESERVATION [illegible] @ 1410

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

☐ Standard ☐ Rush

Project Name:

2014 2nd Quarter

Project #:

NAPIS/LDU

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1401361	8021B + MTBE	8015B	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major CATIONS/ANIONS									Air Bubbles (Y or N)
6/5/14	932	H20	NAPIS-1			-001	X	X	X	X	X	X									
6/5/14	1146	H20	NAPIS-2			-002	X	X	X	X	X	X									
6/5/14	840	H20	KA-3			-003	X	X	X			X									
6/5/14	828	H20	NAPIS-3			-004	X	X	X	X	X	X									
6/3/14	1556	H20	WEST LDU			-005	X	X		X	X										
6/3/14	1540	H20	EAST LDU			-006	X	X		X	X										
		~~H20~~	~~Oil Sump LDU~~				X	X		X	X										JS
6/5/14	1240	H20	FB-GROUP1-6/5/14			-007	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~									
6/5/14		H2O	BD-NAPIS-6/5/14			-008			X		CS 06/09/14										
		~~H2O~~	~~BD~~			-															
			TB			-009	X	X													
			A 06/09/14																		

Date:	Time:	Relinquished by:	Received by:	Date Time	Remarks:
6/6/14	1550	Rax Landers	[signature]	06/06/14 1550	
Date:	Time:	Relinquished by:	Received by:	Date Time	

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Collect a duplicate of 8270 from either one of the these wells.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 06, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: 2014 Annual GW OrderNo.: 1409809

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 5 sample(s) on 9/16/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1409809**
Date Reported: **10/6/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-29
Project: 2014 Annual GW
Collection Date: 9/15/2014 3:45:00 PM
Lab ID: 1409809-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/19/2014 5:42:47 PM	15341
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/19/2014 5:42:47 PM	15341
Surr: DNOP	105	59-141		%REC	1	9/19/2014 5:42:47 PM	15341
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**DJF**
Gasoline Range Organics (GRO)	0.52	0.050		mg/L	1	9/19/2014 12:58:45 AM	R21299
Surr: BFB	91.7	70.9-130		%REC	1	9/19/2014 12:58:45 AM	R21299
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	0.30	0.10		mg/L	1	9/17/2014 10:39:57 PM	R21283
Chloride	160	10		mg/L	20	9/17/2014 10:52:22 PM	R21283
Bromide	0.77	0.10		mg/L	1	9/17/2014 10:39:57 PM	R21283
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/17/2014 10:39:57 PM	R21283
Sulfate	73	10		mg/L	20	9/17/2014 10:52:22 PM	R21283
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/18/2014 7:38:35 PM	R21321
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.061	0.0020		mg/L	1	9/18/2014 2:13:41 PM	R21290
Cadmium	ND	0.0020		mg/L	1	9/18/2014 2:13:41 PM	R21290
Calcium	57	1.0		mg/L	1	9/18/2014 2:13:41 PM	R21290
Chromium	ND	0.0060		mg/L	1	9/18/2014 2:13:41 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 2:13:41 PM	R21290
Iron	0.18	0.020		mg/L	1	9/19/2014 5:59:10 PM	R21336
Magnesium	12	1.0		mg/L	1	9/18/2014 2:13:41 PM	R21290
Manganese	0.26	0.0020	*	mg/L	1	9/19/2014 5:59:10 PM	R21336
Potassium	1.2	1.0		mg/L	1	9/18/2014 2:13:41 PM	R21290
Silver	ND	0.0050		mg/L	1	9/19/2014 5:59:10 PM	R21336
Sodium	380	10		mg/L	10	9/19/2014 6:00:58 PM	R21336
Zinc	ND	0.010		mg/L	1	9/19/2014 5:59:10 PM	R21336
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.058	0.0020		mg/L	1	9/19/2014 11:50:57 AM	15380
Cadmium	ND	0.0020		mg/L	1	9/19/2014 11:50:57 AM	15380
Chromium	ND	0.0060		mg/L	1	9/19/2014 11:50:57 AM	15380
Copper	ND	0.0060		mg/L	1	9/19/2014 11:50:57 AM	15380
Iron	0.20	0.020		mg/L	1	9/19/2014 11:50:57 AM	15380
Manganese	0.26	0.0020	*	mg/L	1	9/19/2014 11:50:57 AM	15380
Silver	ND	0.0050		mg/L	1	9/19/2014 11:50:57 AM	15380
Zinc	ND	0.010		mg/L	1	9/19/2014 11:50:57 AM	15380
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	9/29/2014 5:24:08 PM	R21527

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-29
Project: 2014 Annual GW
Collection Date: 9/15/2014 3:45:00 PM
Lab ID: 1409809-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.0010		mg/L	1	9/26/2014 12:16:19 PM	R21493
Selenium	ND	0.010		mg/L	10	9/29/2014 5:24:08 PM	R21527
Uranium	0.054	0.010	*	mg/L	10	9/29/2014 5:24:08 PM	R21527
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	9/29/2014 1:29:56 PM	15380
Lead	ND	0.0010		mg/L	1	9/23/2014 4:36:50 PM	15380
Selenium	ND	0.010		mg/L	10	9/29/2014 1:29:56 PM	15380
Uranium	0.053	0.010	*	mg/L	10	9/29/2014 1:29:56 PM	15380
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/24/2014 11:14:21 AM	15450
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Acenaphthylene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Aniline	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Anthracene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Azobenzene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Benz(a)anthracene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Benzo(a)pyrene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Benzo(b)fluoranthene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Benzo(k)fluoranthene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Benzoic acid	ND	20		µg/L	1	9/19/2014 3:30:22 AM	15359
Benzyl alcohol	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Butyl benzyl phthalate	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Carbazole	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
4-Chloroaniline	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
2-Chloronaphthalene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
2-Chlorophenol	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Chrysene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Di-n-butyl phthalate	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Di-n-octyl phthalate	ND	20		µg/L	1	9/19/2014 3:30:22 AM	15359

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-29
Project: 2014 Annual GW
Collection Date: 9/15/2014 3:45:00 PM
Lab ID: 1409809-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Dibenzofuran	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
1,2-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
1,3-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
1,4-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Diethyl phthalate	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Dimethyl phthalate	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
2,4-Dichlorophenol	ND	20		µg/L	1	9/19/2014 3:30:22 AM	15359
2,4-Dimethylphenol	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/19/2014 3:30:22 AM	15359
2,4-Dinitrophenol	ND	20		µg/L	1	9/19/2014 3:30:22 AM	15359
2,4-Dinitrotoluene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
2,6-Dinitrotoluene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Fluoranthene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Fluorene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Hexachlorobenzene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Hexachlorobutadiene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Hexachloroethane	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Isophorone	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
1-Methylnaphthalene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
2-Methylnaphthalene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
2-Methylphenol	ND	20		µg/L	1	9/19/2014 3:30:22 AM	15359
3+4-Methylphenol	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
N-Nitrosodimethylamine	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Naphthalene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
2-Nitroaniline	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
3-Nitroaniline	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
4-Nitroaniline	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Nitrobenzene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
2-Nitrophenol	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
4-Nitrophenol	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Pentachlorophenol	ND	20		µg/L	1	9/19/2014 3:30:22 AM	15359
Phenanthrene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Phenol	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-29
Project: 2014 Annual GW
Collection Date: 9/15/2014 3:45:00 PM
Lab ID: 1409809-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Pyrene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Pyridine	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/19/2014 3:30:22 AM	15359
Surr: 2-Fluorophenol	65.0	12.1-85.8		%REC	1	9/19/2014 3:30:22 AM	15359
Surr: Phenol-d5	57.7	17.7-65.8		%REC	1	9/19/2014 3:30:22 AM	15359
Surr: 2,4,6-Tribromophenol	74.5	26-138		%REC	1	9/19/2014 3:30:22 AM	15359
Surr: Nitrobenzene-d5	83.4	47.5-119		%REC	1	9/19/2014 3:30:22 AM	15359
Surr: 2-Fluorobiphenyl	74.7	48.1-106		%REC	1	9/19/2014 3:30:22 AM	15359
Surr: 4-Terphenyl-d14	91.7	44-113		%REC	1	9/19/2014 3:30:22 AM	15359
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
Toluene	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
Ethylbenzene	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
Methyl tert-butyl ether (MTBE)	2500	50		µg/L	50	9/24/2014 12:33:42 AM	R21389
1,2,4-Trimethylbenzene	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
1,3,5-Trimethylbenzene	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
Naphthalene	ND	10		µg/L	5	9/24/2014 1:01:35 AM	R21389
1-Methylnaphthalene	ND	20		µg/L	5	9/24/2014 1:01:35 AM	R21389
2-Methylnaphthalene	ND	20		µg/L	5	9/24/2014 1:01:35 AM	R21389
Acetone	ND	50		µg/L	5	9/24/2014 1:01:35 AM	R21389
Bromobenzene	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
Bromodichloromethane	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
Bromoform	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
Bromomethane	ND	15		µg/L	5	9/24/2014 1:01:35 AM	R21389
2-Butanone	ND	50		µg/L	5	9/24/2014 1:01:35 AM	R21389
Carbon disulfide	ND	50		µg/L	5	9/24/2014 1:01:35 AM	R21389
Carbon Tetrachloride	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
Chlorobenzene	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
Chloroethane	ND	10		µg/L	5	9/24/2014 1:01:35 AM	R21389
Chloroform	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
Chloromethane	ND	15		µg/L	5	9/24/2014 1:01:35 AM	R21389
2-Chlorotoluene	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
4-Chlorotoluene	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
cis-1,2-DCE	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
cis-1,3-Dichloropropene	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-29
Project: 2014 Annual GW
Collection Date: 9/15/2014 3:45:00 PM
Lab ID: 1409809-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,2-Dibromo-3-chloropropane	ND	10		µg/L	5	9/24/2014 1:01:35 AM	R21389
Dibromochloromethane	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
Dibromomethane	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
1,2-Dichlorobenzene	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
1,3-Dichlorobenzene	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
1,4-Dichlorobenzene	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
Dichlorodifluoromethane	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
1,1-Dichloroethane	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
1,1-Dichloroethene	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
1,2-Dichloropropane	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
1,3-Dichloropropane	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
2,2-Dichloropropane	ND	10		µg/L	5	9/24/2014 1:01:35 AM	R21389
1,1-Dichloropropene	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
Hexachlorobutadiene	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
2-Hexanone	ND	50		µg/L	5	9/24/2014 1:01:35 AM	R21389
Isopropylbenzene	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
4-Isopropyltoluene	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
4-Methyl-2-pentanone	ND	50		µg/L	5	9/24/2014 1:01:35 AM	R21389
Methylene Chloride	ND	15		µg/L	5	9/24/2014 1:01:35 AM	R21389
n-Butylbenzene	ND	15		µg/L	5	9/24/2014 1:01:35 AM	R21389
n-Propylbenzene	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
sec-Butylbenzene	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
Styrene	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
tert-Butylbenzene	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
1,1,2,2-Tetrachloroethane	ND	10		µg/L	5	9/24/2014 1:01:35 AM	R21389
Tetrachloroethene (PCE)	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
trans-1,2-DCE	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
trans-1,3-Dichloropropene	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
1,2,3-Trichlorobenzene	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
1,2,4-Trichlorobenzene	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
1,1,1-Trichloroethane	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
1,1,2-Trichloroethane	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
Trichloroethene (TCE)	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
Trichlorofluoromethane	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
1,2,3-Trichloropropane	ND	10		µg/L	5	9/24/2014 1:01:35 AM	R21389
Vinyl chloride	ND	5.0		µg/L	5	9/24/2014 1:01:35 AM	R21389
Xylenes, Total	ND	7.5		µg/L	5	9/24/2014 1:01:35 AM	R21389
Surr: 1,2-Dichloroethane-d4	89.3	70-130		%REC	5	9/24/2014 1:01:35 AM	R21389

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-29
Project: 2014 Annual GW
Collection Date: 9/15/2014 3:45:00 PM
Lab ID: 1409809-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Surr: 4-Bromofluorobenzene	90.4	70-130		%REC	5	9/24/2014 1:01:35 AM	R21389
Surr: Dibromofluoromethane	101	70-130		%REC	5	9/24/2014 1:01:35 AM	R21389
Surr: Toluene-d8	94.0	70-130		%REC	5	9/24/2014 1:01:35 AM	R21389

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-14
Project: 2014 Annual GW
Collection Date: 9/15/2014 4:45:00 PM
Lab ID: 1409809-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	4.5	1.0		mg/L	1	9/19/2014 6:04:10 PM	15341
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/19/2014 6:04:10 PM	15341
Surr: DNOP	107	59-141		%REC	1	9/19/2014 6:04:10 PM	15341
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**DJF**
Gasoline Range Organics (GRO)	8.2	0.50		mg/L	10	9/19/2014 1:28:51 AM	R21299
Surr: BFB	102	70.9-130		%REC	10	9/19/2014 1:28:51 AM	R21299
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	0.21	0.10		mg/L	1	9/17/2014 11:04:46 PM	R21283
Chloride	330	10		mg/L	20	9/17/2014 11:17:10 PM	R21283
Bromide	1.5	0.10		mg/L	1	9/17/2014 11:04:46 PM	R21283
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/17/2014 11:04:46 PM	R21283
Sulfate	2.6	0.50		mg/L	1	9/17/2014 11:04:46 PM	R21283
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/18/2014 7:50:59 PM	R21321
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	1.8	0.020		mg/L	10	9/19/2014 6:04:25 PM	R21336
Cadmium	ND	0.0020		mg/L	1	9/18/2014 2:15:37 PM	R21290
Calcium	94	1.0		mg/L	1	9/18/2014 2:15:37 PM	R21290
Chromium	ND	0.0060		mg/L	1	9/18/2014 2:15:37 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 2:15:37 PM	R21290
Iron	4.5	0.20	*	mg/L	10	9/19/2014 6:04:25 PM	R21336
Magnesium	25	1.0		mg/L	1	9/18/2014 2:15:37 PM	R21290
Manganese	2.2	0.020	*	mg/L	10	9/19/2014 6:04:25 PM	R21336
Potassium	ND	1.0		mg/L	1	9/18/2014 2:15:37 PM	R21290
Silver	ND	0.0050		mg/L	1	9/19/2014 6:02:49 PM	R21336
Sodium	400	10		mg/L	10	9/19/2014 6:04:25 PM	R21336
Zinc	ND	0.010		mg/L	1	9/19/2014 6:02:49 PM	R21336
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	1.9	0.020		mg/L	10	9/19/2014 12:00:30 PM	15380
Cadmium	ND	0.0020		mg/L	1	9/19/2014 11:52:55 AM	15380
Chromium	ND	0.0060		mg/L	1	9/19/2014 11:52:55 AM	15380
Copper	ND	0.0060		mg/L	1	9/19/2014 11:52:55 AM	15380
Iron	4.7	0.20	*	mg/L	10	9/19/2014 12:00:30 PM	15380
Manganese	2.3	0.020	*	mg/L	10	9/19/2014 12:00:30 PM	15380
Silver	ND	0.0050		mg/L	1	9/19/2014 11:52:55 AM	15380
Zinc	ND	0.010		mg/L	1	9/19/2014 11:52:55 AM	15380
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.013	0.010	*	mg/L	10	9/29/2014 5:39:41 PM	R21527

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-14
Project: 2014 Annual GW
Collection Date: 9/15/2014 4:45:00 PM
Lab ID: 1409809-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.0010		mg/L	1	9/26/2014 12:25:43 PM	R21493
Selenium	0.017	0.010		mg/L	10	9/29/2014 5:39:41 PM	R21527
Uranium	0.0071	0.0010		mg/L	1	9/26/2014 12:25:43 PM	R21493
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.014	0.010	*	mg/L	10	9/29/2014 1:33:03 PM	15380
Lead	ND	0.0010		mg/L	1	9/23/2014 4:39:57 PM	15380
Selenium	0.018	0.010		mg/L	10	9/29/2014 1:33:03 PM	15380
Uranium	0.0079	0.0010		mg/L	1	9/23/2014 4:39:57 PM	15380
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/24/2014 11:16:11 AM	15450
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Acenaphthylene	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Aniline	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Anthracene	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Azobenzene	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Benz(a)anthracene	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Benzo(a)pyrene	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Benzo(b)fluoranthene	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Benzo(k)fluoranthene	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Benzoic acid	ND	20		µg/L	1	9/19/2014 3:59:13 AM	15359
Benzyl alcohol	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Butyl benzyl phthalate	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Carbazole	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
4-Chloroaniline	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
2-Chloronaphthalene	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
2-Chlorophenol	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Chrysene	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Di-n-butyl phthalate	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Di-n-octyl phthalate	ND	20		µg/L	1	9/19/2014 3:59:13 AM	15359

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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-14
Project: 2014 Annual GW
Collection Date: 9/15/2014 4:45:00 PM
Lab ID: 1409809-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Dibenzofuran	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
1,2-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
1,3-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
1,4-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Diethyl phthalate	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Dimethyl phthalate	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
2,4-Dichlorophenol	ND	20		µg/L	1	9/19/2014 3:59:13 AM	15359
2,4-Dimethylphenol	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/19/2014 3:59:13 AM	15359
2,4-Dinitrophenol	ND	20		µg/L	1	9/19/2014 3:59:13 AM	15359
2,4-Dinitrotoluene	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
2,6-Dinitrotoluene	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Fluoranthene	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Fluorene	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Hexachlorobenzene	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Hexachlorobutadiene	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Hexachloroethane	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Isophorone	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
1-Methylnaphthalene	16	10		µg/L	1	9/19/2014 3:59:13 AM	15359
2-Methylnaphthalene	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
2-Methylphenol	ND	20		µg/L	1	9/19/2014 3:59:13 AM	15359
3+4-Methylphenol	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
N-Nitrosodimethylamine	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Naphthalene	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
2-Nitroaniline	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
3-Nitroaniline	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
4-Nitroaniline	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Nitrobenzene	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
2-Nitrophenol	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
4-Nitrophenol	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Pentachlorophenol	ND	20		µg/L	1	9/19/2014 3:59:13 AM	15359
Phenanthrene	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Phenol	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-14
Project: 2014 Annual GW
Collection Date: 9/15/2014 4:45:00 PM
Lab ID: 1409809-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyrene	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Pyridine	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/19/2014 3:59:13 AM	15359
Surr: 2-Fluorophenol	49.0	12.1-85.8		%REC	1	9/19/2014 3:59:13 AM	15359
Surr: Phenol-d5	50.0	17.7-65.8		%REC	1	9/19/2014 3:59:13 AM	15359
Surr: 2,4,6-Tribromophenol	59.2	26-138		%REC	1	9/19/2014 3:59:13 AM	15359
Surr: Nitrobenzene-d5	69.7	47.5-119		%REC	1	9/19/2014 3:59:13 AM	15359
Surr: 2-Fluorobiphenyl	64.1	48.1-106		%REC	1	9/19/2014 3:59:13 AM	15359
Surr: 4-Terphenyl-d14	67.3	44-113		%REC	1	9/19/2014 3:59:13 AM	15359
EPA METHOD 8260B: VOLATILES						Analyst:	**DJF**
Benzene	3800	200		µg/L	200	9/24/2014 1:57:27 AM	R21389
Toluene	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
Ethylbenzene	160	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
Methyl tert-butyl ether (MTBE)	820	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
1,2,4-Trimethylbenzene	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
1,3,5-Trimethylbenzene	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
1,2-Dichloroethane (EDC)	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
1,2-Dibromoethane (EDB)	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
Naphthalene	ND	40		µg/L	20	9/24/2014 2:25:17 AM	R21389
1-Methylnaphthalene	ND	80		µg/L	20	9/24/2014 2:25:17 AM	R21389
2-Methylnaphthalene	ND	80		µg/L	20	9/24/2014 2:25:17 AM	R21389
Acetone	ND	200		µg/L	20	9/24/2014 2:25:17 AM	R21389
Bromobenzene	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
Bromodichloromethane	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
Bromoform	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
Bromomethane	ND	60		µg/L	20	9/24/2014 2:25:17 AM	R21389
2-Butanone	ND	200		µg/L	20	9/24/2014 2:25:17 AM	R21389
Carbon disulfide	ND	200		µg/L	20	9/24/2014 2:25:17 AM	R21389
Carbon Tetrachloride	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
Chlorobenzene	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
Chloroethane	ND	40		µg/L	20	9/24/2014 2:25:17 AM	R21389
Chloroform	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
Chloromethane	ND	60		µg/L	20	9/24/2014 2:25:17 AM	R21389
2-Chlorotoluene	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
4-Chlorotoluene	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
cis-1,2-DCE	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
cis-1,3-Dichloropropene	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-14
Project: 2014 Annual GW
Collection Date: 9/15/2014 4:45:00 PM
Lab ID: 1409809-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,2-Dibromo-3-chloropropane	ND	40		µg/L	20	9/24/2014 2:25:17 AM	R21389
Dibromochloromethane	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
Dibromomethane	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
1,2-Dichlorobenzene	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
1,3-Dichlorobenzene	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
1,4-Dichlorobenzene	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
Dichlorodifluoromethane	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
1,1-Dichloroethane	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
1,1-Dichloroethene	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
1,2-Dichloropropane	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
1,3-Dichloropropane	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
2,2-Dichloropropane	ND	40		µg/L	20	9/24/2014 2:25:17 AM	R21389
1,1-Dichloropropene	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
Hexachlorobutadiene	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
2-Hexanone	ND	200		µg/L	20	9/24/2014 2:25:17 AM	R21389
Isopropylbenzene	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
4-Isopropyltoluene	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
4-Methyl-2-pentanone	ND	200		µg/L	20	9/24/2014 2:25:17 AM	R21389
Methylene Chloride	ND	60		µg/L	20	9/24/2014 2:25:17 AM	R21389
n-Butylbenzene	ND	60		µg/L	20	9/24/2014 2:25:17 AM	R21389
n-Propylbenzene	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
sec-Butylbenzene	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
Styrene	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
tert-Butylbenzene	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
1,1,1,2-Tetrachloroethane	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
1,1,2,2-Tetrachloroethane	ND	40		µg/L	20	9/24/2014 2:25:17 AM	R21389
Tetrachloroethene (PCE)	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
trans-1,2-DCE	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
trans-1,3-Dichloropropene	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
1,2,3-Trichlorobenzene	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
1,2,4-Trichlorobenzene	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
1,1,1-Trichloroethane	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
1,1,2-Trichloroethane	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
Trichloroethene (TCE)	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
Trichlorofluoromethane	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
1,2,3-Trichloropropane	ND	40		µg/L	20	9/24/2014 2:25:17 AM	R21389
Vinyl chloride	ND	20		µg/L	20	9/24/2014 2:25:17 AM	R21389
Xylenes, Total	ND	30		µg/L	20	9/24/2014 2:25:17 AM	R21389
Surr: 1,2-Dichloroethane-d4	90.5	70-130		%REC	20	9/24/2014 2:25:17 AM	R21389

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-14
Project: 2014 Annual GW
Collection Date: 9/15/2014 4:45:00 PM
Lab ID: 1409809-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Surr: 4-Bromofluorobenzene	88.4	70-130		%REC	20	9/24/2014 2:25:17 AM	R21389
Surr: Dibromofluoromethane	99.4	70-130		%REC	20	9/24/2014 2:25:17 AM	R21389
Surr: Toluene-d8	96.2	70-130		%REC	20	9/24/2014 2:25:17 AM	R21389

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-13
Project: 2014 Annual GW
Collection Date: 9/15/2014 6:35:00 PM
Lab ID: 1409809-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/19/2014 6:25:38 PM	15341
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/19/2014 6:25:38 PM	15341
Surr: DNOP	116	59-141		%REC	1	9/19/2014 6:25:38 PM	15341
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**DJF**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/19/2014 1:58:56 AM	R21299
Surr: BFB	92.9	70.9-130		%REC	1	9/19/2014 1:58:56 AM	R21299
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	0.22	0.10		mg/L	1	9/17/2014 11:54:25 PM	R21283
Chloride	28	10		mg/L	20	9/18/2014 12:06:50 AM	R21283
Bromide	0.39	0.10		mg/L	1	9/17/2014 11:54:25 PM	R21283
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/17/2014 11:54:25 PM	R21283
Sulfate	150	10		mg/L	20	9/18/2014 12:06:50 AM	R21283
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/18/2014 8:03:24 PM	R21321
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.018	0.0020		mg/L	1	9/19/2014 6:07:59 PM	R21336
Cadmium	ND	0.0020		mg/L	1	9/18/2014 2:27:18 PM	R21290
Calcium	8.8	1.0		mg/L	1	9/18/2014 2:27:18 PM	R21290
Chromium	ND	0.0060		mg/L	1	9/18/2014 2:27:18 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 2:27:18 PM	R21290
Iron	ND	0.020		mg/L	1	9/19/2014 6:07:59 PM	R21336
Magnesium	1.3	1.0		mg/L	1	9/18/2014 2:27:18 PM	R21290
Manganese	0.018	0.0020		mg/L	1	9/19/2014 6:07:59 PM	R21336
Potassium	1.9	1.0		mg/L	1	9/18/2014 2:27:18 PM	R21290
Silver	ND	0.0050		mg/L	1	9/19/2014 6:07:59 PM	R21336
Sodium	300	10		mg/L	10	9/19/2014 6:10:01 PM	R21336
Zinc	ND	0.010		mg/L	1	9/19/2014 6:07:59 PM	R21336
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.018	0.0020		mg/L	1	9/19/2014 11:54:40 AM	15380
Cadmium	ND	0.0020		mg/L	1	9/19/2014 11:54:40 AM	15380
Chromium	ND	0.0060		mg/L	1	9/19/2014 11:54:40 AM	15380
Copper	ND	0.0060		mg/L	1	9/19/2014 11:54:40 AM	15380
Iron	ND	0.020		mg/L	1	9/19/2014 11:54:40 AM	15380
Manganese	0.017	0.0020		mg/L	1	9/19/2014 11:54:40 AM	15380
Silver	ND	0.0050		mg/L	1	9/19/2014 11:54:40 AM	15380
Zinc	ND	0.010		mg/L	1	9/19/2014 11:54:40 AM	15380
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0015	0.0010		mg/L	1	9/26/2014 12:28:49 PM	R21493

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-13
Project: 2014 Annual GW
Collection Date: 9/15/2014 6:35:00 PM
Lab ID: 1409809-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.0010		mg/L	1	9/26/2014 12:28:49 PM	R21493
Selenium	0.0026	0.0010		mg/L	1	9/26/2014 12:28:49 PM	R21493
Uranium	0.017	0.0010		mg/L	1	9/26/2014 12:28:49 PM	R21493
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0011	0.0010		mg/L	1	9/23/2014 4:49:19 PM	15380
Lead	ND	0.0010		mg/L	1	9/23/2014 4:49:19 PM	15380
Selenium	0.0018	0.0010		mg/L	1	9/23/2014 4:49:19 PM	15380
Uranium	0.018	0.0010		mg/L	1	9/23/2014 4:49:19 PM	15380
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/24/2014 11:21:45 AM	15450
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Acenaphthylene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Aniline	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Anthracene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Azobenzene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Benz(a)anthracene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Benzo(a)pyrene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Benzo(b)fluoranthene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Benzo(k)fluoranthene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Benzoic acid	ND	20		µg/L	1	9/19/2014 4:27:51 AM	15359
Benzyl alcohol	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Butyl benzyl phthalate	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Carbazole	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
4-Chloroaniline	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
2-Chloronaphthalene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
2-Chlorophenol	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Chrysene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Di-n-butyl phthalate	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Di-n-octyl phthalate	ND	20		µg/L	1	9/19/2014 4:27:51 AM	15359

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-13
Project: 2014 Annual GW
Collection Date: 9/15/2014 6:35:00 PM
Lab ID: 1409809-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Dibenzofuran	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
1,2-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
1,3-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
1,4-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Diethyl phthalate	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Dimethyl phthalate	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
2,4-Dichlorophenol	ND	20		µg/L	1	9/19/2014 4:27:51 AM	15359
2,4-Dimethylphenol	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/19/2014 4:27:51 AM	15359
2,4-Dinitrophenol	ND	20		µg/L	1	9/19/2014 4:27:51 AM	15359
2,4-Dinitrotoluene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
2,6-Dinitrotoluene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Fluoranthene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Fluorene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Hexachlorobenzene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Hexachlorobutadiene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Hexachloroethane	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Isophorone	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
1-Methylnaphthalene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
2-Methylnaphthalene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
2-Methylphenol	ND	20		µg/L	1	9/19/2014 4:27:51 AM	15359
3+4-Methylphenol	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
N-Nitrosodimethylamine	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Naphthalene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
2-Nitroaniline	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
3-Nitroaniline	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
4-Nitroaniline	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Nitrobenzene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
2-Nitrophenol	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
4-Nitrophenol	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Pentachlorophenol	ND	20		µg/L	1	9/19/2014 4:27:51 AM	15359
Phenanthrene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Phenol	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-13
Project: 2014 Annual GW
Collection Date: 9/15/2014 6:35:00 PM
Lab ID: 1409809-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Pyrene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Pyridine	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/19/2014 4:27:51 AM	15359
Surr: 2-Fluorophenol	66.9	12.1-85.8		%REC	1	9/19/2014 4:27:51 AM	15359
Surr: Phenol-d5	59.8	17.7-65.8		%REC	1	9/19/2014 4:27:51 AM	15359
Surr: 2,4,6-Tribromophenol	77.3	26-138		%REC	1	9/19/2014 4:27:51 AM	15359
Surr: Nitrobenzene-d5	86.5	47.5-119		%REC	1	9/19/2014 4:27:51 AM	15359
Surr: 2-Fluorobiphenyl	75.3	48.1-106		%REC	1	9/19/2014 4:27:51 AM	15359
Surr: 4-Terphenyl-d14	86.2	44-113		%REC	1	9/19/2014 4:27:51 AM	15359
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
Toluene	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
Ethylbenzene	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
Methyl tert-butyl ether (MTBE)	23	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
Naphthalene	ND	2.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
1-Methylnaphthalene	ND	4.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
2-Methylnaphthalene	ND	4.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
Acetone	ND	10		µg/L	1	9/24/2014 3:21:10 AM	R21389
Bromobenzene	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
Bromodichloromethane	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
Bromoform	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
Bromomethane	ND	3.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
2-Butanone	ND	10		µg/L	1	9/24/2014 3:21:10 AM	R21389
Carbon disulfide	ND	10		µg/L	1	9/24/2014 3:21:10 AM	R21389
Carbon Tetrachloride	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
Chlorobenzene	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
Chloroethane	ND	2.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
Chloroform	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
Chloromethane	ND	3.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
2-Chlorotoluene	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
4-Chlorotoluene	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
cis-1,2-DCE	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-13
Project: 2014 Annual GW
Collection Date: 9/15/2014 6:35:00 PM
Lab ID: 1409809-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
Dibromochloromethane	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
Dibromomethane	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
1,1-Dichloroethane	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
1,1-Dichloroethene	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
1,2-Dichloropropane	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
1,3-Dichloropropane	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
2,2-Dichloropropane	ND	2.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
1,1-Dichloropropene	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
Hexachlorobutadiene	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
2-Hexanone	ND	10		µg/L	1	9/24/2014 3:21:10 AM	R21389
Isopropylbenzene	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
4-Isopropyltoluene	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
4-Methyl-2-pentanone	ND	10		µg/L	1	9/24/2014 3:21:10 AM	R21389
Methylene Chloride	ND	3.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
n-Butylbenzene	ND	3.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
n-Propylbenzene	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
sec-Butylbenzene	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
Styrene	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
tert-Butylbenzene	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
trans-1,2-DCE	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
Trichlorofluoromethane	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
Vinyl chloride	ND	1.0		µg/L	1	9/24/2014 3:21:10 AM	R21389
Xylenes, Total	ND	1.5		µg/L	1	9/24/2014 3:21:10 AM	R21389
Surr: 1,2-Dichloroethane-d4	90.6	70-130		%REC	1	9/24/2014 3:21:10 AM	R21389

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-13
Project: 2014 Annual GW
Collection Date: 9/15/2014 6:35:00 PM
Lab ID: 1409809-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Surr: 4-Bromofluorobenzene	93.5	70-130		%REC	1	9/24/2014 3:21:10 AM	R21389
Surr: Dibromofluoromethane	102	70-130		%REC	1	9/24/2014 3:21:10 AM	R21389
Surr: Toluene-d8	92.6	70-130		%REC	1	9/24/2014 3:21:10 AM	R21389

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409809-004
Matrix: TRIP BLANK
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**DJF**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/19/2014 2:28:58 AM	R21299
Surr: BFB	92.3	70.9-130		%REC	1	9/19/2014 2:28:58 AM	R21299
EPA METHOD 8260B: VOLATILES						Analyst:	**DJF**
Benzene	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
Toluene	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
Ethylbenzene	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
Naphthalene	ND	2.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
1-Methylnaphthalene	ND	4.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
2-Methylnaphthalene	ND	4.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
Acetone	ND	10		µg/L	1	9/24/2014 3:49:00 AM	R21389
Bromobenzene	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
Bromodichloromethane	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
Bromoform	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
Bromomethane	ND	3.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
2-Butanone	ND	10		µg/L	1	9/24/2014 3:49:00 AM	R21389
Carbon disulfide	ND	10		µg/L	1	9/24/2014 3:49:00 AM	R21389
Carbon Tetrachloride	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
Chlorobenzene	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
Chloroethane	ND	2.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
Chloroform	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
Chloromethane	ND	3.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
2-Chlorotoluene	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
4-Chlorotoluene	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
cis-1,2-DCE	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
Dibromochloromethane	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
Dibromomethane	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
1,1-Dichloroethane	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
1,1-Dichloroethene	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409809-004
Matrix: TRIP BLANK
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,2-Dichloropropane	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
1,3-Dichloropropane	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
2,2-Dichloropropane	ND	2.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
1,1-Dichloropropene	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
Hexachlorobutadiene	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
2-Hexanone	ND	10		µg/L	1	9/24/2014 3:49:00 AM	R21389
Isopropylbenzene	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
4-Isopropyltoluene	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
4-Methyl-2-pentanone	ND	10		µg/L	1	9/24/2014 3:49:00 AM	R21389
Methylene Chloride	ND	3.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
n-Butylbenzene	ND	3.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
n-Propylbenzene	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
sec-Butylbenzene	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
Styrene	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
tert-Butylbenzene	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
trans-1,2-DCE	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
Trichlorofluoromethane	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
Vinyl chloride	ND	1.0		µg/L	1	9/24/2014 3:49:00 AM	R21389
Xylenes, Total	ND	1.5		µg/L	1	9/24/2014 3:49:00 AM	R21389
Surr: 1,2-Dichloroethane-d4	91.4	70-130		%REC	1	9/24/2014 3:49:00 AM	R21389
Surr: 4-Bromofluorobenzene	92.0	70-130		%REC	1	9/24/2014 3:49:00 AM	R21389
Surr: Dibromofluoromethane	97.1	70-130		%REC	1	9/24/2014 3:49:00 AM	R21389
Surr: Toluene-d8	93.1	70-130		%REC	1	9/24/2014 3:49:00 AM	R21389

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group 2-9/15/14
Project: 2014 Annual GW
Collection Date: 9/15/2014 2:10:00 PM
Lab ID: 1409809-005
Matrix: TRIP BLANK
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**DJF**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/19/2014 2:59:06 AM	R21299
Surr: BFB	93.6	70.9-130		%REC	1	9/19/2014 2:59:06 AM	R21299
EPA METHOD 8260B: VOLATILES						Analyst:	**DJF**
Benzene	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
Toluene	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
Ethylbenzene	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
Naphthalene	ND	2.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
1-Methylnaphthalene	ND	4.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
2-Methylnaphthalene	ND	4.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
Acetone	ND	10		µg/L	1	9/24/2014 4:16:55 AM	R21389
Bromobenzene	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
Bromodichloromethane	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
Bromoform	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
Bromomethane	ND	3.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
2-Butanone	ND	10		µg/L	1	9/24/2014 4:16:55 AM	R21389
Carbon disulfide	ND	10		µg/L	1	9/24/2014 4:16:55 AM	R21389
Carbon Tetrachloride	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
Chlorobenzene	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
Chloroethane	ND	2.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
Chloroform	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
Chloromethane	ND	3.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
2-Chlorotoluene	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
4-Chlorotoluene	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
cis-1,2-DCE	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
Dibromochloromethane	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
Dibromomethane	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
1,1-Dichloroethane	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
1,1-Dichloroethene	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group 2-9/15/14
Project: 2014 Annual GW
Collection Date: 9/15/2014 2:10:00 PM
Lab ID: 1409809-005
Matrix: TRIP BLANK
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,2-Dichloropropane	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
1,3-Dichloropropane	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
2,2-Dichloropropane	ND	2.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
1,1-Dichloropropene	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
Hexachlorobutadiene	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
2-Hexanone	ND	10		µg/L	1	9/24/2014 4:16:55 AM	R21389
Isopropylbenzene	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
4-Isopropyltoluene	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
4-Methyl-2-pentanone	ND	10		µg/L	1	9/24/2014 4:16:55 AM	R21389
Methylene Chloride	ND	3.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
n-Butylbenzene	ND	3.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
n-Propylbenzene	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
sec-Butylbenzene	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
Styrene	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
tert-Butylbenzene	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
trans-1,2-DCE	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
Trichlorofluoromethane	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
Vinyl chloride	ND	1.0		µg/L	1	9/24/2014 4:16:55 AM	R21389
Xylenes, Total	ND	1.5		µg/L	1	9/24/2014 4:16:55 AM	R21389
Surr: 1,2-Dichloroethane-d4	93.9	70-130		%REC	1	9/24/2014 4:16:55 AM	R21389
Surr: 4-Bromofluorobenzene	86.6	70-130		%REC	1	9/24/2014 4:16:55 AM	R21389
Surr: Dibromofluoromethane	101	70-130		%REC	1	9/24/2014 4:16:55 AM	R21389
Surr: Toluene-d8	95.6	70-130		%REC	1	9/24/2014 4:16:55 AM	R21389

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409809**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621146** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Magnesium	ND	1.0								
Potassium	ND	1.0								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621147** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.6	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.0	85	115			
Calcium	49	1.0	50.00	0	97.2	85	115			
Chromium	0.48	0.0060	0.5000	0	96.8	85	115			
Copper	0.49	0.0060	0.5000	0	97.1	85	115			
Magnesium	49	1.0	50.00	0	97.8	85	115			
Potassium	48	1.0	50.00	0	96.0	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621149** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Magnesium	ND	1.0								
Potassium	ND	1.0								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621150** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409809**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621150** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.48	0.0020	0.5000	0	96.8	85	115			
Calcium	48	1.0	50.00	0	96.8	85	115			
Chromium	0.48	0.0060	0.5000	0	96.4	85	115			
Copper	0.48	0.0060	0.5000	0	95.5	85	115			
Magnesium	49	1.0	50.00	0	97.7	85	115			
Potassium	48	1.0	50.00	0	96.3	85	115			

Sample ID **LCS TEST** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621170** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	101	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.6	85	115			
Calcium	50	1.0	50.00	0	99.9	85	115			
Chromium	0.49	0.0060	0.5000	0	98.7	85	115			
Copper	0.49	0.0060	0.5000	0	97.3	85	115			
Magnesium	50	1.0	50.00	0	99.5	85	115			
Potassium	50	1.0	50.00	0	99.2	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622776** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622777** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.46	0.0020	0.5000	0	91.9	85	115			
Iron	0.47	0.020	0.5000	0	93.2	85	115			
Manganese	0.45	0.0020	0.5000	0	89.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409809**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21336**	RunNo: **21336**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622777** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	50	1.0	50.00	0	99.3	85	115			
Zinc	0.46	0.010	0.5000	0	91.8	85	115			

Sample ID **LCS Ag**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21336**	RunNo: **21336**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622778** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.096	0.0050	0.1000	0	95.7	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R21336**	RunNo: **21336**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622779** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21336**	RunNo: **21336**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622780** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.0020	0.5000	0	94.1	85	115			
Iron	0.48	0.020	0.5000	0	95.4	85	115			
Manganese	0.46	0.0020	0.5000	0	91.5	85	115			
Sodium	49	1.0	50.00	0	98.5	85	115			
Zinc	0.47	0.010	0.5000	0	93.7	85	115			

Sample ID **LCS Ag**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21336**	RunNo: **21336**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622781** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409809**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LCS-15380** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **15380** RunNo: **21318**
Prep Date: **9/18/2014** Analysis Date: **9/19/2014** SeqNo: **622068** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.6	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.7	85	115			
Chromium	0.48	0.0060	0.5000	0	96.8	85	115			
Copper	0.50	0.0060	0.5000	0	99.7	85	115			
Iron	0.51	0.020	0.5000	0	102	85	115			
Manganese	0.50	0.0020	0.5000	0	99.1	85	115			
Zinc	0.50	0.010	0.5000	0	100	85	115			

Sample ID **LCS AG-15380** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **15380** RunNo: **21318**
Prep Date: **9/18/2014** Analysis Date: **9/19/2014** SeqNo: **622069** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	104	85	115			

Sample ID **MB-15380** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **15380** RunNo: **21318**
Prep Date: **9/18/2014** Analysis Date: **9/19/2014** SeqNo: **622074** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409809**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628608** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.7	85	115			
Lead	0.024	0.0010	0.02500	0	94.4	85	115			
Selenium	0.022	0.0010	0.02500	0	90.0	85	115			
Uranium	0.024	0.0010	0.02500	0	95.1	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628609** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	92.9	85	115			
Lead	0.023	0.0010	0.02500	0	92.6	85	115			
Selenium	0.023	0.0010	0.02500	0	92.4	85	115			
Uranium	0.023	0.0010	0.02500	0	91.6	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628610** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628611** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21527** RunNo: **21527**
Prep Date: Analysis Date: **9/29/2014** SeqNo: **629894** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409809**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21527**	RunNo: **21527**
Prep Date:	Analysis Date: **9/29/2014**	SeqNo: **629894** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.5	85	115			
Selenium	0.024	0.0010	0.02500	0	94.6	85	115			
Uranium	0.025	0.0010	0.02500	0	101	85	115			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21527**	RunNo: **21527**
Prep Date:	Analysis Date: **9/29/2014**	SeqNo: **629895** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	100	85	115			
Selenium	0.024	0.0010	0.02500	0	94.2	85	115			
Uranium	0.025	0.0010	0.02500	0	101	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R21527**	RunNo: **21527**
Prep Date:	Analysis Date: **9/29/2014**	SeqNo: **629896** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R21527**	RunNo: **21527**
Prep Date:	Analysis Date: **9/29/2014**	SeqNo: **629897** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409809**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **1409809-002GMSDL** SampType: **MSDLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **OW-14** Batch ID: **15380** RunNo: **21376**
Prep Date: **9/18/2014** Analysis Date: **9/23/2014** SeqNo: **624887** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.026	0.0010	0.02500	0	106	70	130	0.451	20	
Uranium	0.038	0.0010	0.02500	0.007945	120	70	130	0.326	20	

Sample ID **1409809-002GMSLL** SampType: **MSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **OW-14** Batch ID: **15380** RunNo: **21376**
Prep Date: **9/18/2014** Analysis Date: **9/23/2014** SeqNo: **624888** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.027	0.0010	0.02500	0	106	70	130			
Uranium	0.038	0.0010	0.02500	0.007945	121	70	130			

Sample ID **LLLCS-15380** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **15380** RunNo: **21376**
Prep Date: **9/18/2014** Analysis Date: **9/23/2014** SeqNo: **624956** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.6	85	115			
Lead	0.024	0.0010	0.02500	0	97.8	85	115			
Selenium	0.024	0.0010	0.02500	0	97.9	85	115			
Uranium	0.025	0.0010	0.02500	0	99.1	85	115			

Sample ID **MB-15380** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **15380** RunNo: **21376**
Prep Date: **9/18/2014** Analysis Date: **9/23/2014** SeqNo: **624959** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409809**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**MB-15450**	SampType:	**MBLK**		TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**15450**		RunNo:	**21410**					
Prep Date:	**9/23/2014**	Analysis Date:	**9/24/2014**		SeqNo:	**625508**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		ND	0.00020								

Sample ID	**LCS-15450**	SampType:	**LCS**		TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**15450**		RunNo:	**21410**					
Prep Date:	**9/23/2014**	Analysis Date:	**9/24/2014**		SeqNo:	**625509**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.0048	0.00020	0.005000	0	95.8	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409809**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R21283** RunNo: **21283**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **621017** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R21283** RunNo: **21283**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **621018** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.47	0.10	0.5000	0	94.8	90	110			
Chloride	4.6	0.50	5.000	0	92.4	90	110			
Bromide	2.4	0.10	2.500	0	96.3	90	110			
Phosphorus, Orthophosphate (As P	4.6	0.50	5.000	0	91.2	90	110			
Sulfate	9.5	0.50	10.00	0	94.9	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R21321** RunNo: **21321**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **622134** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R21321** RunNo: **21321**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **622135** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.4	0.20	3.500	0	98.5	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409809**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**MB-15341**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Diesel Range**					
Client ID:	**PBW**	Batch ID:	**15341**	RunNo:	**21248**					
Prep Date:	**9/17/2014**	Analysis Date:	**9/17/2014**	SeqNo:	**619741**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		106	59	141			

Sample ID	**LCS-15341**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Diesel Range**					
Client ID:	**LCSW**	Batch ID:	**15341**	RunNo:	**21248**					
Prep Date:	**9/17/2014**	Analysis Date:	**9/17/2014**	SeqNo:	**619742**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	100	69.7	142			
Surr: DNOP	0.52		0.5000		105	59	141			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409809**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBW**	Batch ID:	**R21299**	RunNo:	**21299**					
Prep Date:		Analysis Date:	**9/18/2014**	SeqNo:	**621575**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		ND	0.050								
Surr: BFB		19		20.00		93.8	70.9	130			

Sample ID	**2.5UG GRO LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSW**	Batch ID:	**R21299**	RunNo:	**21299**					
Prep Date:		Analysis Date:	**9/18/2014**	SeqNo:	**624430**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		0.48	0.050	0.5000	0	95.7	80	120			
Surr: BFB		20		20.00		101	70.9	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409809**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **5ml rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R21389**	RunNo: **21389**			
Prep Date:	Analysis Date: **9/23/2014**	SeqNo: **624806**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409809**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **5ml rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R21389**	RunNo: **21389**
Prep Date:	Analysis Date: **9/23/2014**	SeqNo: **624806** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.5	70	130			
Surr: 4-Bromofluorobenzene	8.9		10.00		89.4	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.7		10.00		96.6	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R21389**	RunNo: **21389**
Prep Date:	Analysis Date: **9/23/2014**	SeqNo: **624808** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	22	1.0	20.00	0	108	80	120			
Chlorobenzene	20	1.0	20.00	0	102	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409809**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **LCSW**	Batch ID: **R21389**	RunNo: **21389**			
Prep Date:	Analysis Date: **9/23/2014**	SeqNo: **624808**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22	1.0	20.00	0	108	82.6	131			
Trichloroethene (TCE)	21	1.0	20.00	0	104	70	130			
Surr: 1,2-Dichloroethane-d4	9.2		10.00		91.8	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		87.4	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.0	70	130			
Surr: Toluene-d8	9.1		10.00		91.1	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409809**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15359**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **15359**	RunNo: **21301**			
Prep Date: **9/18/2014**	Analysis Date: **9/19/2014**	SeqNo: **621631**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409809**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15359**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **15359**	RunNo: **21301**			
Prep Date: **9/18/2014**	Analysis Date: **9/19/2014**	SeqNo: **621631**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	38		200.0		18.9	12.1	85.8			
Surr: Phenol-d5	56		200.0		27.9	17.7	65.8			
Surr: 2,4,6-Tribromophenol	58		200.0		29.2	26	138			
Surr: Nitrobenzene-d5	54		100.0		54.0	47.5	119			
Surr: 2-Fluorobiphenyl	54		100.0		54.2	48.1	106			
Surr: 4-Terphenyl-d14	73		100.0		72.6	44	113			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409809**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **lcs-15359** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **15359** RunNo: **21301**
Prep Date: **9/18/2014** Analysis Date: **9/19/2014** SeqNo: **621632** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	65	10	100.0	0	65.1	47.9	114			
4-Chloro-3-methylphenol	150	10	200.0	0	73.9	51.7	122			
2-Chlorophenol	140	10	200.0	0	69.8	40.7	113			
1,4-Dichlorobenzene	58	10	100.0	0	57.8	39.6	99.9			
2,4-Dinitrotoluene	57	10	100.0	0	57.3	40.8	113			
N-Nitrosodi-n-propylamine	74	10	100.0	0	74.1	51.2	111			
4-Nitrophenol	95	10	200.0	0	47.3	15.7	86.9			
Pentachlorophenol	130	20	200.0	0	67.4	21.6	104			
Phenol	110	10	200.0	0	53.1	28.6	71.7			
Pyrene	85	10	100.0	0	84.9	54.2	128			
1,2,4-Trichlorobenzene	57	10	100.0	0	56.5	40.9	101			
Surr: 2-Fluorophenol	98		200.0		48.9	12.1	85.8			
Surr: Phenol-d5	93		200.0		46.5	17.7	65.8			
Surr: 2,4,6-Tribromophenol	140		200.0		68.2	26	138			
Surr: Nitrobenzene-d5	69		100.0		69.4	47.5	119			
Surr: 2-Fluorobiphenyl	66		100.0		65.5	48.1	106			
Surr: 4-Terphenyl-d14	81		100.0		81.3	44	113			

Sample ID **lcsd-15359** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **15359** RunNo: **21301**
Prep Date: **9/18/2014** Analysis Date: **9/19/2014** SeqNo: **621633** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	56	10	100.0	0	56.2	47.9	114	14.7	27.2	
4-Chloro-3-methylphenol	130	10	200.0	0	65.3	51.7	122	12.4	25.9	
2-Chlorophenol	110	10	200.0	0	57.2	40.7	113	19.8	22.5	
1,4-Dichlorobenzene	45	10	100.0	0	45.1	39.6	99.9	24.6	24.6	R
2,4-Dinitrotoluene	50	10	100.0	0	49.6	40.8	113	14.6	25.3	
N-Nitrosodi-n-propylamine	65	10	100.0	0	64.6	51.2	111	13.7	23.6	
4-Nitrophenol	75	10	200.0	0	37.3	15.7	86.9	23.7	34.7	
Pentachlorophenol	110	20	200.0	0	52.6	21.6	104	24.7	32.8	
Phenol	89	10	200.0	0	44.5	28.6	71.7	17.7	25.5	
Pyrene	70	10	100.0	0	69.7	54.2	128	19.7	31.4	
1,2,4-Trichlorobenzene	47	10	100.0	0	46.7	40.9	101	18.9	25.9	
Surr: 2-Fluorophenol	80		200.0		39.8	12.1	85.8	0	0	
Surr: Phenol-d5	78		200.0		39.0	17.7	65.8	0	0	
Surr: 2,4,6-Tribromophenol	130		200.0		65.7	26	138	0	0	
Surr: Nitrobenzene-d5	59		100.0		59.2	47.5	119	0	0	
Surr: 2-Fluorobiphenyl	58		100.0		57.5	48.1	106	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409809**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**lcsd-15359**	SampType:	**LCSD**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**LCSS02**	Batch ID:	**15359**	RunNo:	**21301**
Prep Date:	**9/18/2014**	Analysis Date:	**9/19/2014**	SeqNo:	**621633** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	83		100.0		83.0	44	113	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Western Refining Gallup** Work Order Number: **1409809** RcptNo: **1**

Received by/date: CS 09/16/14

Logged By: **Ashley Gallegos** **9/16/2014 5:03:00 PM** AG

Completed By: **Ashley Gallegos** **9/17/2014 8:28:42 AM** AG

Reviewed By: MG 09/17/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? ~~Yes ☑~~ No ☑
9. Was preservative added to bottles? Yes ☑ ~~No ☑~~ NA ☐

For Metals Analysis: Added 1mL HNO_3 to -002G for Acceptable pH. AG 09/17/14

10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 9 (<2 or >12 unless noted)
Adjusted? yes
Checked by: AG

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

☐ Standard ☐ Rush

Project Name:

2014 ANNUAL GW

Project #:

OW-13,-14,-29,-30

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.1°

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1409809	8260 + MTBE	8015B extended	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major cations/anions										Air Bubbles (Y or N)
9/15/14	1545	H_2O	OW-29			-001	X	X	X	X	X	X										
9/15/14	1645	H_2O	OW-14			-002	X	X	X	X	X	X										
9/15/14	1835	H_2O	OW-13			-003	X	X	X	X	X	X										
			Trip Blank			-004	V	4														
09/15/14	1410		FTS-Group 2	9/15/14		-005	X	X														
			09/17/14																			

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/16/14	1450			9/16/14	1450
9-16-14	1703			09/16/14	1703

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 04, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: Q4 2014 OrderNo.: 1411398

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 6 sample(s) on 11/11/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1411398**
Date Reported: **12/4/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-13
Project: Q4 2014
Collection Date: 11/10/2014 3:50:00 PM
Lab ID: 1411398-001
Matrix: AQUEOUS
Received Date: 11/11/2014 4:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.019	0.0020		mg/L	1	11/16/2014 6:58:25 PM	R22599
Cadmium	ND	0.0020		mg/L	1	11/16/2014 6:58:25 PM	R22599
Chromium	ND	0.0060		mg/L	1	11/16/2014 6:58:25 PM	R22599
Copper	ND	0.0060		mg/L	1	11/16/2014 6:58:25 PM	R22599
Iron	ND	0.020		mg/L	1	11/16/2014 6:58:25 PM	R22599
Manganese	0.022	0.0020		mg/L	1	11/16/2014 6:58:25 PM	R22599
Silver	ND	0.0050		mg/L	1	11/16/2014 6:58:25 PM	R22599
Zinc	0.063	0.010		mg/L	1	11/16/2014 6:58:25 PM	R22599
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.024	0.0020		mg/L	1	11/16/2014 6:21:47 PM	16396
Cadmium	ND	0.0020		mg/L	1	11/16/2014 6:21:47 PM	16396
Chromium	ND	0.0060		mg/L	1	11/16/2014 6:21:47 PM	16396
Copper	0.021	0.0060		mg/L	1	11/16/2014 6:21:47 PM	16396
Iron	0.058	0.020		mg/L	1	11/16/2014 6:21:47 PM	16396
Manganese	0.038	0.0020		mg/L	1	11/16/2014 6:21:47 PM	16396
Silver	ND	0.0050		mg/L	1	11/16/2014 6:21:47 PM	16396
Zinc	0.010	0.010		mg/L	1	11/16/2014 6:21:47 PM	16396
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0011	0.0010		mg/L	1	11/17/2014 3:25:56 PM	R22589
Lead	ND	0.010		mg/L	10	11/24/2014 4:33:46 PM	R22774
Selenium	ND	0.0010		mg/L	1	11/17/2014 3:25:56 PM	R22589
Uranium	0.016	0.010		mg/L	10	11/24/2014 4:33:46 PM	R22774
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0010	0.0010		mg/L	1	11/18/2014 4:55:58 PM	16396
Lead	ND	0.0010		mg/L	1	11/18/2014 4:55:58 PM	16396
Selenium	0.0011	0.0010		mg/L	1	11/18/2014 4:55:58 PM	16396
Uranium	0.018	0.0010		mg/L	1	11/18/2014 4:55:58 PM	16396
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/21/2014 2:28:24 PM	16511
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
Toluene	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
Ethylbenzene	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
Methyl tert-butyl ether (MTBE)	27	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-13
Project: Q4 2014
Collection Date: 11/10/2014 3:50:00 PM
Lab ID: 1411398-001
Matrix: AQUEOUS
Received Date: 11/11/2014 4:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
Naphthalene	ND	2.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
1-Methylnaphthalene	ND	4.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
2-Methylnaphthalene	ND	4.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
Acetone	ND	10		µg/L	1	11/12/2014 11:50:10 PM	R22493
Bromobenzene	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
Bromodichloromethane	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
Bromoform	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
Bromomethane	ND	3.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
2-Butanone	ND	10		µg/L	1	11/12/2014 11:50:10 PM	R22493
Carbon disulfide	ND	10		µg/L	1	11/12/2014 11:50:10 PM	R22493
Carbon Tetrachloride	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
Chlorobenzene	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
Chloroethane	ND	2.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
Chloroform	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
Chloromethane	ND	3.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
2-Chlorotoluene	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
4-Chlorotoluene	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
cis-1,2-DCE	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
Dibromochloromethane	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
Dibromomethane	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
1,1-Dichloroethane	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
1,1-Dichloroethene	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
1,2-Dichloropropane	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
1,3-Dichloropropane	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
2,2-Dichloropropane	ND	2.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
1,1-Dichloropropene	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
Hexachlorobutadiene	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
2-Hexanone	ND	10		µg/L	1	11/12/2014 11:50:10 PM	R22493
Isopropylbenzene	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
4-Isopropyltoluene	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
4-Methyl-2-pentanone	ND	10		µg/L	1	11/12/2014 11:50:10 PM	R22493
Methylene Chloride	ND	3.0		µg/L	1	11/12/2014 11:50:10 PM	R22493

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-13
Project: Q4 2014
Collection Date: 11/10/2014 3:50:00 PM
Lab ID: 1411398-001
Matrix: AQUEOUS
Received Date: 11/11/2014 4:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
n-Butylbenzene	ND	3.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
n-Propylbenzene	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
sec-Butylbenzene	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
Styrene	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
tert-Butylbenzene	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
trans-1,2-DCE	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
Trichlorofluoromethane	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
Vinyl chloride	ND	1.0		µg/L	1	11/12/2014 11:50:10 PM	R22493
Xylenes, Total	ND	1.5		µg/L	1	11/12/2014 11:50:10 PM	R22493
Surr: 1,2-Dichloroethane-d4	116	70-130		%REC	1	11/12/2014 11:50:10 PM	R22493
Surr: 4-Bromofluorobenzene	123	70-130		%REC	1	11/12/2014 11:50:10 PM	R22493
Surr: Dibromofluoromethane	104	70-130		%REC	1	11/12/2014 11:50:10 PM	R22493
Surr: Toluene-d8	103	70-130		%REC	1	11/12/2014 11:50:10 PM	R22493

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-14
Project: Q4 2014
Collection Date: 11/10/2014 4:35:00 PM
Lab ID: 1411398-002
Matrix: AQUEOUS
Received Date: 11/11/2014 4:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	1.8	0.010		mg/L	5	11/16/2014 7:03:52 PM	R22599
Cadmium	ND	0.0020		mg/L	1	11/16/2014 7:02:13 PM	R22599
Chromium	ND	0.0060		mg/L	1	11/16/2014 7:02:13 PM	R22599
Copper	ND	0.0060		mg/L	1	11/16/2014 7:02:13 PM	R22599
Iron	4.5	0.10	*	mg/L	5	11/16/2014 7:03:52 PM	R22599
Manganese	2.2	0.010	*	mg/L	5	11/16/2014 7:03:52 PM	R22599
Silver	ND	0.0050		mg/L	1	11/16/2014 7:02:13 PM	R22599
Zinc	0.036	0.010		mg/L	1	11/16/2014 7:02:13 PM	R22599
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	1.8	0.010		mg/L	5	11/16/2014 6:27:13 PM	16396
Cadmium	ND	0.0020		mg/L	1	11/16/2014 6:25:37 PM	16396
Chromium	ND	0.0060		mg/L	1	11/16/2014 6:25:37 PM	16396
Copper	ND	0.0060		mg/L	1	11/16/2014 6:25:37 PM	16396
Iron	4.6	0.10	*	mg/L	5	11/16/2014 6:27:13 PM	16396
Manganese	2.2	0.010	*	mg/L	5	11/16/2014 6:27:13 PM	16396
Silver	ND	0.0050		mg/L	1	11/16/2014 6:25:37 PM	16396
Zinc	ND	0.010		mg/L	1	11/16/2014 6:25:37 PM	16396
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	11/24/2014 4:46:13 PM	R22774
Lead	ND	0.010		mg/L	10	11/24/2014 4:46:13 PM	R22774
Selenium	ND	0.010		mg/L	10	11/24/2014 4:46:13 PM	R22774
Uranium	ND	0.010		mg/L	10	11/24/2014 4:46:13 PM	R22774
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0091	0.0010		mg/L	1	11/18/2014 5:06:44 PM	16396
Lead	ND	0.0010		mg/L	1	11/18/2014 5:06:44 PM	16396
Selenium	ND	0.010		mg/L	10	11/20/2014 12:52:43 PM	16396
Uranium	0.0077	0.0010		mg/L	1	11/18/2014 5:06:44 PM	16396
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/21/2014 2:30:15 PM	16511
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	3600	100		µg/L	100	11/13/2014 1:10:40 AM	R22493
Toluene	15	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
Ethylbenzene	170	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
Methyl tert-butyl ether (MTBE)	810	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
1,2,4-Trimethylbenzene	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
1,3,5-Trimethylbenzene	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-14
Project: Q4 2014
Collection Date: 11/10/2014 4:35:00 PM
Lab ID: 1411398-002
Matrix: AQUEOUS
Received Date: 11/11/2014 4:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
Naphthalene	ND	20		µg/L	10	11/13/2014 1:37:26 AM	R22493
1-Methylnaphthalene	44	40		µg/L	10	11/13/2014 1:37:26 AM	R22493
2-Methylnaphthalene	ND	40		µg/L	10	11/13/2014 1:37:26 AM	R22493
Acetone	ND	100		µg/L	10	11/13/2014 1:37:26 AM	R22493
Bromobenzene	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
Bromodichloromethane	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
Bromoform	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
Bromomethane	ND	30		µg/L	10	11/13/2014 1:37:26 AM	R22493
2-Butanone	ND	100		µg/L	10	11/13/2014 1:37:26 AM	R22493
Carbon disulfide	ND	100		µg/L	10	11/13/2014 1:37:26 AM	R22493
Carbon Tetrachloride	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
Chlorobenzene	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
Chloroethane	ND	20		µg/L	10	11/13/2014 1:37:26 AM	R22493
Chloroform	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
Chloromethane	ND	30		µg/L	10	11/13/2014 1:37:26 AM	R22493
2-Chlorotoluene	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
4-Chlorotoluene	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
cis-1,2-DCE	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/13/2014 1:37:26 AM	R22493
Dibromochloromethane	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
Dibromomethane	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
1,2-Dichlorobenzene	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
1,3-Dichlorobenzene	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
1,4-Dichlorobenzene	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
Dichlorodifluoromethane	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
1,1-Dichloroethane	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
1,1-Dichloroethene	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
1,2-Dichloropropane	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
1,3-Dichloropropane	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
2,2-Dichloropropane	ND	20		µg/L	10	11/13/2014 1:37:26 AM	R22493
1,1-Dichloropropene	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
Hexachlorobutadiene	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
2-Hexanone	ND	100		µg/L	10	11/13/2014 1:37:26 AM	R22493
Isopropylbenzene	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
4-Isopropyltoluene	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
4-Methyl-2-pentanone	ND	100		µg/L	10	11/13/2014 1:37:26 AM	R22493
Methylene Chloride	ND	30		µg/L	10	11/13/2014 1:37:26 AM	R22493

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-14
Project: Q4 2014
Collection Date: 11/10/2014 4:35:00 PM
Lab ID: 1411398-002
Matrix: AQUEOUS
Received Date: 11/11/2014 4:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
n-Butylbenzene	ND	30		µg/L	10	11/13/2014 1:37:26 AM	R22493
n-Propylbenzene	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
sec-Butylbenzene	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
Styrene	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
tert-Butylbenzene	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	11/13/2014 1:37:26 AM	R22493
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
trans-1,2-DCE	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
1,1,1-Trichloroethane	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
1,1,2-Trichloroethane	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
Trichloroethene (TCE)	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
Trichlorofluoromethane	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
1,2,3-Trichloropropane	ND	20		µg/L	10	11/13/2014 1:37:26 AM	R22493
Vinyl chloride	ND	10		µg/L	10	11/13/2014 1:37:26 AM	R22493
Xylenes, Total	ND	15		µg/L	10	11/13/2014 1:37:26 AM	R22493
Surr: 1,2-Dichloroethane-d4	107	70-130		%REC	10	11/13/2014 1:37:26 AM	R22493
Surr: 4-Bromofluorobenzene	103	70-130		%REC	10	11/13/2014 1:37:26 AM	R22493
Surr: Dibromofluoromethane	87.5	70-130		%REC	10	11/13/2014 1:37:26 AM	R22493
Surr: Toluene-d8	96.8	70-130		%REC	10	11/13/2014 1:37:26 AM	R22493

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-29
Project: Q4 2014
Collection Date: 11/11/2014 8:45:00 AM
Lab ID: 1411398-003
Matrix: AQUEOUS
Received Date: 11/11/2014 4:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.061	0.0020		mg/L	1	11/16/2014 7:13:05 PM	R22599
Cadmium	ND	0.0020		mg/L	1	11/16/2014 7:13:05 PM	R22599
Chromium	ND	0.0060		mg/L	1	11/16/2014 7:13:05 PM	R22599
Copper	ND	0.0060		mg/L	1	11/16/2014 7:13:05 PM	R22599
Iron	0.23	0.020		mg/L	1	11/16/2014 7:13:05 PM	R22599
Manganese	0.28	0.0020	*	mg/L	1	11/16/2014 7:13:05 PM	R22599
Silver	ND	0.0050		mg/L	1	11/16/2014 7:13:05 PM	R22599
Zinc	0.029	0.010		mg/L	1	11/16/2014 7:13:05 PM	R22599
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.063	0.0020		mg/L	1	11/16/2014 6:29:08 PM	16396
Cadmium	ND	0.0020		mg/L	1	11/16/2014 6:29:08 PM	16396
Chromium	ND	0.0060		mg/L	1	11/16/2014 6:29:08 PM	16396
Copper	ND	0.0060		mg/L	1	11/16/2014 6:29:08 PM	16396
Iron	0.33	0.020	*	mg/L	1	11/16/2014 6:29:08 PM	16396
Manganese	0.29	0.0020	*	mg/L	1	11/16/2014 6:29:08 PM	16396
Silver	ND	0.0050		mg/L	1	11/16/2014 6:29:08 PM	16396
Zinc	ND	0.010		mg/L	1	11/16/2014 6:29:08 PM	16396
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	11/24/2014 4:49:19 PM	R22774
Lead	ND	0.010		mg/L	10	11/24/2014 4:49:19 PM	R22774
Selenium	ND	0.010		mg/L	10	11/24/2014 4:49:19 PM	R22774
Uranium	0.054	0.010	*	mg/L	10	11/24/2014 4:49:19 PM	R22774
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	11/20/2014 12:58:04 PM	16396
Lead	ND	0.0010		mg/L	1	11/18/2014 5:10:14 PM	16396
Selenium	ND	0.0050		mg/L	5	11/20/2014 12:58:04 PM	16396
Uranium	0.055	0.0050	*	mg/L	5	11/20/2014 12:58:04 PM	16396
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/21/2014 2:32:00 PM	16511
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
Toluene	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
Ethylbenzene	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
Methyl tert-butyl ether (MTBE)	3000	100		µg/L	100	11/13/2014 2:30:57 AM	R22493
1,2,4-Trimethylbenzene	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
1,3,5-Trimethylbenzene	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-29
Project: Q4 2014
Collection Date: 11/11/2014 8:45:00 AM
Lab ID: 1411398-003
Matrix: AQUEOUS
Received Date: 11/11/2014 4:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
Naphthalene	ND	10		µg/L	5	11/13/2014 2:57:41 AM	R22493
1-Methylnaphthalene	ND	20		µg/L	5	11/13/2014 2:57:41 AM	R22493
2-Methylnaphthalene	ND	20		µg/L	5	11/13/2014 2:57:41 AM	R22493
Acetone	ND	50		µg/L	5	11/13/2014 2:57:41 AM	R22493
Bromobenzene	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
Bromodichloromethane	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
Bromoform	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
Bromomethane	ND	15		µg/L	5	11/13/2014 2:57:41 AM	R22493
2-Butanone	ND	50		µg/L	5	11/13/2014 2:57:41 AM	R22493
Carbon disulfide	ND	50		µg/L	5	11/13/2014 2:57:41 AM	R22493
Carbon Tetrachloride	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
Chlorobenzene	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
Chloroethane	ND	10		µg/L	5	11/13/2014 2:57:41 AM	R22493
Chloroform	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
Chloromethane	ND	15		µg/L	5	11/13/2014 2:57:41 AM	R22493
2-Chlorotoluene	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
4-Chlorotoluene	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
cis-1,2-DCE	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
cis-1,3-Dichloropropene	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
1,2-Dibromo-3-chloropropane	ND	10		µg/L	5	11/13/2014 2:57:41 AM	R22493
Dibromochloromethane	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
Dibromomethane	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
1,2-Dichlorobenzene	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
1,3-Dichlorobenzene	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
1,4-Dichlorobenzene	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
Dichlorodifluoromethane	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
1,1-Dichloroethane	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
1,1-Dichloroethene	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
1,2-Dichloropropane	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
1,3-Dichloropropane	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
2,2-Dichloropropane	ND	10		µg/L	5	11/13/2014 2:57:41 AM	R22493
1,1-Dichloropropene	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
Hexachlorobutadiene	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
2-Hexanone	ND	50		µg/L	5	11/13/2014 2:57:41 AM	R22493
Isopropylbenzene	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
4-Isopropyltoluene	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
4-Methyl-2-pentanone	ND	50		µg/L	5	11/13/2014 2:57:41 AM	R22493
Methylene Chloride	ND	15		µg/L	5	11/13/2014 2:57:41 AM	R22493

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-29
Project: Q4 2014
Collection Date: 11/11/2014 8:45:00 AM
Lab ID: 1411398-003
Matrix: AQUEOUS
Received Date: 11/11/2014 4:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
n-Butylbenzene	ND	15		µg/L	5	11/13/2014 2:57:41 AM	R22493
n-Propylbenzene	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
sec-Butylbenzene	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
Styrene	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
tert-Butylbenzene	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
1,1,2,2-Tetrachloroethane	ND	10		µg/L	5	11/13/2014 2:57:41 AM	R22493
Tetrachloroethene (PCE)	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
trans-1,2-DCE	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
trans-1,3-Dichloropropene	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
1,2,3-Trichlorobenzene	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
1,2,4-Trichlorobenzene	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
1,1,1-Trichloroethane	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
1,1,2-Trichloroethane	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
Trichloroethene (TCE)	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
Trichlorofluoromethane	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
1,2,3-Trichloropropane	ND	10		µg/L	5	11/13/2014 2:57:41 AM	R22493
Vinyl chloride	ND	5.0		µg/L	5	11/13/2014 2:57:41 AM	R22493
Xylenes, Total	ND	7.5		µg/L	5	11/13/2014 2:57:41 AM	R22493
Surr: 1,2-Dichloroethane-d4	107	70-130		%REC	5	11/13/2014 2:57:41 AM	R22493
Surr: 4-Bromofluorobenzene	138	70-130	S	%REC	5	11/13/2014 2:57:41 AM	R22493
Surr: Dibromofluoromethane	97.7	70-130		%REC	5	11/13/2014 2:57:41 AM	R22493
Surr: Toluene-d8	101	70-130		%REC	5	11/13/2014 2:57:41 AM	R22493

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-30
Project: Q4 2014
Collection Date: 11/11/2014 9:40:00 AM
Lab ID: 1411398-004
Matrix: AQUEOUS
Received Date: 11/11/2014 4:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.086	0.0020		mg/L	1	11/16/2014 7:16:55 PM	R22599
Cadmium	ND	0.0020		mg/L	1	11/16/2014 7:16:55 PM	R22599
Chromium	ND	0.0060		mg/L	1	11/16/2014 7:16:55 PM	R22599
Copper	ND	0.0060		mg/L	1	11/16/2014 7:16:55 PM	R22599
Iron	0.051	0.020		mg/L	1	11/16/2014 7:16:55 PM	R22599
Manganese	0.034	0.0020		mg/L	1	11/16/2014 7:16:55 PM	R22599
Silver	ND	0.0050		mg/L	1	11/16/2014 7:16:55 PM	R22599
Zinc	0.029	0.010		mg/L	1	11/16/2014 7:16:55 PM	R22599
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.093	0.0020		mg/L	1	11/16/2014 6:47:36 PM	16396
Cadmium	ND	0.0020		mg/L	1	11/16/2014 6:47:36 PM	16396
Chromium	ND	0.0060		mg/L	1	11/16/2014 6:47:36 PM	16396
Copper	ND	0.0060		mg/L	1	11/16/2014 6:47:36 PM	16396
Iron	0.18	0.020		mg/L	1	11/16/2014 6:47:36 PM	16396
Manganese	0.036	0.0020		mg/L	1	11/16/2014 6:47:36 PM	16396
Silver	ND	0.0050		mg/L	1	11/16/2014 6:47:36 PM	16396
Zinc	ND	0.010		mg/L	1	11/16/2014 6:47:36 PM	16396
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	11/24/2014 4:52:24 PM	R22774
Lead	ND	0.010		mg/L	10	11/24/2014 4:52:24 PM	R22774
Selenium	ND	0.010		mg/L	10	11/24/2014 4:52:24 PM	R22774
Uranium	0.050	0.010	*	mg/L	10	11/24/2014 4:52:24 PM	R22774
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	11/20/2014 1:03:25 PM	16396
Lead	ND	0.0010		mg/L	1	11/18/2014 5:13:43 PM	16396
Selenium	ND	0.0050		mg/L	5	11/20/2014 1:03:25 PM	16396
Uranium	0.050	0.0050	*	mg/L	5	11/20/2014 1:03:25 PM	16396
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/21/2014 2:33:46 PM	16511
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
Toluene	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
Ethylbenzene	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
Methyl tert-butyl ether (MTBE)	3600	100		µg/L	100	11/13/2014 3:24:25 AM	R22493
1,2,4-Trimethylbenzene	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
1,3,5-Trimethylbenzene	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-30
Project: Q4 2014
Collection Date: 11/11/2014 9:40:00 AM
Lab ID: 1411398-004
Matrix: AQUEOUS
Received Date: 11/11/2014 4:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
Naphthalene	ND	10		µg/L	5	11/13/2014 3:51:15 AM	R22493
1-Methylnaphthalene	ND	20		µg/L	5	11/13/2014 3:51:15 AM	R22493
2-Methylnaphthalene	ND	20		µg/L	5	11/13/2014 3:51:15 AM	R22493
Acetone	ND	50		µg/L	5	11/13/2014 3:51:15 AM	R22493
Bromobenzene	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
Bromodichloromethane	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
Bromoform	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
Bromomethane	ND	15		µg/L	5	11/13/2014 3:51:15 AM	R22493
2-Butanone	ND	50		µg/L	5	11/13/2014 3:51:15 AM	R22493
Carbon disulfide	ND	50		µg/L	5	11/13/2014 3:51:15 AM	R22493
Carbon Tetrachloride	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
Chlorobenzene	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
Chloroethane	ND	10		µg/L	5	11/13/2014 3:51:15 AM	R22493
Chloroform	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
Chloromethane	ND	15		µg/L	5	11/13/2014 3:51:15 AM	R22493
2-Chlorotoluene	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
4-Chlorotoluene	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
cis-1,2-DCE	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
cis-1,3-Dichloropropene	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
1,2-Dibromo-3-chloropropane	ND	10		µg/L	5	11/13/2014 3:51:15 AM	R22493
Dibromochloromethane	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
Dibromomethane	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
1,2-Dichlorobenzene	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
1,3-Dichlorobenzene	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
1,4-Dichlorobenzene	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
Dichlorodifluoromethane	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
1,1-Dichloroethane	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
1,1-Dichloroethene	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
1,2-Dichloropropane	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
1,3-Dichloropropane	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
2,2-Dichloropropane	ND	10		µg/L	5	11/13/2014 3:51:15 AM	R22493
1,1-Dichloropropene	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
Hexachlorobutadiene	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
2-Hexanone	ND	50		µg/L	5	11/13/2014 3:51:15 AM	R22493
Isopropylbenzene	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
4-Isopropyltoluene	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
4-Methyl-2-pentanone	ND	50		µg/L	5	11/13/2014 3:51:15 AM	R22493
Methylene Chloride	ND	15		µg/L	5	11/13/2014 3:51:15 AM	R22493

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-30
Project: Q4 2014
Collection Date: 11/11/2014 9:40:00 AM
Lab ID: 1411398-004
Matrix: AQUEOUS
Received Date: 11/11/2014 4:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
n-Butylbenzene	ND	15		µg/L	5	11/13/2014 3:51:15 AM	R22493
n-Propylbenzene	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
sec-Butylbenzene	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
Styrene	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
tert-Butylbenzene	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
1,1,2,2-Tetrachloroethane	ND	10		µg/L	5	11/13/2014 3:51:15 AM	R22493
Tetrachloroethene (PCE)	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
trans-1,2-DCE	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
trans-1,3-Dichloropropene	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
1,2,3-Trichlorobenzene	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
1,2,4-Trichlorobenzene	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
1,1,1-Trichloroethane	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
1,1,2-Trichloroethane	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
Trichloroethene (TCE)	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
Trichlorofluoromethane	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
1,2,3-Trichloropropane	ND	10		µg/L	5	11/13/2014 3:51:15 AM	R22493
Vinyl chloride	ND	5.0		µg/L	5	11/13/2014 3:51:15 AM	R22493
Xylenes, Total	ND	7.5		µg/L	5	11/13/2014 3:51:15 AM	R22493
Surr: 1,2-Dichloroethane-d4	104	70-130		%REC	5	11/13/2014 3:51:15 AM	R22493
Surr: 4-Bromofluorobenzene	136	70-130	S	%REC	5	11/13/2014 3:51:15 AM	R22493
Surr: Dibromofluoromethane	103	70-130		%REC	5	11/13/2014 3:51:15 AM	R22493
Surr: Toluene-d8	93.8	70-130		%REC	5	11/13/2014 3:51:15 AM	R22493

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TB-111114
Project: Q4 2014
Collection Date: 11/11/2014
Lab ID: 1411398-005
Matrix: AQUEOUS
Received Date: 11/11/2014 4:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
Toluene	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
Ethylbenzene	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
Naphthalene	ND	2.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
1-Methylnaphthalene	ND	4.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
2-Methylnaphthalene	ND	4.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
Acetone	ND	10		µg/L	1	11/13/2014 4:18:06 AM	R22493
Bromobenzene	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
Bromodichloromethane	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
Bromoform	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
Bromomethane	ND	3.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
2-Butanone	ND	10		µg/L	1	11/13/2014 4:18:06 AM	R22493
Carbon disulfide	ND	10		µg/L	1	11/13/2014 4:18:06 AM	R22493
Carbon Tetrachloride	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
Chlorobenzene	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
Chloroethane	ND	2.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
Chloroform	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
Chloromethane	ND	3.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
2-Chlorotoluene	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
4-Chlorotoluene	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
cis-1,2-DCE	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
Dibromochloromethane	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
Dibromomethane	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
1,1-Dichloroethane	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
1,1-Dichloroethene	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
1,2-Dichloropropane	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
1,3-Dichloropropane	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
2,2-Dichloropropane	ND	2.0		µg/L	1	11/13/2014 4:18:06 AM	R22493

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TB-111114
Project: Q4 2014
Collection Date: 11/11/2014
Lab ID: 1411398-005
Matrix: AQUEOUS
Received Date: 11/11/2014 4:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
Hexachlorobutadiene	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
2-Hexanone	ND	10		µg/L	1	11/13/2014 4:18:06 AM	R22493
Isopropylbenzene	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
4-Isopropyltoluene	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
4-Methyl-2-pentanone	ND	10		µg/L	1	11/13/2014 4:18:06 AM	R22493
Methylene Chloride	ND	3.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
n-Butylbenzene	ND	3.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
n-Propylbenzene	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
sec-Butylbenzene	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
Styrene	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
tert-Butylbenzene	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
trans-1,2-DCE	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
Trichlorofluoromethane	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
Vinyl chloride	ND	1.0		µg/L	1	11/13/2014 4:18:06 AM	R22493
Xylenes, Total	ND	1.5		µg/L	1	11/13/2014 4:18:06 AM	R22493
Surr: 1,2-Dichloroethane-d4	97.3	70-130		%REC	1	11/13/2014 4:18:06 AM	R22493
Surr: 4-Bromofluorobenzene	131	70-130	S	%REC	1	11/13/2014 4:18:06 AM	R22493
Surr: Dibromofluoromethane	83.4	70-130		%REC	1	11/13/2014 4:18:06 AM	R22493
Surr: Toluene-d8	105	70-130		%REC	1	11/13/2014 4:18:06 AM	R22493

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-100
Project: Q4 2014
Collection Date: 11/11/2014 10:30:00 AM
Lab ID: 1411398-006
Matrix: AQUEOUS
Received Date: 11/11/2014 4:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
Toluene	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
Ethylbenzene	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
Naphthalene	ND	2.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
1-Methylnaphthalene	ND	4.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
2-Methylnaphthalene	ND	4.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
Acetone	ND	10		µg/L	1	11/13/2014 4:44:55 AM	R22493
Bromobenzene	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
Bromodichloromethane	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
Bromoform	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
Bromomethane	ND	3.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
2-Butanone	ND	10		µg/L	1	11/13/2014 4:44:55 AM	R22493
Carbon disulfide	ND	10		µg/L	1	11/13/2014 4:44:55 AM	R22493
Carbon Tetrachloride	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
Chlorobenzene	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
Chloroethane	ND	2.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
Chloroform	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
Chloromethane	ND	3.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
2-Chlorotoluene	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
4-Chlorotoluene	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
cis-1,2-DCE	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
Dibromochloromethane	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
Dibromomethane	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
1,1-Dichloroethane	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
1,1-Dichloroethene	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
1,2-Dichloropropane	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
1,3-Dichloropropane	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
2,2-Dichloropropane	ND	2.0		µg/L	1	11/13/2014 4:44:55 AM	R22493

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-100
Project: Q4 2014
Collection Date: 11/11/2014 10:30:00 AM
Lab ID: 1411398-006
Matrix: AQUEOUS
Received Date: 11/11/2014 4:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
Hexachlorobutadiene	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
2-Hexanone	ND	10		µg/L	1	11/13/2014 4:44:55 AM	R22493
Isopropylbenzene	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
4-Isopropyltoluene	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
4-Methyl-2-pentanone	ND	10		µg/L	1	11/13/2014 4:44:55 AM	R22493
Methylene Chloride	ND	3.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
n-Butylbenzene	ND	3.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
n-Propylbenzene	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
sec-Butylbenzene	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
Styrene	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
tert-Butylbenzene	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
trans-1,2-DCE	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
Trichlorofluoromethane	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
Vinyl chloride	ND	1.0		µg/L	1	11/13/2014 4:44:55 AM	R22493
Xylenes, Total	ND	1.5		µg/L	1	11/13/2014 4:44:55 AM	R22493
Surr: 1,2-Dichloroethane-d4	101	70-130		%REC	1	11/13/2014 4:44:55 AM	R22493
Surr: 4-Bromofluorobenzene	135	70-130	S	%REC	1	11/13/2014 4:44:55 AM	R22493
Surr: Dibromofluoromethane	93.5	70-130		%REC	1	11/13/2014 4:44:55 AM	R22493
Surr: Toluene-d8	104	70-130		%REC	1	11/13/2014 4:44:55 AM	R22493

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411398**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22599** RunNo: **22599**
Prep Date: Analysis Date: **11/16/2014** SeqNo: **666147** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22599** RunNo: **22599**
Prep Date: Analysis Date: **11/16/2014** SeqNo: **666149** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22599** RunNo: **22599**
Prep Date: Analysis Date: **11/16/2014** SeqNo: **666151** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.2	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.5	85	115			
Chromium	0.48	0.0060	0.5000	0	96.9	85	115			
Copper	0.49	0.0060	0.5000	0	98.1	85	115			
Iron	0.48	0.020	0.5000	0	95.4	85	115			
Manganese	0.47	0.0020	0.5000	0	94.7	85	115			
Silver	0.11	0.0050	0.1000	0	105	85	115			
Zinc	0.50	0.010	0.5000	0	99.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411398**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**			
Client ID: **LCSW**	Batch ID: **R22599**	RunNo: **22599**			
Prep Date:	Analysis Date: **11/16/2014**	SeqNo: **666152**	Units: **mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.55	0.0020	0.5000	0	109	85	115			
Cadmium	0.55	0.0020	0.5000	0	110	85	115			
Chromium	0.54	0.0060	0.5000	0	108	85	115			
Copper	0.55	0.0060	0.5000	0	109	85	115			
Iron	0.53	0.020	0.5000	0	107	85	115			
Manganese	0.52	0.0020	0.5000	0	104	85	115			
Silver	0.12	0.0050	0.1000	0	117	85	115			S
Zinc	0.54	0.010	0.5000	0	109	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411398**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB-16396** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **16396** RunNo: **22599**
Prep Date: **11/14/2014** Analysis Date: **11/16/2014** SeqNo: **666155** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-16396** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **16396** RunNo: **22599**
Prep Date: **11/14/2014** Analysis Date: **11/16/2014** SeqNo: **666156** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.7	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.9	85	115			
Chromium	0.48	0.0060	0.5000	0	96.9	85	115			
Copper	0.49	0.0060	0.5000	0	98.0	85	115			
Iron	0.48	0.020	0.5000	0	96.3	85	115			
Manganese	0.47	0.0020	0.5000	0	94.3	85	115			
Silver	0.11	0.0050	0.1000	0	106	85	115			
Zinc	0.50	0.010	0.5000	0	99.6	85	115			

Sample ID **1411398-003BMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **OW-29** Batch ID: **16396** RunNo: **22599**
Prep Date: **11/14/2014** Analysis Date: **11/16/2014** SeqNo: **666218** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.55	0.0020	0.5000	0.06274	97.9	70	130			
Cadmium	0.49	0.0020	0.5000	0	98.2	70	130			
Chromium	0.49	0.0060	0.5000	0	97.8	70	130			
Copper	0.52	0.0060	0.5000	0	105	70	130			
Iron	0.85	0.020	0.5000	0.3274	105	70	130			
Manganese	0.76	0.0020	0.5000	0.2862	93.8	70	130			
Silver	0.11	0.0050	0.1000	0	106	70	130			
Zinc	0.50	0.010	0.5000	0.004070	98.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411398**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **1411398-003BMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **OW-29** Batch ID: **16396** RunNo: **22599**
Prep Date: **11/14/2014** Analysis Date: **11/16/2014** SeqNo: **666219** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.56	0.0020	0.5000	0.06274	98.8	70	130	0.813	20	
Cadmium	0.49	0.0020	0.5000	0	97.9	70	130	0.273	20	
Chromium	0.49	0.0060	0.5000	0	98.6	70	130	0.790	20	
Copper	0.53	0.0060	0.5000	0	105	70	130	0.558	20	
Iron	0.85	0.020	0.5000	0.3274	104	70	130	0.328	20	
Manganese	0.76	0.0020	0.5000	0.2862	94.5	70	130	0.481	20	
Silver	0.11	0.0050	0.1000	0	107	70	130	1.03	20	
Zinc	0.50	0.010	0.5000	0.004070	99.9	70	130	1.15	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411398**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22589** RunNo: **22589**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **665959** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.0	85	115			
Selenium	0.023	0.0010	0.02500	0	93.9	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22589** RunNo: **22589**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **665960** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	101	85	115			
Selenium	0.026	0.0010	0.02500	0	103	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22589** RunNo: **22589**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **665963** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22589** RunNo: **22589**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **665964** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22774** RunNo: **22774**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672122** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	92.5	85	115			
Lead	0.024	0.0010	0.02500	0	94.4	85	115			
Selenium	0.022	0.0010	0.02500	0	89.7	85	115			
Uranium	0.024	0.0010	0.02500	0	95.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411398**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22774** RunNo: **22774**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672123** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.3	85	115			
Lead	0.024	0.0010	0.02500	0	97.3	85	115			
Selenium	0.024	0.0010	0.02500	0	95.2	85	115			
Uranium	0.024	0.0010	0.02500	0	94.8	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22774** RunNo: **22774**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672124** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22774** RunNo: **22774**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672125** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411398**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LLLCS-16396** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **16396** RunNo: **22609**
Prep Date: **11/14/2014** Analysis Date: **11/18/2014** SeqNo: **666764** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.6	85	115			
Lead	0.026	0.0010	0.02500	0	103	85	115			
Selenium	0.023	0.0010	0.02500	0	93.2	85	115			
Uranium	0.026	0.0010	0.02500	0	104	85	115			

Sample ID **MB-16396** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **16396** RunNo: **22609**
Prep Date: **11/14/2014** Analysis Date: **11/18/2014** SeqNo: **666766** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411398**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**MB-16511**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**
Client ID:	**PBW**	Batch ID:	**16511**	RunNo:	**22710**
Prep Date:	**11/21/2014**	Analysis Date:	**11/21/2014**	SeqNo:	**669836** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-16511**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**
Client ID:	**LCSW**	Batch ID:	**16511**	RunNo:	**22710**
Prep Date:	**11/21/2014**	Analysis Date:	**11/21/2014**	SeqNo:	**669837** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0	102	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411398**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **5mL rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R22493**	RunNo: **22493**			
Prep Date:	Analysis Date: **11/12/2014**	SeqNo: **663475**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411398**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **5mL rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22493** RunNo: **22493**
Prep Date: Analysis Date: **11/12/2014** SeqNo: **663475** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		109	70	130			
Surr: 4-Bromofluorobenzene	14		10.00		141	70	130			S
Surr: Dibromofluoromethane	8.4		10.00		83.6	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22493** RunNo: **22493**
Prep Date: Analysis Date: **11/12/2014** SeqNo: **663476** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	21	1.0	20.00	0	107	80	120			
Chlorobenzene	19	1.0	20.00	0	96.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411398**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22493** RunNo: **22493**
Prep Date: Analysis Date: **11/12/2014** SeqNo: **663476** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	19	1.0	20.00	0	95.6	82.6	131			
Trichloroethene (TCE)	19	1.0	20.00	0	94.4	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	13		10.00		129	70	130			
Surr: Dibromofluoromethane	9.1		10.00		91.5	70	130			
Surr: Toluene-d8	9.6		10.00		95.9	70	130			

Sample ID **1411398-001a ms** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OW-13** Batch ID: **R22493** RunNo: **22493**
Prep Date: Analysis Date: **11/13/2014** SeqNo: **663494** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	20	1.0	20.00	0	102	70	130			
Chlorobenzene	19	1.0	20.00	0	96.8	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	89.6	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	90.7	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.0	70	130			
Surr: Toluene-d8	9.7		10.00		97.1	70	130			

Sample ID **1411398-001a msd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OW-13** Batch ID: **R22493** RunNo: **22493**
Prep Date: Analysis Date: **11/13/2014** SeqNo: **663495** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130	3.92	20	
Toluene	21	1.0	20.00	0	106	70	130	3.87	20	
Chlorobenzene	20	1.0	20.00	0	97.9	70	130	1.15	20	
1,1-Dichloroethene	18	1.0	20.00	0	89.1	70	130	0.568	20	
Trichloroethene (TCE)	18	1.0	20.00	0	88.5	70	130	2.46	20	
Surr: 1,2-Dichloroethane-d4	11		10.00		108	70	130	0	0	
Surr: 4-Bromofluorobenzene	11		10.00		108	70	130	0	0	
Surr: Dibromofluoromethane	10		10.00		104	70	130	0	0	
Surr: Toluene-d8	10		10.00		101	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1411398 RcptNo: 1

Received by/date: CS 11/11/14

Logged By: **Celina Sessa** 11/11/2014 4:23:00 PM Celina Sessa

Completed By: **Celina Sessa** 11/11/2014 4:57:08 PM Celina Sessa

Reviewed By: 11/11/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐ CS 11/12/14
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☑
9. Was preservative added to bottles? Yes ☑ No ☑ NA ☐

r metals analysis, added 0.4ml HNO3 to -002C and -004C, and added 1ml HNO3 to -002B + -004B for acceptable pH. — CS 11/12/14

10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 8 (<2 or >12 unless noted)
Adjusted? yes
Checked by: CS

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

Q4 2014

Project #:

OW-13,-14,-29,-30

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0°C

HALL ENVIRON
ANALYSIS LAB
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 8
Tel. 505-345-3975 Fax 505-345-410

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1411398	8260 + MTBE	WQCC metals - total	WQCC metals - dissolved (filtered)
11-10-14	1550	Aq	OW-13	5		-001	X	X	X
11-10-14	1635		OW-14	5		-002	X	X	X
11-11-14	845		OW-29	5		-003	X	X	X
11-11-14	940		OW-30	5		-004	X	X	X
11-11-14	—		TB-111114	~~2~~ 3		-005	~~X~~		
11-11-14	1030		FB-100	3		-006	X		

Date:	Time:	Relinquished by:	Received by:	Date	Time
11-11-14	1030	Pam Landers		11-11-14	214
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 08, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: 2014 2nd Quarter OrderNo.: 1406363

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 8 sample(s) on 6/6/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1406363**
Date Reported: **7/8/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-1
Project: 2014 2nd Quarter
Collection Date: 6/3/2014 11:50:00 AM
Lab ID: 1406363-001
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	6/11/2014 6:29:58 AM	13583
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	6/11/2014 6:29:58 AM	13583
Surr: DNOP	107	62.7-145		%REC	1	6/11/2014 6:29:58 AM	13583
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	6/13/2014 1:16:55 AM	R19229
Surr: BFB	98.9	70.9-130		%REC	1	6/13/2014 1:16:55 AM	R19229
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	0.26	0.10		mg/L	1	6/9/2014 6:04:25 PM	R19165
Chloride	66	10		mg/L	20	6/9/2014 6:16:50 PM	R19165
Bromide	0.27	0.10		mg/L	1	6/9/2014 6:04:25 PM	R19165
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	6/9/2014 6:04:25 PM	R19165
Sulfate	160	10		mg/L	20	6/9/2014 6:16:50 PM	R19165
Nitrate+Nitrite as N	ND	1.0		mg/L	5	6/10/2014 1:18:53 AM	R19165
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.039	0.0020		mg/L	1	6/13/2014 2:43:48 PM	R19281
Cadmium	ND	0.0020		mg/L	1	6/13/2014 2:43:48 PM	R19281
Chromium	ND	0.0060		mg/L	1	6/13/2014 2:43:48 PM	R19281
Copper	ND	0.0060		mg/L	1	6/13/2014 2:43:48 PM	R19281
Iron	0.64	0.020	*	mg/L	1	6/13/2014 2:43:48 PM	R19281
Manganese	0.025	0.0020		mg/L	1	6/13/2014 2:43:48 PM	R19281
Silver	ND	0.0050		mg/L	1	6/13/2014 2:43:48 PM	R19281
Zinc	0.013	0.010		mg/L	1	6/13/2014 2:43:48 PM	R19281
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.034	0.0020		mg/L	1	6/11/2014 2:47:03 PM	13601
Cadmium	ND	0.0020		mg/L	1	6/11/2014 2:47:03 PM	13601
Calcium	3.5	1.0		mg/L	1	6/11/2014 2:47:03 PM	13601
Chromium	ND	0.0060		mg/L	1	6/11/2014 2:47:03 PM	13601
Copper	ND	0.0060		mg/L	1	6/11/2014 2:47:03 PM	13601
Iron	1.7	0.10	*	mg/L	5	6/11/2014 2:48:42 PM	13601
Magnesium	ND	1.0		mg/L	1	6/11/2014 2:47:03 PM	13601
Manganese	0.073	0.0020	*	mg/L	1	6/11/2014 2:47:03 PM	13601
Potassium	1.7	1.0		mg/L	1	6/11/2014 2:47:03 PM	13601
Silver	ND	0.0050		mg/L	1	6/12/2014 1:11:52 PM	13601
Sodium	310	5.0		mg/L	5	6/12/2014 1:13:33 PM	13601
Zinc	0.031	0.010		mg/L	1	6/11/2014 2:47:03 PM	13601
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0016	0.0010		mg/L	1	6/12/2014 4:32:21 PM	R19228

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-1
Project: 2014 2nd Quarter
Collection Date: 6/3/2014 11:50:00 AM
Lab ID: 1406363-001
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.0050		mg/L	5	6/18/2014 3:03:15 PM	R19364
Selenium	0.0066	0.0010		mg/L	1	6/12/2014 4:32:21 PM	R19228
Uranium	0.044	0.0050	*	mg/L	5	6/20/2014 5:23:00 PM	R19449
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	6/17/2014 5:04:28 PM	13601
Lead	0.0030	0.0010		mg/L	1	6/13/2014 3:25:24 PM	13601
Selenium	ND	0.0050		mg/L	5	6/17/2014 5:04:28 PM	13601
Uranium	0.042	0.0010	*	mg/L	1	6/13/2014 3:25:24 PM	13601
EPA METHOD 245.1: MERCURY						Analyst:	**DBD**
Mercury	ND	0.00020		mg/L	1	6/17/2014 10:57:43 AM	13722
EPA METHOD 8260B: VOLATILES						Analyst:	**DJF**
Benzene	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
Toluene	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
Ethylbenzene	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
Naphthalene	ND	2.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
1-Methylnaphthalene	ND	4.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
2-Methylnaphthalene	ND	4.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
Acetone	ND	10		µg/L	1	6/9/2014 10:22:30 PM	R19143
Bromobenzene	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
Bromodichloromethane	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
Bromoform	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
Bromomethane	ND	3.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
2-Butanone	ND	10		µg/L	1	6/9/2014 10:22:30 PM	R19143
Carbon disulfide	ND	10		µg/L	1	6/9/2014 10:22:30 PM	R19143
Carbon Tetrachloride	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
Chlorobenzene	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
Chloroethane	ND	2.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
Chloroform	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
Chloromethane	ND	3.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
2-Chlorotoluene	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
4-Chlorotoluene	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
cis-1,2-DCE	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-1
Project: 2014 2nd Quarter
Collection Date: 6/3/2014 11:50:00 AM
Lab ID: 1406363-001
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
Dibromochloromethane	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
Dibromomethane	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
1,1-Dichloroethane	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
1,1-Dichloroethene	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
1,2-Dichloropropane	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
1,3-Dichloropropane	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
2,2-Dichloropropane	ND	2.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
1,1-Dichloropropene	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
Hexachlorobutadiene	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
2-Hexanone	ND	10		µg/L	1	6/9/2014 10:22:30 PM	R19143
Isopropylbenzene	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
4-Isopropyltoluene	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
4-Methyl-2-pentanone	ND	10		µg/L	1	6/9/2014 10:22:30 PM	R19143
Methylene Chloride	ND	3.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
n-Butylbenzene	ND	3.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
n-Propylbenzene	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
sec-Butylbenzene	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
Styrene	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
tert-Butylbenzene	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
trans-1,2-DCE	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
Trichlorofluoromethane	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
Vinyl chloride	ND	1.0		µg/L	1	6/9/2014 10:22:30 PM	R19143
Xylenes, Total	ND	1.5		µg/L	1	6/9/2014 10:22:30 PM	R19143
Surr: 1,2-Dichloroethane-d4	93.4	70-130		%REC	1	6/9/2014 10:22:30 PM	R19143

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-1
Project: 2014 2nd Quarter
Collection Date: 6/3/2014 11:50:00 AM
Lab ID: 1406363-001
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Surr: 4-Bromofluorobenzene	85.8	70-130		%REC	1	6/9/2014 10:22:30 PM	R19143
Surr: Dibromofluoromethane	85.9	70-130		%REC	1	6/9/2014 10:22:30 PM	R19143
Surr: Toluene-d8	97.4	70-130		%REC	1	6/9/2014 10:22:30 PM	R19143

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-10
Project: 2014 2nd Quarter
Collection Date: 6/3/2014 2:15:00 PM
Lab ID: 1406363-002
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	6/11/2014 6:51:41 AM	13583
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	6/11/2014 6:51:41 AM	13583
Surr: DNOP	121	62.7-145		%REC	1	6/11/2014 6:51:41 AM	13583
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	0.069	0.050		mg/L	1	6/13/2014 1:47:03 AM	R19229
Surr: BFB	111	70.9-130		%REC	1	6/13/2014 1:47:03 AM	R19229
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	ND	0.10		mg/L	1	6/9/2014 6:54:04 PM	R19165
Chloride	1500	100		mg/L	200	6/11/2014 1:53:16 AM	R19191
Bromide	1.2	0.10		mg/L	1	6/9/2014 6:54:04 PM	R19165
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	6/9/2014 6:54:04 PM	R19165
Sulfate	200	10		mg/L	20	6/9/2014 7:06:29 PM	R19165
Nitrate+Nitrite as N	ND	4.0		mg/L	20	6/26/2014 1:00:42 AM	R19526
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.094	0.0020		mg/L	1	6/13/2014 2:47:25 PM	R19281
Cadmium	ND	0.0020		mg/L	1	6/13/2014 2:47:25 PM	R19281
Chromium	ND	0.0060		mg/L	1	6/13/2014 2:47:25 PM	R19281
Copper	ND	0.0060		mg/L	1	6/13/2014 2:47:25 PM	R19281
Iron	ND	0.020		mg/L	1	6/13/2014 2:47:25 PM	R19281
Manganese	0.13	0.0020	*	mg/L	1	6/13/2014 2:47:25 PM	R19281
Silver	ND	0.0050		mg/L	1	6/13/2014 2:47:25 PM	R19281
Zinc	ND	0.010		mg/L	1	6/13/2014 2:47:25 PM	R19281
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.094	0.0020		mg/L	1	6/11/2014 2:50:26 PM	13601
Cadmium	ND	0.0020		mg/L	1	6/11/2014 2:50:26 PM	13601
Calcium	250	5.0		mg/L	5	6/11/2014 2:52:16 PM	13601
Chromium	ND	0.0060		mg/L	1	6/11/2014 2:50:26 PM	13601
Copper	ND	0.0060		mg/L	1	6/11/2014 2:50:26 PM	13601
Iron	ND	0.020		mg/L	1	6/11/2014 2:50:26 PM	13601
Magnesium	40	1.0		mg/L	1	6/11/2014 2:50:26 PM	13601
Manganese	0.14	0.0020	*	mg/L	1	6/11/2014 2:50:26 PM	13601
Potassium	4.4	1.0		mg/L	1	6/11/2014 2:50:26 PM	13601
Silver	ND	0.0050		mg/L	1	6/12/2014 1:15:18 PM	13601
Sodium	1100	20		mg/L	20	6/12/2014 1:17:14 PM	13601
Zinc	ND	0.010		mg/L	1	6/11/2014 2:50:26 PM	13601
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	6/18/2014 3:08:15 PM	R19364

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-10
Project: 2014 2nd Quarter
Collection Date: 6/3/2014 2:15:00 PM
Lab ID: 1406363-002
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.0050		mg/L	5	6/18/2014 3:08:15 PM	R19364
Selenium	0.017	0.0050		mg/L	5	6/18/2014 3:08:15 PM	R19364
Uranium	0.062	0.0050	*	mg/L	5	6/20/2014 5:32:08 PM	R19449
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	6/17/2014 5:09:27 PM	13601
Lead	ND	0.0010		mg/L	1	6/13/2014 3:30:24 PM	13601
Selenium	0.015	0.0050		mg/L	5	6/17/2014 5:09:27 PM	13601
Uranium	0.064	0.0050	*	mg/L	5	6/17/2014 5:09:27 PM	13601
EPA METHOD 245.1: MERCURY						Analyst:	**DBD**
Mercury	ND	0.00020		mg/L	1	6/17/2014 10:59:32 AM	13722
EPA METHOD 8260B: VOLATILES						Analyst:	**DJF**
Benzene	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
Toluene	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
Ethylbenzene	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
Methyl tert-butyl ether (MTBE)	92	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
Naphthalene	ND	2.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
1-Methylnaphthalene	ND	4.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
2-Methylnaphthalene	ND	4.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
Acetone	ND	10		µg/L	1	6/9/2014 10:51:51 PM	R19143
Bromobenzene	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
Bromodichloromethane	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
Bromoform	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
Bromomethane	ND	3.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
2-Butanone	ND	10		µg/L	1	6/9/2014 10:51:51 PM	R19143
Carbon disulfide	ND	10		µg/L	1	6/9/2014 10:51:51 PM	R19143
Carbon Tetrachloride	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
Chlorobenzene	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
Chloroethane	ND	2.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
Chloroform	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
Chloromethane	ND	3.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
2-Chlorotoluene	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
4-Chlorotoluene	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
cis-1,2-DCE	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-10
Project: 2014 2nd Quarter
Collection Date: 6/3/2014 2:15:00 PM
Lab ID: 1406363-002
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
Dibromochloromethane	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
Dibromomethane	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
1,1-Dichloroethane	1.2	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
1,1-Dichloroethene	1.2	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
1,2-Dichloropropane	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
1,3-Dichloropropane	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
2,2-Dichloropropane	ND	2.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
1,1-Dichloropropene	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
Hexachlorobutadiene	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
2-Hexanone	ND	10		µg/L	1	6/9/2014 10:51:51 PM	R19143
Isopropylbenzene	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
4-Isopropyltoluene	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
4-Methyl-2-pentanone	ND	10		µg/L	1	6/9/2014 10:51:51 PM	R19143
Methylene Chloride	ND	3.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
n-Butylbenzene	ND	3.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
n-Propylbenzene	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
sec-Butylbenzene	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
Styrene	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
tert-Butylbenzene	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
trans-1,2-DCE	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
Trichlorofluoromethane	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
Vinyl chloride	ND	1.0		µg/L	1	6/9/2014 10:51:51 PM	R19143
Xylenes, Total	ND	1.5		µg/L	1	6/9/2014 10:51:51 PM	R19143
Surr: 1,2-Dichloroethane-d4	89.2	70-130		%REC	1	6/9/2014 10:51:51 PM	R19143

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-10
Project: 2014 2nd Quarter
Collection Date: 6/3/2014 2:15:00 PM
Lab ID: 1406363-002
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Surr: 4-Bromofluorobenzene	79.9	70-130		%REC	1	6/9/2014 10:51:51 PM	R19143
Surr: Dibromofluoromethane	85.2	70-130		%REC	1	6/9/2014 10:51:51 PM	R19143
Surr: Toluene-d8	100	70-130		%REC	1	6/9/2014 10:51:51 PM	R19143

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-13
Project: 2014 2nd Quarter
Collection Date: 6/3/2014 9:53:00 AM
Lab ID: 1406363-003
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.017	0.0020		mg/L	1	6/13/2014 2:51:14 PM	R19281
Cadmium	ND	0.0020		mg/L	1	6/13/2014 2:51:14 PM	R19281
Chromium	ND	0.0060		mg/L	1	6/13/2014 2:51:14 PM	R19281
Copper	ND	0.0060		mg/L	1	6/13/2014 2:51:14 PM	R19281
Iron	ND	0.020		mg/L	1	6/13/2014 2:51:14 PM	R19281
Manganese	0.017	0.0020		mg/L	1	6/13/2014 2:51:14 PM	R19281
Silver	ND	0.0050		mg/L	1	6/13/2014 2:51:14 PM	R19281
Zinc	ND	0.010		mg/L	1	6/13/2014 2:51:14 PM	R19281
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.020	0.0020		mg/L	1	6/11/2014 3:15:36 PM	13601
Cadmium	ND	0.0020		mg/L	1	6/11/2014 3:15:36 PM	13601
Chromium	ND	0.0060		mg/L	1	6/11/2014 3:15:36 PM	13601
Copper	ND	0.0060		mg/L	1	6/11/2014 3:15:36 PM	13601
Iron	ND	0.020		mg/L	1	6/11/2014 3:15:36 PM	13601
Manganese	0.020	0.0020		mg/L	1	6/11/2014 3:15:36 PM	13601
Silver	ND	0.0050		mg/L	1	6/12/2014 1:34:11 PM	13601
Zinc	ND	0.010		mg/L	1	6/12/2014 1:34:11 PM	13601
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0012	0.0010		mg/L	1	6/12/2014 4:38:26 PM	R19228
Lead	ND	0.0050		mg/L	5	6/18/2014 3:13:14 PM	R19364
Selenium	0.0022	0.0010		mg/L	1	6/12/2014 4:38:26 PM	R19228
Uranium	0.015	0.0050		mg/L	5	6/20/2014 5:35:10 PM	R19449
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	6/17/2014 5:14:26 PM	13601
Lead	ND	0.0010		mg/L	1	6/13/2014 3:35:24 PM	13601
Selenium	ND	0.0050		mg/L	5	6/17/2014 5:14:26 PM	13601
Uranium	0.016	0.0010		mg/L	1	6/13/2014 3:35:24 PM	13601
EPA METHOD 245.1: MERCURY						Analyst:	**DBD**
Mercury	ND	0.00020		mg/L	1	6/17/2014 11:01:21 AM	13722
EPA METHOD 8260B: VOLATILES						Analyst:	**DJF**
Benzene	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
Toluene	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
Ethylbenzene	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
Methyl tert-butyl ether (MTBE)	20	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-13
Project: 2014 2nd Quarter
Collection Date: 6/3/2014 9:53:00 AM
Lab ID: 1406363-003
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
Naphthalene	ND	2.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
1-Methylnaphthalene	ND	4.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
2-Methylnaphthalene	ND	4.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
Acetone	ND	10		µg/L	1	6/10/2014 1:19:24 AM	R19143
Bromobenzene	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
Bromodichloromethane	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
Bromoform	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
Bromomethane	ND	3.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
2-Butanone	ND	10		µg/L	1	6/10/2014 1:19:24 AM	R19143
Carbon disulfide	ND	10		µg/L	1	6/10/2014 1:19:24 AM	R19143
Carbon Tetrachloride	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
Chlorobenzene	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
Chloroethane	ND	2.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
Chloroform	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
Chloromethane	ND	3.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
2-Chlorotoluene	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
4-Chlorotoluene	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
cis-1,2-DCE	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
Dibromochloromethane	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
Dibromomethane	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
1,1-Dichloroethane	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
1,1-Dichloroethene	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
1,2-Dichloropropane	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
1,3-Dichloropropane	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
2,2-Dichloropropane	ND	2.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
1,1-Dichloropropene	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
Hexachlorobutadiene	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
2-Hexanone	ND	10		µg/L	1	6/10/2014 1:19:24 AM	R19143
Isopropylbenzene	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
4-Isopropyltoluene	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
4-Methyl-2-pentanone	ND	10		µg/L	1	6/10/2014 1:19:24 AM	R19143
Methylene Chloride	ND	3.0		µg/L	1	6/10/2014 1:19:24 AM	R19143

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-13
Project: 2014 2nd Quarter
Collection Date: 6/3/2014 9:53:00 AM
Lab ID: 1406363-003
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
n-Butylbenzene	ND	3.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
n-Propylbenzene	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
sec-Butylbenzene	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
Styrene	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
tert-Butylbenzene	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
trans-1,2-DCE	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
Trichlorofluoromethane	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
Vinyl chloride	ND	1.0		µg/L	1	6/10/2014 1:19:24 AM	R19143
Xylenes, Total	ND	1.5		µg/L	1	6/10/2014 1:19:24 AM	R19143
Surr: 1,2-Dichloroethane-d4	88.2	70-130		%REC	1	6/10/2014 1:19:24 AM	R19143
Surr: 4-Bromofluorobenzene	79.2	70-130		%REC	1	6/10/2014 1:19:24 AM	R19143
Surr: Dibromofluoromethane	83.8	70-130		%REC	1	6/10/2014 1:19:24 AM	R19143
Surr: Toluene-d8	98.9	70-130		%REC	1	6/10/2014 1:19:24 AM	R19143

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-14
Project: 2014 2nd Quarter
Collection Date: 6/3/2014 8:32:00 AM
Lab ID: 1406363-004
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	1.7	0.010		mg/L	5	6/13/2014 2:56:41 PM	R19281
Cadmium	ND	0.0020		mg/L	1	6/13/2014 2:54:55 PM	R19281
Chromium	ND	0.0060		mg/L	1	6/13/2014 2:54:55 PM	R19281
Copper	ND	0.0060		mg/L	1	6/13/2014 2:54:55 PM	R19281
Iron	4.6	0.10	*	mg/L	5	6/13/2014 2:56:41 PM	R19281
Manganese	2.3	0.010	*	mg/L	5	6/13/2014 2:56:41 PM	R19281
Silver	ND	0.0050		mg/L	1	6/13/2014 2:54:55 PM	R19281
Zinc	0.017	0.010		mg/L	1	6/13/2014 2:54:55 PM	R19281
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	1.7	0.010		mg/L	5	6/11/2014 2:56:00 PM	13601
Cadmium	ND	0.0020		mg/L	1	6/11/2014 2:54:14 PM	13601
Chromium	ND	0.0060		mg/L	1	6/11/2014 2:54:14 PM	13601
Copper	ND	0.0060		mg/L	1	6/11/2014 2:54:14 PM	13601
Iron	4.8	0.10	*	mg/L	5	6/11/2014 2:56:00 PM	13601
Manganese	2.3	0.010	*	mg/L	5	6/11/2014 2:56:00 PM	13601
Silver	ND	0.0050		mg/L	1	6/12/2014 1:36:09 PM	13601
Zinc	ND	0.010		mg/L	1	6/11/2014 2:54:14 PM	13601
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.011	0.0050	*	mg/L	5	6/18/2014 3:18:13 PM	R19364
Lead	ND	0.0050		mg/L	5	6/18/2014 3:18:13 PM	R19364
Selenium	0.018	0.0050		mg/L	5	6/18/2014 3:18:13 PM	R19364
Uranium	0.0083	0.0050		mg/L	5	6/20/2014 5:38:12 PM	R19449
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.011	0.0050	*	mg/L	5	6/17/2014 5:19:25 PM	13601
Lead	ND	0.0010		mg/L	1	6/13/2014 3:40:24 PM	13601
Selenium	0.017	0.0050		mg/L	5	6/17/2014 5:19:25 PM	13601
Uranium	0.0076	0.0010		mg/L	1	6/13/2014 3:40:24 PM	13601
EPA METHOD 245.1: MERCURY						Analyst:	**DBD**
Mercury	ND	0.00020		mg/L	1	6/17/2014 11:03:11 AM	13722
EPA METHOD 8260B: VOLATILES						Analyst:	**DJF**
Benzene	3700	200		µg/L	200	6/10/2014 1:48:56 AM	R19143
Toluene	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
Ethylbenzene	120	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
Methyl tert-butyl ether (MTBE)	930	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
1,2,4-Trimethylbenzene	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
1,3,5-Trimethylbenzene	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
1,2-Dichloroethane (EDC)	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-14
Project: 2014 2nd Quarter
Collection Date: 6/3/2014 8:32:00 AM
Lab ID: 1406363-004
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,2-Dibromoethane (EDB)	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
Naphthalene	ND	40		µg/L	20	6/10/2014 2:18:26 AM	R19143
1-Methylnaphthalene	ND	80		µg/L	20	6/10/2014 2:18:26 AM	R19143
2-Methylnaphthalene	ND	80		µg/L	20	6/10/2014 2:18:26 AM	R19143
Acetone	ND	200		µg/L	20	6/10/2014 2:18:26 AM	R19143
Bromobenzene	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
Bromodichloromethane	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
Bromoform	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
Bromomethane	ND	60		µg/L	20	6/10/2014 2:18:26 AM	R19143
2-Butanone	ND	200		µg/L	20	6/10/2014 2:18:26 AM	R19143
Carbon disulfide	ND	200		µg/L	20	6/10/2014 2:18:26 AM	R19143
Carbon Tetrachloride	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
Chlorobenzene	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
Chloroethane	ND	40		µg/L	20	6/10/2014 2:18:26 AM	R19143
Chloroform	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
Chloromethane	ND	60		µg/L	20	6/10/2014 2:18:26 AM	R19143
2-Chlorotoluene	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
4-Chlorotoluene	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
cis-1,2-DCE	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
cis-1,3-Dichloropropene	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
1,2-Dibromo-3-chloropropane	ND	40		µg/L	20	6/10/2014 2:18:26 AM	R19143
Dibromochloromethane	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
Dibromomethane	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
1,2-Dichlorobenzene	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
1,3-Dichlorobenzene	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
1,4-Dichlorobenzene	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
Dichlorodifluoromethane	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
1,1-Dichloroethane	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
1,1-Dichloroethene	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
1,2-Dichloropropane	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
1,3-Dichloropropane	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
2,2-Dichloropropane	ND	40		µg/L	20	6/10/2014 2:18:26 AM	R19143
1,1-Dichloropropene	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
Hexachlorobutadiene	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
2-Hexanone	ND	200		µg/L	20	6/10/2014 2:18:26 AM	R19143
Isopropylbenzene	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
4-Isopropyltoluene	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
4-Methyl-2-pentanone	ND	200		µg/L	20	6/10/2014 2:18:26 AM	R19143
Methylene Chloride	ND	60		µg/L	20	6/10/2014 2:18:26 AM	R19143

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-14
Project: 2014 2nd Quarter
Collection Date: 6/3/2014 8:32:00 AM
Lab ID: 1406363-004
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
n-Butylbenzene	ND	60		µg/L	20	6/10/2014 2:18:26 AM	R19143
n-Propylbenzene	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
sec-Butylbenzene	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
Styrene	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
tert-Butylbenzene	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
1,1,1,2-Tetrachloroethane	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
1,1,2,2-Tetrachloroethane	ND	40		µg/L	20	6/10/2014 2:18:26 AM	R19143
Tetrachloroethene (PCE)	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
trans-1,2-DCE	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
trans-1,3-Dichloropropene	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
1,2,3-Trichlorobenzene	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
1,2,4-Trichlorobenzene	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
1,1,1-Trichloroethane	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
1,1,2-Trichloroethane	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
Trichloroethene (TCE)	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
Trichlorofluoromethane	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
1,2,3-Trichloropropane	ND	40		µg/L	20	6/10/2014 2:18:26 AM	R19143
Vinyl chloride	ND	20		µg/L	20	6/10/2014 2:18:26 AM	R19143
Xylenes, Total	ND	30		µg/L	20	6/10/2014 2:18:26 AM	R19143
Surr: 1,2-Dichloroethane-d4	92.9	70-130		%REC	20	6/10/2014 2:18:26 AM	R19143
Surr: 4-Bromofluorobenzene	88.0	70-130		%REC	20	6/10/2014 2:18:26 AM	R19143
Surr: Dibromofluoromethane	89.5	70-130		%REC	20	6/10/2014 2:18:26 AM	R19143
Surr: Toluene-d8	100	70-130		%REC	20	6/10/2014 2:18:26 AM	R19143

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-29
Project: 2014 2nd Quarter
Collection Date: 6/2/2014 3:22:00 PM
Lab ID: 1406363-005
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.057	0.0020		mg/L	1	6/13/2014 3:09:42 PM	R19281
Cadmium	ND	0.0020		mg/L	1	6/13/2014 3:09:42 PM	R19281
Chromium	ND	0.0060		mg/L	1	6/13/2014 3:09:42 PM	R19281
Copper	ND	0.0060		mg/L	1	6/13/2014 3:09:42 PM	R19281
Iron	0.20	0.020		mg/L	1	6/13/2014 3:09:42 PM	R19281
Manganese	0.28	0.0020	*	mg/L	1	6/13/2014 3:09:42 PM	R19281
Silver	ND	0.0050		mg/L	1	6/13/2014 3:09:42 PM	R19281
Zinc	ND	0.010		mg/L	1	6/13/2014 3:09:42 PM	R19281
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.063	0.0020		mg/L	1	6/11/2014 3:08:18 PM	13601
Cadmium	ND	0.0020		mg/L	1	6/11/2014 3:08:18 PM	13601
Chromium	ND	0.0060		mg/L	1	6/11/2014 3:08:18 PM	13601
Copper	ND	0.0060		mg/L	1	6/11/2014 3:08:18 PM	13601
Iron	0.37	0.020	*	mg/L	1	6/11/2014 3:08:18 PM	13601
Manganese	0.29	0.0020	*	mg/L	1	6/11/2014 3:08:18 PM	13601
Silver	ND	0.0050		mg/L	1	6/12/2014 1:37:55 PM	13601
Zinc	ND	0.010		mg/L	1	6/12/2014 1:37:55 PM	13601
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	6/18/2014 3:23:12 PM	R19364
Lead	ND	0.0050		mg/L	5	6/18/2014 3:23:12 PM	R19364
Selenium	0.0064	0.0050		mg/L	5	6/18/2014 3:23:12 PM	R19364
Uranium	0.054	0.010	*	mg/L	10	6/25/2014 12:20:56 PM	R19508
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	6/17/2014 5:24:24 PM	13601
Lead	ND	0.0010		mg/L	1	6/13/2014 3:45:24 PM	13601
Selenium	0.0055	0.0050		mg/L	5	6/17/2014 5:24:24 PM	13601
Uranium	0.052	0.0050	*	mg/L	5	6/17/2014 5:24:24 PM	13601
EPA METHOD 245.1: MERCURY						Analyst:	**DBD**
Mercury	ND	0.00020		mg/L	1	6/17/2014 11:05:01 AM	13722
EPA METHOD 8260B: VOLATILES						Analyst:	**DJF**
Benzene	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
Toluene	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
Ethylbenzene	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
Methyl tert-butyl ether (MTBE)	2000	50		µg/L	50	6/10/2014 11:15:06 AM	R19178
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-29
Project: 2014 2nd Quarter
Collection Date: 6/2/2014 3:22:00 PM
Lab ID: 1406363-005
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
Naphthalene	ND	2.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
1-Methylnaphthalene	ND	4.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
2-Methylnaphthalene	ND	4.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
Acetone	ND	10		µg/L	1	6/10/2014 3:17:22 AM	R19143
Bromobenzene	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
Bromodichloromethane	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
Bromoform	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
Bromomethane	ND	3.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
2-Butanone	ND	10		µg/L	1	6/10/2014 3:17:22 AM	R19143
Carbon disulfide	ND	10		µg/L	1	6/10/2014 3:17:22 AM	R19143
Carbon Tetrachloride	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
Chlorobenzene	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
Chloroethane	ND	2.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
Chloroform	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
Chloromethane	ND	3.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
2-Chlorotoluene	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
4-Chlorotoluene	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
cis-1,2-DCE	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
Dibromochloromethane	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
Dibromomethane	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
1,1-Dichloroethane	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
1,1-Dichloroethene	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
1,2-Dichloropropane	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
1,3-Dichloropropane	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
2,2-Dichloropropane	ND	2.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
1,1-Dichloropropene	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
Hexachlorobutadiene	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
2-Hexanone	ND	10		µg/L	1	6/10/2014 3:17:22 AM	R19143
Isopropylbenzene	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
4-Isopropyltoluene	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
4-Methyl-2-pentanone	ND	10		µg/L	1	6/10/2014 3:17:22 AM	R19143
Methylene Chloride	ND	3.0		µg/L	1	6/10/2014 3:17:22 AM	R19143

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-29
Project: 2014 2nd Quarter
Collection Date: 6/2/2014 3:22:00 PM
Lab ID: 1406363-005
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
n-Butylbenzene	ND	3.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
n-Propylbenzene	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
sec-Butylbenzene	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
Styrene	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
tert-Butylbenzene	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
trans-1,2-DCE	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
Trichlorofluoromethane	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
Vinyl chloride	ND	1.0		µg/L	1	6/10/2014 3:17:22 AM	R19143
Xylenes, Total	ND	1.5		µg/L	1	6/10/2014 3:17:22 AM	R19143
Surr: 1,2-Dichloroethane-d4	91.3	70-130		%REC	1	6/10/2014 3:17:22 AM	R19143
Surr: 4-Bromofluorobenzene	81.1	70-130		%REC	1	6/10/2014 3:17:22 AM	R19143
Surr: Dibromofluoromethane	84.1	70-130		%REC	1	6/10/2014 3:17:22 AM	R19143
Surr: Toluene-d8	98.6	70-130		%REC	1	6/10/2014 3:17:22 AM	R19143

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-30
Project: 2014 2nd Quarter
Collection Date: 6/3/2014 1:05:00 PM
Lab ID: 1406363-006
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.17	0.0020		mg/L	1	6/13/2014 3:13:24 PM	R19281
Cadmium	ND	0.0020		mg/L	1	6/13/2014 3:13:24 PM	R19281
Chromium	ND	0.0060		mg/L	1	6/13/2014 3:13:24 PM	R19281
Copper	ND	0.0060		mg/L	1	6/13/2014 3:13:24 PM	R19281
Iron	2.3	0.10	*	mg/L	5	6/13/2014 3:18:43 PM	R19281
Manganese	0.082	0.0020	*	mg/L	1	6/13/2014 3:13:24 PM	R19281
Silver	ND	0.0050		mg/L	1	6/13/2014 3:13:24 PM	R19281
Zinc	ND	0.010		mg/L	1	6/13/2014 3:13:24 PM	R19281
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.56	0.0020		mg/L	1	6/11/2014 3:12:08 PM	13601
Cadmium	ND	0.0020		mg/L	1	6/11/2014 3:12:08 PM	13601
Chromium	0.014	0.0060		mg/L	1	6/11/2014 3:12:08 PM	13601
Copper	ND	0.0060		mg/L	1	6/11/2014 3:12:08 PM	13601
Iron	5.8	0.20	*	mg/L	10	6/12/2014 1:41:43 PM	13601
Manganese	0.35	0.0020	*	mg/L	1	6/11/2014 3:12:08 PM	13601
Silver	ND	0.0050		mg/L	1	6/12/2014 1:39:55 PM	13601
Zinc	0.015	0.010		mg/L	1	6/12/2014 1:39:55 PM	13601
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	6/18/2014 3:38:14 PM	R19364
Lead	ND	0.0050		mg/L	5	6/18/2014 3:38:14 PM	R19364
Selenium	ND	0.010		mg/L	10	7/2/2014 5:26:18 PM	R19649
Uranium	0.051	0.010	*	mg/L	10	6/25/2014 12:23:20 PM	R19508
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	6/17/2014 5:29:24 PM	13601
Lead	0.0064	0.0010		mg/L	1	6/13/2014 3:50:24 PM	13601
Selenium	0.0055	0.0050		mg/L	5	6/17/2014 5:29:24 PM	13601
Uranium	0.048	0.0010	*	mg/L	1	6/13/2014 3:50:24 PM	13601
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	6/18/2014 12:16:58 PM	13740
EPA METHOD 8260B: VOLATILES						Analyst:	**DJF**
Benzene	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
Toluene	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
Ethylbenzene	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
Methyl tert-butyl ether (MTBE)	2700	50		µg/L	50	6/10/2014 11:44:37 AM	R19178
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-30
Project: 2014 2nd Quarter
Collection Date: 6/3/2014 1:05:00 PM
Lab ID: 1406363-006
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
Naphthalene	ND	2.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
1-Methylnaphthalene	ND	4.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
2-Methylnaphthalene	ND	4.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
Acetone	ND	10		µg/L	1	6/10/2014 4:16:17 AM	R19143
Bromobenzene	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
Bromodichloromethane	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
Bromoform	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
Bromomethane	ND	3.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
2-Butanone	ND	10		µg/L	1	6/10/2014 4:16:17 AM	R19143
Carbon disulfide	ND	10		µg/L	1	6/10/2014 4:16:17 AM	R19143
Carbon Tetrachloride	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
Chlorobenzene	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
Chloroethane	ND	2.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
Chloroform	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
Chloromethane	ND	3.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
2-Chlorotoluene	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
4-Chlorotoluene	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
cis-1,2-DCE	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
Dibromochloromethane	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
Dibromomethane	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
1,1-Dichloroethane	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
1,1-Dichloroethene	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
1,2-Dichloropropane	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
1,3-Dichloropropane	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
2,2-Dichloropropane	ND	2.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
1,1-Dichloropropene	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
Hexachlorobutadiene	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
2-Hexanone	ND	10		µg/L	1	6/10/2014 4:16:17 AM	R19143
Isopropylbenzene	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
4-Isopropyltoluene	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
4-Methyl-2-pentanone	ND	10		µg/L	1	6/10/2014 4:16:17 AM	R19143
Methylene Chloride	ND	3.0		µg/L	1	6/10/2014 4:16:17 AM	R19143

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-30
Project: 2014 2nd Quarter
Collection Date: 6/3/2014 1:05:00 PM
Lab ID: 1406363-006
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
n-Butylbenzene	ND	3.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
n-Propylbenzene	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
sec-Butylbenzene	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
Styrene	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
tert-Butylbenzene	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
trans-1,2-DCE	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
Trichlorofluoromethane	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
Vinyl chloride	ND	1.0		µg/L	1	6/10/2014 4:16:17 AM	R19143
Xylenes, Total	ND	1.5		µg/L	1	6/10/2014 4:16:17 AM	R19143
Surr: 1,2-Dichloroethane-d4	89.7	70-130		%REC	1	6/10/2014 4:16:17 AM	R19143
Surr: 4-Bromofluorobenzene	82.8	70-130		%REC	1	6/10/2014 4:16:17 AM	R19143
Surr: Dibromofluoromethane	82.7	70-130		%REC	1	6/10/2014 4:16:17 AM	R19143
Surr: Toluene-d8	102	70-130		%REC	1	6/10/2014 4:16:17 AM	R19143

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-GROUP3-6/5/14
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 11:15:00 AM
Lab ID: 1406363-007
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
Toluene	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
Ethylbenzene	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
Naphthalene	ND	2.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
1-Methylnaphthalene	ND	4.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
2-Methylnaphthalene	ND	4.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
Acetone	ND	10		µg/L	1	6/10/2014 5:15:17 AM	R19143
Bromobenzene	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
Bromodichloromethane	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
Bromoform	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
Bromomethane	ND	3.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
2-Butanone	ND	10		µg/L	1	6/10/2014 5:15:17 AM	R19143
Carbon disulfide	ND	10		µg/L	1	6/10/2014 5:15:17 AM	R19143
Carbon Tetrachloride	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
Chlorobenzene	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
Chloroethane	ND	2.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
Chloroform	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
Chloromethane	ND	3.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
2-Chlorotoluene	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
4-Chlorotoluene	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
cis-1,2-DCE	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
Dibromochloromethane	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
Dibromomethane	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
1,1-Dichloroethane	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
1,1-Dichloroethene	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
1,2-Dichloropropane	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
1,3-Dichloropropane	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
2,2-Dichloropropane	ND	2.0		µg/L	1	6/10/2014 5:15:17 AM	R19143

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-GROUP3-6/5/14
Project: 2014 2nd Quarter
Collection Date: 6/5/2014 11:15:00 AM
Lab ID: 1406363-007
Matrix: AQUEOUS
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,1-Dichloropropene	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
Hexachlorobutadiene	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
2-Hexanone	ND	10		µg/L	1	6/10/2014 5:15:17 AM	R19143
Isopropylbenzene	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
4-Isopropyltoluene	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
4-Methyl-2-pentanone	ND	10		µg/L	1	6/10/2014 5:15:17 AM	R19143
Methylene Chloride	ND	3.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
n-Butylbenzene	ND	3.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
n-Propylbenzene	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
sec-Butylbenzene	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
Styrene	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
tert-Butylbenzene	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
trans-1,2-DCE	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
Trichlorofluoromethane	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
Vinyl chloride	ND	1.0		µg/L	1	6/10/2014 5:15:17 AM	R19143
Xylenes, Total	ND	1.5		µg/L	1	6/10/2014 5:15:17 AM	R19143
Surr: 1,2-Dichloroethane-d4	92.1	70-130		%REC	1	6/10/2014 5:15:17 AM	R19143
Surr: 4-Bromofluorobenzene	80.9	70-130		%REC	1	6/10/2014 5:15:17 AM	R19143
Surr: Dibromofluoromethane	82.6	70-130		%REC	1	6/10/2014 5:15:17 AM	R19143
Surr: Toluene-d8	95.1	70-130		%REC	1	6/10/2014 5:15:17 AM	R19143

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Trip Blank
Project: 2014 2nd Quarter
Collection Date:
Lab ID: 1406363-008
Matrix: TRIP BLANK
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	6/13/2014 2:17:15 AM	R19229
Surr: BFB	101	70.9-130		%REC	1	6/13/2014 2:17:15 AM	R19229
EPA METHOD 8260B: VOLATILES						Analyst:	**DJF**
Benzene	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
Toluene	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
Ethylbenzene	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
Naphthalene	ND	2.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
1-Methylnaphthalene	ND	4.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
2-Methylnaphthalene	ND	4.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
Acetone	ND	10		µg/L	1	6/10/2014 5:44:46 AM	R19143
Bromobenzene	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
Bromodichloromethane	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
Bromoform	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
Bromomethane	ND	3.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
2-Butanone	ND	10		µg/L	1	6/10/2014 5:44:46 AM	R19143
Carbon disulfide	ND	10		µg/L	1	6/10/2014 5:44:46 AM	R19143
Carbon Tetrachloride	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
Chlorobenzene	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
Chloroethane	ND	2.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
Chloroform	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
Chloromethane	ND	3.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
2-Chlorotoluene	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
4-Chlorotoluene	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
cis-1,2-DCE	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
Dibromochloromethane	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
Dibromomethane	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
1,2-Dichlorobenzene	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
1,3-Dichlorobenzene	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
1,4-Dichlorobenzene	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
Dichlorodifluoromethane	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
1,1-Dichloroethane	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
1,1-Dichloroethene	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Trip Blank
Project: 2014 2nd Quarter
Collection Date:
Lab ID: 1406363-008
Matrix: TRIP BLANK
Received Date: 6/6/2014 3:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,2-Dichloropropane	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
1,3-Dichloropropane	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
2,2-Dichloropropane	ND	2.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
1,1-Dichloropropene	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
Hexachlorobutadiene	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
2-Hexanone	ND	10		µg/L	1	6/10/2014 5:44:46 AM	R19143
Isopropylbenzene	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
4-Isopropyltoluene	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
4-Methyl-2-pentanone	ND	10		µg/L	1	6/10/2014 5:44:46 AM	R19143
Methylene Chloride	ND	3.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
n-Butylbenzene	ND	3.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
n-Propylbenzene	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
sec-Butylbenzene	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
Styrene	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
tert-Butylbenzene	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
trans-1,2-DCE	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
1,1,1-Trichloroethane	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
1,1,2-Trichloroethane	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
Trichloroethene (TCE)	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
Trichlorofluoromethane	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
1,2,3-Trichloropropane	ND	2.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
Vinyl chloride	ND	1.0		µg/L	1	6/10/2014 5:44:46 AM	R19143
Xylenes, Total	ND	1.5		µg/L	1	6/10/2014 5:44:46 AM	R19143
Surr: 1,2-Dichloroethane-d4	90.8	70-130		%REC	1	6/10/2014 5:44:46 AM	R19143
Surr: 4-Bromofluorobenzene	77.0	70-130		%REC	1	6/10/2014 5:44:46 AM	R19143
Surr: Dibromofluoromethane	82.5	70-130		%REC	1	6/10/2014 5:44:46 AM	R19143
Surr: Toluene-d8	101	70-130		%REC	1	6/10/2014 5:44:46 AM	R19143

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406363**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19281** RunNo: **19281**
Prep Date: Analysis Date: **6/13/2014** SeqNo: **557419** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19281** RunNo: **19281**
Prep Date: Analysis Date: **6/13/2014** SeqNo: **557420** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.1	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.8	85	115			
Chromium	0.48	0.0060	0.5000	0	95.4	85	115			
Copper	0.48	0.0060	0.5000	0	95.4	85	115			
Iron	0.50	0.020	0.5000	0	99.8	85	115			
Manganese	0.48	0.0020	0.5000	0	96.9	85	115			
Silver	0.096	0.0050	0.1000	0	95.8	85	115			
Zinc	0.49	0.010	0.5000	0	98.6	85	115			

Sample ID **1406363-006CMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **OW-30** Batch ID: **R19281** RunNo: **19281**
Prep Date: Analysis Date: **6/13/2014** SeqNo: **557447** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.64	0.0020	0.5000	0.1660	94.4	70	130			
Cadmium	0.49	0.0020	0.5000	0	98.5	70	130			
Chromium	0.49	0.0060	0.5000	0.003800	96.8	70	130			
Copper	0.50	0.0060	0.5000	0	100	70	130			
Manganese	0.57	0.0020	0.5000	0.08186	97.7	70	130			
Silver	0.092	0.0050	0.1000	0	92.1	70	130			
Zinc	0.51	0.010	0.5000	0.008570	101	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406363**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **1406363-006CMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **OW-30** Batch ID: **R19281** RunNo: **19281**
Prep Date: Analysis Date: **6/13/2014** SeqNo: **557448** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.64	0.0020	0.5000	0.1660	95.7	70	130	0.978	20	
Cadmium	0.50	0.0020	0.5000	0	99.3	70	130	0.869	20	
Chromium	0.49	0.0060	0.5000	0.003800	97.1	70	130	0.307	20	
Copper	0.51	0.0060	0.5000	0	102	70	130	1.55	20	
Manganese	0.58	0.0020	0.5000	0.08186	99.0	70	130	1.10	20	
Silver	0.094	0.0050	0.1000	0	93.6	70	130	1.57	20	
Zinc	0.51	0.010	0.5000	0.008570	101	70	130	0.436	20	

Sample ID **1406363-006CMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **OW-30** Batch ID: **R19281** RunNo: **19281**
Prep Date: Analysis Date: **6/13/2014** SeqNo: **557450** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	4.8	0.10	2.500	2.339	100	70	130			

Sample ID **1406363-006CMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **OW-30** Batch ID: **R19281** RunNo: **19281**
Prep Date: Analysis Date: **6/13/2014** SeqNo: **557452** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	4.5	0.10	2.500	2.339	88.2	70	130	6.26	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406363**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **MB-13601** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **13601** RunNo: **19195**
Prep Date: **6/10/2014** Analysis Date: **6/11/2014** SeqNo: **554950** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS-13601** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **13601** RunNo: **19195**
Prep Date: **6/10/2014** Analysis Date: **6/11/2014** SeqNo: **554951** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.2	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.3	85	115			
Calcium	50	1.0	50.00	0	99.5	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Copper	0.49	0.0060	0.5000	0	98.7	85	115			
Iron	0.54	0.020	0.5000	0	107	85	115			
Magnesium	50	1.0	50.00	0	100	85	115			
Manganese	0.51	0.0020	0.5000	0	102	85	115			
Potassium	49	1.0	50.00	0	97.9	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Sodium	49	1.0	50.00	0	97.9	85	115			
Zinc	0.51	0.010	0.5000	0	103	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406363**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19228** RunNo: **19228**
Prep Date: Analysis Date: **6/12/2014** SeqNo: **556140** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.1	85	115			
Selenium	0.024	0.0010	0.02500	0	97.0	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19228** RunNo: **19228**
Prep Date: Analysis Date: **6/12/2014** SeqNo: **556141** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	100	85	115			
Selenium	0.026	0.0010	0.02500	0	103	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19228** RunNo: **19228**
Prep Date: Analysis Date: **6/12/2014** SeqNo: **556142** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19228** RunNo: **19228**
Prep Date: Analysis Date: **6/12/2014** SeqNo: **556143** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19364** RunNo: **19364**
Prep Date: Analysis Date: **6/18/2014** SeqNo: **560092** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.5	85	115			
Lead	0.024	0.0010	0.02500	0	94.8	85	115			
Selenium	0.024	0.0010	0.02500	0	97.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406363**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19364** RunNo: **19364**
Prep Date: Analysis Date: **6/18/2014** SeqNo: **560093** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.022	0.0010	0.02500	0	89.7	85	115			
Lead	0.023	0.0010	0.02500	0	93.9	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19364** RunNo: **19364**
Prep Date: Analysis Date: **6/18/2014** SeqNo: **560094** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19364** RunNo: **19364**
Prep Date: Analysis Date: **6/18/2014** SeqNo: **560095** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								

Sample ID **LCS RR** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19449** RunNo: **19449**
Prep Date: Analysis Date: **6/20/2014** SeqNo: **562633** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.026	0.0010	0.02500	0	105	85	115			

Sample ID **LCS RR** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19449** RunNo: **19449**
Prep Date: Analysis Date: **6/20/2014** SeqNo: **562635** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.025	0.0010	0.02500	0	99.3	85	115			

Sample ID **MB RR** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19449** RunNo: **19449**
Prep Date: Analysis Date: **6/20/2014** SeqNo: **562637** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406363**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **MB RR** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19449** RunNo: **19449**
Prep Date: Analysis Date: **6/20/2014** SeqNo: **562639** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.0010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19508** RunNo: **19508**
Prep Date: Analysis Date: **6/25/2014** SeqNo: **564692** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.025	0.0010	0.02500	0	100	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19508** RunNo: **19508**
Prep Date: Analysis Date: **6/25/2014** SeqNo: **564693** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.025	0.0010	0.02500	0	99.1	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19508** RunNo: **19508**
Prep Date: Analysis Date: **6/25/2014** SeqNo: **564694** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19508** RunNo: **19508**
Prep Date: Analysis Date: **6/25/2014** SeqNo: **564695** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.0010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19649** RunNo: **19649**
Prep Date: Analysis Date: **7/2/2014** SeqNo: **570332** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.024	0.0010	0.02500	0	95.1	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406363**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID	**MB**	SampType:	**MBLK**		TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**R19649**		RunNo:	**19649**					
Prep Date:		Analysis Date:	**7/2/2014**		SeqNo:	**570334**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium		ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406363**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **LLLCS-13601** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **13601** RunNo: **19169**
Prep Date: **6/10/2014** Analysis Date: **6/10/2014** SeqNo: **554077** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.0	85	115			
Lead	0.025	0.0010	0.02500	0	100	85	115			
Selenium	0.024	0.0010	0.02500	0	95.8	85	115			
Uranium	0.025	0.0010	0.02500	0	101	85	115			

Sample ID **MB-13601** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **13601** RunNo: **19169**
Prep Date: **6/10/2014** Analysis Date: **6/10/2014** SeqNo: **554079** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406363**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **MB-13722** SampType: **MBLK** TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW** Batch ID: **13722** RunNo: **19315**
Prep Date: **6/16/2014** Analysis Date: **6/17/2014** SeqNo: **558343** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID **LCS-13722** SampType: **LCS** TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW** Batch ID: **13722** RunNo: **19315**
Prep Date: **6/16/2014** Analysis Date: **6/17/2014** SeqNo: **558344** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	98.8	80	120			

Sample ID **MB-13740** SampType: **MBLK** TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW** Batch ID: **13740** RunNo: **19350**
Prep Date: **6/17/2014** Analysis Date: **6/18/2014** SeqNo: **559471** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID **LCS-13740** SampType: **LCS** TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW** Batch ID: **13740** RunNo: **19350**
Prep Date: **6/17/2014** Analysis Date: **6/18/2014** SeqNo: **559472** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.8	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406363**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R19165** RunNo: **19165**
Prep Date: Analysis Date: **6/9/2014** SeqNo: **553915** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R19165** RunNo: **19165**
Prep Date: Analysis Date: **6/9/2014** SeqNo: **553916** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	97.4	90	110			
Chloride	4.6	0.50	5.000	0	92.0	90	110			
Bromide	2.4	0.10	2.500	0	96.2	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.9	90	110			
Sulfate	9.4	0.50	10.00	0	93.5	90	110			
Nitrate+Nitrite as N	3.3	0.20	3.500	0	95.7	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R19191** RunNo: **19191**
Prep Date: Analysis Date: **6/10/2014** SeqNo: **554760** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R19191** RunNo: **19191**
Prep Date: Analysis Date: **6/10/2014** SeqNo: **554761** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000	0	91.7	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R19526** RunNo: **19526**
Prep Date: Analysis Date: **6/25/2014** SeqNo: **565235** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406363**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**			
Client ID: **LCSW**	Batch ID: **R19526**	RunNo: **19526**			
Prep Date:	Analysis Date: **6/25/2014**	SeqNo: **565236**	Units: **mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.4	0.20	3.500	0	96.8	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406363**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **MB-13583** SampType: **MBLK** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **PBW** Batch ID: **13583** RunNo: **19152**
Prep Date: **6/9/2014** Analysis Date: **6/11/2014** SeqNo: **554465** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.0		1.000		103	62.7	145			

Sample ID **LCS-13583** SampType: **LCS** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSW** Batch ID: **13583** RunNo: **19152**
Prep Date: **6/9/2014** Analysis Date: **6/11/2014** SeqNo: **554466** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.9	1.0	5.000	0	97.4	78.6	146			
Surr: DNOP	0.46		0.5000		91.3	62.7	145			

Sample ID **LCSD-13583** SampType: **LCSD** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSS02** Batch ID: **13583** RunNo: **19152**
Prep Date: **6/9/2014** Analysis Date: **6/11/2014** SeqNo: **554468** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.4	1.0	5.000	0	89.0	78.6	146	9.06	26.5	
Surr: DNOP	0.44		0.5000		88.0	62.7	145	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406363**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**
Client ID:	**PBW**	Batch ID:	**R19229**	RunNo:	**19229**
Prep Date:		Analysis Date:	**6/12/2014**	SeqNo:	**556148** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		94.8	70.9	130			

Sample ID	**2.5UG GRO LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**
Client ID:	**LCSW**	Batch ID:	**R19229**	RunNo:	**19229**
Prep Date:		Analysis Date:	**6/12/2014**	SeqNo:	**556149** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.47	0.050	0.5000	0	93.6	80	120			
Surr: BFB	21		20.00		105	70.9	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406363**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **5ml rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R19143**	RunNo: **19143**	
Prep Date:	Analysis Date: **6/9/2014**	SeqNo: **553150**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406363**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **5ml rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R19143**	RunNo: **19143**
Prep Date:	Analysis Date: **6/9/2014**	SeqNo: **553150** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.4	70	130			
Surr: 4-Bromofluorobenzene	9.0		10.00		89.8	70	130			
Surr: Dibromofluoromethane	8.8		10.00		88.2	70	130			
Surr: Toluene-d8	9.5		10.00		94.8	70	130			

Sample ID **100ng lcsb**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R19143**	RunNo: **19143**
Prep Date:	Analysis Date: **6/9/2014**	SeqNo: **553166** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.3	70	130			
Toluene	18	1.0	20.00	0	89.6	80	120			
Chlorobenzene	19	1.0	20.00	0	94.1	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406363**
08-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **100ng lcsb** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R19143** RunNo: **19143**
Prep Date: Analysis Date: **6/9/2014** SeqNo: **553166** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	21	1.0	20.00	0	107	82.6	131			
Trichloroethene (TCE)	18	1.0	20.00	0	89.2	70	130			
Surr: 1,2-Dichloroethane-d4	9.2		10.00		92.5	70	130			
Surr: 4-Bromofluorobenzene	8.3		10.00		83.1	70	130			
Surr: Dibromofluoromethane	9.0		10.00		90.3	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID **5ml rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R19178** RunNo: **19178**
Prep Date: Analysis Date: **6/10/2014** SeqNo: **554424** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	1.0								
Surr: 1,2-Dichloroethane-d4	9.0		10.00		90.3	70	130			
Surr: 4-Bromofluorobenzene	8.2		10.00		82.4	70	130			
Surr: Dibromofluoromethane	8.3		10.00		83.3	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R19178** RunNo: **19178**
Prep Date: Analysis Date: **6/10/2014** SeqNo: **554426** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.3		10.00		92.8	70	130			
Surr: 4-Bromofluorobenzene	8.4		10.00		83.9	70	130			
Surr: Dibromofluoromethane	8.7		10.00		87.4	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1406363 RcptNo: 1

Received by/date: MG 06/06/14

Logged By: **Michelle Garcia** 6/6/2014 3:50:00 PM Michelle Garcia

Completed By: **Michelle Garcia** 6/9/2014 9:12:57 AM Michelle Garcia

Reviewed By: 06/09/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☑ MG 06/09/14
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 14
(<2 or >12 unless noted)
Adjusted? no
Checked by: CS

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Not Present			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

! Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

2014 2nd Quarter

Project #:

OW WELLS

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8260+MTBE	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	Major Cations/Anions	8015B extended								Air Bubbles (Y or N)
	1150 CS 06/09/14		Per Anne			1406363													
6/3/14	~~1553~~	H20	OW-1			-001	X	X	X	X	X								
6/3/14	1415	H20	OW-10			-002	X	X	X	X	X								
6/3/14	0953	H20	OW-13			-003	X	X	X										
6-3-14	0832	H20	OW-14			-004	X	X	X										
6-2-14	1522	H20	OW-29			-005	X	X	X										
6/3/14	1305	H20	OW-30			-006	X	X	X										
6/5/14	1115	H20	FB-GROUP3-6/5/14			-007	~~X~~	~~X~~	~~X~~										
			TB			-008	X				X								
			A 06/09/14						CS	06/09/14									

Date:	Time:	Relinquished by:	Received by:	Date	Time
6/6/14	1550	Rax Landers Rax Landers	[signature]	06/06/14	1550
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 21, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: Q1-2014 Groundwater Sampling OrderNo.: 1403307

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 3/7/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1403307**
Date Reported: **3/21/2014**

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-1
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/7/2014 12:38:00 PM
Lab ID: 1403307-001
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	3/12/2014 4:17:56 AM	12114
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	3/12/2014 4:17:56 AM	12114
Surr: DNOP	123	62.7-145		%REC	1	3/12/2014 4:17:56 AM	12114
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**JMP**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	3/12/2014 2:50:41 PM	R17271
Surr: BFB	94.5	80.4-118		%REC	1	3/12/2014 2:50:41 PM	R17271
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	0.30	0.10		mg/L	1	3/11/2014 9:59:36 PM	R17244
Chloride	65	10		mg/L	20	3/11/2014 10:12:01 PM	R17244
Bromide	0.27	0.10		mg/L	1	3/11/2014 9:59:36 PM	R17244
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	3/11/2014 9:59:36 PM	R17244
Sulfate	170	10		mg/L	20	3/11/2014 10:12:01 PM	R17244
Nitrate+Nitrite as N	ND	1.0		mg/L	5	3/12/2014 4:19:48 AM	R17243
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.035	0.0020		mg/L	1	3/13/2014 1:06:44 PM	R17289
Cadmium	ND	0.0020		mg/L	1	3/13/2014 1:06:44 PM	R17289
Calcium	2.0	1.0		mg/L	1	3/13/2014 1:06:44 PM	R17289
Chromium	ND	0.0060		mg/L	1	3/13/2014 1:06:44 PM	R17289
Copper	ND	0.0060		mg/L	1	3/13/2014 1:06:44 PM	R17289
Iron	ND	0.020		mg/L	1	3/13/2014 1:06:44 PM	R17289
Magnesium	ND	1.0		mg/L	1	3/13/2014 1:06:44 PM	R17289
Manganese	0.0063	0.0020		mg/L	1	3/13/2014 1:06:44 PM	R17289
Potassium	ND	1.0		mg/L	1	3/13/2014 1:06:44 PM	R17289
Silver	ND	0.0050		mg/L	1	3/13/2014 1:06:44 PM	R17289
Sodium	320	5.0		mg/L	5	3/13/2014 1:08:41 PM	R17289
Zinc	0.012	0.010		mg/L	1	3/13/2014 1:06:44 PM	R17289
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.041	0.0020		mg/L	1	3/13/2014 4:54:04 PM	12123
Cadmium	ND	0.0020		mg/L	1	3/13/2014 4:54:04 PM	12123
Chromium	ND	0.0060		mg/L	1	3/13/2014 4:54:04 PM	12123
Copper	ND	0.0060		mg/L	1	3/13/2014 4:54:04 PM	12123
Iron	0.28	0.020		mg/L	1	3/13/2014 4:54:04 PM	12123
Manganese	0.020	0.0020		mg/L	1	3/13/2014 4:54:04 PM	12123
Silver	ND	0.0050		mg/L	1	3/13/2014 4:54:04 PM	12123
Zinc	0.010	0.010		mg/L	1	3/13/2014 4:54:04 PM	12123
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0010		mg/L	1	3/19/2014 1:52:14 PM	R17423

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-1
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/7/2014 12:38:00 PM
Lab ID: 1403307-001
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.0010		mg/L	1	3/18/2014 2:02:28 PM	R17401
Selenium	0.0039	0.0010		mg/L	1	3/19/2014 1:52:14 PM	R17423
Uranium	0.043	0.0010	*	mg/L	1	3/18/2014 2:02:28 PM	R17401
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0010		mg/L	1	3/17/2014 3:16:40 PM	12123
Lead	ND	0.0010		mg/L	1	3/17/2014 3:16:40 PM	12123
Selenium	0.0034	0.0010		mg/L	1	3/17/2014 3:16:40 PM	12123
Uranium	0.042	0.0050	*	mg/L	5	3/17/2014 4:41:31 PM	12123
EPA METHOD 245.1: MERCURY						Analyst:	**JML**
Mercury	ND	0.00020		mg/L	1	3/12/2014 12:35:10 PM	12133
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
Toluene	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
Ethylbenzene	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
Methyl tert-butyl ether (MTBE)	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
1,2,4-Trimethylbenzene	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
1,3,5-Trimethylbenzene	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
1,2-Dichloroethane (EDC)	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
1,2-Dibromoethane (EDB)	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
Naphthalene	ND	2.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
1-Methylnaphthalene	ND	4.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
2-Methylnaphthalene	ND	4.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
Acetone	ND	10	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
Bromobenzene	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
Bromodichloromethane	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
Bromoform	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
Bromomethane	ND	3.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
2-Butanone	ND	10	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
Carbon disulfide	ND	10	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
Carbon Tetrachloride	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
Chlorobenzene	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
Chloroethane	ND	2.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
Chloroform	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
Chloromethane	ND	3.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
2-Chlorotoluene	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
4-Chlorotoluene	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
cis-1,2-DCE	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
cis-1,3-Dichloropropene	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-1
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/7/2014 12:38:00 PM
Lab ID: 1403307-001
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dibromo-3-chloropropane	ND	2.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
Dibromochloromethane	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
Dibromomethane	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
1,2-Dichlorobenzene	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
1,3-Dichlorobenzene	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
1,4-Dichlorobenzene	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
Dichlorodifluoromethane	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
1,1-Dichloroethane	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
1,1-Dichloroethene	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
1,2-Dichloropropane	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
1,3-Dichloropropane	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
2,2-Dichloropropane	ND	2.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
1,1-Dichloropropene	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
Hexachlorobutadiene	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
2-Hexanone	ND	10	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
Isopropylbenzene	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
4-Isopropyltoluene	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
4-Methyl-2-pentanone	ND	10	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
Methylene Chloride	ND	3.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
n-Butylbenzene	ND	3.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
n-Propylbenzene	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
sec-Butylbenzene	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
Styrene	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
tert-Butylbenzene	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
1,1,1,2-Tetrachloroethane	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
1,1,2,2-Tetrachloroethane	ND	2.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
Tetrachloroethene (PCE)	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
trans-1,2-DCE	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
trans-1,3-Dichloropropene	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
1,2,3-Trichlorobenzene	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
1,2,4-Trichlorobenzene	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
1,1,1-Trichloroethane	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
1,1,2-Trichloroethane	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
Trichloroethene (TCE)	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
Trichlorofluoromethane	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
1,2,3-Trichloropropane	ND	2.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
Vinyl chloride	ND	1.0	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
Xylenes, Total	ND	1.5	p	µg/L	1	3/12/2014 3:00:01 AM	R17236
Surr: 1,2-Dichloroethane-d4	101	70-130	p	%REC	1	3/12/2014 3:00:01 AM	R17236

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
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S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-1
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/7/2014 12:38:00 PM
Lab ID: 1403307-001
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Surr: 4-Bromofluorobenzene	100	70-130	p	%REC	1	3/12/2014 3:00:01 AM	R17236
Surr: Dibromofluoromethane	99.1	70-130	p	%REC	1	3/12/2014 3:00:01 AM	R17236
Surr: Toluene-d8	102	70-130	p	%REC	1	3/12/2014 3:00:01 AM	R17236

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-10
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/7/2014 1:25:00 PM
Lab ID: 1403307-002
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	3/12/2014 4:39:49 AM	12114
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	3/12/2014 4:39:49 AM	12114
Surr: DNOP	124	62.7-145		%REC	1	3/12/2014 4:39:49 AM	12114
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**JMP**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	3/12/2014 3:20:45 PM	R17271
Surr: BFB	104	80.4-118		%REC	1	3/12/2014 3:20:45 PM	R17271
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	0.20	0.10		mg/L	1	3/11/2014 10:24:25 PM	R17244
Chloride	1200	50		mg/L	100	3/17/2014 7:15:33 PM	R17389
Bromide	0.43	0.10		mg/L	1	3/11/2014 10:24:25 PM	R17244
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	3/11/2014 10:24:25 PM	R17244
Sulfate	190	10		mg/L	20	3/11/2014 10:36:50 PM	R17244
Nitrate+Nitrite as N	ND	1.0		mg/L	5	3/12/2014 4:32:12 AM	R17243
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.071	0.0020		mg/L	1	3/13/2014 1:10:25 PM	R17289
Cadmium	ND	0.0020		mg/L	1	3/13/2014 1:10:25 PM	R17289
Calcium	180	5.0		mg/L	5	3/13/2014 1:12:18 PM	R17289
Chromium	ND	0.0060		mg/L	1	3/13/2014 1:10:25 PM	R17289
Copper	ND	0.0060		mg/L	1	3/13/2014 1:10:25 PM	R17289
Iron	ND	0.020		mg/L	1	3/13/2014 1:10:25 PM	R17289
Magnesium	30	1.0		mg/L	1	3/13/2014 1:10:25 PM	R17289
Manganese	0.098	0.0020	*	mg/L	1	3/13/2014 1:10:25 PM	R17289
Potassium	2.1	1.0		mg/L	1	3/13/2014 1:10:25 PM	R17289
Silver	ND	0.0050		mg/L	1	3/13/2014 1:10:25 PM	R17289
Sodium	910	10		mg/L	10	3/14/2014 3:00:14 PM	R17335
Zinc	ND	0.010		mg/L	1	3/13/2014 1:10:25 PM	R17289
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.071	0.0020		mg/L	1	3/13/2014 5:04:46 PM	12123
Cadmium	ND	0.0020		mg/L	1	3/13/2014 5:04:46 PM	12123
Chromium	ND	0.0060		mg/L	1	3/13/2014 5:04:46 PM	12123
Copper	ND	0.0060		mg/L	1	3/13/2014 5:04:46 PM	12123
Iron	ND	0.020		mg/L	1	3/13/2014 5:04:46 PM	12123
Manganese	0.086	0.0020	*	mg/L	1	3/13/2014 5:04:46 PM	12123
Silver	ND	0.0050		mg/L	1	3/13/2014 5:04:46 PM	12123
Zinc	ND	0.010		mg/L	1	3/13/2014 5:04:46 PM	12123
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	3/19/2014 2:00:34 PM	R17423

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Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-10
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/7/2014 1:25:00 PM
Lab ID: 1403307-002
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.0010		mg/L	1	3/18/2014 2:16:42 PM	R17401
Selenium	0.0095	0.0050		mg/L	5	3/19/2014 2:00:34 PM	R17423
Uranium	0.057	0.0050	*	mg/L	5	3/19/2014 2:00:34 PM	R17423
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	3/17/2014 5:08:04 PM	12123
Lead	ND	0.0010		mg/L	1	3/17/2014 3:32:34 PM	12123
Selenium	0.012	0.0050		mg/L	5	3/17/2014 5:08:04 PM	12123
Uranium	0.060	0.0050	*	mg/L	5	3/17/2014 5:08:04 PM	12123
EPA METHOD 245.1: MERCURY						Analyst:	**JML**
Mercury	ND	0.00020		mg/L	1	3/12/2014 12:36:59 PM	12133
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
Toluene	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
Ethylbenzene	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
Methyl tert-butyl ether (MTBE)	79	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
1,2,4-Trimethylbenzene	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
1,3,5-Trimethylbenzene	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
1,2-Dichloroethane (EDC)	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
1,2-Dibromoethane (EDB)	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
Naphthalene	ND	2.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
1-Methylnaphthalene	ND	4.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
2-Methylnaphthalene	ND	4.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
Acetone	ND	10	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
Bromobenzene	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
Bromodichloromethane	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
Bromoform	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
Bromomethane	ND	3.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
2-Butanone	ND	10	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
Carbon disulfide	ND	10	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
Carbon Tetrachloride	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
Chlorobenzene	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
Chloroethane	ND	2.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
Chloroform	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
Chloromethane	ND	3.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
2-Chlorotoluene	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
4-Chlorotoluene	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
cis-1,2-DCE	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
cis-1,3-Dichloropropene	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-10
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/7/2014 1:25:00 PM
Lab ID: 1403307-002
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dibromo-3-chloropropane	ND	2.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
Dibromochloromethane	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
Dibromomethane	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
1,2-Dichlorobenzene	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
1,3-Dichlorobenzene	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
1,4-Dichlorobenzene	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
Dichlorodifluoromethane	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
1,1-Dichloroethane	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
1,1-Dichloroethene	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
1,2-Dichloropropane	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
1,3-Dichloropropane	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
2,2-Dichloropropane	ND	2.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
1,1-Dichloropropene	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
Hexachlorobutadiene	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
2-Hexanone	ND	10	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
Isopropylbenzene	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
4-Isopropyltoluene	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
4-Methyl-2-pentanone	ND	10	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
Methylene Chloride	ND	3.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
n-Butylbenzene	ND	3.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
n-Propylbenzene	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
sec-Butylbenzene	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
Styrene	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
tert-Butylbenzene	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
1,1,1,2-Tetrachloroethane	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
1,1,2,2-Tetrachloroethane	ND	2.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
Tetrachloroethene (PCE)	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
trans-1,2-DCE	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
trans-1,3-Dichloropropene	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
1,2,3-Trichlorobenzene	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
1,2,4-Trichlorobenzene	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
1,1,1-Trichloroethane	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
1,1,2-Trichloroethane	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
Trichloroethene (TCE)	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
Trichlorofluoromethane	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
1,2,3-Trichloropropane	ND	2.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
Vinyl chloride	ND	1.0	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
Xylenes, Total	ND	1.5	p	µg/L	1	3/12/2014 3:28:40 AM	R17236
Surr: 1,2-Dichloroethane-d4	105	70-130	p	%REC	1	3/12/2014 3:28:40 AM	R17236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-10
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/7/2014 1:25:00 PM
Lab ID: 1403307-002
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Surr: 4-Bromofluorobenzene	98.9	70-130	p	%REC	1	3/12/2014 3:28:40 AM	R17236
Surr: Dibromofluoromethane	102	70-130	p	%REC	1	3/12/2014 3:28:40 AM	R17236
Surr: Toluene-d8	101	70-130	p	%REC	1	3/12/2014 3:28:40 AM	R17236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group#4-
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/7/2014 11:52:00 AM
Lab ID: 1403307-003
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
Toluene	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
Ethylbenzene	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
Naphthalene	ND	2.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
1-Methylnaphthalene	ND	4.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
2-Methylnaphthalene	ND	4.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
Acetone	ND	10		µg/L	1	3/12/2014 3:57:23 AM	R17236
Bromobenzene	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
Bromodichloromethane	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
Bromoform	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
Bromomethane	ND	3.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
2-Butanone	ND	10		µg/L	1	3/12/2014 3:57:23 AM	R17236
Carbon disulfide	ND	10		µg/L	1	3/12/2014 3:57:23 AM	R17236
Carbon Tetrachloride	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
Chlorobenzene	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
Chloroethane	ND	2.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
Chloroform	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
Chloromethane	ND	3.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
2-Chlorotoluene	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
4-Chlorotoluene	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
cis-1,2-DCE	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
Dibromochloromethane	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
Dibromomethane	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
1,1-Dichloroethane	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
1,1-Dichloroethene	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
1,2-Dichloropropane	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
1,3-Dichloropropane	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
2,2-Dichloropropane	ND	2.0		µg/L	1	3/12/2014 3:57:23 AM	R17236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group#4-
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/7/2014 11:52:00 AM
Lab ID: 1403307-003
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,1-Dichloropropene	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
Hexachlorobutadiene	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
2-Hexanone	ND	10		µg/L	1	3/12/2014 3:57:23 AM	R17236
Isopropylbenzene	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
4-Isopropyltoluene	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
4-Methyl-2-pentanone	ND	10		µg/L	1	3/12/2014 3:57:23 AM	R17236
Methylene Chloride	ND	3.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
n-Butylbenzene	ND	3.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
n-Propylbenzene	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
sec-Butylbenzene	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
Styrene	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
tert-Butylbenzene	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
trans-1,2-DCE	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
Trichlorofluoromethane	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
Vinyl chloride	ND	1.0		µg/L	1	3/12/2014 3:57:23 AM	R17236
Xylenes, Total	ND	1.5		µg/L	1	3/12/2014 3:57:23 AM	R17236
Surr: 1,2-Dichloroethane-d4	99.2	70-130		%REC	1	3/12/2014 3:57:23 AM	R17236
Surr: 4-Bromofluorobenzene	93.5	70-130		%REC	1	3/12/2014 3:57:23 AM	R17236
Surr: Dibromofluoromethane	100	70-130		%REC	1	3/12/2014 3:57:23 AM	R17236
Surr: Toluene-d8	103	70-130		%REC	1	3/12/2014 3:57:23 AM	R17236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: Q1-2014 Groundwater Sampling
Collection Date:
Lab ID: 1403307-004
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**JMP**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	3/12/2014 2:20:34 PM	R17271
Surr: BFB	90.0	80.4-118		%REC	1	3/12/2014 2:20:34 PM	R17271
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
Toluene	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
Ethylbenzene	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
Naphthalene	ND	2.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
1-Methylnaphthalene	ND	4.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
2-Methylnaphthalene	ND	4.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
Acetone	ND	10		µg/L	1	3/12/2014 4:26:01 AM	R17236
Bromobenzene	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
Bromodichloromethane	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
Bromoform	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
Bromomethane	ND	3.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
2-Butanone	ND	10		µg/L	1	3/12/2014 4:26:01 AM	R17236
Carbon disulfide	ND	10		µg/L	1	3/12/2014 4:26:01 AM	R17236
Carbon Tetrachloride	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
Chlorobenzene	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
Chloroethane	ND	2.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
Chloroform	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
Chloromethane	ND	3.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
2-Chlorotoluene	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
4-Chlorotoluene	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
cis-1,2-DCE	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
Dibromochloromethane	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
Dibromomethane	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
1,1-Dichloroethane	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
1,1-Dichloroethene	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: Q1-2014 Groundwater Sampling
Collection Date:
Lab ID: 1403307-004
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dichloropropane	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
1,3-Dichloropropane	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
2,2-Dichloropropane	ND	2.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
1,1-Dichloropropene	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
Hexachlorobutadiene	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
2-Hexanone	ND	10		µg/L	1	3/12/2014 4:26:01 AM	R17236
Isopropylbenzene	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
4-Isopropyltoluene	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
4-Methyl-2-pentanone	ND	10		µg/L	1	3/12/2014 4:26:01 AM	R17236
Methylene Chloride	ND	3.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
n-Butylbenzene	ND	3.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
n-Propylbenzene	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
sec-Butylbenzene	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
Styrene	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
tert-Butylbenzene	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
trans-1,2-DCE	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
Trichlorofluoromethane	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
Vinyl chloride	ND	1.0		µg/L	1	3/12/2014 4:26:01 AM	R17236
Xylenes, Total	ND	1.5		µg/L	1	3/12/2014 4:26:01 AM	R17236
Surr: 1,2-Dichloroethane-d4	99.2	70-130		%REC	1	3/12/2014 4:26:01 AM	R17236
Surr: 4-Bromofluorobenzene	97.5	70-130		%REC	1	3/12/2014 4:26:01 AM	R17236
Surr: Dibromofluoromethane	96.3	70-130		%REC	1	3/12/2014 4:26:01 AM	R17236
Surr: Toluene-d8	99.8	70-130		%REC	1	3/12/2014 4:26:01 AM	R17236

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403307**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17289** RunNo: **17289**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498058** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17289** RunNo: **17289**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498059** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.9	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.4	85	115			
Calcium	50	1.0	50.00	0	101	85	115			
Chromium	0.48	0.0060	0.5000	0	96.2	85	115			
Copper	0.48	0.0060	0.5000	0	96.5	85	115			
Iron	0.48	0.020	0.5000	0	95.5	85	115			
Magnesium	51	1.0	50.00	0	103	85	115			
Manganese	0.48	0.0020	0.5000	0	95.4	85	115			
Potassium	50	1.0	50.00	0	100	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Sodium	51	1.0	50.00	0	101	85	115			
Zinc	0.49	0.010	0.5000	0	97.2	85	115			

Sample ID **1403420-008AMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17289** RunNo: **17289**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498099** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	3.7	0.050	2.500	1.186	102	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403307**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **1403420-008AMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17289** RunNo: **17289**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498100** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	3.7	0.050	2.500	1.186	99.3	70	130	1.98	20	

Sample ID **1403477-001BMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17289** RunNo: **17289**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498102** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.55	0.020	0.5000	0.1063	88.6	70	130			
Magnesium	59	1.0	50.00	7.323	103	70	130			

Sample ID **1403477-001BMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17289** RunNo: **17289**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498103** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.57	0.020	0.5000	0.1063	92.0	70	130	3.10	20	
Magnesium	59	1.0	50.00	7.323	104	70	130	0.629	20	

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17335** RunNo: **17335**
Prep Date: Analysis Date: **3/14/2014** SeqNo: **499202** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17335** RunNo: **17335**
Prep Date: Analysis Date: **3/14/2014** SeqNo: **499203** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	50	1.0	50.00	0	99.5	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403307**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **1403307-002DMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **OW-10** Batch ID: **12123** RunNo: **17291**
Prep Date: **3/11/2014** Analysis Date: **3/13/2014** SeqNo: **498216** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.57	0.0020	0.5000	0.07097	99.3	70	130			
Cadmium	0.49	0.0020	0.5000	0	97.7	70	130			
Chromium	0.49	0.0060	0.5000	0	97.9	70	130			
Copper	0.51	0.0060	0.5000	0	101	70	130			
Iron	0.53	0.020	0.5000	0	106	70	130			
Manganese	0.58	0.0020	0.5000	0.08615	99.0	70	130			
Silver	0.094	0.0050	0.1000	0	94.4	70	130			
Zinc	0.51	0.010	0.5000	0	102	70	130			

Sample ID **1403307-002DMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **OW-10** Batch ID: **12123** RunNo: **17291**
Prep Date: **3/11/2014** Analysis Date: **3/13/2014** SeqNo: **498217** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.57	0.0020	0.5000	0.07097	99.2	70	130	0.104	20	
Cadmium	0.49	0.0020	0.5000	0	97.2	70	130	0.507	20	
Chromium	0.48	0.0060	0.5000	0	96.6	70	130	1.24	20	
Copper	0.51	0.0060	0.5000	0	101	70	130	0.0316	20	
Iron	0.53	0.020	0.5000	0	105	70	130	0.220	20	
Manganese	0.58	0.0020	0.5000	0.08615	98.7	70	130	0.250	20	
Silver	0.091	0.0050	0.1000	0	90.8	70	130	3.86	20	
Zinc	0.50	0.010	0.5000	0	101	70	130	0.940	20	

Sample ID **1403354-001DMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC** Batch ID: **12123** RunNo: **17291**
Prep Date: **3/11/2014** Analysis Date: **3/13/2014** SeqNo: **498233** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.64	0.0020	0.5000	0.1369	101	70	130			
Cadmium	0.50	0.0020	0.5000	0	99.1	70	130			
Chromium	0.49	0.0060	0.5000	0	98.1	70	130			
Copper	0.52	0.0060	0.5000	0	103	70	130			
Iron	0.89	0.020	0.5000	0.2846	121	70	130			
Manganese	0.62	0.0020	0.5000	0.09476	105	70	130			
Silver	0.096	0.0050	0.1000	0	96.0	70	130			
Zinc	0.52	0.010	0.5000	0.01156	102	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403307**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **1403354-001DMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC** Batch ID: **12123** RunNo: **17291**
Prep Date: **3/11/2014** Analysis Date: **3/13/2014** SeqNo: **498234** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.63	0.0020	0.5000	0.1369	98.2	70	130	2.12	20	
Cadmium	0.48	0.0020	0.5000	0	97.0	70	130	2.18	20	
Chromium	0.49	0.0060	0.5000	0	97.3	70	130	0.895	20	
Copper	0.50	0.0060	0.5000	0	101	70	130	2.22	20	
Iron	0.88	0.020	0.5000	0.2846	120	70	130	0.786	20	
Manganese	0.59	0.0020	0.5000	0.09476	99.5	70	130	4.36	20	
Silver	0.095	0.0050	0.1000	0	94.6	70	130	1.46	20	
Zinc	0.52	0.010	0.5000	0.01156	101	70	130	0.729	20	

Sample ID **MB-12123** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **12123** RunNo: **17291**
Prep Date: **3/11/2014** Analysis Date: **3/13/2014** SeqNo: **498282** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-12123** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **12123** RunNo: **17291**
Prep Date: **3/11/2014** Analysis Date: **3/13/2014** SeqNo: **498283** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.7	85	115			
Cadmium	0.49	0.0020	0.5000	0	99.0	85	115			
Chromium	0.49	0.0060	0.5000	0	97.9	85	115			
Copper	0.49	0.0060	0.5000	0	98.3	85	115			
Iron	0.53	0.020	0.5000	0	106	85	115			
Manganese	0.50	0.0020	0.5000	0	99.2	85	115			
Silver	0.098	0.0050	0.1000	0	98.2	85	115			
Zinc	0.51	0.010	0.5000	0	103	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403307**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **1403420-008AMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17401** RunNo: **17401**
Prep Date: Analysis Date: **3/18/2014** SeqNo: **501189** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.026	0.0010	0.02500	0.0003984	104	70	130			

Sample ID **1403420-008AMSD** SampType: **MSD** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17401** RunNo: **17401**
Prep Date: Analysis Date: **3/18/2014** SeqNo: **501190** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.027	0.0010	0.02500	0.0003984	105	70	130	0.894	20	

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17401** RunNo: **17401**
Prep Date: Analysis Date: **3/18/2014** SeqNo: **501192** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.025	0.0010	0.02500	0	102	85	115			
Uranium	0.025	0.0010	0.02500	0	100	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17401** RunNo: **17401**
Prep Date: Analysis Date: **3/18/2014** SeqNo: **501193** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.028	0.0010	0.02500	0	110	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17401** RunNo: **17401**
Prep Date: Analysis Date: **3/18/2014** SeqNo: **501194** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17401** RunNo: **17401**
Prep Date: Analysis Date: **3/18/2014** SeqNo: **501195** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403307**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **1403273-002AMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17423** RunNo: **17423**
Prep Date: Analysis Date: **3/19/2014** SeqNo: **501959** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.12	0.0050	0.1250	0.003578	94.3	70	130			

Sample ID **1403420-008AMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17423** RunNo: **17423**
Prep Date: Analysis Date: **3/19/2014** SeqNo: **501996** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.13	0.0050	0.1250	0.0009073	101	70	130			
Selenium	0.13	0.0050	0.1250	0.001602	99.9	70	130			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17423** RunNo: **17423**
Prep Date: Analysis Date: **3/19/2014** SeqNo: **502016** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.7	85	115			
Selenium	0.024	0.0010	0.02500	0	97.2	85	115			
Uranium	0.025	0.0010	0.02500	0	98.9	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17423** RunNo: **17423**
Prep Date: Analysis Date: **3/19/2014** SeqNo: **502017** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.1	85	115			
Selenium	0.024	0.0010	0.02500	0	97.2	85	115			
Uranium	0.025	0.0010	0.02500	0	99.8	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17423** RunNo: **17423**
Prep Date: Analysis Date: **3/19/2014** SeqNo: **502018** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403307**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**			
Client ID: **PBW**	Batch ID: **R17423**	RunNo: **17423**			
Prep Date:	Analysis Date: **3/19/2014**	SeqNo: **502019**	Units: **mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403307**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **1403307-001DMSDL** SampType: **MSDLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **OW-1** Batch ID: **12123** RunNo: **17381**
Prep Date: **3/11/2014** Analysis Date: **3/17/2014** SeqNo: **500678** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.071	0.0050	0.02500	0.04223	114	70	130	2.87	20	

Sample ID **1403307-001DMSDL** SampType: **MSDLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **OW-1** Batch ID: **12123** RunNo: **17381**
Prep Date: **3/11/2014** Analysis Date: **3/17/2014** SeqNo: **500679** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0.0009814	98.2	70	130	0.481	20	
Lead	0.026	0.0010	0.02500	0.0005163	101	70	130	1.78	20	
Selenium	0.026	0.0010	0.02500	0.003365	91.7	70	130	2.65	20	

Sample ID **1403307-001DMSLL** SampType: **MSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **OW-1** Batch ID: **12123** RunNo: **17381**
Prep Date: **3/11/2014** Analysis Date: **3/17/2014** SeqNo: **500680** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.069	0.0050	0.02500	0.04223	106	70	130			

Sample ID **1403307-001DMSLL** SampType: **MSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **OW-1** Batch ID: **12123** RunNo: **17381**
Prep Date: **3/11/2014** Analysis Date: **3/17/2014** SeqNo: **500681** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0.0009814	97.8	70	130			
Lead	0.025	0.0010	0.02500	0.0005163	99.5	70	130			
Selenium	0.026	0.0010	0.02500	0.003365	88.9	70	130			

Sample ID **1403358-001BMSLL** SampType: **MSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **12123** RunNo: **17381**
Prep Date: **3/11/2014** Analysis Date: **3/17/2014** SeqNo: **500694** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0.001050	96.7	70	130			
Lead	0.026	0.0010	0.02500	0	102	70	130			
Selenium	0.023	0.0010	0.02500	0.0008009	87.6	70	130			
Uranium	0.045	0.0010	0.02500	0.01755	110	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403307**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **LLLCS-12123** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **12123** RunNo: **17381**
Prep Date: **3/11/2014** Analysis Date: **3/17/2014** SeqNo: **500705** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.2	85	115			
Lead	0.025	0.0010	0.02500	0	98.9	85	115			
Selenium	0.023	0.0010	0.02500	0	91.4	85	115			
Uranium	0.026	0.0010	0.02500	0	104	85	115			

Sample ID **MB-12123** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **12123** RunNo: **17381**
Prep Date: **3/11/2014** Analysis Date: **3/17/2014** SeqNo: **500708** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403307**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **MB-12133** SampType: **MBLK** TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW** Batch ID: **12133** RunNo: **17250**
Prep Date: **3/11/2014** Analysis Date: **3/12/2014** SeqNo: **496787** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID **LCS-12133** SampType: **LCS** TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW** Batch ID: **12133** RunNo: **17250**
Prep Date: **3/11/2014** Analysis Date: **3/12/2014** SeqNo: **496788** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0053	0.00020	0.005000	0	106	80	120			

Sample ID **1403329-004AMS** SampType: **MS** TestCode: **EPA Method 245.1: Mercury**
Client ID: **BatchQC** Batch ID: **12133** RunNo: **17250**
Prep Date: **3/11/2014** Analysis Date: **3/12/2014** SeqNo: **496797** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0054	0.00020	0.005000	0	107	75	125			

Sample ID **1403329-004AMSD** SampType: **MSD** TestCode: **EPA Method 245.1: Mercury**
Client ID: **BatchQC** Batch ID: **12133** RunNo: **17250**
Prep Date: **3/11/2014** Analysis Date: **3/12/2014** SeqNo: **496798** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0053	0.00020	0.005000	0	107	75	125	0.541	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403307**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R17243** RunNo: **17243**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496494** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R17243** RunNo: **17243**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496495** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.5	0.20	3.500	0	101	90	110			

Sample ID **1403370-001BMS** SampType: **MS** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R17243** RunNo: **17243**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496500** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	4.0	0.20	3.500	0.4951	100	90	110			

Sample ID **1403370-001BMSD** SampType: **MSD** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R17243** RunNo: **17243**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496501** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	4.0	0.20	3.500	0.4951	100	90	110	0.0200	20	

Sample ID **1403371-001BMS** SampType: **MS** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R17243** RunNo: **17243**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496503** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.6	0.20	3.500	0.1383	99.0	90	110			

Sample ID **1403371-001BMSD** SampType: **MSD** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R17243** RunNo: **17243**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496504** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.6	0.20	3.500	0.1383	98.7	90	110	0.270	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403307**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R17244** RunNo: **17244**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496579** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS-b** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R17244** RunNo: **17244**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496581** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.6	90	110			
Bromide	2.4	0.10	2.500	0	95.6	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	95.2	90	110			
Sulfate	9.5	0.50	10.00	0	94.7	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R17244** RunNo: **17244**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496606** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R17244** RunNo: **17244**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496607** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	97.6	90	110			
Chloride	4.8	0.50	5.000	0	95.0	90	110			
Bromide	2.4	0.10	2.500	0	97.1	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	97.0	90	110			
Sulfate	9.5	0.50	10.00	0	95.5	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403307**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **1403297-002AMS** SampType: **MS** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R17244** RunNo: **17244**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496609** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.1	0.10	0.5000	0.7030	87.8	76.4	109			
Bromide	2.3	0.10	2.500	0	93.1	85.9	111			

Sample ID **1403297-002AMSD** SampType: **MSD** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R17244** RunNo: **17244**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496610** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.2	0.10	0.5000	0.7030	92.6	76.4	109	2.09	20	
Bromide	2.4	0.10	2.500	0	94.5	85.9	111	1.52	20	

Sample ID **1403302-001AMS** SampType: **MS** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R17244** RunNo: **17244**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496616** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.97	0.10	0.5000	0.5027	92.9	76.4	109			
Bromide	2.3	0.10	2.500	0	93.2	85.9	111			
Sulfate	50	0.50	10.00	39.40	103	82.3	125			

Sample ID **1403302-001AMSD** SampType: **MSD** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R17244** RunNo: **17244**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496617** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.97	0.10	0.5000	0.5027	93.1	76.4	109	0.0930	20	
Bromide	2.3	0.10	2.500	0	92.9	85.9	111	0.292	20	
Sulfate	50	0.50	10.00	39.40	103	82.3	125	0.134	20	

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R17389** RunNo: **17389**
Prep Date: Analysis Date: **3/17/2014** SeqNo: **500826** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	97.8	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403307**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **MB-12114**	SampType: **MBLK**		TestCode: **EPA Method 8015D: Diesel Range**		
Client ID: **PBW**	Batch ID: **12114**		RunNo: **17227**		
Prep Date: **3/11/2014**	Analysis Date: **3/12/2014**		SeqNo: **496413**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.0		1.000		99.8	62.7	145			

Sample ID **LCSD-12114**	SampType: **LCSD**		TestCode: **EPA Method 8015D: Diesel Range**		
Client ID: **LCSS02**	Batch ID: **12114**		RunNo: **17227**		
Prep Date: **3/11/2014**	Analysis Date: **3/12/2014**		SeqNo: **496415**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.6	1.0	5.000	0	112	78.6	146	34.2	26.5	R
Surr: DNOP	0.62		0.5000		123	62.7	145	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403307**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW** Batch ID: **R17271** RunNo: **17271**
Prep Date: Analysis Date: **3/12/2014** SeqNo: **497471** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		95.6	80.4	118			

Sample ID **2.5UG GRO LCS** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW** Batch ID: **R17271** RunNo: **17271**
Prep Date: Analysis Date: **3/12/2014** SeqNo: **497473** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	91.1	80	120			
Surr: BFB	21		20.00		104	80.4	118			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403307**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **5mL rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R17236**	RunNo: **17236**			
Prep Date:	Analysis Date: **3/11/2014**	SeqNo: **496213**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403307**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **5mL rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R17236** RunNo: **17236**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496213** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		99.9	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID **100ng lcs1** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R17236** RunNo: **17236**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496215** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	116	70	130			
Toluene	21	1.0	20.00	0	105	80	120			
Chlorobenzene	20	1.0	20.00	0	102	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403307**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **100ng lcs1** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R17236** RunNo: **17236**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496215** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	23	1.0	20.00	0	114	90	143			
Trichloroethene (TCE)	20	1.0	20.00	0	98.5	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		96.8	70	130			
Surr: Dibromofluoromethane	10		10.00		99.8	70	130			
Surr: Toluene-d8	9.3		10.00		93.2	70	130			

Sample ID **1403264-005a ms** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **BatchQC** Batch ID: **R17236** RunNo: **17236**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496218** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	23	1.0	20.00	0	115	70	130			
Toluene	21	1.0	20.00	0	106	67.5	123			
Chlorobenzene	21	1.0	20.00	0	103	70	130			
1,1-Dichloroethene	24	1.0	20.00	0	118	81.9	134			
Trichloroethene (TCE)	19	1.0	20.00	0	95.6	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		94.9	70	130			
Surr: Dibromofluoromethane	9.9		10.00		98.8	70	130			
Surr: Toluene-d8	9.8		10.00		98.4	70	130			

Sample ID **1403264-005a msd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **BatchQC** Batch ID: **R17236** RunNo: **17236**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496219** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	112	70	130	3.09	20	
Toluene	20	1.0	20.00	0	100	67.5	123	5.87	20	
Chlorobenzene	20	1.0	20.00	0	98.6	70	130	4.78	20	
1,1-Dichloroethene	22	1.0	20.00	0	108	81.9	134	8.53	20	
Trichloroethene (TCE)	19	1.0	20.00	0	93.9	70	130	1.89	20	
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.7		10.00		96.6	70	130	0	0	
Surr: Dibromofluoromethane	10		10.00		102	70	130	0	0	
Surr: Toluene-d8	9.5		10.00		95.1	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1403307 RcptNo: 1

Received by/date: 03/07/14

Logged By: **Lindsay Mangin** 3/7/2014 5:00:00 PM

Completed By: **Lindsay Mangin** 3/10/2014 8:08:38 AM

Reviewed By: mg 03/11/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 6 (<2 or >12 unless noted)
Adjusted?
Checked by:

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client instructions:

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.8	Good	Not Present			

Chain-of-Custody Record

Client: Western Refining

Mailing Address: Rt 3 Box 7
Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-722-0210

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other _____
☐ EDD (Type) _____

Turn-Around Time:
☑ Standard ☐ Rush _____

Project Name: Q1-2014 Groundwater Sampling

Project #: Quarterly Sampling

Project Manager: Cheryl Johnson

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.8

www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1403307		8015B (DRO/GRO)	WQCC Metals (Total and Dissolved)												Air Bubbles (Y or N)
3/7/14	1238	GW	OW-1	VARIOUS	VARIOUS	-001	x	x	x	x											
3/7/14	1325	GW	OW-10			-002	x	x	x	x											
3/7/14	1152	W	FB-Group#4-			-003	x														
			Trip Blank, 03/11/14			-004															

Date	Time	Relinquished by:	Received by:	Date	Time	Remarks:
3/7/14	1700	Tom Sleeper	[illegible]	03/07/14	1700	
Date:	Time:	Relinquished by:	Received by:	Date	Time	

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 05, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: Q4 2014 OrderNo.: 1411397

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 11/11/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1411397**
Date Reported: **12/5/2014**

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-1
Project: Q4 2014
Collection Date: 11/10/2014 11:10:00 AM
Lab ID: 1411397-001
Matrix: AQUEOUS
Received Date: 11/11/2014 4:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/14/2014 9:57:05 PM	16356
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/14/2014 9:57:05 PM	16356
Surr: DNOP	79.0	59-141		%REC	1	11/14/2014 9:57:05 PM	16356
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/12/2014 1:14:07 PM	R22501
Surr: BFB	90.4	80-120		%REC	1	11/12/2014 1:14:07 PM	R22501
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	0.30	0.10		mg/L	1	11/12/2014 1:26:24 AM	R22483
Chloride	72	10		mg/L	20	11/12/2014 1:38:49 AM	R22483
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	11/12/2014 1:26:24 AM	R22483
Bromide	0.27	0.10		mg/L	1	11/12/2014 1:26:24 AM	R22483
Nitrogen, Nitrate (As N)	0.30	0.10		mg/L	1	11/12/2014 1:26:24 AM	R22483
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	11/12/2014 1:26:24 AM	R22483
Sulfate	170	10		mg/L	20	11/12/2014 1:38:49 AM	R22483
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.033	0.0020		mg/L	1	11/12/2014 5:35:23 PM	R22496
Cadmium	ND	0.0020		mg/L	1	11/12/2014 5:35:23 PM	R22496
Calcium	2.1	1.0		mg/L	1	11/12/2014 5:35:23 PM	R22496
Chromium	ND	0.0060		mg/L	1	11/12/2014 5:35:23 PM	R22496
Copper	ND	0.0060		mg/L	1	11/12/2014 5:35:23 PM	R22496
Iron	0.048	0.020		mg/L	1	11/12/2014 5:35:23 PM	R22496
Magnesium	ND	1.0		mg/L	1	11/12/2014 5:35:23 PM	R22496
Manganese	ND	0.0020		mg/L	1	11/12/2014 5:35:23 PM	R22496
Potassium	ND	1.0		mg/L	1	11/12/2014 5:35:23 PM	R22496
Silver	ND	0.0050		mg/L	1	11/12/2014 5:35:23 PM	R22496
Sodium	310	5.0		mg/L	5	11/12/2014 5:37:18 PM	R22496
Zinc	0.031	0.010		mg/L	1	11/12/2014 5:35:23 PM	R22496
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.036	0.0020		mg/L	1	11/16/2014 6:07:03 PM	16396
Cadmium	ND	0.0020		mg/L	1	11/16/2014 6:07:03 PM	16396
Chromium	ND	0.0060		mg/L	1	11/16/2014 6:07:03 PM	16396
Copper	ND	0.0060		mg/L	1	11/16/2014 6:07:03 PM	16396
Iron	0.27	0.020		mg/L	1	11/16/2014 6:07:03 PM	16396
Manganese	0.0067	0.0020		mg/L	1	11/16/2014 6:07:03 PM	16396
Silver	ND	0.0050		mg/L	1	11/16/2014 6:07:03 PM	16396
Zinc	ND	0.010		mg/L	1	11/16/2014 6:07:03 PM	16396
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-1
Project: Q4 2014
Collection Date: 11/10/2014 11:10:00 AM
Lab ID: 1411397-001
Matrix: AQUEOUS
Received Date: 11/11/2014 4:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0013	0.0010		mg/L	1	11/17/2014 3:19:43 PM	R22589
Lead	ND	0.020		mg/L	20	11/24/2014 6:16:03 PM	R22774
Selenium	0.0037	0.0010		mg/L	1	11/17/2014 3:19:43 PM	R22589
Uranium	0.038	0.020	*	mg/L	20	11/24/2014 6:16:03 PM	R22774
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0010		mg/L	1	11/18/2014 4:48:58 PM	16396
Lead	ND	0.0010		mg/L	1	11/18/2014 4:48:58 PM	16396
Selenium	0.0029	0.0010		mg/L	1	11/18/2014 4:48:58 PM	16396
Uranium	0.043	0.0010	*	mg/L	1	11/18/2014 4:48:58 PM	16396
EPA METHOD 245.1: MERCURY						Analyst:	**JLF**
Mercury	ND	0.00020		mg/L	1	11/19/2014 12:38:19 PM	16435
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
Toluene	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
Ethylbenzene	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
Naphthalene	ND	2.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
1-Methylnaphthalene	ND	4.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
2-Methylnaphthalene	ND	4.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
Acetone	ND	10		µg/L	1	11/12/2014 9:29:05 PM	R22502
Bromobenzene	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
Bromodichloromethane	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
Bromoform	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
Bromomethane	ND	3.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
2-Butanone	ND	10		µg/L	1	11/12/2014 9:29:05 PM	R22502
Carbon disulfide	ND	10		µg/L	1	11/12/2014 9:29:05 PM	R22502
Carbon Tetrachloride	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
Chlorobenzene	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
Chloroethane	ND	2.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
Chloroform	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
Chloromethane	ND	3.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
2-Chlorotoluene	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
4-Chlorotoluene	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
cis-1,2-DCE	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-1
Project: Q4 2014
Collection Date: 11/10/2014 11:10:00 AM
Lab ID: 1411397-001
Matrix: AQUEOUS
Received Date: 11/11/2014 4:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
Dibromochloromethane	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
Dibromomethane	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
1,1-Dichloroethane	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
1,1-Dichloroethene	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
1,2-Dichloropropane	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
1,3-Dichloropropane	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
2,2-Dichloropropane	ND	2.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
1,1-Dichloropropene	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
Hexachlorobutadiene	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
2-Hexanone	ND	10		µg/L	1	11/12/2014 9:29:05 PM	R22502
Isopropylbenzene	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
4-Isopropyltoluene	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
4-Methyl-2-pentanone	ND	10		µg/L	1	11/12/2014 9:29:05 PM	R22502
Methylene Chloride	ND	3.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
n-Butylbenzene	ND	3.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
n-Propylbenzene	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
sec-Butylbenzene	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
Styrene	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
tert-Butylbenzene	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
trans-1,2-DCE	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
Trichlorofluoromethane	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
Vinyl chloride	ND	1.0		µg/L	1	11/12/2014 9:29:05 PM	R22502
Xylenes, Total	ND	1.5		µg/L	1	11/12/2014 9:29:05 PM	R22502

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-1
Project: Q4 2014
Collection Date: 11/10/2014 11:10:00 AM
Lab ID: 1411397-001
Matrix: AQUEOUS
Received Date: 11/11/2014 4:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Surr: 1,2-Dichloroethane-d4	96.9	70-130		%REC	1	11/12/2014 9:29:05 PM	R22502
Surr: 4-Bromofluorobenzene	98.3	70-130		%REC	1	11/12/2014 9:29:05 PM	R22502
Surr: Dibromofluoromethane	106	70-130		%REC	1	11/12/2014 9:29:05 PM	R22502
Surr: Toluene-d8	89.5	70-130		%REC	1	11/12/2014 9:29:05 PM	R22502

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-10
Project: Q4 2014
Collection Date: 11/10/2014 2:24:00 PM
Lab ID: 1411397-002
Matrix: AQUEOUS
Received Date: 11/11/2014 4:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/14/2014 11:01:42 PM	16356
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/14/2014 11:01:42 PM	16356
Surr: DNOP	98.5	59-141		%REC	1	11/14/2014 11:01:42 PM	16356
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	0.087	0.050		mg/L	1	11/12/2014 1:41:23 PM	R22501
Surr: BFB	90.9	80-120		%REC	1	11/12/2014 1:41:23 PM	R22501
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	0.20	0.10		mg/L	1	11/12/2014 1:51:13 AM	R22483
Chloride	1600	50		mg/L	100	11/18/2014 3:40:21 PM	R22624
Nitrogen, Nitrite (As N)	ND	2.0		mg/L	20	11/12/2014 2:03:38 AM	R22483
Bromide	0.69	0.10		mg/L	1	11/12/2014 1:51:13 AM	R22483
Nitrogen, Nitrate (As N)	0.22	0.10		mg/L	1	11/12/2014 1:51:13 AM	R22483
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	11/12/2014 1:51:13 AM	R22483
Sulfate	200	10		mg/L	20	11/12/2014 2:03:38 AM	R22483
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.039	0.0020		mg/L	1	11/12/2014 5:39:00 PM	R22496
Cadmium	ND	0.0020		mg/L	1	11/12/2014 5:39:00 PM	R22496
Calcium	39	1.0		mg/L	1	11/12/2014 5:39:00 PM	R22496
Chromium	ND	0.0060		mg/L	1	11/12/2014 5:39:00 PM	R22496
Copper	ND	0.0060		mg/L	1	11/12/2014 5:39:00 PM	R22496
Iron	ND	0.020		mg/L	1	11/12/2014 5:39:00 PM	R22496
Magnesium	5.3	1.0		mg/L	1	11/12/2014 5:39:00 PM	R22496
Manganese	0.0099	0.0020		mg/L	1	11/12/2014 5:39:00 PM	R22496
Potassium	1.1	1.0		mg/L	1	11/12/2014 5:39:00 PM	R22496
Silver	ND	0.0050		mg/L	1	11/12/2014 5:39:00 PM	R22496
Sodium	430	5.0		mg/L	5	11/12/2014 5:44:48 PM	R22496
Zinc	0.038	0.010		mg/L	1	11/12/2014 5:39:00 PM	R22496
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.082	0.0020		mg/L	1	11/16/2014 6:10:47 PM	16396
Cadmium	ND	0.0020		mg/L	1	11/16/2014 6:10:47 PM	16396
Chromium	ND	0.0060		mg/L	1	11/16/2014 6:10:47 PM	16396
Copper	ND	0.0060		mg/L	1	11/16/2014 6:10:47 PM	16396
Iron	ND	0.020		mg/L	1	11/16/2014 6:10:47 PM	16396
Manganese	0.18	0.0020	*	mg/L	1	11/16/2014 6:10:47 PM	16396
Silver	ND	0.0050		mg/L	1	11/16/2014 6:10:47 PM	16396
Zinc	ND	0.010		mg/L	1	11/16/2014 6:10:47 PM	16396
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-10
Project: Q4 2014
Collection Date: 11/10/2014 2:24:00 PM
Lab ID: 1411397-002
Matrix: AQUEOUS
Received Date: 11/11/2014 4:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	11/24/2014 4:30:41 PM	R22774
Lead	ND	0.010		mg/L	10	11/24/2014 4:30:41 PM	R22774
Selenium	0.013	0.010		mg/L	10	11/24/2014 4:30:41 PM	R22774
Uranium	0.057	0.010	*	mg/L	10	11/24/2014 4:30:41 PM	R22774
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	11/20/2014 12:47:22 PM	16396
Lead	ND	0.0010		mg/L	1	11/18/2014 4:52:28 PM	16396
Selenium	ND	0.020		mg/L	20	11/20/2014 1:19:29 PM	16396
Uranium	0.066	0.0050	*	mg/L	5	11/20/2014 12:47:22 PM	16396
EPA METHOD 245.1: MERCURY						Analyst:	**JLF**
Mercury	ND	0.00020		mg/L	1	11/19/2014 12:40:08 PM	16435
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
Toluene	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
Ethylbenzene	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
Methyl tert-butyl ether (MTBE)	98	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
Naphthalene	ND	2.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
1-Methylnaphthalene	ND	4.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
2-Methylnaphthalene	ND	4.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
Acetone	ND	10		µg/L	1	11/12/2014 11:28:09 PM	R22502
Bromobenzene	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
Bromodichloromethane	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
Bromoform	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
Bromomethane	ND	3.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
2-Butanone	ND	10		µg/L	1	11/12/2014 11:28:09 PM	R22502
Carbon disulfide	ND	10		µg/L	1	11/12/2014 11:28:09 PM	R22502
Carbon Tetrachloride	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
Chlorobenzene	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
Chloroethane	ND	2.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
Chloroform	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
Chloromethane	ND	3.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
2-Chlorotoluene	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
4-Chlorotoluene	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
cis-1,2-DCE	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-10
Project: Q4 2014
Collection Date: 11/10/2014 2:24:00 PM
Lab ID: 1411397-002
Matrix: AQUEOUS
Received Date: 11/11/2014 4:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
Dibromochloromethane	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
Dibromomethane	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
1,1-Dichloroethane	1.3	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
1,1-Dichloroethene	1.7	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
1,2-Dichloropropane	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
1,3-Dichloropropane	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
2,2-Dichloropropane	ND	2.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
1,1-Dichloropropene	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
Hexachlorobutadiene	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
2-Hexanone	ND	10		µg/L	1	11/12/2014 11:28:09 PM	R22502
Isopropylbenzene	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
4-Isopropyltoluene	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
4-Methyl-2-pentanone	ND	10		µg/L	1	11/12/2014 11:28:09 PM	R22502
Methylene Chloride	ND	3.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
n-Butylbenzene	ND	3.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
n-Propylbenzene	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
sec-Butylbenzene	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
Styrene	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
tert-Butylbenzene	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
trans-1,2-DCE	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
Trichlorofluoromethane	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
Vinyl chloride	ND	1.0		µg/L	1	11/12/2014 11:28:09 PM	R22502
Xylenes, Total	ND	1.5		µg/L	1	11/12/2014 11:28:09 PM	R22502

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-10
Project: Q4 2014
Collection Date: 11/10/2014 2:24:00 PM
Lab ID: 1411397-002
Matrix: AQUEOUS
Received Date: 11/11/2014 4:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Surr: 1,2-Dichloroethane-d4	95.2	70-130		%REC	1	11/12/2014 11:28:09 PM	R22502
Surr: 4-Bromofluorobenzene	96.5	70-130		%REC	1	11/12/2014 11:28:09 PM	R22502
Surr: Dibromofluoromethane	100	70-130		%REC	1	11/12/2014 11:28:09 PM	R22502
Surr: Toluene-d8	97.2	70-130		%REC	1	11/12/2014 11:28:09 PM	R22502

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411397**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22496** RunNo: **22496**
Prep Date: Analysis Date: **11/12/2014** SeqNo: **663366** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22496** RunNo: **22496**
Prep Date: Analysis Date: **11/12/2014** SeqNo: **663367** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.6	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.3	85	115			
Calcium	50	1.0	50.00	0	101	85	115			
Chromium	0.48	0.0060	0.5000	0	95.8	85	115			
Copper	0.47	0.0060	0.5000	0	94.2	85	115			
Iron	0.48	0.020	0.5000	0	95.5	85	115			
Magnesium	50	1.0	50.00	0	99.8	85	115			
Manganese	0.46	0.0020	0.5000	0	92.3	85	115			
Potassium	48	1.0	50.00	0	95.0	85	115			
Silver	0.10	0.0050	0.1000	0	103	85	115			
Sodium	49	1.0	50.00	0	97.5	85	115			
Zinc	0.49	0.010	0.5000	0	97.2	85	115			

Sample ID **1411397-002FMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **OW-10** Batch ID: **R22496** RunNo: **22496**
Prep Date: Analysis Date: **11/12/2014** SeqNo: **663680** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.52	0.0020	0.5000	0.03905	95.8	70	130			
Cadmium	0.49	0.0020	0.5000	0	97.7	70	130			
Calcium	87	1.0	50.00	39.46	95.6	70	130			
Chromium	0.48	0.0060	0.5000	0	96.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411397**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **1411397-002FMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **OW-10** Batch ID: **R22496** RunNo: **22496**
Prep Date: Analysis Date: **11/12/2014** SeqNo: **663680** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.53	0.0060	0.5000	0	106	70	130			
Iron	0.48	0.020	0.5000	0	96.0	70	130			
Magnesium	55	1.0	50.00	5.278	100	70	130			
Manganese	0.47	0.0020	0.5000	0.009920	92.6	70	130			
Potassium	49	1.0	50.00	1.055	96.5	70	130			
Silver	0.096	0.0050	0.1000	0	95.5	70	130			
Zinc	0.53	0.010	0.5000	0.03754	97.6	70	130			

Sample ID **1411397-002FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **OW-10** Batch ID: **R22496** RunNo: **22496**
Prep Date: Analysis Date: **11/12/2014** SeqNo: **663681** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.52	0.0020	0.5000	0.03905	95.3	70	130	0.530	20	
Cadmium	0.48	0.0020	0.5000	0	96.2	70	130	1.60	20	
Calcium	86	1.0	50.00	39.46	93.9	70	130	0.969	20	
Chromium	0.48	0.0060	0.5000	0	96.3	70	130	0.377	20	
Copper	0.52	0.0060	0.5000	0	105	70	130	1.04	20	
Iron	0.47	0.020	0.5000	0	94.8	70	130	1.26	20	
Magnesium	55	1.0	50.00	5.278	100	70	130	0.163	20	
Manganese	0.47	0.0020	0.5000	0.009920	92.1	70	130	0.585	20	
Potassium	49	1.0	50.00	1.055	96.7	70	130	0.186	20	
Silver	0.097	0.0050	0.1000	0	97.2	70	130	1.80	20	
Zinc	0.53	0.010	0.5000	0.03754	98.0	70	130	0.338	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411397**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB-16396** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **16396** RunNo: **22599**
Prep Date: **11/14/2014** Analysis Date: **11/16/2014** SeqNo: **666155** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-16396** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **16396** RunNo: **22599**
Prep Date: **11/14/2014** Analysis Date: **11/16/2014** SeqNo: **666156** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.7	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.9	85	115			
Chromium	0.48	0.0060	0.5000	0	96.9	85	115			
Copper	0.49	0.0060	0.5000	0	98.0	85	115			
Iron	0.48	0.020	0.5000	0	96.3	85	115			
Manganese	0.47	0.0020	0.5000	0	94.3	85	115			
Silver	0.11	0.0050	0.1000	0	106	85	115			
Zinc	0.50	0.010	0.5000	0	99.6	85	115			

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411397**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22589** RunNo: **22589**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **665959** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.0	85	115			
Selenium	0.023	0.0010	0.02500	0	93.9	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22589** RunNo: **22589**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **665960** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	101	85	115			
Selenium	0.026	0.0010	0.02500	0	103	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22589** RunNo: **22589**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **665963** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22589** RunNo: **22589**
Prep Date: Analysis Date: **11/17/2014** SeqNo: **665964** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22774** RunNo: **22774**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672122** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	92.5	85	115			
Lead	0.024	0.0010	0.02500	0	94.4	85	115			
Selenium	0.022	0.0010	0.02500	0	89.7	85	115			
Uranium	0.024	0.0010	0.02500	0	95.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411397**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22774** RunNo: **22774**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672123** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.3	85	115			
Lead	0.024	0.0010	0.02500	0	97.3	85	115			
Selenium	0.024	0.0010	0.02500	0	95.2	85	115			
Uranium	0.024	0.0010	0.02500	0	94.8	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22774** RunNo: **22774**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672124** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22774** RunNo: **22774**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672125** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411397**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LLLCS-16396** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **16396** RunNo: **22609**
Prep Date: **11/14/2014** Analysis Date: **11/18/2014** SeqNo: **666764** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.6	85	115			
Lead	0.026	0.0010	0.02500	0	103	85	115			
Selenium	0.023	0.0010	0.02500	0	93.2	85	115			
Uranium	0.026	0.0010	0.02500	0	104	85	115			

Sample ID **MB-16396** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **16396** RunNo: **22609**
Prep Date: **11/14/2014** Analysis Date: **11/18/2014** SeqNo: **666766** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411397**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**MB-16435**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**						
Client ID:	**PBW**	Batch ID:	**16435**	RunNo:	**22633**						
Prep Date:	**11/18/2014**	Analysis Date:	**11/19/2014**	SeqNo:	**667607**	Units:	**mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		ND	0.00020								

Sample ID	**LCS-16435**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**						
Client ID:	**LCSW**	Batch ID:	**16435**	RunNo:	**22633**						
Prep Date:	**11/18/2014**	Analysis Date:	**11/19/2014**	SeqNo:	**667608**	Units:	**mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.0054	0.00020	0.005000	0	107	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411397**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22483** RunNo: **22483**
Prep Date: Analysis Date: **11/11/2014** SeqNo: **662860** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R22483** RunNo: **22483**
Prep Date: Analysis Date: **11/11/2014** SeqNo: **662861** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	101	90	110			
Chloride	4.8	0.50	5.000	0	96.7	90	110			
Nitrogen, Nitrite (As N)	0.97	0.10	1.000	0	96.7	90	110			
Bromide	2.5	0.10	2.500	0	98.5	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	101	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	98.0	90	110			
Sulfate	9.9	0.50	10.00	0	99.4	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411397**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**MB-16356**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Diesel Range**					
Client ID:	**PBW**	Batch ID:	**16356**	RunNo:	**22538**					
Prep Date:	**11/12/2014**	Analysis Date:	**11/14/2014**	SeqNo:	**665412**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.2		1.000		122	59	141			

Sample ID	**LCS-16356**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Diesel Range**					
Client ID:	**LCSW**	Batch ID:	**16356**	RunNo:	**22538**					
Prep Date:	**11/12/2014**	Analysis Date:	**11/14/2014**	SeqNo:	**665425**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.0	1.0	5.000	0	121	69.7	142			
Surr: DNOP	0.73		0.5000		145	59	141			S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411397**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**PBW**	Batch ID:	**R22501**	RunNo:	**22501**				
Prep Date:		Analysis Date:	**11/12/2014**	SeqNo:	**663458**	Units:	**mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		90.3	80	120			

Sample ID	**2.5UG GRO LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**				
Client ID:	**LCSW**	Batch ID:	**R22501**	RunNo:	**22501**				
Prep Date:		Analysis Date:	**11/12/2014**	SeqNo:	**663459**	Units:	**mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	91.3	80	120			
Surr: BFB	19		20.00		92.7	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411397**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R22502**	RunNo: **22502**			
Prep Date:	Analysis Date: **11/12/2014**	SeqNo: **663504**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411397**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **5mL-rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22502** RunNo: **22502**
Prep Date: Analysis Date: **11/12/2014** SeqNo: **663504** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.4		10.00		93.6	70	130			
Surr: 4-Bromofluorobenzene	9.0		10.00		90.3	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	10		10.00		99.6	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22502** RunNo: **22502**
Prep Date: Analysis Date: **11/12/2014** SeqNo: **663506** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	112	70	130			
Toluene	22	1.0	20.00	0	112	80	120			
Chlorobenzene	20	1.0	20.00	0	101	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411397**
05-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **100ng lcs**	SampType: **LCS**		TestCode: **EPA Method 8260B: VOLATILES**		
Client ID: **LCSW**	Batch ID: **R22502**		RunNo: **22502**		
Prep Date:	Analysis Date: **11/12/2014**		SeqNo: **663506**	Units: **µg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	23	1.0	20.00	0	117	82.6	131			
Trichloroethene (TCE)	21	1.0	20.00	0	104	70	130			
Surr: 1,2-Dichloroethane-d4	9.2		10.00		91.8	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.3	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.5		10.00		95.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

ENVIRONMENTAL ANALYSIS LABORATORY

Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1411397 RcptNo: 1

Received by/date: CS 11/11/14

Logged By: Celina Sessa 11/11/2014 4:23:00 PM Celina Sessa

Completed By: Celina Sessa 11/11/2014 4:38:35 PM Celina Sessa

Reviewed By: CS 11/11/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 4 (<2 or >12 unless noted)
Adjusted? —
Checked by: AT 11/12/14

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

Q4 2014

Project #:

OW-1,-10

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0 °C

HALL ENVIRONME
ANALYSIS LABOR

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1411397	8260 + MTBE	8015B extended	WQCC Metals - total	WQCC Metals - dissolved (filtered)	Major cations/anions						
		QS	11/4/14														
11-10-14	1110	Aq	OW-1	10		-001	X	X	X	X	X						
11-10-14	1424	↓	OW-10	10		-002	X	X	X	X	X						
~~11-10-14~~			~~TB-111014~~	~~3~~			~~X~~										

Date:	Time:	Relinquished by:	Received by:	Date	Time
11-11-14	1030	Pam Landers		11-11-14	214
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 21, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: Q1-2014 Groundwater Sampling OrderNo.: 1403358

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 7 sample(s) on 3/7/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1403358**
Date Reported: **3/21/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-13
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/7/2014 11:29:00 AM
Lab ID: 1403358-001
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.019	0.0020		mg/L	1	3/13/2014 1:14:02 PM	R17289
Cadmium	ND	0.0020		mg/L	1	3/13/2014 1:14:02 PM	R17289
Chromium	ND	0.0060		mg/L	1	3/13/2014 1:14:02 PM	R17289
Copper	ND	0.0060		mg/L	1	3/13/2014 1:14:02 PM	R17289
Iron	ND	0.020		mg/L	1	3/13/2014 1:14:02 PM	R17289
Manganese	0.020	0.0020		mg/L	1	3/13/2014 1:14:02 PM	R17289
Silver	ND	0.0050		mg/L	1	3/13/2014 1:14:02 PM	R17289
Zinc	0.017	0.010		mg/L	1	3/13/2014 1:14:02 PM	R17289
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.020	0.0020		mg/L	1	3/13/2014 5:16:21 PM	12123
Cadmium	ND	0.0020		mg/L	1	3/13/2014 5:16:21 PM	12123
Chromium	ND	0.0060		mg/L	1	3/13/2014 5:16:21 PM	12123
Copper	ND	0.0060		mg/L	1	3/13/2014 5:16:21 PM	12123
Iron	ND	0.020		mg/L	1	3/13/2014 5:16:21 PM	12123
Manganese	0.023	0.0020		mg/L	1	3/13/2014 5:16:21 PM	12123
Silver	ND	0.0050		mg/L	1	3/13/2014 5:16:21 PM	12123
Zinc	ND	0.010		mg/L	1	3/13/2014 5:16:21 PM	12123
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0010		mg/L	1	3/19/2014 2:03:19 PM	R17423
Lead	ND	0.0010		mg/L	1	3/18/2014 2:21:25 PM	R17401
Selenium	ND	0.0010		mg/L	1	3/19/2014 2:03:19 PM	R17423
Uranium	0.018	0.0010		mg/L	1	3/18/2014 2:21:25 PM	R17401
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0011	0.0010		mg/L	1	3/17/2014 3:37:52 PM	12123
Lead	ND	0.0010		mg/L	1	3/17/2014 3:37:52 PM	12123
Selenium	ND	0.0010		mg/L	1	3/17/2014 3:37:52 PM	12123
Uranium	0.018	0.0010		mg/L	1	3/17/2014 3:37:52 PM	12123
EPA METHOD 245.1: MERCURY						Analyst:	**JML**
Mercury	ND	0.00020		mg/L	1	3/12/2014 1:03:52 PM	12133
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
Toluene	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
Ethylbenzene	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
Methyl tert-butyl ether (MTBE)	23	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-13
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/7/2014 11:29:00 AM
Lab ID: 1403358-001
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
Naphthalene	ND	2.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
1-Methylnaphthalene	ND	4.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
2-Methylnaphthalene	ND	4.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
Acetone	ND	10		µg/L	1	3/12/2014 7:09:24 PM	R17267
Bromobenzene	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
Bromodichloromethane	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
Bromoform	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
Bromomethane	ND	3.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
2-Butanone	ND	10		µg/L	1	3/12/2014 7:09:24 PM	R17267
Carbon disulfide	ND	10		µg/L	1	3/12/2014 7:09:24 PM	R17267
Carbon Tetrachloride	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
Chlorobenzene	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
Chloroethane	ND	2.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
Chloroform	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
Chloromethane	ND	3.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
2-Chlorotoluene	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
4-Chlorotoluene	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
cis-1,2-DCE	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
Dibromochloromethane	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
Dibromomethane	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
1,1-Dichloroethane	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
1,1-Dichloroethene	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
1,2-Dichloropropane	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
1,3-Dichloropropane	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
2,2-Dichloropropane	ND	2.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
1,1-Dichloropropene	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
Hexachlorobutadiene	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
2-Hexanone	ND	10		µg/L	1	3/12/2014 7:09:24 PM	R17267
Isopropylbenzene	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
4-Isopropyltoluene	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
4-Methyl-2-pentanone	ND	10		µg/L	1	3/12/2014 7:09:24 PM	R17267
Methylene Chloride	ND	3.0		µg/L	1	3/12/2014 7:09:24 PM	R17267

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-13
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/7/2014 11:29:00 AM
Lab ID: 1403358-001
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
n-Butylbenzene	ND	3.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
n-Propylbenzene	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
sec-Butylbenzene	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
Styrene	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
tert-Butylbenzene	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
trans-1,2-DCE	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
Trichlorofluoromethane	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
Vinyl chloride	ND	1.0		µg/L	1	3/12/2014 7:09:24 PM	R17267
Xylenes, Total	ND	1.5		µg/L	1	3/12/2014 7:09:24 PM	R17267
Surr: 1,2-Dichloroethane-d4	100	70-130		%REC	1	3/12/2014 7:09:24 PM	R17267
Surr: 4-Bromofluorobenzene	98.3	70-130		%REC	1	3/12/2014 7:09:24 PM	R17267
Surr: Dibromofluoromethane	99.7	70-130		%REC	1	3/12/2014 7:09:24 PM	R17267
Surr: Toluene-d8	96.4	70-130		%REC	1	3/12/2014 7:09:24 PM	R17267

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-14
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/7/2014 10:32:00 AM
Lab ID: 1403358-002
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	1.6	0.010		mg/L	5	3/13/2014 1:24:38 PM	R17289
Cadmium	ND	0.0020		mg/L	1	3/13/2014 1:23:05 PM	R17289
Chromium	ND	0.0060		mg/L	1	3/13/2014 1:23:05 PM	R17289
Copper	ND	0.0060		mg/L	1	3/13/2014 1:23:05 PM	R17289
Iron	4.2	0.10	*	mg/L	5	3/13/2014 1:24:38 PM	R17289
Manganese	2.1	0.010	*	mg/L	5	3/13/2014 1:24:38 PM	R17289
Silver	ND	0.0050		mg/L	1	3/13/2014 1:23:05 PM	R17289
Zinc	ND	0.010		mg/L	1	3/13/2014 1:23:05 PM	R17289
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	1.7	0.010		mg/L	5	3/13/2014 5:21:47 PM	12123
Cadmium	ND	0.0020		mg/L	1	3/13/2014 5:20:03 PM	12123
Chromium	ND	0.0060		mg/L	1	3/13/2014 5:20:03 PM	12123
Copper	ND	0.0060		mg/L	1	3/13/2014 5:20:03 PM	12123
Iron	4.7	0.10	*	mg/L	5	3/13/2014 5:21:47 PM	12123
Manganese	2.4	0.010	*	mg/L	5	3/13/2014 5:21:47 PM	12123
Silver	ND	0.0050		mg/L	1	3/13/2014 5:20:03 PM	12123
Zinc	ND	0.010		mg/L	1	3/13/2014 5:20:03 PM	12123
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0084	0.0050		mg/L	5	3/19/2014 2:06:05 PM	R17423
Lead	ND	0.0010		mg/L	1	3/18/2014 2:26:08 PM	R17401
Selenium	ND	0.0050		mg/L	5	3/19/2014 2:06:05 PM	R17423
Uranium	0.0097	0.0010		mg/L	1	3/18/2014 2:26:08 PM	R17401
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.010	0.0050	*	mg/L	5	3/17/2014 5:13:22 PM	12123
Lead	ND	0.0010		mg/L	1	3/17/2014 3:48:28 PM	12123
Selenium	0.010	0.0050		mg/L	5	3/17/2014 5:13:22 PM	12123
Uranium	0.0097	0.0010		mg/L	1	3/17/2014 3:48:28 PM	12123
EPA METHOD 245.1: MERCURY						Analyst:	**JML**
Mercury	ND	0.00020		mg/L	1	3/12/2014 1:05:40 PM	12133
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	4000	50		µg/L	50	3/12/2014 8:35:20 PM	R17267
Toluene	26	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
Ethylbenzene	140	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
Methyl tert-butyl ether (MTBE)	1100	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
1,2,4-Trimethylbenzene	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
1,3,5-Trimethylbenzene	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-14
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/7/2014 10:32:00 AM
Lab ID: 1403358-002
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
Naphthalene	ND	20		µg/L	10	3/12/2014 10:30:03 PM	R17267
1-Methylnaphthalene	ND	40		µg/L	10	3/12/2014 10:30:03 PM	R17267
2-Methylnaphthalene	ND	40		µg/L	10	3/12/2014 10:30:03 PM	R17267
Acetone	ND	100		µg/L	10	3/12/2014 10:30:03 PM	R17267
Bromobenzene	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
Bromodichloromethane	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
Bromoform	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
Bromomethane	ND	30		µg/L	10	3/12/2014 10:30:03 PM	R17267
2-Butanone	ND	100		µg/L	10	3/12/2014 10:30:03 PM	R17267
Carbon disulfide	ND	100		µg/L	10	3/12/2014 10:30:03 PM	R17267
Carbon Tetrachloride	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
Chlorobenzene	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
Chloroethane	ND	20		µg/L	10	3/12/2014 10:30:03 PM	R17267
Chloroform	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
Chloromethane	ND	30		µg/L	10	3/12/2014 10:30:03 PM	R17267
2-Chlorotoluene	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
4-Chlorotoluene	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
cis-1,2-DCE	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
cis-1,3-Dichloropropene	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	3/12/2014 10:30:03 PM	R17267
Dibromochloromethane	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
Dibromomethane	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
1,2-Dichlorobenzene	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
1,3-Dichlorobenzene	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
1,4-Dichlorobenzene	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
Dichlorodifluoromethane	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
1,1-Dichloroethane	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
1,1-Dichloroethene	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
1,2-Dichloropropane	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
1,3-Dichloropropane	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
2,2-Dichloropropane	ND	20		µg/L	10	3/12/2014 10:30:03 PM	R17267
1,1-Dichloropropene	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
Hexachlorobutadiene	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
2-Hexanone	ND	100		µg/L	10	3/12/2014 10:30:03 PM	R17267
Isopropylbenzene	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
4-Isopropyltoluene	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
4-Methyl-2-pentanone	ND	100		µg/L	10	3/12/2014 10:30:03 PM	R17267
Methylene Chloride	ND	30		µg/L	10	3/12/2014 10:30:03 PM	R17267

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-14
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/7/2014 10:32:00 AM
Lab ID: 1403358-002
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
n-Butylbenzene	ND	30		µg/L	10	3/12/2014 10:30:03 PM	R17267
n-Propylbenzene	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
sec-Butylbenzene	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
Styrene	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
tert-Butylbenzene	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	3/12/2014 10:30:03 PM	R17267
Tetrachloroethene (PCE)	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
trans-1,2-DCE	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
trans-1,3-Dichloropropene	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
1,2,3-Trichlorobenzene	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
1,2,4-Trichlorobenzene	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
1,1,1-Trichloroethane	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
1,1,2-Trichloroethane	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
Trichloroethene (TCE)	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
Trichlorofluoromethane	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
1,2,3-Trichloropropane	ND	20		µg/L	10	3/12/2014 10:30:03 PM	R17267
Vinyl chloride	ND	10		µg/L	10	3/12/2014 10:30:03 PM	R17267
Xylenes, Total	32	15		µg/L	10	3/12/2014 10:30:03 PM	R17267
Surr: 1,2-Dichloroethane-d4	101	70-130		%REC	10	3/12/2014 10:30:03 PM	R17267
Surr: 4-Bromofluorobenzene	94.2	70-130		%REC	10	3/12/2014 10:30:03 PM	R17267
Surr: Dibromofluoromethane	99.2	70-130		%REC	10	3/12/2014 10:30:03 PM	R17267
Surr: Toluene-d8	95.9	70-130		%REC	10	3/12/2014 10:30:03 PM	R17267

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-29
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/7/2014 9:51:00 AM
Lab ID: 1403358-003
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.059	0.0020		mg/L	1	3/13/2014 1:26:32 PM	R17289
Cadmium	ND	0.0020		mg/L	1	3/13/2014 1:26:32 PM	R17289
Chromium	ND	0.0060		mg/L	1	3/13/2014 1:26:32 PM	R17289
Copper	ND	0.0060		mg/L	1	3/13/2014 1:26:32 PM	R17289
Iron	0.28	0.020		mg/L	1	3/13/2014 1:26:32 PM	R17289
Manganese	0.29	0.0020	*	mg/L	1	3/13/2014 1:26:32 PM	R17289
Silver	ND	0.0050		mg/L	1	3/13/2014 1:26:32 PM	R17289
Zinc	ND	0.010		mg/L	1	3/13/2014 1:26:32 PM	R17289
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.063	0.0020		mg/L	1	3/13/2014 5:32:13 PM	12123
Cadmium	ND	0.0020		mg/L	1	3/13/2014 5:32:13 PM	12123
Chromium	ND	0.0060		mg/L	1	3/13/2014 5:32:13 PM	12123
Copper	ND	0.0060		mg/L	1	3/13/2014 5:32:13 PM	12123
Iron	0.40	0.020	*	mg/L	1	3/13/2014 5:32:13 PM	12123
Manganese	0.30	0.0020	*	mg/L	1	3/13/2014 5:32:13 PM	12123
Silver	ND	0.0050		mg/L	1	3/13/2014 5:32:13 PM	12123
Zinc	ND	0.010		mg/L	1	3/13/2014 5:32:13 PM	12123
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	3/19/2014 2:14:21 PM	R17423
Lead	ND	0.0010		mg/L	1	3/18/2014 2:30:51 PM	R17401
Selenium	ND	0.0050		mg/L	5	3/19/2014 2:14:21 PM	R17423
Uranium	0.053	0.0050	*	mg/L	5	3/19/2014 2:14:21 PM	R17423
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0014	0.0010		mg/L	1	3/17/2014 4:04:25 PM	12123
Lead	ND	0.0010		mg/L	1	3/17/2014 4:04:25 PM	12123
Selenium	ND	0.0050		mg/L	5	3/17/2014 5:18:41 PM	12123
Uranium	0.056	0.0050	*	mg/L	5	3/17/2014 5:18:41 PM	12123
EPA METHOD 245.1: MERCURY						Analyst:	**JML**
Mercury	ND	0.00020		mg/L	1	3/12/2014 1:07:35 PM	12133
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
Toluene	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
Ethylbenzene	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
Methyl tert-butyl ether (MTBE)	2100	100		µg/L	100	3/13/2014 12:08:50 PM	R17299
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-29
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/7/2014 9:51:00 AM
Lab ID: 1403358-003
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
Naphthalene	ND	2.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
1-Methylnaphthalene	ND	4.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
2-Methylnaphthalene	ND	4.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
Acetone	ND	10		µg/L	1	3/12/2014 11:56:15 PM	R17267
Bromobenzene	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
Bromodichloromethane	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
Bromoform	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
Bromomethane	ND	3.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
2-Butanone	ND	10		µg/L	1	3/12/2014 11:56:15 PM	R17267
Carbon disulfide	ND	10		µg/L	1	3/12/2014 11:56:15 PM	R17267
Carbon Tetrachloride	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
Chlorobenzene	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
Chloroethane	ND	2.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
Chloroform	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
Chloromethane	ND	3.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
2-Chlorotoluene	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
4-Chlorotoluene	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
cis-1,2-DCE	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
Dibromochloromethane	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
Dibromomethane	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
1,1-Dichloroethane	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
1,1-Dichloroethene	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
1,2-Dichloropropane	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
1,3-Dichloropropane	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
2,2-Dichloropropane	ND	2.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
1,1-Dichloropropene	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
Hexachlorobutadiene	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
2-Hexanone	ND	10		µg/L	1	3/12/2014 11:56:15 PM	R17267
Isopropylbenzene	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
4-Isopropyltoluene	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
4-Methyl-2-pentanone	ND	10		µg/L	1	3/12/2014 11:56:15 PM	R17267
Methylene Chloride	ND	3.0		µg/L	1	3/12/2014 11:56:15 PM	R17267

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-29
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/7/2014 9:51:00 AM
Lab ID: 1403358-003
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
n-Butylbenzene	ND	3.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
n-Propylbenzene	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
sec-Butylbenzene	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
Styrene	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
tert-Butylbenzene	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
trans-1,2-DCE	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
Trichlorofluoromethane	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
Vinyl chloride	ND	1.0		µg/L	1	3/12/2014 11:56:15 PM	R17267
Xylenes, Total	ND	1.5		µg/L	1	3/12/2014 11:56:15 PM	R17267
Surr: 1,2-Dichloroethane-d4	102	70-130		%REC	1	3/12/2014 11:56:15 PM	R17267
Surr: 4-Bromofluorobenzene	102	70-130		%REC	1	3/12/2014 11:56:15 PM	R17267
Surr: Dibromofluoromethane	102	70-130		%REC	1	3/12/2014 11:56:15 PM	R17267
Surr: Toluene-d8	93.5	70-130		%REC	1	3/12/2014 11:56:15 PM	R17267

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-30
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/7/2014 2:05:00 PM
Lab ID: 1403358-004
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.29	0.0020		mg/L	1	3/13/2014 1:30:11 PM	R17289
Cadmium	ND	0.0020		mg/L	1	3/13/2014 1:30:11 PM	R17289
Chromium	0.014	0.0060		mg/L	1	3/13/2014 1:30:11 PM	R17289
Copper	ND	0.0060		mg/L	1	3/13/2014 1:30:11 PM	R17289
Iron	7.2	0.20	*	mg/L	10	3/14/2014 3:01:55 PM	R17335
Manganese	0.18	0.0020	*	mg/L	1	3/13/2014 1:30:11 PM	R17289
Silver	ND	0.0050		mg/L	1	3/13/2014 1:30:11 PM	R17289
Zinc	0.012	0.010		mg/L	1	3/13/2014 1:30:11 PM	R17289
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	1.3	0.010		mg/L	5	3/13/2014 5:37:48 PM	12123
Cadmium	ND	0.0020		mg/L	1	3/13/2014 5:35:59 PM	12123
Chromium	0.031	0.0060		mg/L	1	3/13/2014 5:35:59 PM	12123
Copper	0.0072	0.0060		mg/L	1	3/13/2014 5:35:59 PM	12123
Iron	13	0.40	*	mg/L	20	3/14/2014 2:38:40 PM	12123
Manganese	0.71	0.0020	*	mg/L	1	3/13/2014 5:35:59 PM	12123
Silver	ND	0.0050		mg/L	1	3/13/2014 5:35:59 PM	12123
Zinc	0.029	0.010		mg/L	1	3/13/2014 5:35:59 PM	12123
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	3/19/2014 2:17:07 PM	R17423
Lead	0.0023	0.0010		mg/L	1	3/18/2014 2:35:34 PM	R17401
Selenium	ND	0.0050		mg/L	5	3/19/2014 2:17:07 PM	R17423
Uranium	0.050	0.0050	*	mg/L	5	3/19/2014 2:17:07 PM	R17423
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0033	0.0010		mg/L	1	3/17/2014 4:09:43 PM	12123
Lead	0.013	0.0010		mg/L	1	3/17/2014 4:09:43 PM	12123
Selenium	ND	0.0050		mg/L	5	3/17/2014 5:23:59 PM	12123
Uranium	0.054	0.0050	*	mg/L	5	3/17/2014 5:23:59 PM	12123
EPA METHOD 245.1: MERCURY						Analyst:	**JML**
Mercury	ND	0.00020		mg/L	1	3/12/2014 1:09:24 PM	12133
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
Toluene	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
Ethylbenzene	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
Methyl tert-butyl ether (MTBE)	2900	100		µg/L	100	3/13/2014 12:37:42 PM	R17299
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-30
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/7/2014 2:05:00 PM
Lab ID: 1403358-004
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
Naphthalene	ND	2.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
1-Methylnaphthalene	ND	4.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
2-Methylnaphthalene	ND	4.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
Acetone	ND	10		µg/L	1	3/13/2014 1:22:28 AM	R17267
Bromobenzene	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
Bromodichloromethane	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
Bromoform	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
Bromomethane	ND	3.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
2-Butanone	ND	10		µg/L	1	3/13/2014 1:22:28 AM	R17267
Carbon disulfide	ND	10		µg/L	1	3/13/2014 1:22:28 AM	R17267
Carbon Tetrachloride	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
Chlorobenzene	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
Chloroethane	ND	2.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
Chloroform	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
Chloromethane	ND	3.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
2-Chlorotoluene	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
4-Chlorotoluene	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
cis-1,2-DCE	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
Dibromochloromethane	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
Dibromomethane	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
1,1-Dichloroethane	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
1,1-Dichloroethene	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
1,2-Dichloropropane	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
1,3-Dichloropropane	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
2,2-Dichloropropane	ND	2.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
1,1-Dichloropropene	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
Hexachlorobutadiene	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
2-Hexanone	ND	10		µg/L	1	3/13/2014 1:22:28 AM	R17267
Isopropylbenzene	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
4-Isopropyltoluene	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
4-Methyl-2-pentanone	ND	10		µg/L	1	3/13/2014 1:22:28 AM	R17267
Methylene Chloride	ND	3.0		µg/L	1	3/13/2014 1:22:28 AM	R17267

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-30
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/7/2014 2:05:00 PM
Lab ID: 1403358-004
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
n-Butylbenzene	ND	3.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
n-Propylbenzene	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
sec-Butylbenzene	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
Styrene	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
tert-Butylbenzene	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
trans-1,2-DCE	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
Trichlorofluoromethane	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
Vinyl chloride	ND	1.0		µg/L	1	3/13/2014 1:22:28 AM	R17267
Xylenes, Total	ND	1.5		µg/L	1	3/13/2014 1:22:28 AM	R17267
Surr: 1,2-Dichloroethane-d4	100	70-130		%REC	1	3/13/2014 1:22:28 AM	R17267
Surr: 4-Bromofluorobenzene	97.1	70-130		%REC	1	3/13/2014 1:22:28 AM	R17267
Surr: Dibromofluoromethane	101	70-130		%REC	1	3/13/2014 1:22:28 AM	R17267
Surr: Toluene-d8	98.3	70-130		%REC	1	3/13/2014 1:22:28 AM	R17267

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group #5
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/7/2014 9:05:00 AM
Lab ID: 1403358-005
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
Toluene	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
Ethylbenzene	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
Naphthalene	ND	2.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
1-Methylnaphthalene	ND	4.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
2-Methylnaphthalene	ND	4.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
Acetone	ND	10		µg/L	1	3/13/2014 2:19:58 AM	R17267
Bromobenzene	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
Bromodichloromethane	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
Bromoform	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
Bromomethane	ND	3.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
2-Butanone	ND	10		µg/L	1	3/13/2014 2:19:58 AM	R17267
Carbon disulfide	ND	10		µg/L	1	3/13/2014 2:19:58 AM	R17267
Carbon Tetrachloride	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
Chlorobenzene	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
Chloroethane	ND	2.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
Chloroform	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
Chloromethane	ND	3.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
2-Chlorotoluene	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
4-Chlorotoluene	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
cis-1,2-DCE	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
Dibromochloromethane	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
Dibromomethane	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
1,1-Dichloroethane	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
1,1-Dichloroethene	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
1,2-Dichloropropane	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
1,3-Dichloropropane	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
2,2-Dichloropropane	ND	2.0		µg/L	1	3/13/2014 2:19:58 AM	R17267

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group #5
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/7/2014 9:05:00 AM
Lab ID: 1403358-005
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,1-Dichloropropene	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
Hexachlorobutadiene	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
2-Hexanone	ND	10		µg/L	1	3/13/2014 2:19:58 AM	R17267
Isopropylbenzene	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
4-Isopropyltoluene	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
4-Methyl-2-pentanone	ND	10		µg/L	1	3/13/2014 2:19:58 AM	R17267
Methylene Chloride	ND	3.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
n-Butylbenzene	ND	3.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
n-Propylbenzene	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
sec-Butylbenzene	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
Styrene	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
tert-Butylbenzene	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
trans-1,2-DCE	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
Trichlorofluoromethane	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
Vinyl chloride	ND	1.0		µg/L	1	3/13/2014 2:19:58 AM	R17267
Xylenes, Total	ND	1.5		µg/L	1	3/13/2014 2:19:58 AM	R17267
Surr: 1,2-Dichloroethane-d4	102	70-130		%REC	1	3/13/2014 2:19:58 AM	R17267
Surr: 4-Bromofluorobenzene	101	70-130		%REC	1	3/13/2014 2:19:58 AM	R17267
Surr: Dibromofluoromethane	101	70-130		%REC	1	3/13/2014 2:19:58 AM	R17267
Surr: Toluene-d8	102	70-130		%REC	1	3/13/2014 2:19:58 AM	R17267

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EQ Blank
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/7/2014 9:10:00 AM
Lab ID: 1403358-006
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
Toluene	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
Ethylbenzene	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
Naphthalene	ND	2.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
1-Methylnaphthalene	ND	4.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
2-Methylnaphthalene	ND	4.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
Acetone	ND	10		µg/L	1	3/13/2014 2:48:41 AM	R17267
Bromobenzene	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
Bromodichloromethane	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
Bromoform	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
Bromomethane	ND	3.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
2-Butanone	ND	10		µg/L	1	3/13/2014 2:48:41 AM	R17267
Carbon disulfide	ND	10		µg/L	1	3/13/2014 2:48:41 AM	R17267
Carbon Tetrachloride	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
Chlorobenzene	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
Chloroethane	ND	2.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
Chloroform	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
Chloromethane	ND	3.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
2-Chlorotoluene	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
4-Chlorotoluene	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
cis-1,2-DCE	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
Dibromochloromethane	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
Dibromomethane	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
1,1-Dichloroethane	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
1,1-Dichloroethene	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
1,2-Dichloropropane	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
1,3-Dichloropropane	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
2,2-Dichloropropane	ND	2.0		µg/L	1	3/13/2014 2:48:41 AM	R17267

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EQ Blank
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/7/2014 9:10:00 AM
Lab ID: 1403358-006
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,1-Dichloropropene	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
Hexachlorobutadiene	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
2-Hexanone	ND	10		µg/L	1	3/13/2014 2:48:41 AM	R17267
Isopropylbenzene	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
4-Isopropyltoluene	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
4-Methyl-2-pentanone	ND	10		µg/L	1	3/13/2014 2:48:41 AM	R17267
Methylene Chloride	ND	3.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
n-Butylbenzene	ND	3.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
n-Propylbenzene	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
sec-Butylbenzene	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
Styrene	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
tert-Butylbenzene	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
trans-1,2-DCE	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
Trichlorofluoromethane	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
Vinyl chloride	ND	1.0		µg/L	1	3/13/2014 2:48:41 AM	R17267
Xylenes, Total	ND	1.5		µg/L	1	3/13/2014 2:48:41 AM	R17267
Surr: 1,2-Dichloroethane-d4	104	70-130		%REC	1	3/13/2014 2:48:41 AM	R17267
Surr: 4-Bromofluorobenzene	97.0	70-130		%REC	1	3/13/2014 2:48:41 AM	R17267
Surr: Dibromofluoromethane	103	70-130		%REC	1	3/13/2014 2:48:41 AM	R17267
Surr: Toluene-d8	98.2	70-130		%REC	1	3/13/2014 2:48:41 AM	R17267

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Trip Blank
Project: Q1-2014 Groundwater Sampling
Collection Date:
Lab ID: 1403358-007
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
Toluene	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
Ethylbenzene	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
Naphthalene	ND	2.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
1-Methylnaphthalene	ND	4.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
2-Methylnaphthalene	ND	4.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
Acetone	ND	10		µg/L	1	3/13/2014 3:17:24 AM	R17267
Bromobenzene	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
Bromodichloromethane	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
Bromoform	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
Bromomethane	ND	3.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
2-Butanone	ND	10		µg/L	1	3/13/2014 3:17:24 AM	R17267
Carbon disulfide	ND	10		µg/L	1	3/13/2014 3:17:24 AM	R17267
Carbon Tetrachloride	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
Chlorobenzene	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
Chloroethane	ND	2.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
Chloroform	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
Chloromethane	ND	3.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
2-Chlorotoluene	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
4-Chlorotoluene	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
cis-1,2-DCE	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
Dibromochloromethane	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
Dibromomethane	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
1,1-Dichloroethane	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
1,1-Dichloroethene	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
1,2-Dichloropropane	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
1,3-Dichloropropane	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
2,2-Dichloropropane	ND	2.0		µg/L	1	3/13/2014 3:17:24 AM	R17267

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Trip Blank
Project: Q1-2014 Groundwater Sampling
Collection Date:
Lab ID: 1403358-007
Matrix: AQUEOUS
Received Date: 3/7/2014 5:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,1-Dichloropropene	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
Hexachlorobutadiene	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
2-Hexanone	ND	10		µg/L	1	3/13/2014 3:17:24 AM	R17267
Isopropylbenzene	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
4-Isopropyltoluene	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
4-Methyl-2-pentanone	ND	10		µg/L	1	3/13/2014 3:17:24 AM	R17267
Methylene Chloride	ND	3.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
n-Butylbenzene	ND	3.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
n-Propylbenzene	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
sec-Butylbenzene	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
Styrene	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
tert-Butylbenzene	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
trans-1,2-DCE	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
Trichlorofluoromethane	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
Vinyl chloride	ND	1.0		µg/L	1	3/13/2014 3:17:24 AM	R17267
Xylenes, Total	ND	1.5		µg/L	1	3/13/2014 3:17:24 AM	R17267
Surr: 1,2-Dichloroethane-d4	103	70-130		%REC	1	3/13/2014 3:17:24 AM	R17267
Surr: 4-Bromofluorobenzene	95.5	70-130		%REC	1	3/13/2014 3:17:24 AM	R17267
Surr: Dibromofluoromethane	101	70-130		%REC	1	3/13/2014 3:17:24 AM	R17267
Surr: Toluene-d8	92.9	70-130		%REC	1	3/13/2014 3:17:24 AM	R17267

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403358**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17289** RunNo: **17289**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498058** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17289** RunNo: **17289**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498059** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.9	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.4	85	115			
Chromium	0.48	0.0060	0.5000	0	96.2	85	115			
Copper	0.48	0.0060	0.5000	0	96.5	85	115			
Iron	0.48	0.020	0.5000	0	95.5	85	115			
Manganese	0.48	0.0020	0.5000	0	95.4	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Zinc	0.49	0.010	0.5000	0	97.2	85	115			

Sample ID **1403420-008AMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17289** RunNo: **17289**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498099** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	3.7	0.050	2.500	1.186	102	70	130			

Sample ID **1403420-008AMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17289** RunNo: **17289**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498100** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	3.7	0.050	2.500	1.186	99.3	70	130	1.98	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403358**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **1403477-001BMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17289** RunNo: **17289**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498102** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.55	0.020	0.5000	0.1063	88.6	70	130			

Sample ID **1403477-001BMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17289** RunNo: **17289**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498103** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.57	0.020	0.5000	0.1063	92.0	70	130	3.10	20	

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17335** RunNo: **17335**
Prep Date: Analysis Date: **3/14/2014** SeqNo: **499202** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17335** RunNo: **17335**
Prep Date: Analysis Date: **3/14/2014** SeqNo: **499203** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.50	0.020	0.5000	0	99.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403358**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **1403307-002DMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC** Batch ID: **12123** RunNo: **17291**
Prep Date: **3/11/2014** Analysis Date: **3/13/2014** SeqNo: **498216** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.57	0.0020	0.5000	0.07097	99.3	70	130			
Cadmium	0.49	0.0020	0.5000	0	97.7	70	130			
Chromium	0.49	0.0060	0.5000	0	97.9	70	130			
Copper	0.51	0.0060	0.5000	0	101	70	130			
Iron	0.53	0.020	0.5000	0	106	70	130			
Manganese	0.58	0.0020	0.5000	0.08615	99.0	70	130			
Silver	0.094	0.0050	0.1000	0	94.4	70	130			
Zinc	0.51	0.010	0.5000	0	102	70	130			

Sample ID **1403307-002DMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC** Batch ID: **12123** RunNo: **17291**
Prep Date: **3/11/2014** Analysis Date: **3/13/2014** SeqNo: **498217** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.57	0.0020	0.5000	0.07097	99.2	70	130	0.104	20	
Cadmium	0.49	0.0020	0.5000	0	97.2	70	130	0.507	20	
Chromium	0.48	0.0060	0.5000	0	96.6	70	130	1.24	20	
Copper	0.51	0.0060	0.5000	0	101	70	130	0.0316	20	
Iron	0.53	0.020	0.5000	0	105	70	130	0.220	20	
Manganese	0.58	0.0020	0.5000	0.08615	98.7	70	130	0.250	20	
Silver	0.091	0.0050	0.1000	0	90.8	70	130	3.86	20	
Zinc	0.50	0.010	0.5000	0	101	70	130	0.940	20	

Sample ID **1403354-001DMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC** Batch ID: **12123** RunNo: **17291**
Prep Date: **3/11/2014** Analysis Date: **3/13/2014** SeqNo: **498233** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.64	0.0020	0.5000	0.1369	101	70	130			
Cadmium	0.50	0.0020	0.5000	0	99.1	70	130			
Chromium	0.49	0.0060	0.5000	0	98.1	70	130			
Copper	0.52	0.0060	0.5000	0	103	70	130			
Iron	0.89	0.020	0.5000	0.2846	121	70	130			
Manganese	0.62	0.0020	0.5000	0.09476	105	70	130			
Silver	0.096	0.0050	0.1000	0	96.0	70	130			
Zinc	0.52	0.010	0.5000	0.01156	102	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403358**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **1403354-001DMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC** Batch ID: **12123** RunNo: **17291**
Prep Date: **3/11/2014** Analysis Date: **3/13/2014** SeqNo: **498234** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.63	0.0020	0.5000	0.1369	98.2	70	130	2.12	20	
Cadmium	0.48	0.0020	0.5000	0	97.0	70	130	2.18	20	
Chromium	0.49	0.0060	0.5000	0	97.3	70	130	0.895	20	
Copper	0.50	0.0060	0.5000	0	101	70	130	2.22	20	
Iron	0.88	0.020	0.5000	0.2846	120	70	130	0.786	20	
Manganese	0.59	0.0020	0.5000	0.09476	99.5	70	130	4.36	20	
Silver	0.095	0.0050	0.1000	0	94.6	70	130	1.46	20	
Zinc	0.52	0.010	0.5000	0.01156	101	70	130	0.729	20	

Sample ID **MB-12123** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **12123** RunNo: **17291**
Prep Date: **3/11/2014** Analysis Date: **3/13/2014** SeqNo: **498282** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-12123** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **12123** RunNo: **17291**
Prep Date: **3/11/2014** Analysis Date: **3/13/2014** SeqNo: **498283** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.7	85	115			
Cadmium	0.49	0.0020	0.5000	0	99.0	85	115			
Chromium	0.49	0.0060	0.5000	0	97.9	85	115			
Copper	0.49	0.0060	0.5000	0	98.3	85	115			
Iron	0.53	0.020	0.5000	0	106	85	115			
Manganese	0.50	0.0020	0.5000	0	99.2	85	115			
Silver	0.098	0.0050	0.1000	0	98.2	85	115			
Zinc	0.51	0.010	0.5000	0	103	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403358**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **1403420-008AMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17401** RunNo: **17401**
Prep Date: Analysis Date: **3/18/2014** SeqNo: **501189** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.026	0.0010	0.02500	0.0003984	104	70	130			

Sample ID **1403420-008AMSD** SampType: **MSD** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17401** RunNo: **17401**
Prep Date: Analysis Date: **3/18/2014** SeqNo: **501190** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.027	0.0010	0.02500	0.0003984	105	70	130	0.894	20	

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17401** RunNo: **17401**
Prep Date: Analysis Date: **3/18/2014** SeqNo: **501192** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.025	0.0010	0.02500	0	102	85	115			
Uranium	0.025	0.0010	0.02500	0	100	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17401** RunNo: **17401**
Prep Date: Analysis Date: **3/18/2014** SeqNo: **501193** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.028	0.0010	0.02500	0	110	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17401** RunNo: **17401**
Prep Date: Analysis Date: **3/18/2014** SeqNo: **501194** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17401** RunNo: **17401**
Prep Date: Analysis Date: **3/18/2014** SeqNo: **501195** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403358**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **1403273-002AMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17423** RunNo: **17423**
Prep Date: Analysis Date: **3/19/2014** SeqNo: **501959** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.12	0.0050	0.1250	0.003578	94.3	70	130			

Sample ID **1403420-008AMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17423** RunNo: **17423**
Prep Date: Analysis Date: **3/19/2014** SeqNo: **501996** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.13	0.0050	0.1250	0.0009073	101	70	130			
Selenium	0.13	0.0050	0.1250	0.001602	99.9	70	130			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17423** RunNo: **17423**
Prep Date: Analysis Date: **3/19/2014** SeqNo: **502016** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.7	85	115			
Selenium	0.024	0.0010	0.02500	0	97.2	85	115			
Uranium	0.025	0.0010	0.02500	0	98.9	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17423** RunNo: **17423**
Prep Date: Analysis Date: **3/19/2014** SeqNo: **502017** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.1	85	115			
Selenium	0.024	0.0010	0.02500	0	97.2	85	115			
Uranium	0.025	0.0010	0.02500	0	99.8	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17423** RunNo: **17423**
Prep Date: Analysis Date: **3/19/2014** SeqNo: **502018** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403358**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**			
Client ID: **PBW**	Batch ID: **R17423**	RunNo: **17423**			
Prep Date:	Analysis Date: **3/19/2014**	SeqNo: **502019**	Units: **mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403358**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **1403307-001DMSDL** SampType: **MSDLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **12123** RunNo: **17381**
Prep Date: **3/11/2014** Analysis Date: **3/17/2014** SeqNo: **500678** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.071	0.0050	0.02500	0.04223	114	70	130	2.87	20	

Sample ID **1403307-001DMSDL** SampType: **MSDLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **12123** RunNo: **17381**
Prep Date: **3/11/2014** Analysis Date: **3/17/2014** SeqNo: **500679** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0.0009814	98.2	70	130	0.481	20	
Lead	0.026	0.0010	0.02500	0.0005163	101	70	130	1.78	20	
Selenium	0.026	0.0010	0.02500	0.003365	91.7	70	130	2.65	20	

Sample ID **1403307-001DMSLL** SampType: **MSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **12123** RunNo: **17381**
Prep Date: **3/11/2014** Analysis Date: **3/17/2014** SeqNo: **500680** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.069	0.0050	0.02500	0.04223	106	70	130			

Sample ID **1403307-001DMSLL** SampType: **MSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **12123** RunNo: **17381**
Prep Date: **3/11/2014** Analysis Date: **3/17/2014** SeqNo: **500681** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0.0009814	97.8	70	130			
Lead	0.025	0.0010	0.02500	0.0005163	99.5	70	130			
Selenium	0.026	0.0010	0.02500	0.003365	88.9	70	130			

Sample ID **1403358-001BMSLL** SampType: **MSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **OW-13** Batch ID: **12123** RunNo: **17381**
Prep Date: **3/11/2014** Analysis Date: **3/17/2014** SeqNo: **500694** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0.001050	96.7	70	130			
Lead	0.026	0.0010	0.02500	0	102	70	130			
Selenium	0.023	0.0010	0.02500	0.0008009	87.6	70	130			
Uranium	0.045	0.0010	0.02500	0.01755	110	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403358**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **LLLCS-12123** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **12123** RunNo: **17381**
Prep Date: **3/11/2014** Analysis Date: **3/17/2014** SeqNo: **500705** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.2	85	115			
Lead	0.025	0.0010	0.02500	0	98.9	85	115			
Selenium	0.023	0.0010	0.02500	0	91.4	85	115			
Uranium	0.026	0.0010	0.02500	0	104	85	115			

Sample ID **MB-12123** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **12123** RunNo: **17381**
Prep Date: **3/11/2014** Analysis Date: **3/17/2014** SeqNo: **500708** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403358**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **MB-12133** SampType: **MBLK** TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW** Batch ID: **12133** RunNo: **17250**
Prep Date: **3/11/2014** Analysis Date: **3/12/2014** SeqNo: **496787** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID **LCS-12133** SampType: **LCS** TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW** Batch ID: **12133** RunNo: **17250**
Prep Date: **3/11/2014** Analysis Date: **3/12/2014** SeqNo: **496788** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0053	0.00020	0.005000	0	106	80	120			

Sample ID **1403329-004AMS** SampType: **MS** TestCode: **EPA Method 245.1: Mercury**
Client ID: **BatchQC** Batch ID: **12133** RunNo: **17250**
Prep Date: **3/11/2014** Analysis Date: **3/12/2014** SeqNo: **496797** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0054	0.00020	0.005000	0	107	75	125			

Sample ID **1403329-004AMSD** SampType: **MSD** TestCode: **EPA Method 245.1: Mercury**
Client ID: **BatchQC** Batch ID: **12133** RunNo: **17250**
Prep Date: **3/11/2014** Analysis Date: **3/12/2014** SeqNo: **496798** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0053	0.00020	0.005000	0	107	75	125	0.541	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403358**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **5mL rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R17267**	RunNo: **17267**			
Prep Date:	Analysis Date: **3/12/2014**	SeqNo: **497358**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403358**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **5mL rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R17267** RunNo: **17267**
Prep Date: Analysis Date: **3/12/2014** SeqNo: **497358** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.3	70	130			
Surr: Toluene-d8	9.8		10.00		98.0	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R17267** RunNo: **17267**
Prep Date: Analysis Date: **3/12/2014** SeqNo: **497360** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	26	1.0	20.00	0	128	70	130			
Toluene	22	1.0	20.00	0	111	80	120			
Chlorobenzene	21	1.0	20.00	0	104	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403358**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R17267** RunNo: **17267**
Prep Date: Analysis Date: **3/12/2014** SeqNo: **497360** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	24	1.0	20.00	0	121	90	143			
Trichloroethene (TCE)	23	1.0	20.00	0	114	70	130			
Surr: 1,2-Dichloroethane-d4	11		10.00		114	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	12		10.00		119	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID **1403358-001a ms** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OW-13** Batch ID: **R17267** RunNo: **17267**
Prep Date: Analysis Date: **3/12/2014** SeqNo: **497366** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	24	1.0	20.00	0	118	70	130			
Toluene	21	1.0	20.00	0	107	67.5	123			
Chlorobenzene	21	1.0	20.00	0	104	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	113	81.9	134			
Trichloroethene (TCE)	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.0	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	9.7		10.00		96.6	70	130			

Sample ID **1403358-001a msd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OW-13** Batch ID: **R17267** RunNo: **17267**
Prep Date: Analysis Date: **3/12/2014** SeqNo: **497367** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	24	1.0	20.00	0	118	70	130	0.0612	20	
Toluene	21	1.0	20.00	0	104	67.5	123	3.21	20	
Chlorobenzene	20	1.0	20.00	0	99.6	70	130	4.61	20	
1,1-Dichloroethene	23	1.0	20.00	0	113	81.9	134	0.471	20	
Trichloroethene (TCE)	20	1.0	20.00	0	100	70	130	0.432	20	
Surr: 1,2-Dichloroethane-d4	11		10.00		105	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130	0	0	
Surr: Dibromofluoromethane	11		10.00		106	70	130	0	0	
Surr: Toluene-d8	9.8		10.00		98.2	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403358**
21-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **5mL rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R17299** RunNo: **17299**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498323** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	1.0								
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	10		10.00		99.7	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R17299** RunNo: **17299**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498325** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.9	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.5		10.00		95.3	70	130			

Sample ID **1403475-001a ms** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **BatchQC** Batch ID: **R17299** RunNo: **17299**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498342** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	11		10.00		106	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		95.5	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.7		10.00		97.3	70	130			

Sample ID **1403475-001a msd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **BatchQC** Batch ID: **R17299** RunNo: **17299**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498343** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130	0	0	
Surr: 4-Bromofluorobenzene	8.9		10.00		89.4	70	130	0	0	
Surr: Dibromofluoromethane	9.8		10.00		98.4	70	130	0	0	
Surr: Toluene-d8	10		10.00		101	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1403358 RcptNo: 1

Received by/date: AG 03/07/14

Logged By: Anne Thorne 3/7/2014 5:00:00 PM Anne Thorne

Completed By: Anne Thorne 3/11/2014 Anne Thorne

Reviewed By: MJ 03/11/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.8	Good	Yes			

Chain-of-Custody Record

Client: Western Refining

Mailing Address: Rt 3 Box 7
Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-722-0210

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other_____
☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush_____

Project Name: Q1-2014 Groundwater Sampling

Project #: Quarterly Sampling

Project Manager: Cheryl Johnson

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.8

www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1403358		WQCC Metals (Total and Dissolved)	Air Bubbles (Y or N)
3/7/14	1129	GW	OW-13			-001	x	x	
3/7/14	1032	GW	OW-14			-002	x	x	
3/7/14	951	GW	OW-29			-003	x	x	
3/7/14	1405	GW	OW-30			-004	x	x	
3/7/14	0905		FB-Group#5-			-005	x		
3/7/14	0910		EQ BLANK			-006	X		
			Trip Blank 03/11/14			-007	X		

Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
3/7/14	1700	Tom Sloan	[signature]	03/07/14	1700	
Date:	Time:	Relinquished by:	Received by:	Date	Time	

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 10, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: Q4 2014 OrderNo.: 1411536

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 9 sample(s) on 11/13/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: **1411536**
Date: **12/10/2014**

CLIENT: Western Refining Southwest, Gallup
Project: Q4 2014

Analytical Notes Regarding EPA Method 8260:
Samples that were diluted were done so because of the foamy matrix.

Analytical Notes Regarding BOD:
Samples EP-5, EP-6 and EP-12A are being reported as < due to all of the BOD bottles in the dilution series having a depletion of <2.0mg/L.

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-111214-2
Project: Q4 2014
Collection Date: 11/12/2014 5:15:00 PM
Lab ID: 1411536-001
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
Toluene	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
Ethylbenzene	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
Naphthalene	ND	2.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
1-Methylnaphthalene	ND	4.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
2-Methylnaphthalene	ND	4.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
Acetone	ND	10		µg/L	1	11/20/2014 2:20:14 AM	R22653
Bromobenzene	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
Bromodichloromethane	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
Bromoform	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
Bromomethane	ND	3.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
2-Butanone	ND	10		µg/L	1	11/20/2014 2:20:14 AM	R22653
Carbon disulfide	ND	10		µg/L	1	11/20/2014 2:20:14 AM	R22653
Carbon Tetrachloride	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
Chlorobenzene	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
Chloroethane	ND	2.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
Chloroform	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
Chloromethane	ND	3.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
2-Chlorotoluene	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
4-Chlorotoluene	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
cis-1,2-DCE	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
Dibromochloromethane	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
Dibromomethane	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
1,1-Dichloroethane	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
1,1-Dichloroethene	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
1,2-Dichloropropane	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
1,3-Dichloropropane	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
2,2-Dichloropropane	ND	2.0		µg/L	1	11/20/2014 2:20:14 AM	R22653

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-111214-2
Project: Q4 2014
Collection Date: 11/12/2014 5:15:00 PM
Lab ID: 1411536-001
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
Hexachlorobutadiene	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
2-Hexanone	ND	10		µg/L	1	11/20/2014 2:20:14 AM	R22653
Isopropylbenzene	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
4-Isopropyltoluene	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
4-Methyl-2-pentanone	ND	10		µg/L	1	11/20/2014 2:20:14 AM	R22653
Methylene Chloride	ND	3.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
n-Butylbenzene	ND	3.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
n-Propylbenzene	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
sec-Butylbenzene	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
Styrene	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
tert-Butylbenzene	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
trans-1,2-DCE	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
Trichlorofluoromethane	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
Vinyl chloride	ND	1.0		µg/L	1	11/20/2014 2:20:14 AM	R22653
Xylenes, Total	ND	1.5		µg/L	1	11/20/2014 2:20:14 AM	R22653
Surr: 1,2-Dichloroethane-d4	98.2	70-130		%REC	1	11/20/2014 2:20:14 AM	R22653
Surr: 4-Bromofluorobenzene	93.0	70-130		%REC	1	11/20/2014 2:20:14 AM	R22653
Surr: Dibromofluoromethane	97.6	70-130		%REC	1	11/20/2014 2:20:14 AM	R22653
Surr: Toluene-d8	100	70-130		%REC	1	11/20/2014 2:20:14 AM	R22653

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-5
Project: Q4 2014
Collection Date: 11/12/2014 2:20:00 PM
Lab ID: 1411536-002
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	27	10	*	mg/L	100	11/14/2014 12:59:11 PM	R22558
Chloride	13000	500		mg/L	1E	11/25/2014 12:05:31 AM	R22782
Nitrogen, Nitrite (As N)	ND	10		mg/L	100	11/14/2014 12:59:11 PM	R22558
Bromide	3.5	1.0		mg/L	10	11/14/2014 12:46:46 PM	R22558
Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	11/14/2014 12:46:46 PM	R22558
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	11/14/2014 12:46:46 PM	R22558
Sulfate	2100	50		mg/L	100	11/14/2014 12:59:11 PM	R22558
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.13	0.0020		mg/L	1	11/16/2014 9:33:12 PM	R22599
Cadmium	ND	0.0020		mg/L	1	11/16/2014 9:33:12 PM	R22599
Calcium	520	10		mg/L	10	11/24/2014 12:31:25 PM	R22752
Chromium	0.0089	0.0060		mg/L	1	11/16/2014 9:33:12 PM	R22599
Copper	ND	0.0060		mg/L	1	11/16/2014 9:33:12 PM	R22599
Iron	0.24	0.020		mg/L	1	11/16/2014 9:33:12 PM	R22599
Magnesium	250	5.0		mg/L	5	11/16/2014 9:35:00 PM	R22599
Manganese	0.48	0.0020	*	mg/L	1	11/16/2014 9:33:12 PM	R22599
Potassium	320	5.0		mg/L	5	11/16/2014 9:35:00 PM	R22599
Silver	ND	0.0050		mg/L	1	11/16/2014 9:33:12 PM	R22599
Sodium	7400	100		mg/L	100	11/24/2014 12:33:29 PM	R22752
Zinc	ND	0.010		mg/L	1	11/16/2014 9:33:12 PM	R22599
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.13	0.0020		mg/L	1	11/18/2014 3:59:36 PM	16416
Cadmium	ND	0.0020		mg/L	1	11/18/2014 3:59:36 PM	16416
Chromium	0.0077	0.0060		mg/L	1	11/18/2014 3:59:36 PM	16416
Copper	ND	0.0060		mg/L	1	11/18/2014 3:59:36 PM	16416
Iron	0.62	0.020	*	mg/L	1	11/18/2014 3:59:36 PM	16416
Manganese	0.48	0.0020	*	mg/L	1	11/18/2014 3:59:36 PM	16416
Silver	ND	0.0050		mg/L	1	11/18/2014 3:59:36 PM	16416
Zinc	0.012	0.010		mg/L	1	11/20/2014 6:05:58 PM	16416
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.025	0.020	*	mg/L	20	12/1/2014 3:18:04 PM	R22871
Lead	ND	0.020		mg/L	20	12/1/2014 3:18:04 PM	R22871
Selenium	ND	0.020		mg/L	20	12/1/2014 3:18:04 PM	R22871
Uranium	ND	0.020		mg/L	20	12/1/2014 3:18:04 PM	R22871
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.032	0.020	*	mg/L	20	11/26/2014 7:02:50 PM	16416
Lead	ND	0.020		mg/L	20	11/26/2014 7:02:50 PM	16416

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-5
Project: Q4 2014
Collection Date: 11/12/2014 2:20:00 PM
Lab ID: 1411536-002
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Selenium	ND	0.050		mg/L	50	12/3/2014 2:29:21 PM	16416
Uranium	ND	0.050		mg/L	50	12/3/2014 2:29:21 PM	16416
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/25/2014 9:07:06 AM	16546
SM5210B: BOD						Analyst:	**MRA**
Biochemical Oxygen Demand	<20.55	2.0		mg/L	1	11/19/2014 1:44:00 PM	16392
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Acenaphthylene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Aniline	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Anthracene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Azobenzene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Benz(a)anthracene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Benzo(a)pyrene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Benzo(b)fluoranthene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Benzo(k)fluoranthene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Benzoic acid	ND	20		µg/L	1	11/19/2014 2:06:36 PM	16427
Benzyl alcohol	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Bis(2-ethylhexyl)phthalate	13	10		µg/L	1	11/19/2014 2:06:36 PM	16427
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Butyl benzyl phthalate	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Carbazole	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
4-Chloroaniline	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
2-Chloronaphthalene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
2-Chlorophenol	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Chrysene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Di-n-butyl phthalate	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Di-n-octyl phthalate	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Dibenzofuran	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
1,2-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
1,3-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-5
Project: Q4 2014
Collection Date: 11/12/2014 2:20:00 PM
Lab ID: 1411536-002
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,4-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Diethyl phthalate	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Dimethyl phthalate	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
2,4-Dichlorophenol	ND	20		µg/L	1	11/19/2014 2:06:36 PM	16427
2,4-Dimethylphenol	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/19/2014 2:06:36 PM	16427
2,4-Dinitrophenol	ND	20		µg/L	1	11/19/2014 2:06:36 PM	16427
2,4-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
2,6-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Fluoranthene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Fluorene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Hexachlorobenzene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Hexachlorobutadiene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Hexachloroethane	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Isophorone	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
1-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
2-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
2-Methylphenol	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
3+4-Methylphenol	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
N-Nitrosodimethylamine	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Naphthalene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
2-Nitroaniline	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
3-Nitroaniline	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
4-Nitroaniline	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Nitrobenzene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
2-Nitrophenol	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
4-Nitrophenol	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Pentachlorophenol	ND	20		µg/L	1	11/19/2014 2:06:36 PM	16427
Phenanthrene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Phenol	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Pyrene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Pyridine	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-5
Project: Q4 2014
Collection Date: 11/12/2014 2:20:00 PM
Lab ID: 1411536-002
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/19/2014 2:06:36 PM	16427
Surr: 2-Fluorophenol	48.0	17.6-104		%REC	1	11/19/2014 2:06:36 PM	16427
Surr: Phenol-d5	51.1	17.7-89.9		%REC	1	11/19/2014 2:06:36 PM	16427
Surr: 2,4,6-Tribromophenol	39.2	16.3-122		%REC	1	11/19/2014 2:06:36 PM	16427
Surr: Nitrobenzene-d5	59.4	45.3-117		%REC	1	11/19/2014 2:06:36 PM	16427
Surr: 2-Fluorobiphenyl	53.1	43-113		%REC	1	11/19/2014 2:06:36 PM	16427
Surr: 4-Terphenyl-d14	52.5	47.6-122		%REC	1	11/19/2014 2:06:36 PM	16427
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	5.0		µg/L	10	11/20/2014 2:49:58 AM	R22653
Toluene	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
Ethylbenzene	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
1,2,4-Trimethylbenzene	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
1,3,5-Trimethylbenzene	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
Naphthalene	ND	20		µg/L	10	11/20/2014 2:49:58 AM	R22653
1-Methylnaphthalene	ND	40		µg/L	10	11/20/2014 2:49:58 AM	R22653
2-Methylnaphthalene	ND	40		µg/L	10	11/20/2014 2:49:58 AM	R22653
Acetone	ND	100		µg/L	10	11/20/2014 2:49:58 AM	R22653
Bromobenzene	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
Bromodichloromethane	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
Bromoform	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
Bromomethane	ND	30		µg/L	10	11/20/2014 2:49:58 AM	R22653
2-Butanone	ND	100		µg/L	10	11/20/2014 2:49:58 AM	R22653
Carbon disulfide	ND	100		µg/L	10	11/20/2014 2:49:58 AM	R22653
Carbon Tetrachloride	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
Chlorobenzene	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
Chloroethane	ND	20		µg/L	10	11/20/2014 2:49:58 AM	R22653
Chloroform	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
Chloromethane	ND	30		µg/L	10	11/20/2014 2:49:58 AM	R22653
2-Chlorotoluene	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
4-Chlorotoluene	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
cis-1,2-DCE	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/20/2014 2:49:58 AM	R22653
Dibromochloromethane	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
Dibromomethane	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
1,2-Dichlorobenzene	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-5
Project: Q4 2014
Collection Date: 11/12/2014 2:20:00 PM
Lab ID: 1411536-002
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,3-Dichlorobenzene	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
1,4-Dichlorobenzene	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
Dichlorodifluoromethane	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
1,1-Dichloroethane	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
1,1-Dichloroethene	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
1,2-Dichloropropane	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
1,3-Dichloropropane	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
2,2-Dichloropropane	ND	20		µg/L	10	11/20/2014 2:49:58 AM	R22653
1,1-Dichloropropene	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
Hexachlorobutadiene	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
2-Hexanone	ND	100		µg/L	10	11/20/2014 2:49:58 AM	R22653
Isopropylbenzene	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
4-Isopropyltoluene	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
4-Methyl-2-pentanone	ND	100		µg/L	10	11/20/2014 2:49:58 AM	R22653
Methylene Chloride	ND	30		µg/L	10	11/20/2014 2:49:58 AM	R22653
n-Butylbenzene	ND	30		µg/L	10	11/20/2014 2:49:58 AM	R22653
n-Propylbenzene	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
sec-Butylbenzene	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
Styrene	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
tert-Butylbenzene	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	11/20/2014 2:49:58 AM	R22653
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
trans-1,2-DCE	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
1,1,1-Trichloroethane	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
1,1,2-Trichloroethane	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
Trichloroethene (TCE)	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
Trichlorofluoromethane	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
1,2,3-Trichloropropane	ND	20		µg/L	10	11/20/2014 2:49:58 AM	R22653
Vinyl chloride	ND	10		µg/L	10	11/20/2014 2:49:58 AM	R22653
Xylenes, Total	ND	15		µg/L	10	11/20/2014 2:49:58 AM	R22653
Surr: 1,2-Dichloroethane-d4	99.7	70-130		%REC	10	11/20/2014 2:49:58 AM	R22653
Surr: 4-Bromofluorobenzene	103	70-130		%REC	10	11/20/2014 2:49:58 AM	R22653
Surr: Dibromofluoromethane	97.6	70-130		%REC	10	11/20/2014 2:49:58 AM	R22653
Surr: Toluene-d8	101	70-130		%REC	10	11/20/2014 2:49:58 AM	R22653
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **JRR**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-5
Project: Q4 2014
Collection Date: 11/12/2014 2:20:00 PM
Lab ID: 1411536-002
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM2510B: SPECIFIC CONDUCTANCE						Analyst:	**JRR**
Conductivity	44000	0.50		µmhos/cm	50	11/21/2014 7:12:41 PM	R22735
SM4500-H+B: PH						Analyst:	**JRR**
pH	7.93	1.68	H	pH units	1	11/20/2014 7:59:48 PM	R22708

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-6
Project: Q4 2014
Collection Date: 11/12/2014 2:45:00 PM
Lab ID: 1411536-003
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	26	10	*	mg/L	100	11/14/2014 1:24:01 PM	R22558
Chloride	15000	500		mg/L	1E	11/25/2014 12:17:56 AM	R22782
Nitrogen, Nitrite (As N)	ND	10		mg/L	100	11/14/2014 1:24:01 PM	R22558
Bromide	4.3	1.0		mg/L	10	11/14/2014 1:11:36 PM	R22558
Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	11/14/2014 1:11:36 PM	R22558
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	11/14/2014 1:11:36 PM	R22558
Sulfate	2200	50		mg/L	100	11/14/2014 1:24:01 PM	R22558
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.14	0.010		mg/L	5	11/16/2014 9:38:42 PM	R22599
Cadmium	ND	0.010		mg/L	5	11/16/2014 9:38:42 PM	R22599
Calcium	540	10		mg/L	10	11/24/2014 12:41:24 PM	R22752
Chromium	ND	0.030		mg/L	5	11/16/2014 9:38:42 PM	R22599
Copper	ND	0.030		mg/L	5	11/16/2014 9:38:42 PM	R22599
Iron	0.20	0.10		mg/L	5	11/16/2014 9:38:42 PM	R22599
Magnesium	290	5.0		mg/L	5	11/16/2014 9:38:42 PM	R22599
Manganese	0.53	0.010	*	mg/L	5	11/16/2014 9:38:42 PM	R22599
Potassium	370	5.0		mg/L	5	11/16/2014 9:38:42 PM	R22599
Silver	ND	0.025		mg/L	5	11/16/2014 9:38:42 PM	R22599
Sodium	8400	100		mg/L	100	11/24/2014 12:43:28 PM	R22752
Zinc	ND	0.050		mg/L	5	11/16/2014 9:38:42 PM	R22599
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.15	0.0020		mg/L	1	11/18/2014 4:03:37 PM	16416
Cadmium	ND	0.0020		mg/L	1	11/18/2014 4:03:37 PM	16416
Chromium	0.0082	0.0060		mg/L	1	11/18/2014 4:03:37 PM	16416
Copper	ND	0.0060		mg/L	1	11/18/2014 4:03:37 PM	16416
Iron	1.6	0.10	*	mg/L	5	11/18/2014 4:05:33 PM	16416
Manganese	0.55	0.0020	*	mg/L	1	11/18/2014 4:03:37 PM	16416
Silver	ND	0.0050		mg/L	1	11/18/2014 4:03:37 PM	16416
Zinc	ND	0.020		mg/L	2	11/21/2014 4:55:03 PM	16416
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.027	0.020	*	mg/L	20	12/1/2014 3:21:11 PM	R22871
Lead	ND	0.020		mg/L	20	12/1/2014 3:21:11 PM	R22871
Selenium	0.025	0.020		mg/L	20	12/1/2014 3:21:11 PM	R22871
Uranium	ND	0.020		mg/L	20	12/1/2014 3:21:11 PM	R22871
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.034	0.020	*	mg/L	20	11/26/2014 7:06:20 PM	16416
Lead	ND	0.020		mg/L	20	11/26/2014 7:06:20 PM	16416

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-6
Project: Q4 2014
Collection Date: 11/12/2014 2:45:00 PM
Lab ID: 1411536-003
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Selenium	ND	0.050		mg/L	50	12/3/2014 2:32:26 PM	16416
Uranium	ND	0.050		mg/L	50	12/3/2014 2:32:26 PM	16416
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/25/2014 9:08:53 AM	16546
SM5210B: BOD						Analyst:	**MRA**
Biochemical Oxygen Demand	<15.30	2.0		mg/L	1	11/19/2014 1:44:00 PM	16392
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Acenaphthylene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Aniline	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Anthracene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Azobenzene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Benz(a)anthracene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Benzo(a)pyrene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Benzo(b)fluoranthene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Benzo(k)fluoranthene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Benzoic acid	ND	20		µg/L	1	11/19/2014 2:34:29 PM	16427
Benzyl alcohol	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Butyl benzyl phthalate	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Carbazole	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
4-Chloroaniline	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
2-Chloronaphthalene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
2-Chlorophenol	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Chrysene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Di-n-butyl phthalate	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Di-n-octyl phthalate	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Dibenzofuran	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
1,2-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
1,3-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-6
Project: Q4 2014
Collection Date: 11/12/2014 2:45:00 PM
Lab ID: 1411536-003
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,4-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Diethyl phthalate	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Dimethyl phthalate	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
2,4-Dichlorophenol	ND	20		µg/L	1	11/19/2014 2:34:29 PM	16427
2,4-Dimethylphenol	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/19/2014 2:34:29 PM	16427
2,4-Dinitrophenol	ND	20		µg/L	1	11/19/2014 2:34:29 PM	16427
2,4-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
2,6-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Fluoranthene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Fluorene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Hexachlorobenzene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Hexachlorobutadiene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Hexachloroethane	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Isophorone	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
1-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
2-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
2-Methylphenol	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
3+4-Methylphenol	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
N-Nitrosodimethylamine	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Naphthalene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
2-Nitroaniline	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
3-Nitroaniline	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
4-Nitroaniline	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Nitrobenzene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
2-Nitrophenol	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
4-Nitrophenol	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Pentachlorophenol	ND	20		µg/L	1	11/19/2014 2:34:29 PM	16427
Phenanthrene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Phenol	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Pyrene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Pyridine	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-6
Project: Q4 2014
Collection Date: 11/12/2014 2:45:00 PM
Lab ID: 1411536-003
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/19/2014 2:34:29 PM	16427
Surr: 2-Fluorophenol	39.4	17.6-104		%REC	1	11/19/2014 2:34:29 PM	16427
Surr: Phenol-d5	52.7	17.7-89.9		%REC	1	11/19/2014 2:34:29 PM	16427
Surr: 2,4,6-Tribromophenol	32.2	16.3-122		%REC	1	11/19/2014 2:34:29 PM	16427
Surr: Nitrobenzene-d5	51.2	45.3-117		%REC	1	11/19/2014 2:34:29 PM	16427
Surr: 2-Fluorobiphenyl	47.4	43-113		%REC	1	11/19/2014 2:34:29 PM	16427
Surr: 4-Terphenyl-d14	55.1	47.6-122		%REC	1	11/19/2014 2:34:29 PM	16427
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	5.0		µg/L	10	11/20/2014 3:19:35 AM	R22653
Toluene	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
Ethylbenzene	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
1,2,4-Trimethylbenzene	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
1,3,5-Trimethylbenzene	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
Naphthalene	ND	20		µg/L	10	11/20/2014 3:19:35 AM	R22653
1-Methylnaphthalene	ND	40		µg/L	10	11/20/2014 3:19:35 AM	R22653
2-Methylnaphthalene	ND	40		µg/L	10	11/20/2014 3:19:35 AM	R22653
Acetone	ND	100		µg/L	10	11/20/2014 3:19:35 AM	R22653
Bromobenzene	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
Bromodichloromethane	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
Bromoform	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
Bromomethane	ND	30		µg/L	10	11/20/2014 3:19:35 AM	R22653
2-Butanone	ND	100		µg/L	10	11/20/2014 3:19:35 AM	R22653
Carbon disulfide	ND	100		µg/L	10	11/20/2014 3:19:35 AM	R22653
Carbon Tetrachloride	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
Chlorobenzene	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
Chloroethane	ND	20		µg/L	10	11/20/2014 3:19:35 AM	R22653
Chloroform	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
Chloromethane	ND	30		µg/L	10	11/20/2014 3:19:35 AM	R22653
2-Chlorotoluene	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
4-Chlorotoluene	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
cis-1,2-DCE	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/20/2014 3:19:35 AM	R22653
Dibromochloromethane	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
Dibromomethane	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
1,2-Dichlorobenzene	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-6
Project: Q4 2014
Collection Date: 11/12/2014 2:45:00 PM
Lab ID: 1411536-003
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,3-Dichlorobenzene	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
1,4-Dichlorobenzene	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
Dichlorodifluoromethane	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
1,1-Dichloroethane	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
1,1-Dichloroethene	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
1,2-Dichloropropane	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
1,3-Dichloropropane	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
2,2-Dichloropropane	ND	20		µg/L	10	11/20/2014 3:19:35 AM	R22653
1,1-Dichloropropene	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
Hexachlorobutadiene	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
2-Hexanone	ND	100		µg/L	10	11/20/2014 3:19:35 AM	R22653
Isopropylbenzene	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
4-Isopropyltoluene	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
4-Methyl-2-pentanone	ND	100		µg/L	10	11/20/2014 3:19:35 AM	R22653
Methylene Chloride	ND	30		µg/L	10	11/20/2014 3:19:35 AM	R22653
n-Butylbenzene	ND	30		µg/L	10	11/20/2014 3:19:35 AM	R22653
n-Propylbenzene	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
sec-Butylbenzene	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
Styrene	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
tert-Butylbenzene	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	11/20/2014 3:19:35 AM	R22653
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
trans-1,2-DCE	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
1,1,1-Trichloroethane	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
1,1,2-Trichloroethane	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
Trichloroethene (TCE)	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
Trichlorofluoromethane	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
1,2,3-Trichloropropane	ND	20		µg/L	10	11/20/2014 3:19:35 AM	R22653
Vinyl chloride	ND	10		µg/L	10	11/20/2014 3:19:35 AM	R22653
Xylenes, Total	ND	15		µg/L	10	11/20/2014 3:19:35 AM	R22653
Surr: 1,2-Dichloroethane-d4	96.3	70-130		%REC	10	11/20/2014 3:19:35 AM	R22653
Surr: 4-Bromofluorobenzene	99.3	70-130		%REC	10	11/20/2014 3:19:35 AM	R22653
Surr: Dibromofluoromethane	92.4	70-130		%REC	10	11/20/2014 3:19:35 AM	R22653
Surr: Toluene-d8	91.8	70-130		%REC	10	11/20/2014 3:19:35 AM	R22653
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **JRR**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-6
Project: Q4 2014
Collection Date: 11/12/2014 2:45:00 PM
Lab ID: 1411536-003
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM2510B: SPECIFIC CONDUCTANCE						Analyst:	**JRR**
Conductivity	48000	0.50		µmhos/cm	50	11/21/2014 7:16:57 PM	R22735
SM4500-H+B: PH						Analyst:	**JRR**
pH	7.99	1.68	H	pH units	1	11/20/2014 8:03:59 PM	R22708

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-7
Project: Q4 2014
Collection Date: 11/12/2014 4:24:00 PM
Lab ID: 1411536-004
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	44	10	*	mg/L	100	11/14/2014 1:48:49 PM	R22558
Chloride	61000	2500		mg/L	5E	11/26/2014 2:49:44 PM	R22848
Bromide	33	10		mg/L	100	11/14/2014 1:48:49 PM	R22558
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	11/14/2014 1:36:25 PM	R22558
Sulfate	12000	250		mg/L	500	11/25/2014 12:30:21 AM	R22782
Nitrate+Nitrite as N	ND	40		mg/L	200	11/24/2014 10:01:25 PM	R22782
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.19	0.010		mg/L	5	11/18/2014 6:15:29 PM	R22614
Cadmium	ND	0.010		mg/L	5	11/18/2014 6:15:29 PM	R22614
Calcium	1100	20		mg/L	20	11/24/2014 12:47:07 PM	R22752
Chromium	ND	0.030		mg/L	5	11/18/2014 6:15:29 PM	R22614
Copper	ND	0.030		mg/L	5	11/18/2014 6:15:29 PM	R22614
Iron	0.35	0.10	*	mg/L	5	11/24/2014 12:45:25 PM	R22752
Magnesium	1200	20		mg/L	20	11/24/2014 12:47:07 PM	R22752
Manganese	0.80	0.010	*	mg/L	5	11/18/2014 6:15:29 PM	R22614
Potassium	1600	20		mg/L	20	11/24/2014 12:47:07 PM	R22752
Silver	ND	0.025		mg/L	5	11/18/2014 6:15:29 PM	R22614
Sodium	32000	500		mg/L	500	11/24/2014 12:55:15 PM	R22752
Zinc	ND	0.050		mg/L	5	11/18/2014 6:15:29 PM	R22614
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.20	0.010		mg/L	5	11/18/2014 4:18:01 PM	16416
Cadmium	ND	0.010		mg/L	5	11/18/2014 4:18:01 PM	16416
Chromium	ND	0.030		mg/L	5	11/18/2014 4:18:01 PM	16416
Copper	ND	0.030		mg/L	5	11/18/2014 4:18:01 PM	16416
Iron	0.72	0.10	*	mg/L	5	11/18/2014 4:18:01 PM	16416
Manganese	1.1	0.010	*	mg/L	5	11/18/2014 4:18:01 PM	16416
Silver	ND	0.025		mg/L	5	11/18/2014 4:18:01 PM	16416
Zinc	ND	0.050		mg/L	5	11/20/2014 4:21:25 PM	16416
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.11	0.050	*	mg/L	50	12/1/2014 4:04:58 PM	R22871
Lead	ND	0.020		mg/L	20	12/1/2014 3:24:18 PM	R22871
Selenium	ND	0.20	*	mg/L	20	12/1/2014 3:24:18 PM	R22871
Uranium	ND	0.020		mg/L	20	12/1/2014 3:24:18 PM	R22871
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.14	0.050	*	mg/L	50	12/3/2014 2:35:31 PM	16416
Lead	ND	0.050		mg/L	50	12/3/2014 2:35:31 PM	16416
Selenium	ND	0.50	*	mg/L	50	12/3/2014 2:35:31 PM	16416

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-7
Project: Q4 2014
Collection Date: 11/12/2014 4:24:00 PM
Lab ID: 1411536-004
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Uranium	ND	0.050		mg/L	50	12/3/2014 2:35:31 PM	16416
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/25/2014 9:10:41 AM	16546
SM5210B: BOD						Analyst:	**MRA**
Biochemical Oxygen Demand	28	2.0		mg/L	1	11/19/2014 1:44:00 PM	16392
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Acenaphthylene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Aniline	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Anthracene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Azobenzene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Benz(a)anthracene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Benzo(a)pyrene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Benzo(b)fluoranthene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Benzo(k)fluoranthene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Benzoic acid	ND	20		µg/L	1	11/19/2014 3:02:12 PM	16427
Benzyl alcohol	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Butyl benzyl phthalate	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Carbazole	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
4-Chloroaniline	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
2-Chloronaphthalene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
2-Chlorophenol	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Chrysene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Di-n-butyl phthalate	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Di-n-octyl phthalate	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Dibenzofuran	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
1,2-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
1,3-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
1,4-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-7
Project: Q4 2014
Collection Date: 11/12/2014 4:24:00 PM
Lab ID: 1411536-004
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Diethyl phthalate	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Dimethyl phthalate	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
2,4-Dichlorophenol	ND	20		µg/L	1	11/19/2014 3:02:12 PM	16427
2,4-Dimethylphenol	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/19/2014 3:02:12 PM	16427
2,4-Dinitrophenol	ND	20		µg/L	1	11/19/2014 3:02:12 PM	16427
2,4-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
2,6-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Fluoranthene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Fluorene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Hexachlorobenzene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Hexachlorobutadiene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Hexachloroethane	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Isophorone	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
1-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
2-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
2-Methylphenol	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
3+4-Methylphenol	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
N-Nitrosodimethylamine	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Naphthalene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
2-Nitroaniline	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
3-Nitroaniline	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
4-Nitroaniline	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Nitrobenzene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
2-Nitrophenol	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
4-Nitrophenol	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Pentachlorophenol	ND	20		µg/L	1	11/19/2014 3:02:12 PM	16427
Phenanthrene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Phenol	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Pyrene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
Pyridine	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/19/2014 3:02:12 PM	16427

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R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-7
Project: Q4 2014
Collection Date: 11/12/2014 4:24:00 PM
Lab ID: 1411536-004
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Surr: 2-Fluorophenol	20.7	17.6-104		%REC	1	11/19/2014 3:02:12 PM	16427
Surr: Phenol-d5	33.7	17.7-89.9		%REC	1	11/19/2014 3:02:12 PM	16427
Surr: 2,4,6-Tribromophenol	28.8	16.3-122		%REC	1	11/19/2014 3:02:12 PM	16427
Surr: Nitrobenzene-d5	53.1	45.3-117		%REC	1	11/19/2014 3:02:12 PM	16427
Surr: 2-Fluorobiphenyl	44.4	43-113		%REC	1	11/19/2014 3:02:12 PM	16427
Surr: 4-Terphenyl-d14	36.4	47.6-122	S	%REC	1	11/19/2014 3:02:12 PM	16427
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	5.0		µg/L	10	11/20/2014 3:49:23 AM	R22653
Toluene	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
Ethylbenzene	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
1,2,4-Trimethylbenzene	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
1,3,5-Trimethylbenzene	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
Naphthalene	ND	20		µg/L	10	11/20/2014 3:49:23 AM	R22653
1-Methylnaphthalene	ND	40		µg/L	10	11/20/2014 3:49:23 AM	R22653
2-Methylnaphthalene	ND	40		µg/L	10	11/20/2014 3:49:23 AM	R22653
Acetone	ND	100		µg/L	10	11/20/2014 3:49:23 AM	R22653
Bromobenzene	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
Bromodichloromethane	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
Bromoform	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
Bromomethane	ND	30		µg/L	10	11/20/2014 3:49:23 AM	R22653
2-Butanone	ND	100		µg/L	10	11/20/2014 3:49:23 AM	R22653
Carbon disulfide	ND	100		µg/L	10	11/20/2014 3:49:23 AM	R22653
Carbon Tetrachloride	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
Chlorobenzene	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
Chloroethane	ND	20		µg/L	10	11/20/2014 3:49:23 AM	R22653
Chloroform	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
Chloromethane	ND	30		µg/L	10	11/20/2014 3:49:23 AM	R22653
2-Chlorotoluene	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
4-Chlorotoluene	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
cis-1,2-DCE	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/20/2014 3:49:23 AM	R22653
Dibromochloromethane	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
Dibromomethane	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
1,2-Dichlorobenzene	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
1,3-Dichlorobenzene	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-7
Project: Q4 2014
Collection Date: 11/12/2014 4:24:00 PM
Lab ID: 1411536-004
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,4-Dichlorobenzene	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
Dichlorodifluoromethane	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
1,1-Dichloroethane	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
1,1-Dichloroethene	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
1,2-Dichloropropane	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
1,3-Dichloropropane	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
2,2-Dichloropropane	ND	20		µg/L	10	11/20/2014 3:49:23 AM	R22653
1,1-Dichloropropene	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
Hexachlorobutadiene	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
2-Hexanone	ND	100		µg/L	10	11/20/2014 3:49:23 AM	R22653
Isopropylbenzene	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
4-Isopropyltoluene	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
4-Methyl-2-pentanone	ND	100		µg/L	10	11/20/2014 3:49:23 AM	R22653
Methylene Chloride	ND	30		µg/L	10	11/20/2014 3:49:23 AM	R22653
n-Butylbenzene	ND	30		µg/L	10	11/20/2014 3:49:23 AM	R22653
n-Propylbenzene	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
sec-Butylbenzene	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
Styrene	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
tert-Butylbenzene	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	11/20/2014 3:49:23 AM	R22653
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
trans-1,2-DCE	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
1,1,1-Trichloroethane	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
1,1,2-Trichloroethane	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
Trichloroethene (TCE)	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
Trichlorofluoromethane	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
1,2,3-Trichloropropane	ND	20		µg/L	10	11/20/2014 3:49:23 AM	R22653
Vinyl chloride	ND	10		µg/L	10	11/20/2014 3:49:23 AM	R22653
Xylenes, Total	ND	15		µg/L	10	11/20/2014 3:49:23 AM	R22653
Surr: 1,2-Dichloroethane-d4	97.9	70-130		%REC	10	11/20/2014 3:49:23 AM	R22653
Surr: 4-Bromofluorobenzene	94.6	70-130		%REC	10	11/20/2014 3:49:23 AM	R22653
Surr: Dibromofluoromethane	96.8	70-130		%REC	10	11/20/2014 3:49:23 AM	R22653
Surr: Toluene-d8	92.2	70-130		%REC	10	11/20/2014 3:49:23 AM	R22653
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **JRR**	
Conductivity	160000	1.0		µmhos/cm	100	11/21/2014 7:21:18 PM	R22735

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Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
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R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-7
Project: Q4 2014
Collection Date: 11/12/2014 4:24:00 PM
Lab ID: 1411536-004
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM4500-H+B: PH						Analyst: **JRR**	
pH	7.82	1.68	H	pH units	1	11/20/2014 8:08:05 PM	R22708

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-8
Project: Q4 2014
Collection Date: 11/12/2014 4:53:00 PM
Lab ID: 1411536-005
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	41	10	*	mg/L	100	11/14/2014 2:13:38 PM	R22558
Chloride	61000	2500		mg/L	5E	11/26/2014 3:02:08 PM	R22848
Bromide	29	10		mg/L	100	11/14/2014 2:13:38 PM	R22558
Phosphorus, Orthophosphate (As P)	ND	50		mg/L	100	11/14/2014 2:13:38 PM	R22558
Sulfate	11000	250		mg/L	500	11/25/2014 12:42:45 AM	R22782
Nitrate+Nitrite as N	ND	40		mg/L	200	11/24/2014 10:13:50 PM	R22782
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.17	0.010		mg/L	5	11/18/2014 6:19:36 PM	R22614
Cadmium	ND	0.010		mg/L	5	11/18/2014 6:19:36 PM	R22614
Calcium	1100	20		mg/L	20	11/24/2014 12:53:07 PM	R22752
Chromium	ND	0.030		mg/L	5	11/18/2014 6:19:36 PM	R22614
Copper	ND	0.030		mg/L	5	11/18/2014 6:19:36 PM	R22614
Iron	0.23	0.10		mg/L	5	11/24/2014 12:51:19 PM	R22752
Magnesium	1200	20		mg/L	20	11/24/2014 12:53:07 PM	R22752
Manganese	0.77	0.010	*	mg/L	5	11/18/2014 6:19:36 PM	R22614
Potassium	1700	20		mg/L	20	11/24/2014 12:53:07 PM	R22752
Silver	ND	0.025		mg/L	5	11/18/2014 6:19:36 PM	R22614
Sodium	32000	500		mg/L	500	11/24/2014 12:59:16 PM	R22752
Zinc	ND	0.050		mg/L	5	11/18/2014 6:19:36 PM	R22614
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.20	0.010		mg/L	5	11/18/2014 4:22:44 PM	16416
Cadmium	ND	0.010		mg/L	5	11/18/2014 4:22:44 PM	16416
Chromium	ND	0.030		mg/L	5	11/18/2014 4:22:44 PM	16416
Copper	ND	0.030		mg/L	5	11/18/2014 4:22:44 PM	16416
Iron	0.57	0.10	*	mg/L	5	11/18/2014 4:22:44 PM	16416
Manganese	1.2	0.010	*	mg/L	5	11/18/2014 4:22:44 PM	16416
Silver	ND	0.025		mg/L	5	11/18/2014 4:22:44 PM	16416
Zinc	ND	0.050		mg/L	5	11/21/2014 4:52:35 PM	16416
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.11	0.050	*	mg/L	50	12/1/2014 4:14:18 PM	R22871
Lead	ND	0.020		mg/L	20	12/1/2014 3:27:24 PM	R22871
Selenium	ND	0.20	*	mg/L	20	12/1/2014 3:27:24 PM	R22871
Uranium	ND	0.020		mg/L	20	12/1/2014 3:27:24 PM	R22871
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.14	0.050	*	mg/L	50	12/3/2014 2:38:36 PM	16416
Lead	ND	0.050		mg/L	50	12/3/2014 2:38:36 PM	16416
Selenium	ND	0.50	*	mg/L	50	12/3/2014 2:38:36 PM	16416

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-8
Project: Q4 2014
Collection Date: 11/12/2014 4:53:00 PM
Lab ID: 1411536-005
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Uranium	ND	0.050		mg/L	50	12/3/2014 2:38:36 PM	16416
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/25/2014 9:12:29 AM	16546
SM5210B: BOD						Analyst:	**MRA**
Biochemical Oxygen Demand	27	2.0		mg/L	1	11/19/2014 1:44:00 PM	16392
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Acenaphthylene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Aniline	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Anthracene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Azobenzene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Benz(a)anthracene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Benzo(a)pyrene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Benzo(b)fluoranthene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Benzo(g,h,i)perylene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Benzo(k)fluoranthene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Benzoic acid	ND	22		µg/L	1	11/20/2014 6:29:40 PM	16481
Benzyl alcohol	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Bis(2-chloroethoxy)methane	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Bis(2-chloroethyl)ether	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Bis(2-chloroisopropyl)ether	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Bis(2-ethylhexyl)phthalate	18	11		µg/L	1	11/20/2014 6:29:40 PM	16481
4-Bromophenyl phenyl ether	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Butyl benzyl phthalate	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Carbazole	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
4-Chloro-3-methylphenol	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
4-Chloroaniline	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
2-Chloronaphthalene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
2-Chlorophenol	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
4-Chlorophenyl phenyl ether	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Chrysene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Di-n-butyl phthalate	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Di-n-octyl phthalate	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Dibenz(a,h)anthracene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Dibenzofuran	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
1,2-Dichlorobenzene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
1,3-Dichlorobenzene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
1,4-Dichlorobenzene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-8
Project: Q4 2014
Collection Date: 11/12/2014 4:53:00 PM
Lab ID: 1411536-005
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
3,3´-Dichlorobenzidine	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Diethyl phthalate	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Dimethyl phthalate	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
2,4-Dichlorophenol	ND	22		µg/L	1	11/20/2014 6:29:40 PM	16481
2,4-Dimethylphenol	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
4,6-Dinitro-2-methylphenol	ND	22		µg/L	1	11/20/2014 6:29:40 PM	16481
2,4-Dinitrophenol	ND	22		µg/L	1	11/20/2014 6:29:40 PM	16481
2,4-Dinitrotoluene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
2,6-Dinitrotoluene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Fluoranthene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Fluorene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Hexachlorobenzene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Hexachlorobutadiene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Hexachlorocyclopentadiene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Hexachloroethane	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Indeno(1,2,3-cd)pyrene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Isophorone	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
1-Methylnaphthalene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
2-Methylnaphthalene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
2-Methylphenol	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
3+4-Methylphenol	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
N-Nitrosodi-n-propylamine	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
N-Nitrosodimethylamine	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
N-Nitrosodiphenylamine	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Naphthalene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
2-Nitroaniline	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
3-Nitroaniline	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
4-Nitroaniline	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Nitrobenzene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
2-Nitrophenol	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
4-Nitrophenol	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Pentachlorophenol	ND	22		µg/L	1	11/20/2014 6:29:40 PM	16481
Phenanthrene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Phenol	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Pyrene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
Pyridine	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
1,2,4-Trichlorobenzene	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
2,4,5-Trichlorophenol	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481
2,4,6-Trichlorophenol	ND	11		µg/L	1	11/20/2014 6:29:40 PM	16481

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Qualifiers:

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R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-8
Project: Q4 2014
Collection Date: 11/12/2014 4:53:00 PM
Lab ID: 1411536-005
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Surr: 2-Fluorophenol	53.3	17.6-104		%REC	1	11/20/2014 6:29:40 PM	16481
Surr: Phenol-d5	48.7	17.7-89.9		%REC	1	11/20/2014 6:29:40 PM	16481
Surr: 2,4,6-Tribromophenol	55.9	16.3-122		%REC	1	11/20/2014 6:29:40 PM	16481
Surr: Nitrobenzene-d5	58.3	45.3-117		%REC	1	11/20/2014 6:29:40 PM	16481
Surr: 2-Fluorobiphenyl	62.1	43-113		%REC	1	11/20/2014 6:29:40 PM	16481
Surr: 4-Terphenyl-d14	49.8	47.6-122		%REC	1	11/20/2014 6:29:40 PM	16481
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	5.0		µg/L	10	11/20/2014 4:19:10 AM	R22653
Toluene	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
Ethylbenzene	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
1,2,4-Trimethylbenzene	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
1,3,5-Trimethylbenzene	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
Naphthalene	ND	20		µg/L	10	11/20/2014 4:19:10 AM	R22653
1-Methylnaphthalene	ND	40		µg/L	10	11/20/2014 4:19:10 AM	R22653
2-Methylnaphthalene	ND	40		µg/L	10	11/20/2014 4:19:10 AM	R22653
Acetone	ND	100		µg/L	10	11/20/2014 4:19:10 AM	R22653
Bromobenzene	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
Bromodichloromethane	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
Bromoform	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
Bromomethane	ND	30		µg/L	10	11/20/2014 4:19:10 AM	R22653
2-Butanone	ND	100		µg/L	10	11/20/2014 4:19:10 AM	R22653
Carbon disulfide	ND	100		µg/L	10	11/20/2014 4:19:10 AM	R22653
Carbon Tetrachloride	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
Chlorobenzene	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
Chloroethane	ND	20		µg/L	10	11/20/2014 4:19:10 AM	R22653
Chloroform	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
Chloromethane	ND	30		µg/L	10	11/20/2014 4:19:10 AM	R22653
2-Chlorotoluene	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
4-Chlorotoluene	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
cis-1,2-DCE	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/20/2014 4:19:10 AM	R22653
Dibromochloromethane	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
Dibromomethane	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
1,2-Dichlorobenzene	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
1,3-Dichlorobenzene	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-8
Project: Q4 2014
Collection Date: 11/12/2014 4:53:00 PM
Lab ID: 1411536-005
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,4-Dichlorobenzene	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
Dichlorodifluoromethane	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
1,1-Dichloroethane	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
1,1-Dichloroethene	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
1,2-Dichloropropane	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
1,3-Dichloropropane	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
2,2-Dichloropropane	ND	20		µg/L	10	11/20/2014 4:19:10 AM	R22653
1,1-Dichloropropene	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
Hexachlorobutadiene	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
2-Hexanone	ND	100		µg/L	10	11/20/2014 4:19:10 AM	R22653
Isopropylbenzene	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
4-Isopropyltoluene	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
4-Methyl-2-pentanone	ND	100		µg/L	10	11/20/2014 4:19:10 AM	R22653
Methylene Chloride	ND	30		µg/L	10	11/20/2014 4:19:10 AM	R22653
n-Butylbenzene	ND	30		µg/L	10	11/20/2014 4:19:10 AM	R22653
n-Propylbenzene	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
sec-Butylbenzene	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
Styrene	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
tert-Butylbenzene	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	11/20/2014 4:19:10 AM	R22653
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
trans-1,2-DCE	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
1,1,1-Trichloroethane	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
1,1,2-Trichloroethane	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
Trichloroethene (TCE)	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
Trichlorofluoromethane	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
1,2,3-Trichloropropane	ND	20		µg/L	10	11/20/2014 4:19:10 AM	R22653
Vinyl chloride	ND	10		µg/L	10	11/20/2014 4:19:10 AM	R22653
Xylenes, Total	ND	15		µg/L	10	11/20/2014 4:19:10 AM	R22653
Surr: 1,2-Dichloroethane-d4	101	70-130		%REC	10	11/20/2014 4:19:10 AM	R22653
Surr: 4-Bromofluorobenzene	94.0	70-130		%REC	10	11/20/2014 4:19:10 AM	R22653
Surr: Dibromofluoromethane	103	70-130		%REC	10	11/20/2014 4:19:10 AM	R22653
Surr: Toluene-d8	89.7	70-130		%REC	10	11/20/2014 4:19:10 AM	R22653
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **JRR**	
Conductivity	170000	1.0		µmhos/cm	100	11/21/2014 7:25:41 PM	R22735

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-8
Project: Q4 2014
Collection Date: 11/12/2014 4:53:00 PM
Lab ID: 1411536-005
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM4500-H+B: PH						Analyst: **JRR**	
pH	7.82	1.68	H	pH units	1	11/20/2014 8:12:15 PM	R22708

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-9
Project: Q4 2014
Collection Date: 11/13/2014 8:30:00 AM
Lab ID: 1411536-006
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	22	10	*	mg/L	100	11/14/2014 2:38:27 PM	R22558
Chloride	98000	5000		mg/L	1E	11/26/2014 3:14:33 PM	R22848
Bromide	34	10		mg/L	100	11/14/2014 2:38:27 PM	R22558
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	11/14/2014 2:26:03 PM	R22558
Sulfate	12000	500		mg/L	1E	11/25/2014 12:55:10 AM	R22782
Nitrate+Nitrite as N	ND	100		mg/L	500	11/26/2014 4:37:05 AM	R22802
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.25	0.010		mg/L	5	11/18/2014 6:24:11 PM	R22614
Cadmium	ND	0.010		mg/L	5	11/18/2014 6:24:11 PM	R22614
Calcium	1500	20		mg/L	20	11/24/2014 1:10:28 PM	R22752
Chromium	ND	0.030		mg/L	5	11/18/2014 6:24:11 PM	R22614
Copper	ND	0.030		mg/L	5	11/18/2014 6:24:11 PM	R22614
Iron	ND	0.10		mg/L	5	11/24/2014 1:40:10 PM	R22752
Magnesium	2000	20		mg/L	20	11/24/2014 1:10:28 PM	R22752
Manganese	0.18	0.010	*	mg/L	5	11/18/2014 6:24:11 PM	R22614
Potassium	2400	50		mg/L	50	11/24/2014 1:12:12 PM	R22752
Silver	ND	0.025		mg/L	5	11/18/2014 6:24:11 PM	R22614
Sodium	64000	1000		mg/L	1E	11/24/2014 1:43:46 PM	R22752
Zinc	0.051	0.050		mg/L	5	11/18/2014 6:24:11 PM	R22614
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.25	0.010		mg/L	5	11/18/2014 4:26:59 PM	16416
Cadmium	ND	0.010		mg/L	5	11/18/2014 4:26:59 PM	16416
Chromium	ND	0.030		mg/L	5	11/18/2014 4:26:59 PM	16416
Copper	ND	0.030		mg/L	5	11/18/2014 4:26:59 PM	16416
Iron	0.19	0.10		mg/L	5	11/18/2014 4:26:59 PM	16416
Manganese	0.25	0.010	*	mg/L	5	11/18/2014 4:26:59 PM	16416
Silver	ND	0.025		mg/L	5	11/18/2014 4:26:59 PM	16416
Zinc	ND	0.10		mg/L	10	11/21/2014 5:19:45 PM	16416
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.16	0.050	*	mg/L	50	12/1/2014 4:17:24 PM	R22871
Lead	ND	0.050		mg/L	50	12/1/2014 4:17:24 PM	R22871
Selenium	ND	0.50	*	mg/L	50	12/1/2014 4:17:24 PM	R22871
Uranium	ND	0.050		mg/L	50	12/2/2014 5:41:37 PM	R22885
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.20	0.10	*	mg/L	100	12/3/2014 2:57:13 PM	16416
Lead	ND	0.050		mg/L	50	12/3/2014 2:41:40 PM	16416
Selenium	ND	1.0	*	mg/L	100	12/3/2014 2:57:13 PM	16416

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Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-9
Project: Q4 2014
Collection Date: 11/13/2014 8:30:00 AM
Lab ID: 1411536-006
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Uranium	ND	0.050		mg/L	50	12/3/2014 2:41:40 PM	16416
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/25/2014 9:17:59 AM	16546
SM5210B: BOD						Analyst:	**MRA**
Biochemical Oxygen Demand	4.2	2.0		mg/L	1	11/19/2014 1:44:00 PM	16392
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Acenaphthylene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Aniline	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Anthracene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Azobenzene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Benz(a)anthracene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Benzo(a)pyrene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Benzo(b)fluoranthene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Benzo(k)fluoranthene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Benzoic acid	ND	20		µg/L	1	11/19/2014 3:57:37 PM	16427
Benzyl alcohol	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Bis(2-ethylhexyl)phthalate	18	10		µg/L	1	11/19/2014 3:57:37 PM	16427
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Butyl benzyl phthalate	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Carbazole	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
4-Chloroaniline	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
2-Chloronaphthalene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
2-Chlorophenol	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Chrysene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Di-n-butyl phthalate	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Di-n-octyl phthalate	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Dibenzofuran	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
1,2-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
1,3-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
1,4-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427

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Qualifiers:

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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-9
Project: Q4 2014
Collection Date: 11/13/2014 8:30:00 AM
Lab ID: 1411536-006
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Diethyl phthalate	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Dimethyl phthalate	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
2,4-Dichlorophenol	ND	20		µg/L	1	11/19/2014 3:57:37 PM	16427
2,4-Dimethylphenol	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/19/2014 3:57:37 PM	16427
2,4-Dinitrophenol	ND	20		µg/L	1	11/19/2014 3:57:37 PM	16427
2,4-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
2,6-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Fluoranthene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Fluorene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Hexachlorobenzene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Hexachlorobutadiene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Hexachloroethane	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Isophorone	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
1-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
2-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
2-Methylphenol	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
3+4-Methylphenol	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
N-Nitrosodimethylamine	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Naphthalene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
2-Nitroaniline	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
3-Nitroaniline	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
4-Nitroaniline	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Nitrobenzene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
2-Nitrophenol	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
4-Nitrophenol	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Pentachlorophenol	ND	20		µg/L	1	11/19/2014 3:57:37 PM	16427
Phenanthrene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Phenol	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Pyrene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
Pyridine	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/19/2014 3:57:37 PM	16427

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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-9
Project: Q4 2014
Collection Date: 11/13/2014 8:30:00 AM
Lab ID: 1411536-006
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Surr: 2-Fluorophenol	57.0	17.6-104		%REC	1	11/19/2014 3:57:37 PM	16427
Surr: Phenol-d5	63.8	17.7-89.9		%REC	1	11/19/2014 3:57:37 PM	16427
Surr: 2,4,6-Tribromophenol	38.7	16.3-122		%REC	1	11/19/2014 3:57:37 PM	16427
Surr: Nitrobenzene-d5	69.4	45.3-117		%REC	1	11/19/2014 3:57:37 PM	16427
Surr: 2-Fluorobiphenyl	56.4	43-113		%REC	1	11/19/2014 3:57:37 PM	16427
Surr: 4-Terphenyl-d14	46.3	47.6-122	S	%REC	1	11/19/2014 3:57:37 PM	16427
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	5.0		µg/L	10	11/20/2014 4:48:56 AM	R22653
Toluene	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
Ethylbenzene	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
1,2,4-Trimethylbenzene	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
1,3,5-Trimethylbenzene	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
Naphthalene	ND	20		µg/L	10	11/20/2014 4:48:56 AM	R22653
1-Methylnaphthalene	ND	40		µg/L	10	11/20/2014 4:48:56 AM	R22653
2-Methylnaphthalene	ND	40		µg/L	10	11/20/2014 4:48:56 AM	R22653
Acetone	ND	100		µg/L	10	11/20/2014 4:48:56 AM	R22653
Bromobenzene	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
Bromodichloromethane	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
Bromoform	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
Bromomethane	ND	30		µg/L	10	11/20/2014 4:48:56 AM	R22653
2-Butanone	ND	100		µg/L	10	11/20/2014 4:48:56 AM	R22653
Carbon disulfide	ND	100		µg/L	10	11/20/2014 4:48:56 AM	R22653
Carbon Tetrachloride	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
Chlorobenzene	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
Chloroethane	ND	20		µg/L	10	11/20/2014 4:48:56 AM	R22653
Chloroform	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
Chloromethane	ND	30		µg/L	10	11/20/2014 4:48:56 AM	R22653
2-Chlorotoluene	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
4-Chlorotoluene	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
cis-1,2-DCE	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/20/2014 4:48:56 AM	R22653
Dibromochloromethane	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
Dibromomethane	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
1,2-Dichlorobenzene	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
1,3-Dichlorobenzene	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-9
Project: Q4 2014
Collection Date: 11/13/2014 8:30:00 AM
Lab ID: 1411536-006
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,4-Dichlorobenzene	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
Dichlorodifluoromethane	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
1,1-Dichloroethane	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
1,1-Dichloroethene	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
1,2-Dichloropropane	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
1,3-Dichloropropane	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
2,2-Dichloropropane	ND	20		µg/L	10	11/20/2014 4:48:56 AM	R22653
1,1-Dichloropropene	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
Hexachlorobutadiene	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
2-Hexanone	ND	100		µg/L	10	11/20/2014 4:48:56 AM	R22653
Isopropylbenzene	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
4-Isopropyltoluene	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
4-Methyl-2-pentanone	ND	100		µg/L	10	11/20/2014 4:48:56 AM	R22653
Methylene Chloride	ND	30		µg/L	10	11/20/2014 4:48:56 AM	R22653
n-Butylbenzene	ND	30		µg/L	10	11/20/2014 4:48:56 AM	R22653
n-Propylbenzene	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
sec-Butylbenzene	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
Styrene	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
tert-Butylbenzene	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	11/20/2014 4:48:56 AM	R22653
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
trans-1,2-DCE	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
1,1,1-Trichloroethane	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
1,1,2-Trichloroethane	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
Trichloroethene (TCE)	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
Trichlorofluoromethane	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
1,2,3-Trichloropropane	ND	20		µg/L	10	11/20/2014 4:48:56 AM	R22653
Vinyl chloride	ND	10		µg/L	10	11/20/2014 4:48:56 AM	R22653
Xylenes, Total	ND	15		µg/L	10	11/20/2014 4:48:56 AM	R22653
Surr: 1,2-Dichloroethane-d4	97.0	70-130		%REC	10	11/20/2014 4:48:56 AM	R22653
Surr: 4-Bromofluorobenzene	97.9	70-130		%REC	10	11/20/2014 4:48:56 AM	R22653
Surr: Dibromofluoromethane	90.0	70-130		%REC	10	11/20/2014 4:48:56 AM	R22653
Surr: Toluene-d8	93.8	70-130		%REC	10	11/20/2014 4:48:56 AM	R22653
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **JRR**	
Conductivity	300000	1.0		µmhos/cm	100	11/21/2014 7:30:07 PM	R22735

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-9
Project: Q4 2014
Collection Date: 11/13/2014 8:30:00 AM
Lab ID: 1411536-006
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM4500-H+B: PH						Analyst: **JRR**	
pH	7.40	1.68	H	pH units	1	11/20/2014 8:16:27 PM	R22708

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-11
Project: Q4 2014
Collection Date: 11/12/2014 4:06:00 PM
Lab ID: 1411536-007
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	32	10	*	mg/L	100	11/14/2014 3:28:06 PM	R22558
Chloride	63000	2500		mg/L	5E	11/26/2014 3:26:58 PM	R22848
Bromide	32	10		mg/L	100	11/14/2014 3:28:06 PM	R22558
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	11/14/2014 3:15:41 PM	R22558
Sulfate	17000	250		mg/L	500	11/25/2014 1:07:35 AM	R22782
Nitrate+Nitrite as N	ND	40		mg/L	200	11/24/2014 10:38:40 PM	R22782
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.16	0.010		mg/L	5	11/18/2014 6:36:20 PM	R22614
Cadmium	ND	0.010		mg/L	5	11/18/2014 6:36:20 PM	R22614
Calcium	1100	50		mg/L	50	11/24/2014 1:16:04 PM	R22752
Chromium	ND	0.030		mg/L	5	11/18/2014 6:36:20 PM	R22614
Copper	ND	0.030		mg/L	5	11/24/2014 1:14:15 PM	R22752
Iron	0.31	0.10	*	mg/L	5	11/24/2014 1:14:15 PM	R22752
Magnesium	1300	50		mg/L	50	11/24/2014 1:16:04 PM	R22752
Manganese	1.0	0.010	*	mg/L	5	11/18/2014 6:36:20 PM	R22614
Potassium	1800	50		mg/L	50	11/24/2014 1:16:04 PM	R22752
Silver	ND	0.025		mg/L	5	11/18/2014 6:36:20 PM	R22614
Sodium	34000	500		mg/L	500	11/24/2014 1:45:48 PM	R22752
Zinc	0.061	0.050		mg/L	5	11/18/2014 6:36:20 PM	R22614
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.16	0.010		mg/L	5	11/18/2014 4:31:55 PM	16416
Cadmium	ND	0.010		mg/L	5	11/18/2014 4:31:55 PM	16416
Chromium	ND	0.030		mg/L	5	11/18/2014 4:31:55 PM	16416
Copper	ND	0.030		mg/L	5	11/18/2014 4:31:55 PM	16416
Iron	0.38	0.10	*	mg/L	5	11/18/2014 4:31:55 PM	16416
Manganese	1.2	0.010	*	mg/L	5	11/18/2014 4:31:55 PM	16416
Silver	ND	0.025		mg/L	5	11/18/2014 4:31:55 PM	16416
Zinc	ND	0.050		mg/L	5	11/20/2014 4:54:02 PM	16416
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.10	0.050	*	mg/L	50	12/1/2014 4:20:30 PM	R22871
Lead	ND	0.020		mg/L	20	12/1/2014 3:40:09 PM	R22871
Selenium	ND	0.50	*	mg/L	50	12/1/2014 4:20:30 PM	R22871
Uranium	ND	0.050		mg/L	50	12/2/2014 5:44:36 PM	R22885
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.14	0.050	*	mg/L	50	12/3/2014 2:44:45 PM	16416
Lead	ND	0.050		mg/L	50	12/3/2014 2:44:45 PM	16416
Selenium	ND	0.50	*	mg/L	50	12/3/2014 2:44:45 PM	16416

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Hall Environmental Analysis Laboratory, Inc.

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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Uranium	ND	0.050		mg/L	50	12/3/2014 2:44:45 PM	16416
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/25/2014 9:19:47 AM	16546
SM5210B: BOD						Analyst:	**MRA**
Biochemical Oxygen Demand	89	2.0		mg/L	1	11/19/2014 1:44:00 PM	16392
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Acenaphthylene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Aniline	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Anthracene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Azobenzene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Benz(a)anthracene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Benzo(a)pyrene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Benzo(b)fluoranthene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Benzo(k)fluoranthene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Benzoic acid	ND	20		µg/L	1	11/19/2014 4:25:20 PM	16427
Benzyl alcohol	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Bis(2-ethylhexyl)phthalate	13	10		µg/L	1	11/19/2014 4:25:20 PM	16427
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Butyl benzyl phthalate	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Carbazole	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
4-Chloroaniline	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
2-Chloronaphthalene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
2-Chlorophenol	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Chrysene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Di-n-butyl phthalate	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Di-n-octyl phthalate	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Dibenzofuran	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
1,2-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
1,3-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
1,4-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427

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EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Diethyl phthalate	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Dimethyl phthalate	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
2,4-Dichlorophenol	ND	20		µg/L	1	11/19/2014 4:25:20 PM	16427
2,4-Dimethylphenol	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/19/2014 4:25:20 PM	16427
2,4-Dinitrophenol	ND	20		µg/L	1	11/19/2014 4:25:20 PM	16427
2,4-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
2,6-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Fluoranthene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Fluorene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Hexachlorobenzene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Hexachlorobutadiene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Hexachloroethane	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Isophorone	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
1-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
2-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
2-Methylphenol	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
3+4-Methylphenol	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
N-Nitrosodimethylamine	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Naphthalene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
2-Nitroaniline	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
3-Nitroaniline	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
4-Nitroaniline	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Nitrobenzene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
2-Nitrophenol	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
4-Nitrophenol	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Pentachlorophenol	ND	20		µg/L	1	11/19/2014 4:25:20 PM	16427
Phenanthrene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Phenol	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Pyrene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
Pyridine	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/19/2014 4:25:20 PM	16427

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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Surr: 2-Fluorophenol	43.7	17.6-104		%REC	1	11/19/2014 4:25:20 PM	16427
Surr: Phenol-d5	54.2	17.7-89.9		%REC	1	11/19/2014 4:25:20 PM	16427
Surr: 2,4,6-Tribromophenol	39.6	16.3-122		%REC	1	11/19/2014 4:25:20 PM	16427
Surr: Nitrobenzene-d5	58.7	45.3-117		%REC	1	11/19/2014 4:25:20 PM	16427
Surr: 2-Fluorobiphenyl	40.3	43-113	S	%REC	1	11/19/2014 4:25:20 PM	16427
Surr: 4-Terphenyl-d14	35.6	47.6-122	S	%REC	1	11/19/2014 4:25:20 PM	16427
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	5.0		µg/L	10	11/20/2014 5:18:43 AM	R22653
Toluene	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
Ethylbenzene	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
1,2,4-Trimethylbenzene	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
1,3,5-Trimethylbenzene	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
Naphthalene	ND	20		µg/L	10	11/20/2014 5:18:43 AM	R22653
1-Methylnaphthalene	ND	40		µg/L	10	11/20/2014 5:18:43 AM	R22653
2-Methylnaphthalene	ND	40		µg/L	10	11/20/2014 5:18:43 AM	R22653
Acetone	ND	100		µg/L	10	11/20/2014 5:18:43 AM	R22653
Bromobenzene	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
Bromodichloromethane	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
Bromoform	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
Bromomethane	ND	30		µg/L	10	11/20/2014 5:18:43 AM	R22653
2-Butanone	ND	100		µg/L	10	11/20/2014 5:18:43 AM	R22653
Carbon disulfide	ND	100		µg/L	10	11/20/2014 5:18:43 AM	R22653
Carbon Tetrachloride	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
Chlorobenzene	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
Chloroethane	ND	20		µg/L	10	11/20/2014 5:18:43 AM	R22653
Chloroform	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
Chloromethane	ND	30		µg/L	10	11/20/2014 5:18:43 AM	R22653
2-Chlorotoluene	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
4-Chlorotoluene	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
cis-1,2-DCE	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/20/2014 5:18:43 AM	R22653
Dibromochloromethane	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
Dibromomethane	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
1,2-Dichlorobenzene	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
1,3-Dichlorobenzene	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653

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EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,4-Dichlorobenzene	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
Dichlorodifluoromethane	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
1,1-Dichloroethane	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
1,1-Dichloroethene	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
1,2-Dichloropropane	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
1,3-Dichloropropane	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
2,2-Dichloropropane	ND	20		µg/L	10	11/20/2014 5:18:43 AM	R22653
1,1-Dichloropropene	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
Hexachlorobutadiene	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
2-Hexanone	ND	100		µg/L	10	11/20/2014 5:18:43 AM	R22653
Isopropylbenzene	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
4-Isopropyltoluene	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
4-Methyl-2-pentanone	ND	100		µg/L	10	11/20/2014 5:18:43 AM	R22653
Methylene Chloride	ND	30		µg/L	10	11/20/2014 5:18:43 AM	R22653
n-Butylbenzene	ND	30		µg/L	10	11/20/2014 5:18:43 AM	R22653
n-Propylbenzene	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
sec-Butylbenzene	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
Styrene	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
tert-Butylbenzene	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	11/20/2014 5:18:43 AM	R22653
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
trans-1,2-DCE	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
1,1,1-Trichloroethane	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
1,1,2-Trichloroethane	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
Trichloroethene (TCE)	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
Trichlorofluoromethane	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
1,2,3-Trichloropropane	ND	20		µg/L	10	11/20/2014 5:18:43 AM	R22653
Vinyl chloride	ND	10		µg/L	10	11/20/2014 5:18:43 AM	R22653
Xylenes, Total	ND	15		µg/L	10	11/20/2014 5:18:43 AM	R22653
Surr: 1,2-Dichloroethane-d4	103	70-130		%REC	10	11/20/2014 5:18:43 AM	R22653
Surr: 4-Bromofluorobenzene	96.4	70-130		%REC	10	11/20/2014 5:18:43 AM	R22653
Surr: Dibromofluoromethane	100	70-130		%REC	10	11/20/2014 5:18:43 AM	R22653
Surr: Toluene-d8	93.1	70-130		%REC	10	11/20/2014 5:18:43 AM	R22653
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **JRR**	
Conductivity	180000	1.0		µmhos/cm	100	11/21/2014 7:34:33 PM	R22735

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Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM4500-H+B: PH						Analyst: **JRR**	
pH	7.74	1.68	H	pH units	1	11/20/2014 8:20:39 PM	R22708

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-12A
Project: Q4 2014
Collection Date: 11/12/2014 3:35:00 PM
Lab ID: 1411536-008
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	43	10	*	mg/L	100	11/14/2014 3:52:55 PM	R22558
Chloride	3000	100		mg/L	200	11/25/2014 1:20:00 AM	R22782
Bromide	2.1	1.0		mg/L	10	11/14/2014 3:40:31 PM	R22558
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	11/14/2014 3:40:31 PM	R22558
Sulfate	1600	50		mg/L	100	11/14/2014 3:52:55 PM	R22558
Nitrate+Nitrite as N	2.5	2.0		mg/L	10	11/24/2014 11:28:18 PM	R22782
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.11	0.020		mg/L	10	11/24/2014 1:18:05 PM	R22752
Cadmium	ND	0.020		mg/L	10	11/24/2014 1:18:05 PM	R22752
Calcium	130	10		mg/L	10	11/24/2014 1:18:05 PM	R22752
Chromium	ND	0.060		mg/L	10	11/24/2014 1:18:05 PM	R22752
Copper	ND	0.060		mg/L	10	11/24/2014 1:18:05 PM	R22752
Iron	2.2	0.20	*	mg/L	10	11/24/2014 1:18:05 PM	R22752
Magnesium	63	10		mg/L	10	11/24/2014 1:18:05 PM	R22752
Manganese	0.43	0.020	*	mg/L	10	11/24/2014 1:18:05 PM	R22752
Potassium	180	10		mg/L	10	11/24/2014 1:18:05 PM	R22752
Silver	ND	0.050		mg/L	10	11/24/2014 1:18:05 PM	R22752
Sodium	2500	50		mg/L	50	11/24/2014 1:47:34 PM	R22752
Zinc	ND	0.10		mg/L	10	11/24/2014 5:04:23 PM	R22755
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.14	0.0020		mg/L	1	11/18/2014 4:33:41 PM	16416
Cadmium	ND	0.0020		mg/L	1	11/18/2014 4:33:41 PM	16416
Chromium	0.018	0.0060		mg/L	1	11/18/2014 4:33:41 PM	16416
Copper	ND	0.0060		mg/L	1	11/18/2014 4:33:41 PM	16416
Iron	4.1	0.10	*	mg/L	5	11/18/2014 4:35:19 PM	16416
Manganese	0.44	0.0020	*	mg/L	1	11/18/2014 4:33:41 PM	16416
Silver	ND	0.0050		mg/L	1	11/18/2014 4:33:41 PM	16416
Zinc	0.019	0.010		mg/L	1	11/20/2014 4:38:30 PM	16416
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.021	0.020	*	mg/L	20	12/1/2014 3:43:15 PM	R22871
Lead	ND	0.020		mg/L	20	12/1/2014 3:43:15 PM	R22871
Selenium	ND	0.020		mg/L	20	12/1/2014 3:43:15 PM	R22871
Uranium	ND	0.020		mg/L	20	12/1/2014 5:13:13 PM	R22871
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.050	*	mg/L	50	12/3/2014 2:54:08 PM	16416
Lead	ND	0.050		mg/L	50	12/3/2014 2:54:08 PM	16416
Selenium	ND	0.050		mg/L	50	12/3/2014 2:54:08 PM	16416

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-12A
Project: Q4 2014
Collection Date: 11/12/2014 3:35:00 PM
Lab ID: 1411536-008
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Uranium	ND	0.050		mg/L	50	12/3/2014 2:54:08 PM	16416
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/25/2014 9:21:36 AM	16546
SM5210B: BOD						Analyst:	**MRA**
Biochemical Oxygen Demand	<37.50	2.0		mg/L	1	11/19/2014 1:44:00 PM	16392
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Acenaphthylene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Aniline	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Anthracene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Azobenzene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Benz(a)anthracene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Benzo(a)pyrene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Benzo(b)fluoranthene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Benzo(k)fluoranthene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Benzoic acid	ND	20		µg/L	1	11/19/2014 4:53:05 PM	16427
Benzyl alcohol	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Bis(2-ethylhexyl)phthalate	12	10		µg/L	1	11/19/2014 4:53:05 PM	16427
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Butyl benzyl phthalate	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Carbazole	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
4-Chloroaniline	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
2-Chloronaphthalene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
2-Chlorophenol	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Chrysene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Di-n-butyl phthalate	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Di-n-octyl phthalate	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Dibenzofuran	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
1,2-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
1,3-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
1,4-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-12A
Project: Q4 2014
Collection Date: 11/12/2014 3:35:00 PM
Lab ID: 1411536-008
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Diethyl phthalate	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Dimethyl phthalate	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
2,4-Dichlorophenol	ND	20		µg/L	1	11/19/2014 4:53:05 PM	16427
2,4-Dimethylphenol	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/19/2014 4:53:05 PM	16427
2,4-Dinitrophenol	ND	20		µg/L	1	11/19/2014 4:53:05 PM	16427
2,4-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
2,6-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Fluoranthene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Fluorene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Hexachlorobenzene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Hexachlorobutadiene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Hexachloroethane	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Isophorone	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
1-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
2-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
2-Methylphenol	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
3+4-Methylphenol	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
N-Nitrosodimethylamine	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Naphthalene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
2-Nitroaniline	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
3-Nitroaniline	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
4-Nitroaniline	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Nitrobenzene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
2-Nitrophenol	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
4-Nitrophenol	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Pentachlorophenol	ND	20		µg/L	1	11/19/2014 4:53:05 PM	16427
Phenanthrene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Phenol	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Pyrene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
Pyridine	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/19/2014 4:53:05 PM	16427

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-12A
Project: Q4 2014
Collection Date: 11/12/2014 3:35:00 PM
Lab ID: 1411536-008
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Surr: 2-Fluorophenol	59.9	17.6-104		%REC	1	11/19/2014 4:53:05 PM	16427
Surr: Phenol-d5	53.6	17.7-89.9		%REC	1	11/19/2014 4:53:05 PM	16427
Surr: 2,4,6-Tribromophenol	81.5	16.3-122		%REC	1	11/19/2014 4:53:05 PM	16427
Surr: Nitrobenzene-d5	68.2	45.3-117		%REC	1	11/19/2014 4:53:05 PM	16427
Surr: 2-Fluorobiphenyl	66.1	43-113		%REC	1	11/19/2014 4:53:05 PM	16427
Surr: 4-Terphenyl-d14	74.6	47.6-122		%REC	1	11/19/2014 4:53:05 PM	16427
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	5.0		µg/L	10	11/20/2014 5:48:25 AM	R22653
Toluene	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
Ethylbenzene	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
1,2,4-Trimethylbenzene	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
1,3,5-Trimethylbenzene	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
Naphthalene	ND	20		µg/L	10	11/20/2014 5:48:25 AM	R22653
1-Methylnaphthalene	ND	40		µg/L	10	11/20/2014 5:48:25 AM	R22653
2-Methylnaphthalene	ND	40		µg/L	10	11/20/2014 5:48:25 AM	R22653
Acetone	ND	100		µg/L	10	11/20/2014 5:48:25 AM	R22653
Bromobenzene	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
Bromodichloromethane	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
Bromoform	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
Bromomethane	ND	30		µg/L	10	11/20/2014 5:48:25 AM	R22653
2-Butanone	ND	100		µg/L	10	11/20/2014 5:48:25 AM	R22653
Carbon disulfide	ND	100		µg/L	10	11/20/2014 5:48:25 AM	R22653
Carbon Tetrachloride	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
Chlorobenzene	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
Chloroethane	ND	20		µg/L	10	11/20/2014 5:48:25 AM	R22653
Chloroform	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
Chloromethane	ND	30		µg/L	10	11/20/2014 5:48:25 AM	R22653
2-Chlorotoluene	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
4-Chlorotoluene	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
cis-1,2-DCE	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/20/2014 5:48:25 AM	R22653
Dibromochloromethane	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
Dibromomethane	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
1,2-Dichlorobenzene	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
1,3-Dichlorobenzene	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653

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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-12A
Project: Q4 2014
Collection Date: 11/12/2014 3:35:00 PM
Lab ID: 1411536-008
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,4-Dichlorobenzene	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
Dichlorodifluoromethane	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
1,1-Dichloroethane	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
1,1-Dichloroethene	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
1,2-Dichloropropane	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
1,3-Dichloropropane	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
2,2-Dichloropropane	ND	20		µg/L	10	11/20/2014 5:48:25 AM	R22653
1,1-Dichloropropene	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
Hexachlorobutadiene	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
2-Hexanone	ND	100		µg/L	10	11/20/2014 5:48:25 AM	R22653
Isopropylbenzene	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
4-Isopropyltoluene	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
4-Methyl-2-pentanone	ND	100		µg/L	10	11/20/2014 5:48:25 AM	R22653
Methylene Chloride	ND	30		µg/L	10	11/20/2014 5:48:25 AM	R22653
n-Butylbenzene	ND	30		µg/L	10	11/20/2014 5:48:25 AM	R22653
n-Propylbenzene	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
sec-Butylbenzene	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
Styrene	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
tert-Butylbenzene	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	11/20/2014 5:48:25 AM	R22653
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
trans-1,2-DCE	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
1,1,1-Trichloroethane	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
1,1,2-Trichloroethane	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
Trichloroethene (TCE)	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
Trichlorofluoromethane	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
1,2,3-Trichloropropane	ND	20		µg/L	10	11/20/2014 5:48:25 AM	R22653
Vinyl chloride	ND	10		µg/L	10	11/20/2014 5:48:25 AM	R22653
Xylenes, Total	ND	15		µg/L	10	11/20/2014 5:48:25 AM	R22653
Surr: 1,2-Dichloroethane-d4	91.3	70-130		%REC	10	11/20/2014 5:48:25 AM	R22653
Surr: 4-Bromofluorobenzene	94.7	70-130		%REC	10	11/20/2014 5:48:25 AM	R22653
Surr: Dibromofluoromethane	90.7	70-130		%REC	10	11/20/2014 5:48:25 AM	R22653
Surr: Toluene-d8	96.8	70-130		%REC	10	11/20/2014 5:48:25 AM	R22653
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **JRR**	
Conductivity	12000	0.050		µmhos/cm	5	11/21/2014 7:38:59 PM	R22735

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-12A
Project: Q4 2014
Collection Date: 11/12/2014 3:35:00 PM
Lab ID: 1411536-008
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM4500-H+B: PH						Analyst: **JRR**	
pH	8.24	1.68	H	pH units	1	11/20/2014 8:24:59 PM	R22708

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-12B
Project: Q4 2014
Collection Date: 11/12/2014 3:15:00 PM
Lab ID: 1411536-009
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	38	10	*	mg/L	100	11/14/2014 4:17:45 PM	R22558
Chloride	1900	50		mg/L	100	11/26/2014 3:39:22 PM	R22848
Bromide	1.3	1.0		mg/L	10	11/14/2014 4:05:20 PM	R22558
Phosphorus, Orthophosphate (As P)	ND	5.0	H	mg/L	10	11/14/2014 4:05:20 PM	R22558
Sulfate	1200	50		mg/L	100	11/14/2014 4:17:45 PM	R22558
Nitrate+Nitrite as N	ND	2.0		mg/L	10	11/24/2014 11:40:42 PM	R22782
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.076	0.0020		mg/L	1	11/18/2014 6:41:46 PM	R22614
Cadmium	ND	0.0020		mg/L	1	11/18/2014 6:41:46 PM	R22614
Calcium	150	5.0		mg/L	5	11/24/2014 1:23:40 PM	R22752
Chromium	0.010	0.0060		mg/L	1	11/18/2014 6:41:46 PM	R22614
Copper	ND	0.0060		mg/L	1	11/24/2014 1:21:54 PM	R22752
Iron	1.3	0.10	*	mg/L	5	11/24/2014 1:23:40 PM	R22752
Magnesium	44	1.0		mg/L	1	11/24/2014 1:21:54 PM	R22752
Manganese	0.24	0.0020	*	mg/L	1	11/18/2014 6:41:46 PM	R22614
Potassium	150	5.0		mg/L	5	11/24/2014 1:23:40 PM	R22752
Silver	ND	0.0050		mg/L	1	11/18/2014 6:41:46 PM	R22614
Sodium	1600	20		mg/L	20	11/24/2014 1:25:44 PM	R22752
Zinc	0.023	0.010		mg/L	1	11/18/2014 6:41:46 PM	R22614
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.087	0.0020		mg/L	1	11/18/2014 4:37:20 PM	16416
Cadmium	ND	0.0020		mg/L	1	11/18/2014 4:37:20 PM	16416
Chromium	0.011	0.0060		mg/L	1	11/18/2014 4:37:20 PM	16416
Copper	ND	0.0060		mg/L	1	11/18/2014 4:37:20 PM	16416
Iron	1.4	0.10	*	mg/L	5	11/18/2014 4:50:39 PM	16416
Manganese	0.27	0.0020	*	mg/L	1	11/18/2014 4:37:20 PM	16416
Silver	ND	0.0050		mg/L	1	11/18/2014 4:37:20 PM	16416
Zinc	0.019	0.010		mg/L	1	11/20/2014 4:40:06 PM	16416
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.020	*	mg/L	20	12/1/2014 3:46:22 PM	R22871
Lead	ND	0.020		mg/L	20	12/1/2014 3:46:22 PM	R22871
Selenium	ND	0.020		mg/L	20	12/1/2014 3:46:22 PM	R22871
Uranium	ND	0.020		mg/L	20	12/1/2014 5:22:34 PM	R22871
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.050		mg/L	50	12/3/2014 3:00:18 PM	16416
Lead	ND	0.050		mg/L	50	12/3/2014 3:00:18 PM	16416
Selenium	ND	0.050		mg/L	50	12/3/2014 3:00:18 PM	16416

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Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-12B
Project: Q4 2014
Collection Date: 11/12/2014 3:15:00 PM
Lab ID: 1411536-009
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Uranium	ND	0.050		mg/L	50	12/3/2014 3:00:18 PM	16416
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/25/2014 9:23:27 AM	16546
SM5210B: BOD						Analyst:	**MRA**
Biochemical Oxygen Demand	110	2.0		mg/L	1	11/19/2014 1:44:00 PM	16392
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Acenaphthylene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Aniline	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Anthracene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Azobenzene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Benz(a)anthracene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Benzo(a)pyrene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Benzo(b)fluoranthene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Benzo(k)fluoranthene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Benzoic acid	ND	20		µg/L	1	11/19/2014 5:20:46 PM	16427
Benzyl alcohol	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Bis(2-ethylhexyl)phthalate	12	10		µg/L	1	11/19/2014 5:20:46 PM	16427
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Butyl benzyl phthalate	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Carbazole	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
4-Chloroaniline	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
2-Chloronaphthalene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
2-Chlorophenol	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Chrysene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Di-n-butyl phthalate	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Di-n-octyl phthalate	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Dibenzofuran	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
1,2-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
1,3-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
1,4-Dichlorobenzene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427

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R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-12B
Project: Q4 2014
Collection Date: 11/12/2014 3:15:00 PM
Lab ID: 1411536-009
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Diethyl phthalate	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Dimethyl phthalate	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
2,4-Dichlorophenol	ND	20		µg/L	1	11/19/2014 5:20:46 PM	16427
2,4-Dimethylphenol	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/19/2014 5:20:46 PM	16427
2,4-Dinitrophenol	ND	20		µg/L	1	11/19/2014 5:20:46 PM	16427
2,4-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
2,6-Dinitrotoluene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Fluoranthene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Fluorene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Hexachlorobenzene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Hexachlorobutadiene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Hexachloroethane	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Isophorone	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
1-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
2-Methylnaphthalene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
2-Methylphenol	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
3+4-Methylphenol	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
N-Nitrosodimethylamine	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Naphthalene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
2-Nitroaniline	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
3-Nitroaniline	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
4-Nitroaniline	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Nitrobenzene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
2-Nitrophenol	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
4-Nitrophenol	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Pentachlorophenol	ND	20		µg/L	1	11/19/2014 5:20:46 PM	16427
Phenanthrene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Phenol	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Pyrene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
Pyridine	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/19/2014 5:20:46 PM	16427

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-12B
Project: Q4 2014
Collection Date: 11/12/2014 3:15:00 PM
Lab ID: 1411536-009
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Surr: 2-Fluorophenol	59.0	17.6-104		%REC	1	11/19/2014 5:20:46 PM	16427
Surr: Phenol-d5	52.1	17.7-89.9		%REC	1	11/19/2014 5:20:46 PM	16427
Surr: 2,4,6-Tribromophenol	71.3	16.3-122		%REC	1	11/19/2014 5:20:46 PM	16427
Surr: Nitrobenzene-d5	67.9	45.3-117		%REC	1	11/19/2014 5:20:46 PM	16427
Surr: 2-Fluorobiphenyl	67.8	43-113		%REC	1	11/19/2014 5:20:46 PM	16427
Surr: 4-Terphenyl-d14	73.0	47.6-122		%REC	1	11/19/2014 5:20:46 PM	16427
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	5.0		µg/L	10	11/20/2014 6:18:08 AM	R22653
Toluene	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
Ethylbenzene	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
1,2,4-Trimethylbenzene	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
1,3,5-Trimethylbenzene	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
Naphthalene	ND	20		µg/L	10	11/20/2014 6:18:08 AM	R22653
1-Methylnaphthalene	ND	40		µg/L	10	11/20/2014 6:18:08 AM	R22653
2-Methylnaphthalene	ND	40		µg/L	10	11/20/2014 6:18:08 AM	R22653
Acetone	ND	100		µg/L	10	11/20/2014 6:18:08 AM	R22653
Bromobenzene	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
Bromodichloromethane	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
Bromoform	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
Bromomethane	ND	30		µg/L	10	11/20/2014 6:18:08 AM	R22653
2-Butanone	ND	100		µg/L	10	11/20/2014 6:18:08 AM	R22653
Carbon disulfide	ND	100		µg/L	10	11/20/2014 6:18:08 AM	R22653
Carbon Tetrachloride	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
Chlorobenzene	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
Chloroethane	ND	20		µg/L	10	11/20/2014 6:18:08 AM	R22653
Chloroform	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
Chloromethane	ND	30		µg/L	10	11/20/2014 6:18:08 AM	R22653
2-Chlorotoluene	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
4-Chlorotoluene	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
cis-1,2-DCE	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/20/2014 6:18:08 AM	R22653
Dibromochloromethane	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
Dibromomethane	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
1,2-Dichlorobenzene	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
1,3-Dichlorobenzene	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-12B
Project: Q4 2014
Collection Date: 11/12/2014 3:15:00 PM
Lab ID: 1411536-009
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,4-Dichlorobenzene	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
Dichlorodifluoromethane	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
1,1-Dichloroethane	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
1,1-Dichloroethene	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
1,2-Dichloropropane	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
1,3-Dichloropropane	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
2,2-Dichloropropane	ND	20		µg/L	10	11/20/2014 6:18:08 AM	R22653
1,1-Dichloropropene	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
Hexachlorobutadiene	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
2-Hexanone	ND	100		µg/L	10	11/20/2014 6:18:08 AM	R22653
Isopropylbenzene	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
4-Isopropyltoluene	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
4-Methyl-2-pentanone	ND	100		µg/L	10	11/20/2014 6:18:08 AM	R22653
Methylene Chloride	ND	30		µg/L	10	11/20/2014 6:18:08 AM	R22653
n-Butylbenzene	ND	30		µg/L	10	11/20/2014 6:18:08 AM	R22653
n-Propylbenzene	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
sec-Butylbenzene	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
Styrene	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
tert-Butylbenzene	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	11/20/2014 6:18:08 AM	R22653
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
trans-1,2-DCE	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
1,1,1-Trichloroethane	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
1,1,2-Trichloroethane	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
Trichloroethene (TCE)	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
Trichlorofluoromethane	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
1,2,3-Trichloropropane	ND	20		µg/L	10	11/20/2014 6:18:08 AM	R22653
Vinyl chloride	ND	10		µg/L	10	11/20/2014 6:18:08 AM	R22653
Xylenes, Total	ND	15		µg/L	10	11/20/2014 6:18:08 AM	R22653
Surr: 1,2-Dichloroethane-d4	86.3	70-130		%REC	10	11/20/2014 6:18:08 AM	R22653
Surr: 4-Bromofluorobenzene	92.1	70-130		%REC	10	11/20/2014 6:18:08 AM	R22653
Surr: Dibromofluoromethane	90.5	70-130		%REC	10	11/20/2014 6:18:08 AM	R22653
Surr: Toluene-d8	103	70-130		%REC	10	11/20/2014 6:18:08 AM	R22653
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **JRR**	
Conductivity	7600	0.010		µmhos/cm	1	11/20/2014 8:29:10 PM	R22708

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-12B
Project: Q4 2014
Collection Date: 11/12/2014 3:15:00 PM
Lab ID: 1411536-009
Matrix: AQUEOUS
Received Date: 11/13/2014 3:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM4500-H+B: PH						Analyst: **JRR**	
pH	7.84	1.68	H	pH units	1	11/20/2014 8:29:10 PM	R22708

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

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REPORT OF ANALYSIS

November 19, 2014

Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

ESC Sample # : L733939-01

Date Received : November 15, 2014
Description :

Site ID :

Sample ID : 1411536-002G EP-5

Project # :

Collected By :
Collection Date : 11/12/14 14:20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	660	50.	mg/l	410.4	11/19/14	5

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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REPORT OF ANALYSIS

November 19, 2014

Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

ESC Sample # : L733939-02

Date Received : November 15, 2014
Description :

Site ID :

Sample ID : 1411536-003G EP-6

Project # :

Collected By :
Collection Date : 11/12/14 14:45

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	810	50.	mg/l	410.4	11/19/14	5

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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REPORT OF ANALYSIS

November 19, 2014

Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

ESC Sample # : L733939-03

Date Received : November 15, 2014
Description :

Site ID :

Sample ID : 1411536-004G EP-7

Project # :

Collected By :
Collection Date : 11/12/14 16:24

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	4400	100	mg/l	410.4	11/19/14	10

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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REPORT OF ANALYSIS

November 19, 2014

Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

ESC Sample # : L733939-04

Date Received : November 15, 2014
Description :

Site ID :

Sample ID : 1411536-005G EP-8

Project # :

Collected By :
Collection Date : 11/12/14 16:53

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	4100	100	mg/l	410.4	11/19/14	10

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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REPORT OF ANALYSIS

November 19, 2014

Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

ESC Sample # : L733939-05

Date Received : November 15, 2014
Description :

Site ID :

Sample ID : 1411536-006G EP-9

Project # :

Collected By :
Collection Date : 11/13/14 08:30

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	3900	1000	mg/l	410.4	11/19/14	100

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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Reported: 11/19/14 15:37 Printed: 11/19/14 15:38

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REPORT OF ANALYSIS

November 19, 2014

Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

ESC Sample # : L733939-06

Date Received : November 15, 2014
Description :

Site ID :

Sample ID : 1411536-007G EP-11

Project # :

Collected By :
Collection Date : 11/12/14 16:06

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	4700	100	mg/l	410.4	11/19/14	10

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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REPORT OF ANALYSIS

November 19, 2014

Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

ESC Sample # : L733939-07

Date Received : November 15, 2014
Description :

Site ID :

Sample ID : 1411536-008G EP-12A

Project # :

Collected By :
Collection Date : 11/12/14 15:35

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	450	10.	mg/l	410.4	11/19/14	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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Reported: 11/19/14 15:37 Printed: 11/19/14 15:38

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REPORT OF ANALYSIS

November 19, 2014

Hall Environmental Analysis Laborat
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Albuquerque, NM 87109

ESC Sample # : L733939-08

Date Received : November 15, 2014
Description :

Site ID :

Sample ID : 1411536-009G EP-12B

Project # :

Collected By :
Collection Date : 11/12/14 15:15

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	410	10.	mg/l	410.4	11/19/14	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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Hall Environmental Analysis Laboratory

4901 Hawkins NE

Albuquerque, NM 87109

Quality Assurance Report
Level II

L733939

November 19, 2014

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
COD	< 10	mg/l			WG755289	11/19/14 12:12

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
COD	mg/l	410.	410.	0.0	5	L733939-08	WG755289
COD	mg/l	9600	9600	0.0	5	L733485-01	WG755289

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
COD	mg/l	183	189.	103.	90-110	WG755289

Laboratory Control Sample Duplicate

Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
COD	mg/l	189.	189.	103.	90-110	0.0	5	WG755289

Matrix Spike

Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
COD	mg/l	699.	260.	400	110.	90-110	L733812-01	WG755289

Matrix Spike Duplicate

Analyte	Units	MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
COD	mg/l	700.	699.	110.	90-110	0.143	5	L733812-01	WG755289

Batch number /Run number / Sample number cross reference

WG755289: R3005377: L733939-01 02 03 04 05 06 07 08

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411536**
10-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22599** RunNo: **22599**
Prep Date: Analysis Date: **11/16/2014** SeqNo: **666147** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22599** RunNo: **22599**
Prep Date: Analysis Date: **11/16/2014** SeqNo: **666149** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22599** RunNo: **22599**
Prep Date: Analysis Date: **11/16/2014** SeqNo: **666151** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.2	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.5	85	115			
Chromium	0.48	0.0060	0.5000	0	96.9	85	115			
Copper	0.49	0.0060	0.5000	0	98.1	85	115			
Iron	0.48	0.020	0.5000	0	95.4	85	115			
Magnesium	45	1.0	50.00	0	89.1	85	115			
Manganese	0.47	0.0020	0.5000	0	94.7	85	115			
Potassium	43	1.0	50.00	0	86.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411536**
10-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22599** RunNo: **22599**
Prep Date: Analysis Date: **11/16/2014** SeqNo: **666151** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.11	0.0050	0.1000	0	105	85	115			
Zinc	0.50	0.010	0.5000	0	99.2	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22599** RunNo: **22599**
Prep Date: Analysis Date: **11/16/2014** SeqNo: **666152** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.55	0.0020	0.5000	0	109	85	115			
Cadmium	0.55	0.0020	0.5000	0	110	85	115			
Chromium	0.54	0.0060	0.5000	0	108	85	115			
Copper	0.55	0.0060	0.5000	0	109	85	115			
Iron	0.53	0.020	0.5000	0	107	85	115			
Magnesium	56	1.0	50.00	0	112	85	115			
Manganese	0.52	0.0020	0.5000	0	104	85	115			
Potassium	54	1.0	50.00	0	109	85	115			
Silver	0.12	0.0050	0.1000	0	117	85	115			S
Zinc	0.54	0.010	0.5000	0	109	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22614** RunNo: **22614**
Prep Date: Analysis Date: **11/18/2014** SeqNo: **666850** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22614** RunNo: **22614**
Prep Date: Analysis Date: **11/18/2014** SeqNo: **666851** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.6	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.9	85	115			
Chromium	0.48	0.0060	0.5000	0	96.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411536**
10-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22614** RunNo: **22614**
Prep Date: Analysis Date: **11/18/2014** SeqNo: **666851** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.49	0.0060	0.5000	0	97.7	85	115			
Manganese	0.47	0.0020	0.5000	0	94.4	85	115			
Silver	0.10	0.0050	0.1000	0	105	85	115			
Zinc	0.48	0.010	0.5000	0	97.0	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22752** RunNo: **22752**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671318** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22752** RunNo: **22752**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671319** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	97.0	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.9	85	115			
Calcium	52	1.0	50.00	0	104	85	115			
Chromium	0.48	0.0060	0.5000	0	96.5	85	115			
Copper	0.48	0.0060	0.5000	0	96.0	85	115			
Iron	0.49	0.020	0.5000	0	98.5	85	115			
Magnesium	53	1.0	50.00	0	106	85	115			
Manganese	0.47	0.0020	0.5000	0	93.7	85	115			
Potassium	51	1.0	50.00	0	101	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Sodium	52	1.0	50.00	0	104	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411536**
10-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22752** RunNo: **22752**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671320** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22752** RunNo: **22752**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671321** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	102	85	115			
Cadmium	0.51	0.0020	0.5000	0	103	85	115			
Calcium	50	1.0	50.00	0	100	85	115			
Chromium	0.50	0.0060	0.5000	0	101	85	115			
Copper	0.51	0.0060	0.5000	0	102	85	115			
Iron	0.52	0.020	0.5000	0	104	85	115			
Magnesium	50	1.0	50.00	0	101	85	115			
Manganese	0.49	0.0020	0.5000	0	98.8	85	115			
Potassium	49	1.0	50.00	0	97.7	85	115			
Silver	0.11	0.0050	0.1000	0	106	85	115			
Sodium	50	1.0	50.00	0	99.6	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22755** RunNo: **22755**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671448** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411536**
10-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**			
Client ID: **LCSW**	Batch ID: **R22755**	RunNo: **22755**			
Prep Date:	Analysis Date: **11/24/2014**	SeqNo: **671449**	Units: **mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.48	0.010	0.5000	0	96.3	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411536**
10-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB-16416** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **16416** RunNo: **22614**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666852** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-16416** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **16416** RunNo: **22614**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666853** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	101	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Copper	0.51	0.0060	0.5000	0	101	85	115			
Iron	0.50	0.020	0.5000	0	101	85	115			
Manganese	0.49	0.0020	0.5000	0	98.1	85	115			
Silver	0.11	0.0050	0.1000	0	111	85	115			
Zinc	0.50	0.010	0.5000	0	101	85	115			

Sample ID **1411536-009FMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **EP-12B** Batch ID: **16416** RunNo: **22614**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666915** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.57	0.0020	0.5000	0.08749	96.3	70	130			
Cadmium	0.50	0.0020	0.5000	0	99.7	70	130			
Chromium	0.50	0.0060	0.5000	0.01112	97.6	70	130			
Copper	0.57	0.0060	0.5000	0	114	70	130			
Manganese	0.73	0.0020	0.5000	0.2661	92.6	70	130			
Silver	0.11	0.0050	0.1000	0	114	70	130			

Sample ID **1411536-009FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **EP-12B** Batch ID: **16416** RunNo: **22614**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666916** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411536**
10-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **1411536-009FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **EP-12B** Batch ID: **16416** RunNo: **22614**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666916** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.56	0.0020	0.5000	0.08749	95.2	70	130	0.945	20	
Cadmium	0.49	0.0020	0.5000	0	98.7	70	130	0.994	20	
Chromium	0.50	0.0060	0.5000	0.01112	97.1	70	130	0.518	20	
Copper	0.57	0.0060	0.5000	0	113	70	130	0.490	20	
Manganese	0.72	0.0020	0.5000	0.2661	91.0	70	130	1.07	20	
Silver	0.11	0.0050	0.1000	0	113	70	130	0.643	20	

Sample ID **1411536-009FMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **EP-12B** Batch ID: **16416** RunNo: **22614**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666918** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	1.8	0.10	0.5000	1.392	90.6	70	130			

Sample ID **1411536-009FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **EP-12B** Batch ID: **16416** RunNo: **22614**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666919** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	1.9	0.10	0.5000	1.392	91.8	70	130	0.327	20	

Sample ID **1411536-009FMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **EP-12B** Batch ID: **16416** RunNo: **22687**
Prep Date: **11/17/2014** Analysis Date: **11/20/2014** SeqNo: **669131** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.48	0.010	0.5000	0.01862	93.0	70	130			

Sample ID **1411536-009FMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **EP-12B** Batch ID: **16416** RunNo: **22687**
Prep Date: **11/17/2014** Analysis Date: **11/20/2014** SeqNo: **669132** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.50	0.010	0.5000	0.01862	95.8	70	130	2.79	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411536**
10-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22871** RunNo: **22871**
Prep Date: Analysis Date: **12/1/2014** SeqNo: **675136** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.7	85	115			
Selenium	0.024	0.0010	0.02500	0	97.6	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22871** RunNo: **22871**
Prep Date: Analysis Date: **12/1/2014** SeqNo: **675137** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.023	0.0010	0.02500	0	92.9	85	115			
Uranium	0.023	0.0010	0.02500	0	91.5	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22871** RunNo: **22871**
Prep Date: Analysis Date: **12/1/2014** SeqNo: **675138** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	90.2	85	115			
Lead	0.023	0.0010	0.02500	0	93.8	85	115			
Selenium	0.022	0.0010	0.02500	0	88.9	85	115			
Uranium	0.023	0.0010	0.02500	0	92.0	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22871** RunNo: **22871**
Prep Date: Analysis Date: **12/1/2014** SeqNo: **675139** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22871** RunNo: **22871**
Prep Date: Analysis Date: **12/1/2014** SeqNo: **675140** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411536**
10-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**		
Client ID: **PBW**	Batch ID: **R22871**	RunNo: **22871**		
Prep Date:	Analysis Date: **12/1/2014**	SeqNo: **675141**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**		
Client ID: **LCSW**	Batch ID: **R22885**	RunNo: **22885**		
Prep Date:	Analysis Date: **12/2/2014**	SeqNo: **675799**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.026	0.0010	0.02500	0	103	85	115			

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**		
Client ID: **LCSW**	Batch ID: **R22885**	RunNo: **22885**		
Prep Date:	Analysis Date: **12/2/2014**	SeqNo: **675800**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.026	0.0010	0.02500	0	102	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**		
Client ID: **PBW**	Batch ID: **R22885**	RunNo: **22885**		
Prep Date:	Analysis Date: **12/2/2014**	SeqNo: **675801**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.0010								

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**		
Client ID: **PBW**	Batch ID: **R22885**	RunNo: **22885**		
Prep Date:	Analysis Date: **12/2/2014**	SeqNo: **675802**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411536**
10-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LLLCS-16416** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **16416** RunNo: **22609**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666765** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.5	85	115			
Lead	0.026	0.0010	0.02500	0	106	85	115			
Selenium	0.024	0.0010	0.02500	0	96.6	85	115			
Uranium	0.026	0.0010	0.02500	0	106	85	115			

Sample ID **MB-16416** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **16416** RunNo: **22609**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666767** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411536**
10-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**MB-16546**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**						
Client ID:	**PBW**	Batch ID:	**16546**	RunNo:	**22791**						
Prep Date:	**11/24/2014**	Analysis Date:	**11/25/2014**	SeqNo:	**672552**	Units:	**mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		ND	0.00020								

Sample ID	**LCS-16546**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**						
Client ID:	**LCSW**	Batch ID:	**16546**	RunNo:	**22791**						
Prep Date:	**11/24/2014**	Analysis Date:	**11/25/2014**	SeqNo:	**672553**	Units:	**mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.0054	0.00020	0.005000	0	109	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411536**
10-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22558** RunNo: **22558**
Prep Date: Analysis Date: **11/14/2014** SeqNo: **665153** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R22558** RunNo: **22558**
Prep Date: Analysis Date: **11/14/2014** SeqNo: **665154** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.51	0.10	0.5000	0	101	90	110			
Nitrogen, Nitrite (As N)	0.99	0.10	1.000	0	99.4	90	110			
Bromide	2.3	0.10	2.500	0	94.0	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	100	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	97.9	90	110			
Sulfate	10	0.50	10.00	0	104	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22558** RunNo: **22558**
Prep Date: Analysis Date: **11/14/2014** SeqNo: **665207** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R22558** RunNo: **22558**
Prep Date: Analysis Date: **11/14/2014** SeqNo: **665208** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	103	90	110			
Nitrogen, Nitrite (As N)	0.97	0.10	1.000	0	97.3	90	110			
Bromide	2.3	0.10	2.500	0	91.0	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	97.1	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411536**
10-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R22558** RunNo: **22558**
Prep Date: Analysis Date: **11/14/2014** SeqNo: **665208** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	95.0	90	110			
Sulfate	9.4	0.50	10.00	0	93.8	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22782** RunNo: **22782**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672326** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R22782** RunNo: **22782**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672327** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.5	0.50	5.000	0	90.3	90	110			
Sulfate	9.3	0.50	10.00	0	92.9	90	110			
Nitrate+Nitrite as N	3.3	0.20	3.500	0	94.6	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22802** RunNo: **22802**
Prep Date: Analysis Date: **11/25/2014** SeqNo: **672863** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R22802** RunNo: **22802**
Prep Date: Analysis Date: **11/25/2014** SeqNo: **672864** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.5	0.20	3.500	0	98.9	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22802** RunNo: **22802**
Prep Date: Analysis Date: **11/25/2014** SeqNo: **672919** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411536**
10-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R22802**	RunNo: **22802**							
Prep Date:	Analysis Date: **11/25/2014**	SeqNo: **672919**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R22802**	RunNo: **22802**							
Prep Date:	Analysis Date: **11/26/2014**	SeqNo: **672920**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.3	0.20	3.500	0	93.0	90	110			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R22848**	RunNo: **22848**							
Prep Date:	Analysis Date: **11/26/2014**	SeqNo: **674415**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R22848**	RunNo: **22848**							
Prep Date:	Analysis Date: **11/26/2014**	SeqNo: **674416**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	98.8	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411536**
10-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R22653**	RunNo: **22653**			
Prep Date:	Analysis Date: **11/19/2014**	SeqNo: **668056**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411536**
10-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **5mL-rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22653** RunNo: **22653**
Prep Date: Analysis Date: **11/19/2014** SeqNo: **668056** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		99.9	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	9.7		10.00		97.4	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22653** RunNo: **22653**
Prep Date: Analysis Date: **11/19/2014** SeqNo: **668058** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	23	1.0	20.00	0	116	80	120			
Chlorobenzene	21	1.0	20.00	0	104	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411536**
10-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22653** RunNo: **22653**
Prep Date: Analysis Date: **11/19/2014** SeqNo: **668058** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	23	1.0	20.00	0	117	82.6	131			
Trichloroethene (TCE)	19	1.0	20.00	0	96.3	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		91.0	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.4	70	130			
Surr: Dibromofluoromethane	8.7		10.00		87.1	70	130			
Surr: Toluene-d8	9.6		10.00		96.5	70	130			

Sample ID **b2** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22653** RunNo: **22653**
Prep Date: Analysis Date: **11/19/2014** SeqNo: **668101** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411536**
10-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **b2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R22653**	RunNo: **22653**	
Prep Date:	Analysis Date: **11/19/2014**	SeqNo: **668101**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411536**
10-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **b2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R22653**	RunNo: **22653**
Prep Date:	Analysis Date: **11/19/2014**	SeqNo: **668101** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	9.8		10.00		98.0	70	130			
Surr: Dibromofluoromethane	9.5		10.00		94.8	70	130			
Surr: Toluene-d8	9.4		10.00		94.3	70	130			

Sample ID **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R22653**	RunNo: **22653**
Prep Date:	Analysis Date: **11/19/2014**	SeqNo: **668103** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	24	1.0	20.00	0	122	70	130			
Toluene	24	1.0	20.00	0	118	80	120			
Chlorobenzene	22	1.0	20.00	0	109	70	130			
1,1-Dichloroethene	26	1.0	20.00	0	129	82.6	131			
Trichloroethene (TCE)	22	1.0	20.00	0	109	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		99.7	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.2	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.3	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411536**
10-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **mb-16427**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **16427**	RunNo: **22650**			
Prep Date: **11/18/2014**	Analysis Date: **11/19/2014**	SeqNo: **667984**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411536**
10-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**mb-16427**	SampType:	**MBLK**	TestCode:	**EPA Method 8270C: Semivolatiles**		
Client ID:	**PBW**	Batch ID:	**16427**	RunNo:	**22650**		
Prep Date:	**11/18/2014**	Analysis Date:	**11/19/2014**	SeqNo:	**667984**	Units:	**µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	130		200.0		67.4	17.6	104			
Surr: Phenol-d5	120		200.0		62.3	17.7	89.9			
Surr: 2,4,6-Tribromophenol	110		200.0		56.7	16.3	122			
Surr: Nitrobenzene-d5	68		100.0		68.0	45.3	117			
Surr: 2-Fluorobiphenyl	67		100.0		67.5	43	113			
Surr: 4-Terphenyl-d14	72		100.0		72.3	47.6	122			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411536**
10-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **lcs-16427** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **16427** RunNo: **22650**
Prep Date: **11/18/2014** Analysis Date: **11/19/2014** SeqNo: **667985** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	62	10	100.0	0	62.4	47.9	114			
4-Chloro-3-methylphenol	140	10	200.0	0	71.1	51.7	122			
2-Chlorophenol	140	10	200.0	0	68.2	40.7	113			
1,4-Dichlorobenzene	60	10	100.0	0	60.1	39.6	99.9			
2,4-Dinitrotoluene	56	10	100.0	0	56.4	40.8	113			
N-Nitrosodi-n-propylamine	67	10	100.0	0	66.7	51.2	111			
4-Nitrophenol	140	10	200.0	0	70.4	15.7	86.9			
Pentachlorophenol	98	20	200.0	0	49.1	21.6	104			
Phenol	140	10	200.0	0	69.2	28.6	71.7			
Pyrene	61	10	100.0	0	60.6	54.2	128			
1,2,4-Trichlorobenzene	59	10	100.0	0	59.4	40.9	101			
Surr: 2-Fluorophenol	120		200.0		61.4	17.6	104			
Surr: Phenol-d5	120		200.0		62.2	17.7	89.9			
Surr: 2,4,6-Tribromophenol	130		200.0		64.7	16.3	122			
Surr: Nitrobenzene-d5	60		100.0		60.4	45.3	117			
Surr: 2-Fluorobiphenyl	58		100.0		58.2	43	113			
Surr: 4-Terphenyl-d14	70		100.0		70.2	47.6	122			

Sample ID **lcsd-16427** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **16427** RunNo: **22650**
Prep Date: **11/18/2014** Analysis Date: **11/19/2014** SeqNo: **667986** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	73	10	100.0	0	73.4	47.9	114	16.1	27.2	
4-Chloro-3-methylphenol	160	10	200.0	0	80.2	51.7	122	12.0	25.9	
2-Chlorophenol	160	10	200.0	0	77.8	40.7	113	13.2	22.5	
1,4-Dichlorobenzene	70	10	100.0	0	69.7	39.6	99.9	14.8	24.6	
2,4-Dinitrotoluene	70	10	100.0	0	69.6	40.8	113	20.9	25.3	
N-Nitrosodi-n-propylamine	78	10	100.0	0	77.7	51.2	111	15.2	23.6	
4-Nitrophenol	170	10	200.0	0	85.3	15.7	86.9	19.1	34.7	
Pentachlorophenol	110	20	200.0	0	57.5	21.6	104	15.7	32.8	
Phenol	160	10	200.0	0	81.8	28.6	71.7	16.7	25.5	S
Pyrene	63	10	100.0	0	63.2	54.2	128	4.14	31.4	
1,2,4-Trichlorobenzene	66	10	100.0	0	66.0	40.9	101	10.6	25.9	
Surr: 2-Fluorophenol	150		200.0		75.0	17.6	104	0	0	
Surr: Phenol-d5	140		200.0		72.2	17.7	89.9	0	0	
Surr: 2,4,6-Tribromophenol	140		200.0		71.8	16.3	122	0	0	
Surr: Nitrobenzene-d5	67		100.0		67.1	45.3	117	0	0	
Surr: 2-Fluorobiphenyl	69		100.0		69.4	43	113	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411536**
10-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**lcsd-16427**	SampType:	**LCSD**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**LCSS02**	Batch ID:	**16427**	RunNo:	**22650**
Prep Date:	**11/18/2014**	Analysis Date:	**11/19/2014**	SeqNo:	**667986** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	75		100.0		74.6	47.6	122	0	0	

Sample ID	**mb-16481**	SampType:	**MBLK**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**PBW**	Batch ID:	**16481**	RunNo:	**22682**
Prep Date:	**11/19/2014**	Analysis Date:	**11/20/2014**	SeqNo:	**668827** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	10	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411536**
10-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**mb-16481**	SampType:	**MBLK**	TestCode:	**EPA Method 8270C: Semivolatiles**				
Client ID:	**PBW**	Batch ID:	**16481**	RunNo:	**22682**				
Prep Date:	**11/19/2014**	Analysis Date:	**11/20/2014**	SeqNo:	**668827**	Units:	**µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411536**
10-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **mb-16481** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **16481** RunNo: **22682**
Prep Date: **11/19/2014** Analysis Date: **11/20/2014** SeqNo: **668827** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	150		200.0		72.8	17.6	104			
Surr: Phenol-d5	140		200.0		70.0	17.7	89.9			
Surr: 2,4,6-Tribromophenol	160		200.0		81.6	16.3	122			
Surr: Nitrobenzene-d5	70		100.0		69.6	45.3	117			
Surr: 2-Fluorobiphenyl	74		100.0		74.0	43	113			
Surr: 4-Terphenyl-d14	99		100.0		99.0	47.6	122			

Sample ID **lcs-16481** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **16481** RunNo: **22682**
Prep Date: **11/19/2014** Analysis Date: **11/20/2014** SeqNo: **668828** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	80	10	100.0	0	79.8	47.9	114			
4-Chloro-3-methylphenol	180	10	200.0	0	88.4	51.7	122			
2-Chlorophenol	150	10	200.0	0	73.0	40.7	113			
1,4-Dichlorobenzene	70	10	100.0	0	69.9	39.6	99.9			
2,4-Dinitrotoluene	70	10	100.0	0	70.1	40.8	113			
N-Nitrosodi-n-propylamine	79	10	100.0	0	79.0	51.2	111			
4-Nitrophenol	170	10	200.0	0	85.4	15.7	86.9			
Pentachlorophenol	120	20	200.0	0	60.0	21.6	104			
Phenol	160	10	200.0	0	80.1	28.6	71.7			S
Pyrene	76	10	100.0	0	75.8	54.2	128			
1,2,4-Trichlorobenzene	72	10	100.0	0	72.1	40.9	101			
Surr: 2-Fluorophenol	130		200.0		63.8	17.6	104			
Surr: Phenol-d5	130		200.0		66.5	17.7	89.9			
Surr: 2,4,6-Tribromophenol	160		200.0		82.5	16.3	122			
Surr: Nitrobenzene-d5	67		100.0		66.8	45.3	117			
Surr: 2-Fluorobiphenyl	72		100.0		72.0	43	113			
Surr: 4-Terphenyl-d14	81		100.0		81.0	47.6	122			

Sample ID **lcsd-16481** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **16481** RunNo: **22682**
Prep Date: **11/19/2014** Analysis Date: **11/20/2014** SeqNo: **668829** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	83	10	100.0	0	82.9	47.9	114	3.83	27.2	
4-Chloro-3-methylphenol	160	10	200.0	0	82.2	51.7	122	7.36	25.9	
2-Chlorophenol	140	10	200.0	0	71.6	40.7	113	1.87	22.5	
1,4-Dichlorobenzene	69	10	100.0	0	69.3	39.6	99.9	0.948	24.6	
2,4-Dinitrotoluene	71	10	100.0	0	70.8	40.8	113	0.966	25.3	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411536**
10-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **lcsd-16481** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **16481** RunNo: **22682**
Prep Date: **11/19/2014** Analysis Date: **11/20/2014** SeqNo: **668829** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodi-n-propylamine	77	10	100.0	0	77.0	51.2	111	2.61	23.6	
4-Nitrophenol	180	10	200.0	0	88.7	15.7	86.9	3.77	34.7	S
Pentachlorophenol	130	20	200.0	0	63.1	21.6	104	4.97	32.8	
Phenol	160	10	200.0	0	78.3	28.6	71.7	2.37	25.5	S
Pyrene	81	10	100.0	0	81.1	54.2	128	6.83	31.4	
1,2,4-Trichlorobenzene	70	10	100.0	0	70.0	40.9	101	2.96	25.9	
Surr: 2-Fluorophenol	120		200.0		62.4	17.6	104	0	0	
Surr: Phenol-d5	130		200.0		64.7	17.7	89.9	0	0	
Surr: 2,4,6-Tribromophenol	170		200.0		85.0	16.3	122	0	0	
Surr: Nitrobenzene-d5	66		100.0		66.0	45.3	117	0	0	
Surr: 2-Fluorobiphenyl	74		100.0		74.2	43	113	0	0	
Surr: 4-Terphenyl-d14	89		100.0		89.4	47.6	122	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411536**
10-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB-16392** SampType: **MBLK** TestCode: **SM5210B: BOD**
Client ID: **PBW** Batch ID: **16392** RunNo: **22688**
Prep Date: **11/14/2014** Analysis Date: **11/19/2014** SeqNo: **669192** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID **MB--16392** SampType: **MBLK** TestCode: **SM5210B: BOD**
Client ID: **PBW** Batch ID: **16392** RunNo: **22688**
Prep Date: **11/14/2014** Analysis Date: **11/19/2014** SeqNo: **669193** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID **LCS-16392** SampType: **LCS** TestCode: **SM5210B: BOD**
Client ID: **LCSW** Batch ID: **16392** RunNo: **22688**
Prep Date: **11/14/2014** Analysis Date: **11/19/2014** SeqNo: **669194** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	230	2.0	198.0	0	114	89.6	126			

Sample ID **LCSD-16392** SampType: **LCSD** TestCode: **SM5210B: BOD**
Client ID: **LCSS02** Batch ID: **16392** RunNo: **22688**
Prep Date: **11/14/2014** Analysis Date: **11/19/2014** SeqNo: **669195** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	230	2.0	198.0	0	115	89.6	126	0.661	31.9	

Sample ID **1411536-002CDUP** SampType: **DUP** TestCode: **SM5210B: BOD**
Client ID: **EP-5** Batch ID: **16392** RunNo: **22688**
Prep Date: **11/14/2014** Analysis Date: **11/19/2014** SeqNo: **669197** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	<20.55	2.0						0	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1411536 RcptNo: 1

Received by/date: 11/13/14

Logged By: **Ashley Gallegos** 11/13/2014 3:48:00 PM

Completed By: **Ashley Gallegos** 11/14/2014 8:19:07 AM

Reviewed By: 11/14/14 @ 08:30

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐ 11/14/14
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
   metals analysis, added 1 ml HNO3 to -008F for acceptable pH. Held in login for 24 hours. -CS 11/14/14
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 32
(<2 or >12 unless noted)
Adjusted? yes
Checked by: CS

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks: Poured off from each BOD bottle for TSS analysis (unpreserved 500 ml) -CS 11/14/14

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

2 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

Q4 2014

Project #:

Evaporation Ponds

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: X Yes ☐ No

Sample Temperature: 4°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix (AT 11/13/14 Ag)	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1411536	8260 + MTBE	8270 + phenols	WQCC metals - total	WQCC metals - dissolved (filtered)	BOD / COD	General Chemistry	e-coli							Air Bubbles (Y or N)
			~~EP-1~~																	
			~~EP-2~~																	
11-12-14	1715		~~EP-3~~ FB-111214-2	3		-001	X													
			~~EP-4 FB~~																	
11-12-14	1420		EP-5	9		-002	X	X	X	X	X	X								
11-12-14	1445		EP-6	9		-003	X	X	X	X	X	X								
11-12-14	1624		EP-7	9		-004	X	X	X	X	X	X								
11-12-14	1653		EP-8	9		-005	X	X	X	X	X	X								
11-13-14	830		EP-9	9		-006	X	X	X	X	X	X								
11-12-14	1606		EP-11	9		-007	X	X	X	X	X	X								
11-12-14	1535		EP-12A	9		-008	X	X	X	X	X	X								
11-12-14	1515		EP-12B	9		-009	X	X	X	X	X	X								
~~11-12-14~~			~~BD to BD 111214~~	1		~~-010~~		~~X~~	~~AT~~	~~11/13/14~~										

Date:	Time:	Relinquished by:	Received by:	Date	Time
11-13-14	1100	Rex Lowdes / Rex Lowdes	[signature]	11/13/14	1:00
11/13/14	1548	[signature]	[signature]	11/13/14	1548

Remarks:

Gen Chem: ec, pH, cations/Anions

did not receive BD sample AT 11/13/14

AT 11/13/14

...other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 11, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: Q1-2014 Groundwater Sampling OrderNo.: 1403216

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 10 sample(s) on 3/5/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order: **1403216**
Date Reported: **3/11/2014**

CLIENT: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling
Lab Order: 1403216

Lab ID: 1403216-001 **Collection Date:** 3/5/2014 9:10:00 AM
Client Sample ID: EP-1 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	5830	200	*	mg/L	1	3/10/2014 10:55:00 AM	12072

Lab ID: 1403216-002 **Collection Date:** 3/5/2014 9:40:00 AM
Client Sample ID: STP-1 to EP-2 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	2780	200	*	mg/L	1	3/10/2014 10:55:00 AM	12072

Lab ID: 1403216-003 **Collection Date:** 3/5/2014 10:20:00 AM
Client Sample ID: EP-2 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	5310	200	*	mg/L	1	3/10/2014 10:55:00 AM	12072

Lab ID: 1403216-004 **Collection Date:** 3/5/2014 11:00:00 AM
Client Sample ID: EP-12B **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	5670	200	*	mg/L	1	3/10/2014 10:55:00 AM	12072

Lab ID: 1403216-005 **Collection Date:** 3/5/2014 11:25:00 AM
Client Sample ID: EP-12A **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	5220	200	*	mg/L	1	3/10/2014 10:55:00 AM	12072

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling
Lab Order: 1403216

Lab ID: 1403216-006 **Collection Date:** 3/5/2014 11:50:00 AM
Client Sample ID: EP-11 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	23600	400	*	mg/L	1	3/10/2014 10:55:00 AM	12072

Lab ID: 1403216-007 **Collection Date:** 3/5/2014 12:15:00 PM
Client Sample ID: EP-8 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	79300	2000	*	mg/L	1	3/10/2014 10:55:00 AM	12072

Lab ID: 1403216-008 **Collection Date:** 3/5/2014 12:35:00 PM
Client Sample ID: EP-7 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	83700	1000	*	mg/L	1	3/10/2014 10:55:00 AM	12072

Lab ID: 1403216-009 **Collection Date:** 3/5/2014 12:55:00 PM
Client Sample ID: EP-9 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	105000	2000	*	mg/L	1	3/10/2014 10:55:00 AM	12072

Lab ID: 1403216-010 **Collection Date:** 3/5/2014 1:35:00 PM
Client Sample ID: EP-6 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**	
Total Dissolved Solids	15100	400	*	mg/L	1	3/10/2014 10:55:00 AM	12072

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403216**
11-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **MB-12072** SampType: **MBLK** TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **PBW** Batch ID: **12072** RunNo: **17184**
Prep Date: **3/6/2014** Analysis Date: **3/10/2014** SeqNo: **494421** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID **LCS-12072** SampType: **LCS** TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **LCSW** Batch ID: **12072** RunNo: **17184**
Prep Date: **3/6/2014** Analysis Date: **3/10/2014** SeqNo: **494422** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1060	20.0	1000	0	106	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Western Refining Gallup** Work Order Number: **1403216** RcptNo: 1

Received by/date: CM 03/05/14

Logged By: **Anne Thorne** **3/5/2014 3:40:00 PM** Anne Thorne

Completed By: **Anne Thorne** **3/6/2014** Anne Thorne

Reviewed By: MG 03/06/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Yes			

Client: Western Refining

Mailing Address: Rt 3 Box 7
Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-722-0210

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other

☒ EDD (Type) Trihydro Format

☒ Standard ☐ Rush

Project Name: Q1-2014 Groundwater Sampling

Project #: Quarterly Sampling

Project Manager: Cheryl Johnson

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.3

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1403216	8260B + VOCs		8015B (DRO/GRO)	WQCC Metals (Total and Dissolved)	8270C + Phenols		BOD and COD				Nitrates	Cyanide	TDS			Air Bubbles (Y or N)
3/5/14	0910	H_2O	EP-1	1		-001													X			
	0940	H_2O	STP-1 to EP-2	1		-002													X			
	10:20	H_2O	EP-2	1		-003													X			
	1100	H_2O	EP-12B	1		-004													X			
	11:25	H_2O	EP-12A	1		-005													X			
	11:50	H_2O	EP-11	1		-006													X			
	12:15	H_2O	EP-8	1		-007													X			
	12:35	H_2O	EP-7	1		-008													X			
	12:55	H_2O	EP-9	1		-009													X			
	1:35	H_2O	EP-6	1		-010													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
3/5/14	1346	[signature]	[signature]	3/5/14	1326
Date:	Time:	Relinquished by:	Received by:	Date	Time
3/5/14	3:40	[signature]	[signature]	03/05/14	1540

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 24, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: Q1 -2014 Groundwater Sampling OrderNo.: 1403198

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 13 sample(s) on 3/5/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: **1403198**
Date: **3/24/2014**

CLIENT: Western Refining Southwest, Gallup
Project: Q1 -2014 Groundwater Sampling

Analytical Remarks Regarding BOD:
Sample "EP-6" is being reported as an estimated value due to all 4 dilutions having a DO depletion below 1.0mg/L.

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-1
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 9:10:00 AM
Lab ID: 1403198-001
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: **JRR**
16984-48-8	Fluoride	18	1.0	*	mg/L	10	3/6/2014 9:54:13 PM
16887-00-6	Chloride	1500	50		mg/L	100	3/6/2014 10:06:38 PM
7727-37-9	Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	3/6/2014 9:54:13 PM
24959-67-9	Bromide	1.3	1.0		mg/L	10	3/6/2014 9:54:13 PM
7727-37-9	Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	3/6/2014 9:54:13 PM
7723-14-0	Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	3/6/2014 9:54:13 PM
14808-79-8	Sulfate	2100	50		mg/L	100	3/6/2014 10:06:38 PM
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **JLF**
7440-39-3	Barium	0.13	0.0020		mg/L	1	3/6/2014 1:53:18 PM
7440-43-9	Cadmium	ND	0.0020		mg/L	1	3/6/2014 1:53:18 PM
7440-70-2	Calcium	350	5.0		mg/L	5	3/6/2014 1:55:31 PM
7440-47-3	Chromium	0.018	0.0060		mg/L	1	3/6/2014 1:53:18 PM
7440-50-8	Copper	ND	0.0060		mg/L	1	3/6/2014 1:53:18 PM
7439-89-6	Iron	0.78	0.020	*	mg/L	1	3/6/2014 1:53:18 PM
7439-95-4	Magnesium	130	5.0		mg/L	5	3/6/2014 1:55:31 PM
7439-96-5	Manganese	0.53	0.0020	*	mg/L	1	3/6/2014 1:53:18 PM
7440-09-7	Potassium	95	1.0		mg/L	1	3/6/2014 1:53:18 PM
7440-22-4	Silver	ND	0.0050		mg/L	1	3/7/2014 2:42:06 PM
7440-23-5	Sodium	1300	50		mg/L	50	3/7/2014 2:44:01 PM
7440-66-6	Zinc	0.021	0.010		mg/L	1	3/6/2014 1:53:18 PM
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**
7440-39-3	Barium	0.12	0.0020		mg/L	1	3/10/2014 5:30:00 PM
7440-43-9	Cadmium	ND	0.0020		mg/L	1	3/10/2014 5:30:00 PM
7440-47-3	Chromium	0.018	0.0060		mg/L	1	3/10/2014 5:30:00 PM
7440-50-8	Copper	ND	0.0060		mg/L	1	3/10/2014 5:30:00 PM
7439-89-6	Iron	0.86	0.020	*	mg/L	1	3/10/2014 5:30:00 PM
7439-96-5	Manganese	0.51	0.0020	*	mg/L	1	3/10/2014 5:30:00 PM
7440-22-4	Silver	ND	0.0050		mg/L	1	3/18/2014 3:20:46 PM
7440-66-6	Zinc	0.028	0.010		mg/L	1	3/10/2014 5:30:00 PM
EPA 200.8: DISSOLVED METALS							Analyst: **DBD**
7440-38-2	Arsenic	ND	0.010		mg/L	10	3/13/2014 2:49:16 PM
7439-92-1	Lead	ND	0.010		mg/L	10	3/13/2014 2:49:16 PM
7782-49-2	Selenium	ND	0.010		mg/L	10	3/13/2014 2:49:16 PM
7440-61-1	Uranium	ND	0.010		mg/L	10	3/13/2014 2:49:16 PM
200.8 ICPMS METALS:TOTAL							Analyst: **DBD**
7440-38-2	Arsenic	0.013	0.010	*	mg/L	10	3/14/2014 3:33:55 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-1
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 9:10:00 AM
Lab ID: 1403198-001
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
200.8 ICPMS METALS:TOTAL							Analyst: **DBD**
7439-92-1	Lead	ND	0.0010		mg/L	1	3/12/2014 1:40:06 PM
7782-49-2	Selenium	ND	0.010		mg/L	10	3/14/2014 3:33:55 PM
7440-61-1	Uranium	ND	0.0010		mg/L	1	3/12/2014 1:40:06 PM
EPA METHOD 245.1: MERCURY							Analyst: **JML**
7439-97-6	Mercury	ND	0.00020		mg/L	1	3/6/2014 5:25:54 PM
SM5210B: BOD							Analyst: **SMS**
BOD	Biochemical Oxygen Demand	55	2.0		mg/L	1	3/11/2014 11:16:00 AM
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **ECH**
1101	E. Coli	<10	10.00	H	CFU/100	10	3/6/2014 6:40:00 PM
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**
83-32-9	Acenaphthene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
208-96-8	Acenaphthylene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
62-53-3	Aniline	ND	50		µg/L	1	3/12/2014 1:29:59 PM
120-12-7	Anthracene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
103-33-3	Azobenzene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
56-55-3	Benz(a)anthracene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
50-32-8	Benzo(a)pyrene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
205-99-2	Benzo(b)fluoranthene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
191-24-2	Benzo(g,h,i)perylene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
207-08-9	Benzo(k)fluoranthene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
65-85-0	Benzoic acid	ND	100		µg/L	1	3/12/2014 1:29:59 PM
100-51-6	Benzyl alcohol	ND	50		µg/L	1	3/12/2014 1:29:59 PM
111-91-1	Bis(2-chloroethoxy)methane	ND	50		µg/L	1	3/12/2014 1:29:59 PM
111-44-4	Bis(2-chloroethyl)ether	ND	50		µg/L	1	3/12/2014 1:29:59 PM
108-60-1	Bis(2-chloroisopropyl)ether	ND	50		µg/L	1	3/12/2014 1:29:59 PM
117-81-7	Bis(2-ethylhexyl)phthalate	ND	50		µg/L	1	3/12/2014 1:29:59 PM
101-55-3	4-Bromophenyl phenyl ether	ND	50		µg/L	1	3/12/2014 1:29:59 PM
85-68-7	Butyl benzyl phthalate	ND	50		µg/L	1	3/12/2014 1:29:59 PM
86-74-8	Carbazole	ND	50		µg/L	1	3/12/2014 1:29:59 PM
59-50-7	4-Chloro-3-methylphenol	ND	50		µg/L	1	3/12/2014 1:29:59 PM
106-47-8	4-Chloroaniline	ND	50		µg/L	1	3/12/2014 1:29:59 PM
91-58-7	2-Chloronaphthalene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
95-57-8	2-Chlorophenol	ND	50		µg/L	1	3/12/2014 1:29:59 PM
7005-72-3	4-Chlorophenyl phenyl ether	ND	50		µg/L	1	3/12/2014 1:29:59 PM
218-01-9	Chrysene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
84-74-2	Di-n-butyl phthalate	ND	50		µg/L	1	3/12/2014 1:29:59 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-1
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 9:10:00 AM
Lab ID: 1403198-001
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

EPA METHOD 8270C: SEMIVOLATILES

Analyst: **DAM**

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
117-84-0	Di-n-octyl phthalate	ND	50		µg/L	1	3/12/2014 1:29:59 PM
53-70-3	Dibenz(a,h)anthracene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
132-64-9	Dibenzofuran	ND	50		µg/L	1	3/12/2014 1:29:59 PM
95-50-1	1,2-Dichlorobenzene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
541-73-1	1,3-Dichlorobenzene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
106-46-7	1,4-Dichlorobenzene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
91-94-1	3,3´-Dichlorobenzidine	ND	50		µg/L	1	3/12/2014 1:29:59 PM
84-66-2	Diethyl phthalate	ND	50		µg/L	1	3/12/2014 1:29:59 PM
131-11-3	Dimethyl phthalate	ND	50		µg/L	1	3/12/2014 1:29:59 PM
120-83-2	2,4-Dichlorophenol	ND	100		µg/L	1	3/12/2014 1:29:59 PM
105-67-9	2,4-Dimethylphenol	ND	50		µg/L	1	3/12/2014 1:29:59 PM
534-52-1	4,6-Dinitro-2-methylphenol	ND	100		µg/L	1	3/12/2014 1:29:59 PM
51-28-5	2,4-Dinitrophenol	ND	100		µg/L	1	3/12/2014 1:29:59 PM
121-14-2	2,4-Dinitrotoluene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
606-20-2	2,6-Dinitrotoluene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
206-44-0	Fluoranthene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
86-73-7	Fluorene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
118-74-1	Hexachlorobenzene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
87-68-3	Hexachlorobutadiene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
77-47-4	Hexachlorocyclopentadiene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
67-72-1	Hexachloroethane	ND	50		µg/L	1	3/12/2014 1:29:59 PM
193-39-5	Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
78-59-1	Isophorone	ND	50		µg/L	1	3/12/2014 1:29:59 PM
90-12-0	1-Methylnaphthalene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
91-57-6	2-Methylnaphthalene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
95-48-7	2-Methylphenol	ND	50		µg/L	1	3/12/2014 1:29:59 PM
782-06-0	3+4-Methylphenol	140	50		µg/L	1	3/12/2014 1:29:59 PM
621-64-7	N-Nitrosodi-n-propylamine	ND	50		µg/L	1	3/12/2014 1:29:59 PM
62-75-9	N-Nitrosodimethylamine	ND	50		µg/L	1	3/12/2014 1:29:59 PM
86-30-6	N-Nitrosodiphenylamine	ND	50		µg/L	1	3/12/2014 1:29:59 PM
91-20-3	Naphthalene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
88-74-4	2-Nitroaniline	ND	50		µg/L	1	3/12/2014 1:29:59 PM
99-09-2	3-Nitroaniline	ND	50		µg/L	1	3/12/2014 1:29:59 PM
100-01-6	4-Nitroaniline	ND	50		µg/L	1	3/12/2014 1:29:59 PM
98-95-3	Nitrobenzene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
88-75-5	2-Nitrophenol	ND	50		µg/L	1	3/12/2014 1:29:59 PM
100-02-7	4-Nitrophenol	ND	50		µg/L	1	3/12/2014 1:29:59 PM
87-86-5	Pentachlorophenol	ND	100		µg/L	1	3/12/2014 1:29:59 PM
85-01-8	Phenanthrene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
108-95-2	Phenol	ND	50		µg/L	1	3/12/2014 1:29:59 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-1
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 9:10:00 AM
Lab ID: 1403198-001
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**
129-00-0	Pyrene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
110-86-1	Pyridine	ND	50		µg/L	1	3/12/2014 1:29:59 PM
120-82-1	1,2,4-Trichlorobenzene	ND	50		µg/L	1	3/12/2014 1:29:59 PM
95-95-4	2,4,5-Trichlorophenol	ND	50		µg/L	1	3/12/2014 1:29:59 PM
88-06-2	2,4,6-Trichlorophenol	ND	50		µg/L	1	3/12/2014 1:29:59 PM
367-12-4	Surr: 2-Fluorophenol	48.8	22.7-98		%REC	1	3/12/2014 1:29:59 PM
4165-62-2	Surr: Phenol-d5	37.0	23.4-74.9		%REC	1	3/12/2014 1:29:59 PM
118-79-6	Surr: 2,4,6-Tribromophenol	80.4	23.3-111		%REC	1	3/12/2014 1:29:59 PM
4165-60-0	Surr: Nitrobenzene-d5	69.5	36.8-111		%REC	1	3/12/2014 1:29:59 PM
321-60-8	Surr: 2-Fluorobiphenyl	64.9	38.3-110		%REC	1	3/12/2014 1:29:59 PM
1718-51-0	Surr: 4-Terphenyl-d14	70.0	52.1-116		%REC	1	3/12/2014 1:29:59 PM
EPA METHOD 8260B: VOLATILES							Analyst: **KJH**
71-43-2	Benzene	ND	10		µg/L	10	3/10/2014 9:29:16 PM
108-88-3	Toluene	ND	10		µg/L	10	3/10/2014 9:29:16 PM
100-41-4	Ethylbenzene	ND	10		µg/L	10	3/10/2014 9:29:16 PM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	3/10/2014 9:29:16 PM
95-63-6	1,2,4-Trimethylbenzene	ND	10		µg/L	10	3/10/2014 9:29:16 PM
108-67-8	1,3,5-Trimethylbenzene	ND	10		µg/L	10	3/10/2014 9:29:16 PM
107-06-2	1,2-Dichloroethane (EDC)	ND	10		µg/L	10	3/10/2014 9:29:16 PM
106-93-4	1,2-Dibromoethane (EDB)	ND	10		µg/L	10	3/10/2014 9:29:16 PM
91-20-3	Naphthalene	ND	20		µg/L	10	3/10/2014 9:29:16 PM
90-12-0	1-Methylnaphthalene	ND	40		µg/L	10	3/10/2014 9:29:16 PM
91-57-6	2-Methylnaphthalene	ND	40		µg/L	10	3/10/2014 9:29:16 PM
67-64-1	Acetone	ND	100		µg/L	10	3/10/2014 9:29:16 PM
108-86-1	Bromobenzene	ND	10		µg/L	10	3/10/2014 9:29:16 PM
75-27-4	Bromodichloromethane	ND	10		µg/L	10	3/10/2014 9:29:16 PM
75-25-2	Bromoform	ND	10		µg/L	10	3/10/2014 9:29:16 PM
74-83-9	Bromomethane	ND	30		µg/L	10	3/10/2014 9:29:16 PM
78-93-3	2-Butanone	ND	100		µg/L	10	3/10/2014 9:29:16 PM
75-15-0	Carbon disulfide	ND	100		µg/L	10	3/10/2014 9:29:16 PM
56-23-5	Carbon Tetrachloride	ND	10		µg/L	10	3/10/2014 9:29:16 PM
108-90-7	Chlorobenzene	ND	10		µg/L	10	3/10/2014 9:29:16 PM
75-00-3	Chloroethane	ND	20		µg/L	10	3/10/2014 9:29:16 PM
67-66-3	Chloroform	ND	10		µg/L	10	3/10/2014 9:29:16 PM
74-87-3	Chloromethane	ND	30		µg/L	10	3/10/2014 9:29:16 PM
95-49-8	2-Chlorotoluene	ND	10		µg/L	10	3/10/2014 9:29:16 PM
106-43-4	4-Chlorotoluene	ND	10		µg/L	10	3/10/2014 9:29:16 PM
156-59-2	cis-1,2-DCE	ND	10		µg/L	10	3/10/2014 9:29:16 PM
10061-01-5	cis-1,3-Dichloropropene	ND	10		µg/L	10	3/10/2014 9:29:16 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-1
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 9:10:00 AM
Lab ID: 1403198-001
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

EPA METHOD 8260B: VOLATILES Analyst: **KJH**

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
96-12-8	1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	3/10/2014 9:29:16 PM
124-48-1	Dibromochloromethane	ND	10		µg/L	10	3/10/2014 9:29:16 PM
74-95-3	Dibromomethane	ND	10		µg/L	10	3/10/2014 9:29:16 PM
95-50-1	1,2-Dichlorobenzene	ND	10		µg/L	10	3/10/2014 9:29:16 PM
541-73-1	1,3-Dichlorobenzene	ND	10		µg/L	10	3/10/2014 9:29:16 PM
106-46-7	1,4-Dichlorobenzene	ND	10		µg/L	10	3/10/2014 9:29:16 PM
75-71-8	Dichlorodifluoromethane	ND	10		µg/L	10	3/10/2014 9:29:16 PM
75-34-3	1,1-Dichloroethane	ND	10		µg/L	10	3/10/2014 9:29:16 PM
75-35-4	1,1-Dichloroethene	ND	10		µg/L	10	3/10/2014 9:29:16 PM
78-87-5	1,2-Dichloropropane	ND	10		µg/L	10	3/10/2014 9:29:16 PM
142-28-9	1,3-Dichloropropane	ND	10		µg/L	10	3/10/2014 9:29:16 PM
594-20-7	2,2-Dichloropropane	ND	20		µg/L	10	3/10/2014 9:29:16 PM
563-58-6	1,1-Dichloropropene	ND	10		µg/L	10	3/10/2014 9:29:16 PM
87-68-3	Hexachlorobutadiene	ND	10		µg/L	10	3/10/2014 9:29:16 PM
591-78-6	2-Hexanone	ND	100		µg/L	10	3/10/2014 9:29:16 PM
98-82-8	Isopropylbenzene	ND	10		µg/L	10	3/10/2014 9:29:16 PM
99-87-6	4-Isopropyltoluene	ND	10		µg/L	10	3/10/2014 9:29:16 PM
108-10-1	4-Methyl-2-pentanone	ND	100		µg/L	10	3/10/2014 9:29:16 PM
75-09-2	Methylene Chloride	ND	30		µg/L	10	3/10/2014 9:29:16 PM
104-51-8	n-Butylbenzene	ND	30		µg/L	10	3/10/2014 9:29:16 PM
103-65-1	n-Propylbenzene	ND	10		µg/L	10	3/10/2014 9:29:16 PM
135-98-8	sec-Butylbenzene	ND	10		µg/L	10	3/10/2014 9:29:16 PM
100-42-5	Styrene	ND	10		µg/L	10	3/10/2014 9:29:16 PM
98-06-6	tert-Butylbenzene	ND	10		µg/L	10	3/10/2014 9:29:16 PM
630-20-6	1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	3/10/2014 9:29:16 PM
79-34-5	1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	3/10/2014 9:29:16 PM
127-18-4	Tetrachloroethene (PCE)	ND	10		µg/L	10	3/10/2014 9:29:16 PM
156-60-5	trans-1,2-DCE	ND	10		µg/L	10	3/10/2014 9:29:16 PM
10061-02-6	trans-1,3-Dichloropropene	ND	10		µg/L	10	3/10/2014 9:29:16 PM
87-61-6	1,2,3-Trichlorobenzene	ND	10		µg/L	10	3/10/2014 9:29:16 PM
120-82-1	1,2,4-Trichlorobenzene	ND	10		µg/L	10	3/10/2014 9:29:16 PM
71-55-6	1,1,1-Trichloroethane	ND	10		µg/L	10	3/10/2014 9:29:16 PM
79-00-5	1,1,2-Trichloroethane	ND	10		µg/L	10	3/10/2014 9:29:16 PM
79-01-6	Trichloroethene (TCE)	ND	10		µg/L	10	3/10/2014 9:29:16 PM
75-69-4	Trichlorofluoromethane	ND	10		µg/L	10	3/10/2014 9:29:16 PM
96-18-4	1,2,3-Trichloropropane	ND	20		µg/L	10	3/10/2014 9:29:16 PM
75-01-4	Vinyl chloride	ND	10		µg/L	10	3/10/2014 9:29:16 PM
1330-20-7	Xylenes, Total	ND	15		µg/L	10	3/10/2014 9:29:16 PM
17060-07-0	Surr: 1,2-Dichloroethane-d4	91.3	70-130		%REC	10	3/10/2014 9:29:16 PM
460-00-4	Surr: 4-Bromofluorobenzene	93.0	70-130		%REC	10	3/10/2014 9:29:16 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-1
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 9:10:00 AM
Lab ID: 1403198-001
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **KJH**
1868-53-7	Surr: Dibromofluoromethane	96.3	70-130		%REC	10	3/10/2014 9:29:16 PM
2037-26-5	Surr: Toluene-d8	91.1	70-130		%REC	10	3/10/2014 9:29:16 PM
SM2510B: SPECIFIC CONDUCTANCE							Analyst: **JML**
eC	Conductivity	6800	0.010		µmhos/c	1	3/6/2014 12:29:09 PM
SM4500-H+B: PH							Analyst: **JML**
pH	pH	7.61	1.68	H	pH units	1	3/6/2014 12:29:09 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-2
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 10:20:00 AM
Lab ID: 1403198-002
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: **JRR**
16984-48-8	Fluoride	37	10	*	mg/L	100	3/6/2014 10:31:28 PM
16887-00-6	Chloride	1900	50		mg/L	100	3/6/2014 10:31:28 PM
7727-37-9	Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	3/6/2014 10:19:03 PM
24959-67-9	Bromide	3.4	1.0		mg/L	10	3/6/2014 10:19:03 PM
7727-37-9	Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	3/6/2014 10:19:03 PM
7723-14-0	Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	3/6/2014 10:19:03 PM
14808-79-8	Sulfate	680	50		mg/L	100	3/6/2014 10:31:28 PM
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **JLF**
7440-39-3	Barium	0.13	0.0020		mg/L	1	3/6/2014 1:59:17 PM
7440-43-9	Cadmium	ND	0.0020		mg/L	1	3/6/2014 1:59:17 PM
7440-70-2	Calcium	140	5.0		mg/L	5	3/6/2014 2:01:09 PM
7440-47-3	Chromium	0.016	0.0060		mg/L	1	3/6/2014 1:59:17 PM
7440-50-8	Copper	ND	0.0060		mg/L	1	3/6/2014 1:59:17 PM
7439-89-6	Iron	0.72	0.020	*	mg/L	1	3/6/2014 1:59:17 PM
7439-95-4	Magnesium	36	1.0		mg/L	1	3/6/2014 1:59:17 PM
7439-96-5	Manganese	0.38	0.0020	*	mg/L	1	3/6/2014 1:59:17 PM
7440-09-7	Potassium	150	5.0		mg/L	5	3/6/2014 2:01:09 PM
7440-22-4	Silver	ND	0.0050		mg/L	1	3/7/2014 2:45:54 PM
7440-23-5	Sodium	1500	50		mg/L	50	3/7/2014 2:47:54 PM
7440-66-6	Zinc	0.010	0.010		mg/L	1	3/6/2014 1:59:17 PM
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**
7440-39-3	Barium	0.12	0.0020		mg/L	1	3/10/2014 5:31:57 PM
7440-43-9	Cadmium	ND	0.0020		mg/L	1	3/10/2014 5:31:57 PM
7440-47-3	Chromium	0.013	0.0060		mg/L	1	3/10/2014 5:31:57 PM
7440-50-8	Copper	ND	0.0060		mg/L	1	3/10/2014 5:31:57 PM
7439-89-6	Iron	1.2	0.10	*	mg/L	5	3/12/2014 1:04:04 PM
7439-96-5	Manganese	0.36	0.0020	*	mg/L	1	3/10/2014 5:31:57 PM
7440-22-4	Silver	ND	0.0050		mg/L	1	3/18/2014 3:21:49 PM
7440-66-6	Zinc	0.020	0.010		mg/L	1	3/10/2014 5:31:57 PM
EPA 200.8: DISSOLVED METALS							Analyst: **DBD**
7440-38-2	Arsenic	ND	0.010		mg/L	10	3/13/2014 2:57:36 PM
7439-92-1	Lead	ND	0.010		mg/L	10	3/13/2014 2:57:36 PM
7782-49-2	Selenium	0.042	0.010		mg/L	10	3/13/2014 2:57:36 PM
7440-61-1	Uranium	ND	0.010		mg/L	10	3/13/2014 2:57:36 PM
200.8 ICPMS METALS:TOTAL							Analyst: **DBD**
7440-38-2	Arsenic	0.012	0.010	*	mg/L	10	3/14/2014 3:37:21 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-2
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 10:20:00 AM
Lab ID: 1403198-002
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
200.8 ICPMS METALS:TOTAL							Analyst: **DBD**
7439-92-1	Lead	ND	0.0010		mg/L	1	3/12/2014 1:47:25 PM
7782-49-2	Selenium	0.023	0.010		mg/L	10	3/14/2014 3:37:21 PM
7440-61-1	Uranium	0.0051	0.0010		mg/L	1	3/12/2014 1:47:25 PM
EPA METHOD 245.1: MERCURY							Analyst: **JML**
7439-97-6	Mercury	ND	0.0010		mg/L	5	3/6/2014 5:54:59 PM
SM5210B: BOD							Analyst: **SMS**
BOD	Biochemical Oxygen Demand	450	2.0		mg/L	1	3/11/2014 11:16:00 AM
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **ECH**
1101	E. Coli	>2419.6	1.000	H	CFU/100	1	3/6/2014 6:40:00 PM
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**
83-32-9	Acenaphthene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
208-96-8	Acenaphthylene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
62-53-3	Aniline	44	10		µg/L	1	3/12/2014 1:58:56 PM
120-12-7	Anthracene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
103-33-3	Azobenzene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
56-55-3	Benz(a)anthracene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
50-32-8	Benzo(a)pyrene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
205-99-2	Benzo(b)fluoranthene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
191-24-2	Benzo(g,h,i)perylene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
207-08-9	Benzo(k)fluoranthene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
65-85-0	Benzoic acid	97	20		µg/L	1	3/12/2014 1:58:56 PM
100-51-6	Benzyl alcohol	ND	10		µg/L	1	3/12/2014 1:58:56 PM
111-91-1	Bis(2-chloroethoxy)methane	ND	10		µg/L	1	3/12/2014 1:58:56 PM
111-44-4	Bis(2-chloroethyl)ether	ND	10		µg/L	1	3/12/2014 1:58:56 PM
108-60-1	Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	3/12/2014 1:58:56 PM
117-81-7	Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	3/12/2014 1:58:56 PM
101-55-3	4-Bromophenyl phenyl ether	ND	10		µg/L	1	3/12/2014 1:58:56 PM
85-68-7	Butyl benzyl phthalate	ND	10		µg/L	1	3/12/2014 1:58:56 PM
86-74-8	Carbazole	ND	10		µg/L	1	3/12/2014 1:58:56 PM
59-50-7	4-Chloro-3-methylphenol	ND	10		µg/L	1	3/12/2014 1:58:56 PM
106-47-8	4-Chloroaniline	ND	10		µg/L	1	3/12/2014 1:58:56 PM
91-58-7	2-Chloronaphthalene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
95-57-8	2-Chlorophenol	ND	10		µg/L	1	3/12/2014 1:58:56 PM
7005-72-3	4-Chlorophenyl phenyl ether	ND	10		µg/L	1	3/12/2014 1:58:56 PM
218-01-9	Chrysene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
84-74-2	Di-n-butyl phthalate	ND	10		µg/L	1	3/12/2014 1:58:56 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-2
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 10:20:00 AM
Lab ID: 1403198-002
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

EPA METHOD 8270C: SEMIVOLATILES

Analyst: **DAM**

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
117-84-0	Di-n-octyl phthalate	ND	10		µg/L	1	3/12/2014 1:58:56 PM
53-70-3	Dibenz(a,h)anthracene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
132-64-9	Dibenzofuran	ND	10		µg/L	1	3/12/2014 1:58:56 PM
95-50-1	1,2-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
541-73-1	1,3-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
106-46-7	1,4-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
91-94-1	3,3´-Dichlorobenzidine	ND	10		µg/L	1	3/12/2014 1:58:56 PM
84-66-2	Diethyl phthalate	ND	10		µg/L	1	3/12/2014 1:58:56 PM
131-11-3	Dimethyl phthalate	ND	10		µg/L	1	3/12/2014 1:58:56 PM
120-83-2	2,4-Dichlorophenol	ND	20		µg/L	1	3/12/2014 1:58:56 PM
105-67-9	2,4-Dimethylphenol	29	10		µg/L	1	3/12/2014 1:58:56 PM
534-52-1	4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	3/12/2014 1:58:56 PM
51-28-5	2,4-Dinitrophenol	ND	20		µg/L	1	3/12/2014 1:58:56 PM
121-14-2	2,4-Dinitrotoluene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
606-20-2	2,6-Dinitrotoluene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
206-44-0	Fluoranthene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
86-73-7	Fluorene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
118-74-1	Hexachlorobenzene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
87-68-3	Hexachlorobutadiene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
77-47-4	Hexachlorocyclopentadiene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
67-72-1	Hexachloroethane	ND	10		µg/L	1	3/12/2014 1:58:56 PM
193-39-5	Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
78-59-1	Isophorone	ND	10		µg/L	1	3/12/2014 1:58:56 PM
90-12-0	1-Methylnaphthalene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
91-57-6	2-Methylnaphthalene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
95-48-7	2-Methylphenol	140	10		µg/L	1	3/12/2014 1:58:56 PM
782-06-0	3+4-Methylphenol	350	100		µg/L	10	3/13/2014 1:20:22 PM
621-64-7	N-Nitrosodi-n-propylamine	ND	10		µg/L	1	3/12/2014 1:58:56 PM
62-75-9	N-Nitrosodimethylamine	ND	10		µg/L	1	3/12/2014 1:58:56 PM
86-30-6	N-Nitrosodiphenylamine	ND	10		µg/L	1	3/12/2014 1:58:56 PM
91-20-3	Naphthalene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
88-74-4	2-Nitroaniline	ND	10		µg/L	1	3/12/2014 1:58:56 PM
99-09-2	3-Nitroaniline	ND	10		µg/L	1	3/12/2014 1:58:56 PM
100-01-6	4-Nitroaniline	ND	10		µg/L	1	3/12/2014 1:58:56 PM
98-95-3	Nitrobenzene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
88-75-5	2-Nitrophenol	ND	10		µg/L	1	3/12/2014 1:58:56 PM
100-02-7	4-Nitrophenol	ND	10		µg/L	1	3/12/2014 1:58:56 PM
87-86-5	Pentachlorophenol	ND	20		µg/L	1	3/12/2014 1:58:56 PM
85-01-8	Phenanthrene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
108-95-2	Phenol	870	100		µg/L	10	3/13/2014 1:20:22 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-2
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 10:20:00 AM
Lab ID: 1403198-002
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**
129-00-0	Pyrene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
110-86-1	Pyridine	ND	10		µg/L	1	3/12/2014 1:58:56 PM
120-82-1	1,2,4-Trichlorobenzene	ND	10		µg/L	1	3/12/2014 1:58:56 PM
95-95-4	2,4,5-Trichlorophenol	ND	10		µg/L	1	3/12/2014 1:58:56 PM
88-06-2	2,4,6-Trichlorophenol	ND	10		µg/L	1	3/12/2014 1:58:56 PM
367-12-4	Surr: 2-Fluorophenol	66.5	22.7-98		%REC	1	3/12/2014 1:58:56 PM
4165-62-2	Surr: Phenol-d5	52.6	23.4-74.9		%REC	1	3/12/2014 1:58:56 PM
118-79-6	Surr: 2,4,6-Tribromophenol	102	23.3-111		%REC	1	3/12/2014 1:58:56 PM
4165-60-0	Surr: Nitrobenzene-d5	89.1	36.8-111		%REC	1	3/12/2014 1:58:56 PM
321-60-8	Surr: 2-Fluorobiphenyl	74.9	38.3-110		%REC	1	3/12/2014 1:58:56 PM
1718-51-0	Surr: 4-Terphenyl-d14	81.9	52.1-116		%REC	1	3/12/2014 1:58:56 PM
EPA METHOD 8260B: VOLATILES							Analyst: **KJH**
71-43-2	Benzene	ND	10		µg/L	10	3/10/2014 9:57:01 PM
108-88-3	Toluene	ND	10		µg/L	10	3/10/2014 9:57:01 PM
100-41-4	Ethylbenzene	ND	10		µg/L	10	3/10/2014 9:57:01 PM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	3/10/2014 9:57:01 PM
95-63-6	1,2,4-Trimethylbenzene	ND	10		µg/L	10	3/10/2014 9:57:01 PM
108-67-8	1,3,5-Trimethylbenzene	ND	10		µg/L	10	3/10/2014 9:57:01 PM
107-06-2	1,2-Dichloroethane (EDC)	ND	10		µg/L	10	3/10/2014 9:57:01 PM
106-93-4	1,2-Dibromoethane (EDB)	ND	10		µg/L	10	3/10/2014 9:57:01 PM
91-20-3	Naphthalene	ND	20		µg/L	10	3/10/2014 9:57:01 PM
90-12-0	1-Methylnaphthalene	ND	40		µg/L	10	3/10/2014 9:57:01 PM
91-57-6	2-Methylnaphthalene	ND	40		µg/L	10	3/10/2014 9:57:01 PM
67-64-1	Acetone	670	100		µg/L	10	3/10/2014 9:57:01 PM
108-86-1	Bromobenzene	ND	10		µg/L	10	3/10/2014 9:57:01 PM
75-27-4	Bromodichloromethane	ND	10		µg/L	10	3/10/2014 9:57:01 PM
75-25-2	Bromoform	ND	10		µg/L	10	3/10/2014 9:57:01 PM
74-83-9	Bromomethane	ND	30		µg/L	10	3/10/2014 9:57:01 PM
78-93-3	2-Butanone	ND	100		µg/L	10	3/10/2014 9:57:01 PM
75-15-0	Carbon disulfide	110	100		µg/L	10	3/10/2014 9:57:01 PM
56-23-5	Carbon Tetrachloride	ND	10		µg/L	10	3/10/2014 9:57:01 PM
108-90-7	Chlorobenzene	ND	10		µg/L	10	3/10/2014 9:57:01 PM
75-00-3	Chloroethane	ND	20		µg/L	10	3/10/2014 9:57:01 PM
67-66-3	Chloroform	ND	10		µg/L	10	3/10/2014 9:57:01 PM
74-87-3	Chloromethane	ND	30		µg/L	10	3/10/2014 9:57:01 PM
95-49-8	2-Chlorotoluene	ND	10		µg/L	10	3/10/2014 9:57:01 PM
106-43-4	4-Chlorotoluene	ND	10		µg/L	10	3/10/2014 9:57:01 PM
156-59-2	cis-1,2-DCE	ND	10		µg/L	10	3/10/2014 9:57:01 PM
10061-01-5	cis-1,3-Dichloropropene	ND	10		µg/L	10	3/10/2014 9:57:01 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-2
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 10:20:00 AM
Lab ID: 1403198-002
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **KJH**
96-12-8	1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	3/10/2014 9:57:01 PM
124-48-1	Dibromochloromethane	ND	10		µg/L	10	3/10/2014 9:57:01 PM
74-95-3	Dibromomethane	ND	10		µg/L	10	3/10/2014 9:57:01 PM
95-50-1	1,2-Dichlorobenzene	ND	10		µg/L	10	3/10/2014 9:57:01 PM
541-73-1	1,3-Dichlorobenzene	ND	10		µg/L	10	3/10/2014 9:57:01 PM
106-46-7	1,4-Dichlorobenzene	ND	10		µg/L	10	3/10/2014 9:57:01 PM
75-71-8	Dichlorodifluoromethane	ND	10		µg/L	10	3/10/2014 9:57:01 PM
75-34-3	1,1-Dichloroethane	ND	10		µg/L	10	3/10/2014 9:57:01 PM
75-35-4	1,1-Dichloroethene	ND	10		µg/L	10	3/10/2014 9:57:01 PM
78-87-5	1,2-Dichloropropane	ND	10		µg/L	10	3/10/2014 9:57:01 PM
142-28-9	1,3-Dichloropropane	ND	10		µg/L	10	3/10/2014 9:57:01 PM
594-20-7	2,2-Dichloropropane	ND	20		µg/L	10	3/10/2014 9:57:01 PM
563-58-6	1,1-Dichloropropene	ND	10		µg/L	10	3/10/2014 9:57:01 PM
87-68-3	Hexachlorobutadiene	ND	10		µg/L	10	3/10/2014 9:57:01 PM
591-78-6	2-Hexanone	ND	100		µg/L	10	3/10/2014 9:57:01 PM
98-82-8	Isopropylbenzene	ND	10		µg/L	10	3/10/2014 9:57:01 PM
99-87-6	4-Isopropyltoluene	ND	10		µg/L	10	3/10/2014 9:57:01 PM
108-10-1	4-Methyl-2-pentanone	ND	100		µg/L	10	3/10/2014 9:57:01 PM
75-09-2	Methylene Chloride	ND	30		µg/L	10	3/10/2014 9:57:01 PM
104-51-8	n-Butylbenzene	ND	30		µg/L	10	3/10/2014 9:57:01 PM
103-65-1	n-Propylbenzene	ND	10		µg/L	10	3/10/2014 9:57:01 PM
135-98-8	sec-Butylbenzene	ND	10		µg/L	10	3/10/2014 9:57:01 PM
100-42-5	Styrene	ND	10		µg/L	10	3/10/2014 9:57:01 PM
98-06-6	tert-Butylbenzene	ND	10		µg/L	10	3/10/2014 9:57:01 PM
630-20-6	1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	3/10/2014 9:57:01 PM
79-34-5	1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	3/10/2014 9:57:01 PM
127-18-4	Tetrachloroethene (PCE)	ND	10		µg/L	10	3/10/2014 9:57:01 PM
156-60-5	trans-1,2-DCE	ND	10		µg/L	10	3/10/2014 9:57:01 PM
10061-02-6	trans-1,3-Dichloropropene	ND	10		µg/L	10	3/10/2014 9:57:01 PM
87-61-6	1,2,3-Trichlorobenzene	ND	10		µg/L	10	3/10/2014 9:57:01 PM
120-82-1	1,2,4-Trichlorobenzene	ND	10		µg/L	10	3/10/2014 9:57:01 PM
71-55-6	1,1,1-Trichloroethane	ND	10		µg/L	10	3/10/2014 9:57:01 PM
79-00-5	1,1,2-Trichloroethane	ND	10		µg/L	10	3/10/2014 9:57:01 PM
79-01-6	Trichloroethene (TCE)	ND	10		µg/L	10	3/10/2014 9:57:01 PM
75-69-4	Trichlorofluoromethane	ND	10		µg/L	10	3/10/2014 9:57:01 PM
96-18-4	1,2,3-Trichloropropane	ND	20		µg/L	10	3/10/2014 9:57:01 PM
75-01-4	Vinyl chloride	ND	10		µg/L	10	3/10/2014 9:57:01 PM
1330-20-7	Xylenes, Total	ND	15		µg/L	10	3/10/2014 9:57:01 PM
17060-07-0	Surr: 1,2-Dichloroethane-d4	91.9	70-130		%REC	10	3/10/2014 9:57:01 PM
460-00-4	Surr: 4-Bromofluorobenzene	95.3	70-130		%REC	10	3/10/2014 9:57:01 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-2
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 10:20:00 AM
Lab ID: 1403198-002
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **KJH**
1868-53-7	Surr: Dibromofluoromethane	97.8	70-130		%REC	10	3/10/2014 9:57:01 PM
2037-26-5	Surr: Toluene-d8	91.0	70-130		%REC	10	3/10/2014 9:57:01 PM
SM2510B: SPECIFIC CONDUCTANCE							Analyst: **JML**
eC	Conductivity	7600	0.010		µmhos/c	1	3/6/2014 12:33:30 PM
SM4500-H+B: PH							Analyst: **JML**
pH	pH	7.87	1.68	H	pH units	1	3/6/2014 12:33:30 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-6
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 1:25:00 PM
Lab ID: 1403198-003
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: **JRR**
16984-48-8	Fluoride	18	1.0	*	mg/L	10	3/6/2014 11:08:44 PM
16887-00-6	Chloride	6900	500		mg/L	1000	3/12/2014 1:43:00 AM
7727-37-9	Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	3/6/2014 11:08:44 PM
24959-67-9	Bromide	2.3	1.0		mg/L	10	3/6/2014 11:08:44 PM
7727-37-9	Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	3/6/2014 11:08:44 PM
7723-14-0	Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	3/6/2014 11:08:44 PM
14808-79-8	Sulfate	1500	50		mg/L	100	3/6/2014 11:21:09 PM
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **JLF**
7440-39-3	Barium	0.11	0.0020		mg/L	1	3/6/2014 2:13:28 PM
7440-43-9	Cadmium	ND	0.0020		mg/L	1	3/6/2014 2:13:28 PM
7440-70-2	Calcium	450	5.0		mg/L	5	3/6/2014 2:15:45 PM
7440-47-3	Chromium	0.0091	0.0060		mg/L	1	3/6/2014 2:13:28 PM
7440-50-8	Copper	ND	0.0060		mg/L	1	3/6/2014 2:13:28 PM
7439-89-6	Iron	0.45	0.020	*	mg/L	1	3/6/2014 2:13:28 PM
7439-95-4	Magnesium	150	5.0		mg/L	5	3/6/2014 2:15:45 PM
7439-96-5	Manganese	0.60	0.0020	*	mg/L	1	3/6/2014 2:13:28 PM
7440-09-7	Potassium	240	5.0		mg/L	5	3/6/2014 2:15:45 PM
7440-22-4	Silver	ND	0.0050		mg/L	1	3/7/2014 2:49:38 PM
7440-23-5	Sodium	4800	100		mg/L	100	3/7/2014 2:51:26 PM
7440-66-6	Zinc	0.011	0.010		mg/L	1	3/6/2014 2:13:28 PM
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**
7440-39-3	Barium	0.12	0.0020		mg/L	1	3/12/2014 1:06:01 PM
7440-43-9	Cadmium	ND	0.0020		mg/L	1	3/12/2014 1:06:01 PM
7440-47-3	Chromium	0.0089	0.0060		mg/L	1	3/12/2014 1:06:01 PM
7440-50-8	Copper	ND	0.0060		mg/L	1	3/12/2014 1:06:01 PM
7439-89-6	Iron	0.67	0.020	*	mg/L	1	3/10/2014 5:33:56 PM
7439-96-5	Manganese	0.59	0.0020	*	mg/L	1	3/12/2014 1:06:01 PM
7440-22-4	Silver	ND	0.0050		mg/L	1	3/18/2014 3:22:51 PM
7440-66-6	Zinc	0.014	0.010		mg/L	1	3/12/2014 3:32:31 PM
EPA 200.8: DISSOLVED METALS							Analyst: **DBD**
7440-38-2	Arsenic	0.015	0.010	*	mg/L	10	3/13/2014 3:00:22 PM
7439-92-1	Lead	ND	0.010		mg/L	10	3/13/2014 3:00:22 PM
7782-49-2	Selenium	0.024	0.010		mg/L	10	3/13/2014 3:00:22 PM
7440-61-1	Uranium	ND	0.010		mg/L	10	3/13/2014 3:00:22 PM
200.8 ICPMS METALS:TOTAL							Analyst: **DBD**
7440-38-2	Arsenic	0.015	0.010	*	mg/L	10	3/14/2014 3:40:48 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-6
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 1:25:00 PM
Lab ID: 1403198-003
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
200.8 ICPMS METALS:TOTAL							Analyst: **DBD**
7439-92-1	Lead	ND	0.010		mg/L	10	3/14/2014 3:40:48 PM
7782-49-2	Selenium	0.018	0.010		mg/L	10	3/14/2014 3:40:48 PM
7440-61-1	Uranium	ND	0.010		mg/L	10	3/14/2014 3:40:48 PM
EPA METHOD 245.1: MERCURY							Analyst: **JML**
7439-97-6	Mercury	ND	0.00020		mg/L	1	3/6/2014 5:33:09 PM
SM5210B: BOD							Analyst: **SMS**
BOD	Biochemical Oxygen Demand	>171.97	2.0	E	mg/L	1	3/12/2014 3:12:00 PM
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **ECH**
1101	E. Coli	<10	10.00		CFU/100	10	3/6/2014 6:40:00 PM
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**
83-32-9	Acenaphthene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
208-96-8	Acenaphthylene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
62-53-3	Aniline	ND	50		µg/L	1	3/12/2014 2:27:56 PM
120-12-7	Anthracene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
103-33-3	Azobenzene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
56-55-3	Benz(a)anthracene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
50-32-8	Benzo(a)pyrene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
205-99-2	Benzo(b)fluoranthene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
191-24-2	Benzo(g,h,i)perylene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
207-08-9	Benzo(k)fluoranthene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
65-85-0	Benzoic acid	ND	100		µg/L	1	3/12/2014 2:27:56 PM
100-51-6	Benzyl alcohol	ND	50		µg/L	1	3/12/2014 2:27:56 PM
111-91-1	Bis(2-chloroethoxy)methane	ND	50		µg/L	1	3/12/2014 2:27:56 PM
111-44-4	Bis(2-chloroethyl)ether	ND	50		µg/L	1	3/12/2014 2:27:56 PM
108-60-1	Bis(2-chloroisopropyl)ether	ND	50		µg/L	1	3/12/2014 2:27:56 PM
117-81-7	Bis(2-ethylhexyl)phthalate	ND	50		µg/L	1	3/12/2014 2:27:56 PM
101-55-3	4-Bromophenyl phenyl ether	ND	50		µg/L	1	3/12/2014 2:27:56 PM
85-68-7	Butyl benzyl phthalate	ND	50		µg/L	1	3/12/2014 2:27:56 PM
86-74-8	Carbazole	ND	50		µg/L	1	3/12/2014 2:27:56 PM
59-50-7	4-Chloro-3-methylphenol	ND	50		µg/L	1	3/12/2014 2:27:56 PM
106-47-8	4-Chloroaniline	ND	50		µg/L	1	3/12/2014 2:27:56 PM
91-58-7	2-Chloronaphthalene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
95-57-8	2-Chlorophenol	ND	50		µg/L	1	3/12/2014 2:27:56 PM
7005-72-3	4-Chlorophenyl phenyl ether	ND	50		µg/L	1	3/12/2014 2:27:56 PM
218-01-9	Chrysene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
84-74-2	Di-n-butyl phthalate	ND	50		µg/L	1	3/12/2014 2:27:56 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-6
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 1:25:00 PM
Lab ID: 1403198-003
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

EPA METHOD 8270C: SEMIVOLATILES

Analyst: **DAM**

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
117-84-0	Di-n-octyl phthalate	ND	50		µg/L	1	3/12/2014 2:27:56 PM
53-70-3	Dibenz(a,h)anthracene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
132-64-9	Dibenzofuran	ND	50		µg/L	1	3/12/2014 2:27:56 PM
95-50-1	1,2-Dichlorobenzene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
541-73-1	1,3-Dichlorobenzene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
106-46-7	1,4-Dichlorobenzene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
91-94-1	3,3´-Dichlorobenzidine	ND	50		µg/L	1	3/12/2014 2:27:56 PM
84-66-2	Diethyl phthalate	ND	50		µg/L	1	3/12/2014 2:27:56 PM
131-11-3	Dimethyl phthalate	ND	50		µg/L	1	3/12/2014 2:27:56 PM
120-83-2	2,4-Dichlorophenol	ND	100		µg/L	1	3/12/2014 2:27:56 PM
105-67-9	2,4-Dimethylphenol	ND	50		µg/L	1	3/12/2014 2:27:56 PM
534-52-1	4,6-Dinitro-2-methylphenol	ND	100		µg/L	1	3/12/2014 2:27:56 PM
51-28-5	2,4-Dinitrophenol	ND	100		µg/L	1	3/12/2014 2:27:56 PM
121-14-2	2,4-Dinitrotoluene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
606-20-2	2,6-Dinitrotoluene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
206-44-0	Fluoranthene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
86-73-7	Fluorene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
118-74-1	Hexachlorobenzene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
87-68-3	Hexachlorobutadiene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
77-47-4	Hexachlorocyclopentadiene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
67-72-1	Hexachloroethane	ND	50		µg/L	1	3/12/2014 2:27:56 PM
193-39-5	Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
78-59-1	Isophorone	ND	50		µg/L	1	3/12/2014 2:27:56 PM
90-12-0	1-Methylnaphthalene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
91-57-6	2-Methylnaphthalene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
95-48-7	2-Methylphenol	ND	50		µg/L	1	3/12/2014 2:27:56 PM
782-06-0	3+4-Methylphenol	88	50		µg/L	1	3/12/2014 2:27:56 PM
621-64-7	N-Nitrosodi-n-propylamine	ND	50		µg/L	1	3/12/2014 2:27:56 PM
62-75-9	N-Nitrosodimethylamine	ND	50		µg/L	1	3/12/2014 2:27:56 PM
86-30-6	N-Nitrosodiphenylamine	ND	50		µg/L	1	3/12/2014 2:27:56 PM
91-20-3	Naphthalene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
88-74-4	2-Nitroaniline	ND	50		µg/L	1	3/12/2014 2:27:56 PM
99-09-2	3-Nitroaniline	ND	50		µg/L	1	3/12/2014 2:27:56 PM
100-01-6	4-Nitroaniline	ND	50		µg/L	1	3/12/2014 2:27:56 PM
98-95-3	Nitrobenzene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
88-75-5	2-Nitrophenol	ND	50		µg/L	1	3/12/2014 2:27:56 PM
100-02-7	4-Nitrophenol	ND	50		µg/L	1	3/12/2014 2:27:56 PM
87-86-5	Pentachlorophenol	ND	100		µg/L	1	3/12/2014 2:27:56 PM
85-01-8	Phenanthrene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
108-95-2	Phenol	280	50		µg/L	1	3/12/2014 2:27:56 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-6
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 1:25:00 PM
Lab ID: 1403198-003
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**
129-00-0	Pyrene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
110-86-1	Pyridine	ND	50		µg/L	1	3/12/2014 2:27:56 PM
120-82-1	1,2,4-Trichlorobenzene	ND	50		µg/L	1	3/12/2014 2:27:56 PM
95-95-4	2,4,5-Trichlorophenol	ND	50		µg/L	1	3/12/2014 2:27:56 PM
88-06-2	2,4,6-Trichlorophenol	ND	50		µg/L	1	3/12/2014 2:27:56 PM
367-12-4	Surr: 2-Fluorophenol	41.6	22.7-98		%REC	1	3/12/2014 2:27:56 PM
4165-62-2	Surr: Phenol-d5	35.1	23.4-74.9		%REC	1	3/12/2014 2:27:56 PM
118-79-6	Surr: 2,4,6-Tribromophenol	85.4	23.3-111		%REC	1	3/12/2014 2:27:56 PM
4165-60-0	Surr: Nitrobenzene-d5	63.9	36.8-111		%REC	1	3/12/2014 2:27:56 PM
321-60-8	Surr: 2-Fluorobiphenyl	67.2	38.3-110		%REC	1	3/12/2014 2:27:56 PM
1718-51-0	Surr: 4-Terphenyl-d14	75.0	52.1-116		%REC	1	3/12/2014 2:27:56 PM
EPA METHOD 8260B: VOLATILES							Analyst: **KJH**
71-43-2	Benzene	ND	10		µg/L	10	3/10/2014 10:24:47 PM
108-88-3	Toluene	ND	10		µg/L	10	3/10/2014 10:24:47 PM
100-41-4	Ethylbenzene	ND	10		µg/L	10	3/10/2014 10:24:47 PM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	3/10/2014 10:24:47 PM
95-63-6	1,2,4-Trimethylbenzene	ND	10		µg/L	10	3/10/2014 10:24:47 PM
108-67-8	1,3,5-Trimethylbenzene	ND	10		µg/L	10	3/10/2014 10:24:47 PM
107-06-2	1,2-Dichloroethane (EDC)	ND	10		µg/L	10	3/10/2014 10:24:47 PM
106-93-4	1,2-Dibromoethane (EDB)	ND	10		µg/L	10	3/10/2014 10:24:47 PM
91-20-3	Naphthalene	ND	20		µg/L	10	3/10/2014 10:24:47 PM
90-12-0	1-Methylnaphthalene	ND	40		µg/L	10	3/10/2014 10:24:47 PM
91-57-6	2-Methylnaphthalene	ND	40		µg/L	10	3/10/2014 10:24:47 PM
67-64-1	Acetone	140	100		µg/L	10	3/10/2014 10:24:47 PM
108-86-1	Bromobenzene	ND	10		µg/L	10	3/10/2014 10:24:47 PM
75-27-4	Bromodichloromethane	ND	10		µg/L	10	3/10/2014 10:24:47 PM
75-25-2	Bromoform	ND	10		µg/L	10	3/10/2014 10:24:47 PM
74-83-9	Bromomethane	ND	30		µg/L	10	3/10/2014 10:24:47 PM
78-93-3	2-Butanone	ND	100		µg/L	10	3/10/2014 10:24:47 PM
75-15-0	Carbon disulfide	ND	100		µg/L	10	3/10/2014 10:24:47 PM
56-23-5	Carbon Tetrachloride	ND	10		µg/L	10	3/10/2014 10:24:47 PM
108-90-7	Chlorobenzene	ND	10		µg/L	10	3/10/2014 10:24:47 PM
75-00-3	Chloroethane	ND	20		µg/L	10	3/10/2014 10:24:47 PM
67-66-3	Chloroform	ND	10		µg/L	10	3/10/2014 10:24:47 PM
74-87-3	Chloromethane	ND	30		µg/L	10	3/10/2014 10:24:47 PM
95-49-8	2-Chlorotoluene	ND	10		µg/L	10	3/10/2014 10:24:47 PM
106-43-4	4-Chlorotoluene	ND	10		µg/L	10	3/10/2014 10:24:47 PM
156-59-2	cis-1,2-DCE	ND	10		µg/L	10	3/10/2014 10:24:47 PM
10061-01-5	cis-1,3-Dichloropropene	ND	10		µg/L	10	3/10/2014 10:24:47 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-6
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 1:25:00 PM
Lab ID: 1403198-003
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **KJH**
96-12-8	1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	3/10/2014 10:24:47 PM
124-48-1	Dibromochloromethane	ND	10		µg/L	10	3/10/2014 10:24:47 PM
74-95-3	Dibromomethane	ND	10		µg/L	10	3/10/2014 10:24:47 PM
95-50-1	1,2-Dichlorobenzene	ND	10		µg/L	10	3/10/2014 10:24:47 PM
541-73-1	1,3-Dichlorobenzene	ND	10		µg/L	10	3/10/2014 10:24:47 PM
106-46-7	1,4-Dichlorobenzene	ND	10		µg/L	10	3/10/2014 10:24:47 PM
75-71-8	Dichlorodifluoromethane	ND	10		µg/L	10	3/10/2014 10:24:47 PM
75-34-3	1,1-Dichloroethane	ND	10		µg/L	10	3/10/2014 10:24:47 PM
75-35-4	1,1-Dichloroethene	ND	10		µg/L	10	3/10/2014 10:24:47 PM
78-87-5	1,2-Dichloropropane	ND	10		µg/L	10	3/10/2014 10:24:47 PM
142-28-9	1,3-Dichloropropane	ND	10		µg/L	10	3/10/2014 10:24:47 PM
594-20-7	2,2-Dichloropropane	ND	20		µg/L	10	3/10/2014 10:24:47 PM
563-58-6	1,1-Dichloropropene	ND	10		µg/L	10	3/10/2014 10:24:47 PM
87-68-3	Hexachlorobutadiene	ND	10		µg/L	10	3/10/2014 10:24:47 PM
591-78-6	2-Hexanone	ND	100		µg/L	10	3/10/2014 10:24:47 PM
98-82-8	Isopropylbenzene	ND	10		µg/L	10	3/10/2014 10:24:47 PM
99-87-6	4-Isopropyltoluene	ND	10		µg/L	10	3/10/2014 10:24:47 PM
108-10-1	4-Methyl-2-pentanone	ND	100		µg/L	10	3/10/2014 10:24:47 PM
75-09-2	Methylene Chloride	ND	30		µg/L	10	3/10/2014 10:24:47 PM
104-51-8	n-Butylbenzene	ND	30		µg/L	10	3/10/2014 10:24:47 PM
103-65-1	n-Propylbenzene	ND	10		µg/L	10	3/10/2014 10:24:47 PM
135-98-8	sec-Butylbenzene	ND	10		µg/L	10	3/10/2014 10:24:47 PM
100-42-5	Styrene	ND	10		µg/L	10	3/10/2014 10:24:47 PM
98-06-6	tert-Butylbenzene	ND	10		µg/L	10	3/10/2014 10:24:47 PM
630-20-6	1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	3/10/2014 10:24:47 PM
79-34-5	1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	3/10/2014 10:24:47 PM
127-18-4	Tetrachloroethene (PCE)	ND	10		µg/L	10	3/10/2014 10:24:47 PM
156-60-5	trans-1,2-DCE	ND	10		µg/L	10	3/10/2014 10:24:47 PM
10061-02-6	trans-1,3-Dichloropropene	ND	10		µg/L	10	3/10/2014 10:24:47 PM
87-61-6	1,2,3-Trichlorobenzene	ND	10		µg/L	10	3/10/2014 10:24:47 PM
120-82-1	1,2,4-Trichlorobenzene	ND	10		µg/L	10	3/10/2014 10:24:47 PM
71-55-6	1,1,1-Trichloroethane	ND	10		µg/L	10	3/10/2014 10:24:47 PM
79-00-5	1,1,2-Trichloroethane	ND	10		µg/L	10	3/10/2014 10:24:47 PM
79-01-6	Trichloroethene (TCE)	ND	10		µg/L	10	3/10/2014 10:24:47 PM
75-69-4	Trichlorofluoromethane	ND	10		µg/L	10	3/10/2014 10:24:47 PM
96-18-4	1,2,3-Trichloropropane	ND	20		µg/L	10	3/10/2014 10:24:47 PM
75-01-4	Vinyl chloride	ND	10		µg/L	10	3/10/2014 10:24:47 PM
1330-20-7	Xylenes, Total	ND	15		µg/L	10	3/10/2014 10:24:47 PM
17060-07-0	Surr: 1,2-Dichloroethane-d4	93.1	70-130		%REC	10	3/10/2014 10:24:47 PM
460-00-4	Surr: 4-Bromofluorobenzene	93.5	70-130		%REC	10	3/10/2014 10:24:47 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-6
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 1:25:00 PM
Lab ID: 1403198-003
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **KJH**
1868-53-7	Surr: Dibromofluoromethane	96.0	70-130		%REC	10	3/10/2014 10:24:47 PM
2037-26-5	Surr: Toluene-d8	91.6	70-130		%REC	10	3/10/2014 10:24:47 PM
SM2510B: SPECIFIC CONDUCTANCE							Analyst: **JML**
eC	Conductivity	23000	0.050		µmhos/c	5	3/6/2014 2:08:07 PM
SM4500-H+B: PH							Analyst: **JML**
pH	pH	7.69	1.68	H	pH units	1	3/6/2014 12:41:53 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-7
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 12:35:00 PM
Lab ID: 1403198-004
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: **JRR**
16984-48-8	Fluoride	28	10	*	mg/L	100	3/6/2014 11:45:58 PM
16887-00-6	Chloride	41000	2500		mg/L	5000	3/12/2014 1:55:25 AM
7727-37-9	Nitrogen, Nitrite (As N)	ND	10		mg/L	100	3/6/2014 11:45:58 PM
24959-67-9	Bromide	19	1.0		mg/L	10	3/6/2014 11:33:33 PM
7727-37-9	Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	3/6/2014 11:33:33 PM
7723-14-0	Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	3/6/2014 11:33:33 PM
14808-79-8	Sulfate	8500	2500		mg/L	5000	3/12/2014 1:55:25 AM
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **JLF**
7440-39-3	Barium	0.11	0.010		mg/L	5	3/6/2014 2:21:29 PM
7440-43-9	Cadmium	ND	0.010		mg/L	5	3/6/2014 2:21:29 PM
7440-70-2	Calcium	760	50		mg/L	50	3/6/2014 2:23:41 PM
7440-47-3	Chromium	ND	0.030		mg/L	5	3/6/2014 2:21:29 PM
7440-50-8	Copper	ND	0.030		mg/L	5	3/6/2014 2:21:29 PM
7439-89-6	Iron	0.15	0.10		mg/L	5	3/6/2014 2:21:29 PM
7439-95-4	Magnesium	1000	50		mg/L	50	3/6/2014 2:23:41 PM
7439-96-5	Manganese	2.1	0.010	*	mg/L	5	3/6/2014 2:21:29 PM
7440-09-7	Potassium	1700	50		mg/L	50	3/6/2014 2:23:41 PM
7440-22-4	Silver	ND	0.025		mg/L	5	3/7/2014 2:53:16 PM
7440-23-5	Sodium	28000	500		mg/L	500	3/7/2014 2:55:01 PM
7440-66-6	Zinc	ND	0.050		mg/L	5	3/6/2014 2:21:29 PM
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**
7440-39-3	Barium	0.11	0.010		mg/L	5	3/12/2014 1:27:44 PM
7440-43-9	Cadmium	ND	0.010		mg/L	5	3/12/2014 1:27:44 PM
7440-47-3	Chromium	ND	0.030		mg/L	5	3/12/2014 1:27:44 PM
7440-50-8	Copper	ND	0.030		mg/L	5	3/12/2014 1:27:44 PM
7439-89-6	Iron	0.28	0.10		mg/L	5	3/12/2014 1:27:44 PM
7439-96-5	Manganese	2.0	0.010	*	mg/L	5	3/12/2014 1:27:44 PM
7440-22-4	Silver	ND	0.025		mg/L	5	3/18/2014 3:23:53 PM
7440-66-6	Zinc	ND	0.050		mg/L	5	3/12/2014 3:34:01 PM
EPA 200.8: DISSOLVED METALS							Analyst: **DBD**
7440-38-2	Arsenic	0.11	0.10	*	mg/L	100	3/13/2014 3:03:07 PM
7439-92-1	Lead	ND	0.10		mg/L	100	3/13/2014 3:03:07 PM
7782-49-2	Selenium	0.13	0.10	*	mg/L	100	3/13/2014 3:03:07 PM
7440-61-1	Uranium	ND	0.10		mg/L	100	3/13/2014 3:03:07 PM
200.8 ICPMS METALS:TOTAL							Analyst: **DBD**
7440-38-2	Arsenic	0.15	0.10	*	mg/L	100	3/14/2014 3:44:15 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-7
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 12:35:00 PM
Lab ID: 1403198-004
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
200.8 ICPMS METALS:TOTAL							Analyst: **DBD**
7439-92-1	Lead	ND	0.10		mg/L	100	3/14/2014 3:44:15 PM
7782-49-2	Selenium	0.12	0.10	*	mg/L	100	3/14/2014 3:44:15 PM
7440-61-1	Uranium	ND	0.10		mg/L	100	3/14/2014 3:44:15 PM
EPA METHOD 245.1: MERCURY							Analyst: **JML**
7439-97-6	Mercury	ND	0.00020		mg/L	1	3/6/2014 5:34:59 PM
SM5210B: BOD							Analyst: **SMS**
BOD	Biochemical Oxygen Demand	11	2.0		mg/L	1	3/11/2014 2:36:00 PM
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **ECH**
1101	E. Coli	<1	1.000		CFU/100	1	3/6/2014 6:40:00 PM
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**
83-32-9	Acenaphthene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
208-96-8	Acenaphthylene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
62-53-3	Aniline	ND	10		µg/L	1	3/12/2014 2:56:54 PM
120-12-7	Anthracene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
103-33-3	Azobenzene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
56-55-3	Benz(a)anthracene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
50-32-8	Benzo(a)pyrene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
205-99-2	Benzo(b)fluoranthene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
191-24-2	Benzo(g,h,i)perylene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
207-08-9	Benzo(k)fluoranthene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
65-85-0	Benzoic acid	ND	20		µg/L	1	3/12/2014 2:56:54 PM
100-51-6	Benzyl alcohol	ND	10		µg/L	1	3/12/2014 2:56:54 PM
111-91-1	Bis(2-chloroethoxy)methane	ND	10		µg/L	1	3/12/2014 2:56:54 PM
111-44-4	Bis(2-chloroethyl)ether	ND	10		µg/L	1	3/12/2014 2:56:54 PM
108-60-1	Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	3/12/2014 2:56:54 PM
117-81-7	Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	3/12/2014 2:56:54 PM
101-55-3	4-Bromophenyl phenyl ether	ND	10		µg/L	1	3/12/2014 2:56:54 PM
85-68-7	Butyl benzyl phthalate	ND	10		µg/L	1	3/12/2014 2:56:54 PM
86-74-8	Carbazole	ND	10		µg/L	1	3/12/2014 2:56:54 PM
59-50-7	4-Chloro-3-methylphenol	ND	10		µg/L	1	3/12/2014 2:56:54 PM
106-47-8	4-Chloroaniline	ND	10		µg/L	1	3/12/2014 2:56:54 PM
91-58-7	2-Chloronaphthalene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
95-57-8	2-Chlorophenol	ND	10		µg/L	1	3/12/2014 2:56:54 PM
7005-72-3	4-Chlorophenyl phenyl ether	ND	10		µg/L	1	3/12/2014 2:56:54 PM
218-01-9	Chrysene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
84-74-2	Di-n-butyl phthalate	ND	10		µg/L	1	3/12/2014 2:56:54 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-7
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 12:35:00 PM
Lab ID: 1403198-004
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

EPA METHOD 8270C: SEMIVOLATILES

Analyst: **DAM**

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
117-84-0	Di-n-octyl phthalate	ND	10		µg/L	1	3/12/2014 2:56:54 PM
53-70-3	Dibenz(a,h)anthracene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
132-64-9	Dibenzofuran	ND	10		µg/L	1	3/12/2014 2:56:54 PM
95-50-1	1,2-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
541-73-1	1,3-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
106-46-7	1,4-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
91-94-1	3,3´-Dichlorobenzidine	ND	10		µg/L	1	3/12/2014 2:56:54 PM
84-66-2	Diethyl phthalate	ND	10		µg/L	1	3/12/2014 2:56:54 PM
131-11-3	Dimethyl phthalate	ND	10		µg/L	1	3/12/2014 2:56:54 PM
120-83-2	2,4-Dichlorophenol	ND	20		µg/L	1	3/12/2014 2:56:54 PM
105-67-9	2,4-Dimethylphenol	ND	10		µg/L	1	3/12/2014 2:56:54 PM
534-52-1	4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	3/12/2014 2:56:54 PM
51-28-5	2,4-Dinitrophenol	ND	20		µg/L	1	3/12/2014 2:56:54 PM
121-14-2	2,4-Dinitrotoluene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
606-20-2	2,6-Dinitrotoluene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
206-44-0	Fluoranthene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
86-73-7	Fluorene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
118-74-1	Hexachlorobenzene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
87-68-3	Hexachlorobutadiene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
77-47-4	Hexachlorocyclopentadiene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
67-72-1	Hexachloroethane	ND	10		µg/L	1	3/12/2014 2:56:54 PM
193-39-5	Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
78-59-1	Isophorone	ND	10		µg/L	1	3/12/2014 2:56:54 PM
90-12-0	1-Methylnaphthalene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
91-57-6	2-Methylnaphthalene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
95-48-7	2-Methylphenol	ND	10		µg/L	1	3/12/2014 2:56:54 PM
782-06-0	3+4-Methylphenol	ND	10		µg/L	1	3/12/2014 2:56:54 PM
621-64-7	N-Nitrosodi-n-propylamine	ND	10		µg/L	1	3/12/2014 2:56:54 PM
62-75-9	N-Nitrosodimethylamine	ND	10		µg/L	1	3/12/2014 2:56:54 PM
86-30-6	N-Nitrosodiphenylamine	ND	10		µg/L	1	3/12/2014 2:56:54 PM
91-20-3	Naphthalene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
88-74-4	2-Nitroaniline	ND	10		µg/L	1	3/12/2014 2:56:54 PM
99-09-2	3-Nitroaniline	ND	10		µg/L	1	3/12/2014 2:56:54 PM
100-01-6	4-Nitroaniline	ND	10		µg/L	1	3/12/2014 2:56:54 PM
98-95-3	Nitrobenzene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
88-75-5	2-Nitrophenol	ND	10		µg/L	1	3/12/2014 2:56:54 PM
100-02-7	4-Nitrophenol	ND	10		µg/L	1	3/12/2014 2:56:54 PM
87-86-5	Pentachlorophenol	ND	20		µg/L	1	3/12/2014 2:56:54 PM
85-01-8	Phenanthrene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
108-95-2	Phenol	ND	10		µg/L	1	3/12/2014 2:56:54 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-7
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 12:35:00 PM
Lab ID: 1403198-004
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**
129-00-0	Pyrene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
110-86-1	Pyridine	ND	10		µg/L	1	3/12/2014 2:56:54 PM
120-82-1	1,2,4-Trichlorobenzene	ND	10		µg/L	1	3/12/2014 2:56:54 PM
95-95-4	2,4,5-Trichlorophenol	ND	10		µg/L	1	3/12/2014 2:56:54 PM
88-06-2	2,4,6-Trichlorophenol	ND	10		µg/L	1	3/12/2014 2:56:54 PM
367-12-4	Surr: 2-Fluorophenol	60.7	22.7-98		%REC	1	3/12/2014 2:56:54 PM
4165-62-2	Surr: Phenol-d5	55.7	23.4-74.9		%REC	1	3/12/2014 2:56:54 PM
118-79-6	Surr: 2,4,6-Tribromophenol	72.5	23.3-111		%REC	1	3/12/2014 2:56:54 PM
4165-60-0	Surr: Nitrobenzene-d5	85.9	36.8-111		%REC	1	3/12/2014 2:56:54 PM
321-60-8	Surr: 2-Fluorobiphenyl	72.5	38.3-110		%REC	1	3/12/2014 2:56:54 PM
1718-51-0	Surr: 4-Terphenyl-d14	60.9	52.1-116		%REC	1	3/12/2014 2:56:54 PM
EPA METHOD 8260B: VOLATILES							Analyst: **KJH**
71-43-2	Benzene	ND	10		µg/L	10	3/10/2014 10:52:36 PM
108-88-3	Toluene	ND	10		µg/L	10	3/10/2014 10:52:36 PM
100-41-4	Ethylbenzene	ND	10		µg/L	10	3/10/2014 10:52:36 PM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	3/10/2014 10:52:36 PM
95-63-6	1,2,4-Trimethylbenzene	ND	10		µg/L	10	3/10/2014 10:52:36 PM
108-67-8	1,3,5-Trimethylbenzene	ND	10		µg/L	10	3/10/2014 10:52:36 PM
107-06-2	1,2-Dichloroethane (EDC)	ND	10		µg/L	10	3/10/2014 10:52:36 PM
106-93-4	1,2-Dibromoethane (EDB)	ND	10		µg/L	10	3/10/2014 10:52:36 PM
91-20-3	Naphthalene	ND	20		µg/L	10	3/10/2014 10:52:36 PM
90-12-0	1-Methylnaphthalene	ND	40		µg/L	10	3/10/2014 10:52:36 PM
91-57-6	2-Methylnaphthalene	ND	40		µg/L	10	3/10/2014 10:52:36 PM
67-64-1	Acetone	ND	100		µg/L	10	3/10/2014 10:52:36 PM
108-86-1	Bromobenzene	ND	10		µg/L	10	3/10/2014 10:52:36 PM
75-27-4	Bromodichloromethane	ND	10		µg/L	10	3/10/2014 10:52:36 PM
75-25-2	Bromoform	ND	10		µg/L	10	3/10/2014 10:52:36 PM
74-83-9	Bromomethane	ND	30		µg/L	10	3/10/2014 10:52:36 PM
78-93-3	2-Butanone	ND	100		µg/L	10	3/10/2014 10:52:36 PM
75-15-0	Carbon disulfide	ND	100		µg/L	10	3/10/2014 10:52:36 PM
56-23-5	Carbon Tetrachloride	ND	10		µg/L	10	3/10/2014 10:52:36 PM
108-90-7	Chlorobenzene	ND	10		µg/L	10	3/10/2014 10:52:36 PM
75-00-3	Chloroethane	ND	20		µg/L	10	3/10/2014 10:52:36 PM
67-66-3	Chloroform	ND	10		µg/L	10	3/10/2014 10:52:36 PM
74-87-3	Chloromethane	ND	30		µg/L	10	3/10/2014 10:52:36 PM
95-49-8	2-Chlorotoluene	ND	10		µg/L	10	3/10/2014 10:52:36 PM
106-43-4	4-Chlorotoluene	ND	10		µg/L	10	3/10/2014 10:52:36 PM
156-59-2	cis-1,2-DCE	ND	10		µg/L	10	3/10/2014 10:52:36 PM
10061-01-5	cis-1,3-Dichloropropene	ND	10		µg/L	10	3/10/2014 10:52:36 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-7
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 12:35:00 PM
Lab ID: 1403198-004
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **KJH**
96-12-8	1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	3/10/2014 10:52:36 PM
124-48-1	Dibromochloromethane	ND	10		µg/L	10	3/10/2014 10:52:36 PM
74-95-3	Dibromomethane	ND	10		µg/L	10	3/10/2014 10:52:36 PM
95-50-1	1,2-Dichlorobenzene	ND	10		µg/L	10	3/10/2014 10:52:36 PM
541-73-1	1,3-Dichlorobenzene	ND	10		µg/L	10	3/10/2014 10:52:36 PM
106-46-7	1,4-Dichlorobenzene	ND	10		µg/L	10	3/10/2014 10:52:36 PM
75-71-8	Dichlorodifluoromethane	ND	10		µg/L	10	3/10/2014 10:52:36 PM
75-34-3	1,1-Dichloroethane	ND	10		µg/L	10	3/10/2014 10:52:36 PM
75-35-4	1,1-Dichloroethene	ND	10		µg/L	10	3/10/2014 10:52:36 PM
78-87-5	1,2-Dichloropropane	ND	10		µg/L	10	3/10/2014 10:52:36 PM
142-28-9	1,3-Dichloropropane	ND	10		µg/L	10	3/10/2014 10:52:36 PM
594-20-7	2,2-Dichloropropane	ND	20		µg/L	10	3/10/2014 10:52:36 PM
563-58-6	1,1-Dichloropropene	ND	10		µg/L	10	3/10/2014 10:52:36 PM
87-68-3	Hexachlorobutadiene	ND	10		µg/L	10	3/10/2014 10:52:36 PM
591-78-6	2-Hexanone	ND	100		µg/L	10	3/10/2014 10:52:36 PM
98-82-8	Isopropylbenzene	ND	10		µg/L	10	3/10/2014 10:52:36 PM
99-87-6	4-Isopropyltoluene	ND	10		µg/L	10	3/10/2014 10:52:36 PM
108-10-1	4-Methyl-2-pentanone	ND	100		µg/L	10	3/10/2014 10:52:36 PM
75-09-2	Methylene Chloride	ND	30		µg/L	10	3/10/2014 10:52:36 PM
104-51-8	n-Butylbenzene	ND	30		µg/L	10	3/10/2014 10:52:36 PM
103-65-1	n-Propylbenzene	ND	10		µg/L	10	3/10/2014 10:52:36 PM
135-98-8	sec-Butylbenzene	ND	10		µg/L	10	3/10/2014 10:52:36 PM
100-42-5	Styrene	ND	10		µg/L	10	3/10/2014 10:52:36 PM
98-06-6	tert-Butylbenzene	ND	10		µg/L	10	3/10/2014 10:52:36 PM
630-20-6	1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	3/10/2014 10:52:36 PM
79-34-5	1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	3/10/2014 10:52:36 PM
127-18-4	Tetrachloroethene (PCE)	ND	10		µg/L	10	3/10/2014 10:52:36 PM
156-60-5	trans-1,2-DCE	ND	10		µg/L	10	3/10/2014 10:52:36 PM
10061-02-6	trans-1,3-Dichloropropene	ND	10		µg/L	10	3/10/2014 10:52:36 PM
87-61-6	1,2,3-Trichlorobenzene	ND	10		µg/L	10	3/10/2014 10:52:36 PM
120-82-1	1,2,4-Trichlorobenzene	ND	10		µg/L	10	3/10/2014 10:52:36 PM
71-55-6	1,1,1-Trichloroethane	ND	10		µg/L	10	3/10/2014 10:52:36 PM
79-00-5	1,1,2-Trichloroethane	ND	10		µg/L	10	3/10/2014 10:52:36 PM
79-01-6	Trichloroethene (TCE)	ND	10		µg/L	10	3/10/2014 10:52:36 PM
75-69-4	Trichlorofluoromethane	ND	10		µg/L	10	3/10/2014 10:52:36 PM
96-18-4	1,2,3-Trichloropropane	ND	20		µg/L	10	3/10/2014 10:52:36 PM
75-01-4	Vinyl chloride	ND	10		µg/L	10	3/10/2014 10:52:36 PM
1330-20-7	Xylenes, Total	ND	15		µg/L	10	3/10/2014 10:52:36 PM
17060-07-0	Surr: 1,2-Dichloroethane-d4	87.5	70-130		%REC	10	3/10/2014 10:52:36 PM
460-00-4	Surr: 4-Bromofluorobenzene	91.6	70-130		%REC	10	3/10/2014 10:52:36 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-7
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 12:35:00 PM
Lab ID: 1403198-004
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **KJH**
1868-53-7	Surr: Dibromofluoromethane	94.8	70-130		%REC	10	3/10/2014 10:52:36 PM
2037-26-5	Surr: Toluene-d8	92.5	70-130		%REC	10	3/10/2014 10:52:36 PM
SM2510B: SPECIFIC CONDUCTANCE							Analyst: **JML**
eC	Conductivity	130000	0.25		µmhos/c	25	3/6/2014 6:38:36 PM
SM4500-H+B: PH							Analyst: **JML**
pH	pH	7.82	1.68	H	pH units	1	3/6/2014 12:46:01 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-8
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 12:15:00 PM
Lab ID: 1403198-005
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: **JRR**
16984-48-8	Fluoride	27	10	*	mg/L	100	3/7/2014 12:10:47 AM
16887-00-6	Chloride	39000	2500		mg/L	5000	3/12/2014 2:07:50 AM
7727-37-9	Nitrogen, Nitrite (As N)	ND	10		mg/L	100	3/7/2014 12:10:47 AM
24959-67-9	Bromide	20	1.0		mg/L	10	3/6/2014 11:58:22 PM
7727-37-9	Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	3/6/2014 11:58:22 PM
7723-14-0	Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	3/6/2014 11:58:22 PM
14808-79-8	Sulfate	7900	2500		mg/L	5000	3/12/2014 2:07:50 AM
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **JLF**
7440-39-3	Barium	0.11	0.010		mg/L	5	3/6/2014 2:27:33 PM
7440-43-9	Cadmium	ND	0.010		mg/L	5	3/6/2014 2:27:33 PM
7440-70-2	Calcium	780	50		mg/L	50	3/6/2014 2:29:30 PM
7440-47-3	Chromium	ND	0.030		mg/L	5	3/6/2014 2:27:33 PM
7440-50-8	Copper	ND	0.030		mg/L	5	3/6/2014 2:27:33 PM
7439-89-6	Iron	0.14	0.10		mg/L	5	3/6/2014 2:27:33 PM
7439-95-4	Magnesium	1000	50		mg/L	50	3/6/2014 2:29:30 PM
7439-96-5	Manganese	2.1	0.010	*	mg/L	5	3/6/2014 2:27:33 PM
7440-09-7	Potassium	1800	50		mg/L	50	3/6/2014 2:29:30 PM
7440-22-4	Silver	ND	0.025		mg/L	5	3/7/2014 3:02:03 PM
7440-23-5	Sodium	26000	500		mg/L	500	3/7/2014 3:03:47 PM
7440-66-6	Zinc	ND	0.050		mg/L	5	3/6/2014 2:27:33 PM
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**
7440-39-3	Barium	0.12	0.010		mg/L	5	3/12/2014 1:29:53 PM
7440-43-9	Cadmium	ND	0.010		mg/L	5	3/12/2014 1:29:53 PM
7440-47-3	Chromium	ND	0.030		mg/L	5	3/12/2014 1:29:53 PM
7440-50-8	Copper	ND	0.030		mg/L	5	3/12/2014 1:29:53 PM
7439-89-6	Iron	0.28	0.10		mg/L	5	3/12/2014 1:29:53 PM
7439-96-5	Manganese	2.2	0.010	*	mg/L	5	3/12/2014 1:29:53 PM
7440-22-4	Silver	ND	0.025		mg/L	5	3/18/2014 3:24:54 PM
7440-66-6	Zinc	ND	0.050		mg/L	5	3/12/2014 3:35:12 PM
EPA 200.8: DISSOLVED METALS							Analyst: **DBD**
7440-38-2	Arsenic	0.11	0.10	*	mg/L	100	3/13/2014 3:05:52 PM
7439-92-1	Lead	ND	0.10		mg/L	100	3/13/2014 3:05:52 PM
7782-49-2	Selenium	0.12	0.10	*	mg/L	100	3/13/2014 3:05:52 PM
7440-61-1	Uranium	ND	0.10		mg/L	100	3/13/2014 3:05:52 PM
200.8 ICPMS METALS:TOTAL							Analyst: **DBD**
7440-38-2	Arsenic	0.12	0.10	*	mg/L	100	3/14/2014 3:47:42 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-8
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 12:15:00 PM
Lab ID: 1403198-005
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
200.8 ICPMS METALS:TOTAL							Analyst: **DBD**
7439-92-1	Lead	ND	0.10		mg/L	100	3/14/2014 3:47:42 PM
7782-49-2	Selenium	ND	0.10	*	mg/L	100	3/14/2014 3:47:42 PM
7440-61-1	Uranium	ND	0.10		mg/L	100	3/14/2014 3:47:42 PM
EPA METHOD 245.1: MERCURY							Analyst: **JML**
7439-97-6	Mercury	ND	0.00020		mg/L	1	3/6/2014 5:36:43 PM
SM5210B: BOD							Analyst: **SMS**
BOD	Biochemical Oxygen Demand	13	2.0		mg/L	1	3/11/2014 2:36:00 PM
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **ECH**
1101	E. Coli	<1	1.000		CFU/100	1	3/6/2014 6:40:00 PM
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**
83-32-9	Acenaphthene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
208-96-8	Acenaphthylene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
62-53-3	Aniline	ND	10		µg/L	1	3/12/2014 4:23:49 PM
120-12-7	Anthracene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
103-33-3	Azobenzene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
56-55-3	Benz(a)anthracene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
50-32-8	Benzo(a)pyrene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
205-99-2	Benzo(b)fluoranthene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
191-24-2	Benzo(g,h,i)perylene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
207-08-9	Benzo(k)fluoranthene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
65-85-0	Benzoic acid	ND	20		µg/L	1	3/12/2014 4:23:49 PM
100-51-6	Benzyl alcohol	ND	10		µg/L	1	3/12/2014 4:23:49 PM
111-91-1	Bis(2-chloroethoxy)methane	ND	10		µg/L	1	3/12/2014 4:23:49 PM
111-44-4	Bis(2-chloroethyl)ether	ND	10		µg/L	1	3/12/2014 4:23:49 PM
108-60-1	Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	3/12/2014 4:23:49 PM
117-81-7	Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	3/12/2014 4:23:49 PM
101-55-3	4-Bromophenyl phenyl ether	ND	10		µg/L	1	3/12/2014 4:23:49 PM
85-68-7	Butyl benzyl phthalate	ND	10		µg/L	1	3/12/2014 4:23:49 PM
86-74-8	Carbazole	ND	10		µg/L	1	3/12/2014 4:23:49 PM
59-50-7	4-Chloro-3-methylphenol	ND	10		µg/L	1	3/12/2014 4:23:49 PM
106-47-8	4-Chloroaniline	ND	10		µg/L	1	3/12/2014 4:23:49 PM
91-58-7	2-Chloronaphthalene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
95-57-8	2-Chlorophenol	ND	10		µg/L	1	3/12/2014 4:23:49 PM
7005-72-3	4-Chlorophenyl phenyl ether	ND	10		µg/L	1	3/12/2014 4:23:49 PM
218-01-9	Chrysene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
84-74-2	Di-n-butyl phthalate	ND	10		µg/L	1	3/12/2014 4:23:49 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-8
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 12:15:00 PM
Lab ID: 1403198-005
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

EPA METHOD 8270C: SEMIVOLATILES

Analyst: **DAM**

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
117-84-0	Di-n-octyl phthalate	ND	10		µg/L	1	3/12/2014 4:23:49 PM
53-70-3	Dibenz(a,h)anthracene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
132-64-9	Dibenzofuran	ND	10		µg/L	1	3/12/2014 4:23:49 PM
95-50-1	1,2-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
541-73-1	1,3-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
106-46-7	1,4-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
91-94-1	3,3´-Dichlorobenzidine	ND	10		µg/L	1	3/12/2014 4:23:49 PM
84-66-2	Diethyl phthalate	ND	10		µg/L	1	3/12/2014 4:23:49 PM
131-11-3	Dimethyl phthalate	ND	10		µg/L	1	3/12/2014 4:23:49 PM
120-83-2	2,4-Dichlorophenol	ND	20		µg/L	1	3/12/2014 4:23:49 PM
105-67-9	2,4-Dimethylphenol	ND	10		µg/L	1	3/12/2014 4:23:49 PM
534-52-1	4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	3/12/2014 4:23:49 PM
51-28-5	2,4-Dinitrophenol	ND	20		µg/L	1	3/12/2014 4:23:49 PM
121-14-2	2,4-Dinitrotoluene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
606-20-2	2,6-Dinitrotoluene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
206-44-0	Fluoranthene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
86-73-7	Fluorene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
118-74-1	Hexachlorobenzene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
87-68-3	Hexachlorobutadiene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
77-47-4	Hexachlorocyclopentadiene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
67-72-1	Hexachloroethane	ND	10		µg/L	1	3/12/2014 4:23:49 PM
193-39-5	Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
78-59-1	Isophorone	ND	10		µg/L	1	3/12/2014 4:23:49 PM
90-12-0	1-Methylnaphthalene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
91-57-6	2-Methylnaphthalene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
95-48-7	2-Methylphenol	ND	10		µg/L	1	3/12/2014 4:23:49 PM
782-06-0	3+4-Methylphenol	ND	10		µg/L	1	3/12/2014 4:23:49 PM
621-64-7	N-Nitrosodi-n-propylamine	ND	10		µg/L	1	3/12/2014 4:23:49 PM
62-75-9	N-Nitrosodimethylamine	ND	10		µg/L	1	3/12/2014 4:23:49 PM
86-30-6	N-Nitrosodiphenylamine	ND	10		µg/L	1	3/12/2014 4:23:49 PM
91-20-3	Naphthalene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
88-74-4	2-Nitroaniline	ND	10		µg/L	1	3/12/2014 4:23:49 PM
99-09-2	3-Nitroaniline	ND	10		µg/L	1	3/12/2014 4:23:49 PM
100-01-6	4-Nitroaniline	ND	10		µg/L	1	3/12/2014 4:23:49 PM
98-95-3	Nitrobenzene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
88-75-5	2-Nitrophenol	ND	10		µg/L	1	3/12/2014 4:23:49 PM
100-02-7	4-Nitrophenol	ND	10		µg/L	1	3/12/2014 4:23:49 PM
87-86-5	Pentachlorophenol	ND	20		µg/L	1	3/12/2014 4:23:49 PM
85-01-8	Phenanthrene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
108-95-2	Phenol	ND	10		µg/L	1	3/12/2014 4:23:49 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-8
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 12:15:00 PM
Lab ID: 1403198-005
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**
129-00-0	Pyrene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
110-86-1	Pyridine	ND	10		µg/L	1	3/12/2014 4:23:49 PM
120-82-1	1,2,4-Trichlorobenzene	ND	10		µg/L	1	3/12/2014 4:23:49 PM
95-95-4	2,4,5-Trichlorophenol	ND	10		µg/L	1	3/12/2014 4:23:49 PM
88-06-2	2,4,6-Trichlorophenol	ND	10		µg/L	1	3/12/2014 4:23:49 PM
367-12-4	Surr: 2-Fluorophenol	43.9	22.7-98		%REC	1	3/12/2014 4:23:49 PM
4165-62-2	Surr: Phenol-d5	47.1	23.4-74.9		%REC	1	3/12/2014 4:23:49 PM
118-79-6	Surr: 2,4,6-Tribromophenol	51.3	23.3-111		%REC	1	3/12/2014 4:23:49 PM
4165-60-0	Surr: Nitrobenzene-d5	78.8	36.8-111		%REC	1	3/12/2014 4:23:49 PM
321-60-8	Surr: 2-Fluorobiphenyl	66.5	38.3-110		%REC	1	3/12/2014 4:23:49 PM
1718-51-0	Surr: 4-Terphenyl-d14	53.8	52.1-116		%REC	1	3/12/2014 4:23:49 PM
EPA METHOD 8260B: VOLATILES							Analyst: **KJH**
71-43-2	Benzene	ND	10		µg/L	10	3/10/2014 11:20:32 PM
108-88-3	Toluene	ND	10		µg/L	10	3/10/2014 11:20:32 PM
100-41-4	Ethylbenzene	ND	10		µg/L	10	3/10/2014 11:20:32 PM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	3/10/2014 11:20:32 PM
95-63-6	1,2,4-Trimethylbenzene	ND	10		µg/L	10	3/10/2014 11:20:32 PM
108-67-8	1,3,5-Trimethylbenzene	ND	10		µg/L	10	3/10/2014 11:20:32 PM
107-06-2	1,2-Dichloroethane (EDC)	ND	10		µg/L	10	3/10/2014 11:20:32 PM
106-93-4	1,2-Dibromoethane (EDB)	ND	10		µg/L	10	3/10/2014 11:20:32 PM
91-20-3	Naphthalene	ND	20		µg/L	10	3/10/2014 11:20:32 PM
90-12-0	1-Methylnaphthalene	ND	40		µg/L	10	3/10/2014 11:20:32 PM
91-57-6	2-Methylnaphthalene	ND	40		µg/L	10	3/10/2014 11:20:32 PM
67-64-1	Acetone	ND	100		µg/L	10	3/10/2014 11:20:32 PM
108-86-1	Bromobenzene	ND	10		µg/L	10	3/10/2014 11:20:32 PM
75-27-4	Bromodichloromethane	ND	10		µg/L	10	3/10/2014 11:20:32 PM
75-25-2	Bromoform	ND	10		µg/L	10	3/10/2014 11:20:32 PM
74-83-9	Bromomethane	ND	30		µg/L	10	3/10/2014 11:20:32 PM
78-93-3	2-Butanone	ND	100		µg/L	10	3/10/2014 11:20:32 PM
75-15-0	Carbon disulfide	ND	100		µg/L	10	3/10/2014 11:20:32 PM
56-23-5	Carbon Tetrachloride	ND	10		µg/L	10	3/10/2014 11:20:32 PM
108-90-7	Chlorobenzene	ND	10		µg/L	10	3/10/2014 11:20:32 PM
75-00-3	Chloroethane	ND	20		µg/L	10	3/10/2014 11:20:32 PM
67-66-3	Chloroform	ND	10		µg/L	10	3/10/2014 11:20:32 PM
74-87-3	Chloromethane	ND	30		µg/L	10	3/10/2014 11:20:32 PM
95-49-8	2-Chlorotoluene	ND	10		µg/L	10	3/10/2014 11:20:32 PM
106-43-4	4-Chlorotoluene	ND	10		µg/L	10	3/10/2014 11:20:32 PM
156-59-2	cis-1,2-DCE	ND	10		µg/L	10	3/10/2014 11:20:32 PM
10061-01-5	cis-1,3-Dichloropropene	ND	10		µg/L	10	3/10/2014 11:20:32 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-8
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 12:15:00 PM
Lab ID: 1403198-005
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **KJH**
96-12-8	1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	3/10/2014 11:20:32 PM
124-48-1	Dibromochloromethane	ND	10		µg/L	10	3/10/2014 11:20:32 PM
74-95-3	Dibromomethane	ND	10		µg/L	10	3/10/2014 11:20:32 PM
95-50-1	1,2-Dichlorobenzene	ND	10		µg/L	10	3/10/2014 11:20:32 PM
541-73-1	1,3-Dichlorobenzene	ND	10		µg/L	10	3/10/2014 11:20:32 PM
106-46-7	1,4-Dichlorobenzene	ND	10		µg/L	10	3/10/2014 11:20:32 PM
75-71-8	Dichlorodifluoromethane	ND	10		µg/L	10	3/10/2014 11:20:32 PM
75-34-3	1,1-Dichloroethane	ND	10		µg/L	10	3/10/2014 11:20:32 PM
75-35-4	1,1-Dichloroethene	ND	10		µg/L	10	3/10/2014 11:20:32 PM
78-87-5	1,2-Dichloropropane	ND	10		µg/L	10	3/10/2014 11:20:32 PM
142-28-9	1,3-Dichloropropane	ND	10		µg/L	10	3/10/2014 11:20:32 PM
594-20-7	2,2-Dichloropropane	ND	20		µg/L	10	3/10/2014 11:20:32 PM
563-58-6	1,1-Dichloropropene	ND	10		µg/L	10	3/10/2014 11:20:32 PM
87-68-3	Hexachlorobutadiene	ND	10		µg/L	10	3/10/2014 11:20:32 PM
591-78-6	2-Hexanone	ND	100		µg/L	10	3/10/2014 11:20:32 PM
98-82-8	Isopropylbenzene	ND	10		µg/L	10	3/10/2014 11:20:32 PM
99-87-6	4-Isopropyltoluene	ND	10		µg/L	10	3/10/2014 11:20:32 PM
108-10-1	4-Methyl-2-pentanone	ND	100		µg/L	10	3/10/2014 11:20:32 PM
75-09-2	Methylene Chloride	ND	30		µg/L	10	3/10/2014 11:20:32 PM
104-51-8	n-Butylbenzene	ND	30		µg/L	10	3/10/2014 11:20:32 PM
103-65-1	n-Propylbenzene	ND	10		µg/L	10	3/10/2014 11:20:32 PM
135-98-8	sec-Butylbenzene	ND	10		µg/L	10	3/10/2014 11:20:32 PM
100-42-5	Styrene	ND	10		µg/L	10	3/10/2014 11:20:32 PM
98-06-6	tert-Butylbenzene	ND	10		µg/L	10	3/10/2014 11:20:32 PM
630-20-6	1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	3/10/2014 11:20:32 PM
79-34-5	1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	3/10/2014 11:20:32 PM
127-18-4	Tetrachloroethene (PCE)	ND	10		µg/L	10	3/10/2014 11:20:32 PM
156-60-5	trans-1,2-DCE	ND	10		µg/L	10	3/10/2014 11:20:32 PM
10061-02-6	trans-1,3-Dichloropropene	ND	10		µg/L	10	3/10/2014 11:20:32 PM
87-61-6	1,2,3-Trichlorobenzene	ND	10		µg/L	10	3/10/2014 11:20:32 PM
120-82-1	1,2,4-Trichlorobenzene	ND	10		µg/L	10	3/10/2014 11:20:32 PM
71-55-6	1,1,1-Trichloroethane	ND	10		µg/L	10	3/10/2014 11:20:32 PM
79-00-5	1,1,2-Trichloroethane	ND	10		µg/L	10	3/10/2014 11:20:32 PM
79-01-6	Trichloroethene (TCE)	ND	10		µg/L	10	3/10/2014 11:20:32 PM
75-69-4	Trichlorofluoromethane	ND	10		µg/L	10	3/10/2014 11:20:32 PM
96-18-4	1,2,3-Trichloropropane	ND	20		µg/L	10	3/10/2014 11:20:32 PM
75-01-4	Vinyl chloride	ND	10		µg/L	10	3/10/2014 11:20:32 PM
1330-20-7	Xylenes, Total	ND	15		µg/L	10	3/10/2014 11:20:32 PM
17060-07-0	Surr: 1,2-Dichloroethane-d4	93.7	70-130		%REC	10	3/10/2014 11:20:32 PM
460-00-4	Surr: 4-Bromofluorobenzene	92.4	70-130		%REC	10	3/10/2014 11:20:32 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-8
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 12:15:00 PM
Lab ID: 1403198-005
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **KJH**
1868-53-7	Surr: Dibromofluoromethane	98.8	70-130		%REC	10	3/10/2014 11:20:32 PM
2037-26-5	Surr: Toluene-d8	91.0	70-130		%REC	10	3/10/2014 11:20:32 PM
SM2510B: SPECIFIC CONDUCTANCE							Analyst: **JML**
eC	Conductivity	130000	0.25		µmhos/c	25	3/6/2014 6:42:52 PM
SM4500-H+B: PH							Analyst: **JML**
pH	pH	7.82	1.68	H	pH units	1	3/6/2014 12:50:08 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-9
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 12:55:00 PM
Lab ID: 1403198-006
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: **JRR**
16984-48-8	Fluoride	18	10	*	mg/L	100	3/7/2014 12:35:35 AM
16887-00-6	Chloride	56000	2500		mg/L	5000	3/12/2014 2:32:38 AM
7727-37-9	Nitrogen, Nitrite (As N)	ND	10		mg/L	100	3/7/2014 12:35:35 AM
24959-67-9	Bromide	20	10		mg/L	100	3/7/2014 12:35:35 AM
7727-37-9	Nitrogen, Nitrate (As N)	8.1	1.0		mg/L	10	3/7/2014 12:23:11 AM
7723-14-0	Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	3/7/2014 12:23:11 AM
14808-79-8	Sulfate	7800	100		mg/L	200	3/12/2014 2:20:14 AM
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **JLF**
7440-39-3	Barium	0.19	0.010		mg/L	5	3/6/2014 2:54:14 PM
7440-43-9	Cadmium	ND	0.010		mg/L	5	3/6/2014 2:54:14 PM
7440-70-2	Calcium	1400	50		mg/L	50	3/6/2014 2:56:17 PM
7440-47-3	Chromium	ND	0.030		mg/L	5	3/6/2014 2:54:14 PM
7440-50-8	Copper	ND	0.030		mg/L	5	3/6/2014 2:54:14 PM
7439-89-6	Iron	0.14	0.10		mg/L	5	3/6/2014 2:54:14 PM
7439-95-4	Magnesium	1100	50		mg/L	50	3/6/2014 2:56:17 PM
7439-96-5	Manganese	2.8	0.010	*	mg/L	5	3/6/2014 2:54:14 PM
7440-09-7	Potassium	1300	50		mg/L	50	3/7/2014 3:07:15 PM
7440-22-4	Silver	ND	0.025		mg/L	5	3/7/2014 3:05:30 PM
7440-23-5	Sodium	34000	500		mg/L	500	3/7/2014 3:09:13 PM
7440-66-6	Zinc	ND	0.050		mg/L	5	3/6/2014 2:54:14 PM
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**
7440-39-3	Barium	0.18	0.010		mg/L	5	3/12/2014 1:38:31 PM
7440-43-9	Cadmium	ND	0.010		mg/L	5	3/12/2014 1:38:31 PM
7440-47-3	Chromium	ND	0.030		mg/L	5	3/12/2014 1:38:31 PM
7440-50-8	Copper	ND	0.030		mg/L	5	3/12/2014 1:38:31 PM
7439-89-6	Iron	0.26	0.10		mg/L	5	3/12/2014 1:38:31 PM
7439-96-5	Manganese	2.7	0.010	*	mg/L	5	3/12/2014 1:38:31 PM
7440-22-4	Silver	ND	0.025		mg/L	5	3/18/2014 3:32:10 PM
7440-66-6	Zinc	ND	0.050		mg/L	5	3/12/2014 3:38:46 PM
EPA 200.8: DISSOLVED METALS							Analyst: **DBD**
7440-38-2	Arsenic	0.10	0.10	*	mg/L	100	3/13/2014 3:08:38 PM
7439-92-1	Lead	ND	0.10		mg/L	100	3/13/2014 3:08:38 PM
7782-49-2	Selenium	0.13	0.10	*	mg/L	100	3/13/2014 3:08:38 PM
7440-61-1	Uranium	ND	0.10		mg/L	100	3/13/2014 3:08:38 PM
200.8 ICPMS METALS:TOTAL							Analyst: **DBD**
7440-38-2	Arsenic	0.12	0.10	*	mg/L	100	3/14/2014 3:51:08 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-9
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 12:55:00 PM
Lab ID: 1403198-006
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
200.8 ICPMS METALS:TOTAL							Analyst: **DBD**
7439-92-1	Lead	ND	0.10		mg/L	100	3/14/2014 3:51:08 PM
7782-49-2	Selenium	0.15	0.10	*	mg/L	100	3/14/2014 3:51:08 PM
7440-61-1	Uranium	ND	0.10		mg/L	100	3/14/2014 3:51:08 PM
EPA METHOD 245.1: MERCURY							Analyst: **JML**
7439-97-6	Mercury	ND	0.00020		mg/L	1	3/6/2014 5:38:29 PM
SM5210B: BOD							Analyst: **SMS**
BOD	Biochemical Oxygen Demand	15	2.0		mg/L	1	3/11/2014 2:36:00 PM
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **ECH**
1101	E. Coli	<1	1.000		CFU/100	1	3/6/2014 6:40:00 PM
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**
83-32-9	Acenaphthene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
208-96-8	Acenaphthylene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
62-53-3	Aniline	ND	10		µg/L	1	3/12/2014 4:52:36 PM
120-12-7	Anthracene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
103-33-3	Azobenzene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
56-55-3	Benz(a)anthracene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
50-32-8	Benzo(a)pyrene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
205-99-2	Benzo(b)fluoranthene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
191-24-2	Benzo(g,h,i)perylene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
207-08-9	Benzo(k)fluoranthene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
65-85-0	Benzoic acid	ND	20		µg/L	1	3/12/2014 4:52:36 PM
100-51-6	Benzyl alcohol	ND	10		µg/L	1	3/12/2014 4:52:36 PM
111-91-1	Bis(2-chloroethoxy)methane	ND	10		µg/L	1	3/12/2014 4:52:36 PM
111-44-4	Bis(2-chloroethyl)ether	ND	10		µg/L	1	3/12/2014 4:52:36 PM
108-60-1	Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	3/12/2014 4:52:36 PM
117-81-7	Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	3/12/2014 4:52:36 PM
101-55-3	4-Bromophenyl phenyl ether	ND	10		µg/L	1	3/12/2014 4:52:36 PM
85-68-7	Butyl benzyl phthalate	ND	10		µg/L	1	3/12/2014 4:52:36 PM
86-74-8	Carbazole	ND	10		µg/L	1	3/12/2014 4:52:36 PM
59-50-7	4-Chloro-3-methylphenol	ND	10		µg/L	1	3/12/2014 4:52:36 PM
106-47-8	4-Chloroaniline	ND	10		µg/L	1	3/12/2014 4:52:36 PM
91-58-7	2-Chloronaphthalene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
95-57-8	2-Chlorophenol	ND	10		µg/L	1	3/12/2014 4:52:36 PM
7005-72-3	4-Chlorophenyl phenyl ether	ND	10		µg/L	1	3/12/2014 4:52:36 PM
218-01-9	Chrysene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
84-74-2	Di-n-butyl phthalate	ND	10		µg/L	1	3/12/2014 4:52:36 PM

Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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Hall Environmental Analysis Laboratory, Inc.

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Lab ID: 1403198-006
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

EPA METHOD 8270C: SEMIVOLATILES

Analyst: **DAM**

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
117-84-0	Di-n-octyl phthalate	ND	10		µg/L	1	3/12/2014 4:52:36 PM
53-70-3	Dibenz(a,h)anthracene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
132-64-9	Dibenzofuran	ND	10		µg/L	1	3/12/2014 4:52:36 PM
95-50-1	1,2-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
541-73-1	1,3-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
106-46-7	1,4-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
91-94-1	3,3´-Dichlorobenzidine	ND	10		µg/L	1	3/12/2014 4:52:36 PM
84-66-2	Diethyl phthalate	ND	10		µg/L	1	3/12/2014 4:52:36 PM
131-11-3	Dimethyl phthalate	ND	10		µg/L	1	3/12/2014 4:52:36 PM
120-83-2	2,4-Dichlorophenol	ND	20		µg/L	1	3/12/2014 4:52:36 PM
105-67-9	2,4-Dimethylphenol	ND	10		µg/L	1	3/12/2014 4:52:36 PM
534-52-1	4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	3/12/2014 4:52:36 PM
51-28-5	2,4-Dinitrophenol	ND	20		µg/L	1	3/12/2014 4:52:36 PM
121-14-2	2,4-Dinitrotoluene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
606-20-2	2,6-Dinitrotoluene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
206-44-0	Fluoranthene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
86-73-7	Fluorene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
118-74-1	Hexachlorobenzene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
87-68-3	Hexachlorobutadiene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
77-47-4	Hexachlorocyclopentadiene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
67-72-1	Hexachloroethane	ND	10		µg/L	1	3/12/2014 4:52:36 PM
193-39-5	Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
78-59-1	Isophorone	ND	10		µg/L	1	3/12/2014 4:52:36 PM
90-12-0	1-Methylnaphthalene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
91-57-6	2-Methylnaphthalene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
95-48-7	2-Methylphenol	ND	10		µg/L	1	3/12/2014 4:52:36 PM
782-06-0	3+4-Methylphenol	ND	10		µg/L	1	3/12/2014 4:52:36 PM
621-64-7	N-Nitrosodi-n-propylamine	ND	10		µg/L	1	3/12/2014 4:52:36 PM
62-75-9	N-Nitrosodimethylamine	ND	10		µg/L	1	3/12/2014 4:52:36 PM
86-30-6	N-Nitrosodiphenylamine	ND	10		µg/L	1	3/12/2014 4:52:36 PM
91-20-3	Naphthalene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
88-74-4	2-Nitroaniline	ND	10		µg/L	1	3/12/2014 4:52:36 PM
99-09-2	3-Nitroaniline	ND	10		µg/L	1	3/12/2014 4:52:36 PM
100-01-6	4-Nitroaniline	ND	10		µg/L	1	3/12/2014 4:52:36 PM
98-95-3	Nitrobenzene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
88-75-5	2-Nitrophenol	ND	10		µg/L	1	3/12/2014 4:52:36 PM
100-02-7	4-Nitrophenol	ND	10		µg/L	1	3/12/2014 4:52:36 PM
87-86-5	Pentachlorophenol	ND	20		µg/L	1	3/12/2014 4:52:36 PM
85-01-8	Phenanthrene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
108-95-2	Phenol	ND	10		µg/L	1	3/12/2014 4:52:36 PM

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-9
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 12:55:00 PM
Lab ID: 1403198-006
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**
129-00-0	Pyrene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
110-86-1	Pyridine	ND	10		µg/L	1	3/12/2014 4:52:36 PM
120-82-1	1,2,4-Trichlorobenzene	ND	10		µg/L	1	3/12/2014 4:52:36 PM
95-95-4	2,4,5-Trichlorophenol	ND	10		µg/L	1	3/12/2014 4:52:36 PM
88-06-2	2,4,6-Trichlorophenol	ND	10		µg/L	1	3/12/2014 4:52:36 PM
367-12-4	Surr: 2-Fluorophenol	47.9	22.7-98		%REC	1	3/12/2014 4:52:36 PM
4165-62-2	Surr: Phenol-d5	46.4	23.4-74.9		%REC	1	3/12/2014 4:52:36 PM
118-79-6	Surr: 2,4,6-Tribromophenol	67.4	23.3-111		%REC	1	3/12/2014 4:52:36 PM
4165-60-0	Surr: Nitrobenzene-d5	69.4	36.8-111		%REC	1	3/12/2014 4:52:36 PM
321-60-8	Surr: 2-Fluorobiphenyl	63.6	38.3-110		%REC	1	3/12/2014 4:52:36 PM
1718-51-0	Surr: 4-Terphenyl-d14	45.4	52.1-116	S	%REC	1	3/12/2014 4:52:36 PM
EPA METHOD 8260B: VOLATILES							Analyst: **KJH**
71-43-2	Benzene	ND	10		µg/L	10	3/10/2014 11:48:25 PM
108-88-3	Toluene	ND	10		µg/L	10	3/10/2014 11:48:25 PM
100-41-4	Ethylbenzene	ND	10		µg/L	10	3/10/2014 11:48:25 PM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	3/10/2014 11:48:25 PM
95-63-6	1,2,4-Trimethylbenzene	ND	10		µg/L	10	3/10/2014 11:48:25 PM
108-67-8	1,3,5-Trimethylbenzene	ND	10		µg/L	10	3/10/2014 11:48:25 PM
107-06-2	1,2-Dichloroethane (EDC)	ND	10		µg/L	10	3/10/2014 11:48:25 PM
106-93-4	1,2-Dibromoethane (EDB)	ND	10		µg/L	10	3/10/2014 11:48:25 PM
91-20-3	Naphthalene	ND	20		µg/L	10	3/10/2014 11:48:25 PM
90-12-0	1-Methylnaphthalene	ND	40		µg/L	10	3/10/2014 11:48:25 PM
91-57-6	2-Methylnaphthalene	ND	40		µg/L	10	3/10/2014 11:48:25 PM
67-64-1	Acetone	ND	100		µg/L	10	3/10/2014 11:48:25 PM
108-86-1	Bromobenzene	ND	10		µg/L	10	3/10/2014 11:48:25 PM
75-27-4	Bromodichloromethane	ND	10		µg/L	10	3/10/2014 11:48:25 PM
75-25-2	Bromoform	ND	10		µg/L	10	3/10/2014 11:48:25 PM
74-83-9	Bromomethane	ND	30		µg/L	10	3/10/2014 11:48:25 PM
78-93-3	2-Butanone	ND	100		µg/L	10	3/10/2014 11:48:25 PM
75-15-0	Carbon disulfide	ND	100		µg/L	10	3/10/2014 11:48:25 PM
56-23-5	Carbon Tetrachloride	ND	10		µg/L	10	3/10/2014 11:48:25 PM
108-90-7	Chlorobenzene	ND	10		µg/L	10	3/10/2014 11:48:25 PM
75-00-3	Chloroethane	ND	20		µg/L	10	3/10/2014 11:48:25 PM
67-66-3	Chloroform	ND	10		µg/L	10	3/10/2014 11:48:25 PM
74-87-3	Chloromethane	ND	30		µg/L	10	3/10/2014 11:48:25 PM
95-49-8	2-Chlorotoluene	ND	10		µg/L	10	3/10/2014 11:48:25 PM
106-43-4	4-Chlorotoluene	ND	10		µg/L	10	3/10/2014 11:48:25 PM
156-59-2	cis-1,2-DCE	ND	10		µg/L	10	3/10/2014 11:48:25 PM
10061-01-5	cis-1,3-Dichloropropene	ND	10		µg/L	10	3/10/2014 11:48:25 PM

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-9
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 12:55:00 PM
Lab ID: 1403198-006
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **KJH**
96-12-8	1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	3/10/2014 11:48:25 PM
124-48-1	Dibromochloromethane	ND	10		µg/L	10	3/10/2014 11:48:25 PM
74-95-3	Dibromomethane	ND	10		µg/L	10	3/10/2014 11:48:25 PM
95-50-1	1,2-Dichlorobenzene	ND	10		µg/L	10	3/10/2014 11:48:25 PM
541-73-1	1,3-Dichlorobenzene	ND	10		µg/L	10	3/10/2014 11:48:25 PM
106-46-7	1,4-Dichlorobenzene	ND	10		µg/L	10	3/10/2014 11:48:25 PM
75-71-8	Dichlorodifluoromethane	ND	10		µg/L	10	3/10/2014 11:48:25 PM
75-34-3	1,1-Dichloroethane	ND	10		µg/L	10	3/10/2014 11:48:25 PM
75-35-4	1,1-Dichloroethene	ND	10		µg/L	10	3/10/2014 11:48:25 PM
78-87-5	1,2-Dichloropropane	ND	10		µg/L	10	3/10/2014 11:48:25 PM
142-28-9	1,3-Dichloropropane	ND	10		µg/L	10	3/10/2014 11:48:25 PM
594-20-7	2,2-Dichloropropane	ND	20		µg/L	10	3/10/2014 11:48:25 PM
563-58-6	1,1-Dichloropropene	ND	10		µg/L	10	3/10/2014 11:48:25 PM
87-68-3	Hexachlorobutadiene	ND	10		µg/L	10	3/10/2014 11:48:25 PM
591-78-6	2-Hexanone	ND	100		µg/L	10	3/10/2014 11:48:25 PM
98-82-8	Isopropylbenzene	ND	10		µg/L	10	3/10/2014 11:48:25 PM
99-87-6	4-Isopropyltoluene	ND	10		µg/L	10	3/10/2014 11:48:25 PM
108-10-1	4-Methyl-2-pentanone	ND	100		µg/L	10	3/10/2014 11:48:25 PM
75-09-2	Methylene Chloride	ND	30		µg/L	10	3/10/2014 11:48:25 PM
104-51-8	n-Butylbenzene	ND	30		µg/L	10	3/10/2014 11:48:25 PM
103-65-1	n-Propylbenzene	ND	10		µg/L	10	3/10/2014 11:48:25 PM
135-98-8	sec-Butylbenzene	ND	10		µg/L	10	3/10/2014 11:48:25 PM
100-42-5	Styrene	ND	10		µg/L	10	3/10/2014 11:48:25 PM
98-06-6	tert-Butylbenzene	ND	10		µg/L	10	3/10/2014 11:48:25 PM
630-20-6	1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	3/10/2014 11:48:25 PM
79-34-5	1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	3/10/2014 11:48:25 PM
127-18-4	Tetrachloroethene (PCE)	ND	10		µg/L	10	3/10/2014 11:48:25 PM
156-60-5	trans-1,2-DCE	ND	10		µg/L	10	3/10/2014 11:48:25 PM
10061-02-6	trans-1,3-Dichloropropene	ND	10		µg/L	10	3/10/2014 11:48:25 PM
87-61-6	1,2,3-Trichlorobenzene	ND	10		µg/L	10	3/10/2014 11:48:25 PM
120-82-1	1,2,4-Trichlorobenzene	ND	10		µg/L	10	3/10/2014 11:48:25 PM
71-55-6	1,1,1-Trichloroethane	ND	10		µg/L	10	3/10/2014 11:48:25 PM
79-00-5	1,1,2-Trichloroethane	ND	10		µg/L	10	3/10/2014 11:48:25 PM
79-01-6	Trichloroethene (TCE)	ND	10		µg/L	10	3/10/2014 11:48:25 PM
75-69-4	Trichlorofluoromethane	ND	10		µg/L	10	3/10/2014 11:48:25 PM
96-18-4	1,2,3-Trichloropropane	ND	20		µg/L	10	3/10/2014 11:48:25 PM
75-01-4	Vinyl chloride	ND	10		µg/L	10	3/10/2014 11:48:25 PM
1330-20-7	Xylenes, Total	ND	15		µg/L	10	3/10/2014 11:48:25 PM
17060-07-0	Surr: 1,2-Dichloroethane-d4	90.1	70-130		%REC	10	3/10/2014 11:48:25 PM
460-00-4	Surr: 4-Bromofluorobenzene	93.6	70-130		%REC	10	3/10/2014 11:48:25 PM

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CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-9
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Collection Date: 3/5/2014 12:55:00 PM
Lab ID: 1403198-006
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **KJH**
1868-53-7	Surr: Dibromofluoromethane	98.2	70-130		%REC	10	3/10/2014 11:48:25 PM
2037-26-5	Surr: Toluene-d8	91.1	70-130		%REC	10	3/10/2014 11:48:25 PM
SM2510B: SPECIFIC CONDUCTANCE							Analyst: **JML**
eC	Conductivity	160000	0.25		µmhos/c	25	3/6/2014 6:47:10 PM
SM4500-H+B: PH							Analyst: **JML**
pH	pH	7.70	1.68	H	pH units	1	3/6/2014 12:54:08 PM

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-11
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 11:50:00 AM
Lab ID: 1403198-007
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: **JRR**
16984-48-8	Fluoride	22	1.0	*	mg/L	10	3/7/2014 12:48:00 AM
16887-00-6	Chloride	10000	500		mg/L	1000	3/12/2014 2:45:03 AM
7727-37-9	Nitrogen, Nitrite (As N)	ND	10		mg/L	100	3/7/2014 1:00:25 AM
24959-67-9	Bromide	6.3	1.0		mg/L	10	3/7/2014 12:48:00 AM
7727-37-9	Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	3/7/2014 12:48:00 AM
7723-14-0	Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	3/7/2014 12:48:00 AM
14808-79-8	Sulfate	4300	50		mg/L	100	3/7/2014 1:00:25 AM
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **JLF**
7440-39-3	Barium	0.074	0.0020		mg/L	1	3/6/2014 2:58:11 PM
7440-43-9	Cadmium	ND	0.0020		mg/L	1	3/6/2014 2:58:11 PM
7440-70-2	Calcium	330	5.0		mg/L	5	3/6/2014 3:00:18 PM
7440-47-3	Chromium	0.011	0.0060		mg/L	1	3/6/2014 2:58:11 PM
7440-50-8	Copper	ND	0.0060		mg/L	1	3/6/2014 2:58:11 PM
7439-89-6	Iron	0.48	0.020	*	mg/L	1	3/6/2014 2:58:11 PM
7439-95-4	Magnesium	230	5.0		mg/L	5	3/6/2014 3:00:18 PM
7439-96-5	Manganese	0.99	0.010	*	mg/L	5	3/6/2014 3:00:18 PM
7440-09-7	Potassium	430	50		mg/L	50	3/7/2014 3:12:43 PM
7440-22-4	Silver	ND	0.025		mg/L	5	3/11/2014 3:12:15 PM
7440-23-5	Sodium	7900	500		mg/L	500	3/7/2014 3:14:34 PM
7440-66-6	Zinc	0.013	0.010		mg/L	1	3/6/2014 2:58:11 PM
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**
7440-39-3	Barium	0.081	0.0020		mg/L	1	3/12/2014 1:59:15 PM
7440-43-9	Cadmium	ND	0.0020		mg/L	1	3/12/2014 1:59:15 PM
7440-47-3	Chromium	0.013	0.0060		mg/L	1	3/12/2014 1:59:15 PM
7440-50-8	Copper	ND	0.0060		mg/L	1	3/12/2014 1:59:15 PM
7439-89-6	Iron	0.79	0.020	*	mg/L	1	3/12/2014 1:59:15 PM
7439-96-5	Manganese	0.99	0.0020	*	mg/L	1	3/12/2014 1:59:15 PM
7440-22-4	Silver	ND	0.0050		mg/L	1	3/18/2014 3:38:19 PM
7440-66-6	Zinc	0.019	0.010		mg/L	1	3/12/2014 3:47:08 PM
EPA 200.8: DISSOLVED METALS							Analyst: **DBD**
7440-38-2	Arsenic	0.040	0.010	*	mg/L	10	3/13/2014 3:11:23 PM
7439-92-1	Lead	ND	0.010		mg/L	10	3/13/2014 3:11:23 PM
7782-49-2	Selenium	0.039	0.010		mg/L	10	3/13/2014 3:11:23 PM
7440-61-1	Uranium	ND	0.010		mg/L	10	3/13/2014 3:11:23 PM
200.8 ICPMS METALS:TOTAL							Analyst: **DBD**
7440-38-2	Arsenic	0.042	0.010	*	mg/L	10	3/14/2014 3:54:35 PM

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Lab ID: 1403198-007
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
200.8 ICPMS METALS:TOTAL							Analyst: **DBD**
7439-92-1	Lead	ND	0.010		mg/L	10	3/14/2014 3:54:35 PM
7782-49-2	Selenium	0.041	0.010		mg/L	10	3/14/2014 3:54:35 PM
7440-61-1	Uranium	ND	0.010		mg/L	10	3/14/2014 3:54:35 PM
EPA METHOD 245.1: MERCURY							Analyst: **JML**
7439-97-6	Mercury	ND	0.00020		mg/L	1	3/6/2014 5:47:53 PM
SM5210B: BOD							Analyst: **SMS**
BOD	Biochemical Oxygen Demand	48	2.0		mg/L	1	3/11/2014 2:36:00 PM
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **ECH**
1101	E. Coli	<10	10.00		CFU/100	10	3/6/2014 6:40:00 PM
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**
83-32-9	Acenaphthene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
208-96-8	Acenaphthylene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
62-53-3	Aniline	ND	50		µg/L	1	3/12/2014 6:48:43 PM
120-12-7	Anthracene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
103-33-3	Azobenzene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
56-55-3	Benz(a)anthracene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
50-32-8	Benzo(a)pyrene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
205-99-2	Benzo(b)fluoranthene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
191-24-2	Benzo(g,h,i)perylene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
207-08-9	Benzo(k)fluoranthene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
65-85-0	Benzoic acid	ND	100		µg/L	1	3/12/2014 6:48:43 PM
100-51-6	Benzyl alcohol	ND	50		µg/L	1	3/12/2014 6:48:43 PM
111-91-1	Bis(2-chloroethoxy)methane	ND	50		µg/L	1	3/12/2014 6:48:43 PM
111-44-4	Bis(2-chloroethyl)ether	ND	50		µg/L	1	3/12/2014 6:48:43 PM
108-60-1	Bis(2-chloroisopropyl)ether	ND	50		µg/L	1	3/12/2014 6:48:43 PM
117-81-7	Bis(2-ethylhexyl)phthalate	ND	50		µg/L	1	3/12/2014 6:48:43 PM
101-55-3	4-Bromophenyl phenyl ether	ND	50		µg/L	1	3/12/2014 6:48:43 PM
85-68-7	Butyl benzyl phthalate	ND	50		µg/L	1	3/12/2014 6:48:43 PM
86-74-8	Carbazole	ND	50		µg/L	1	3/12/2014 6:48:43 PM
59-50-7	4-Chloro-3-methylphenol	ND	50		µg/L	1	3/12/2014 6:48:43 PM
106-47-8	4-Chloroaniline	ND	50		µg/L	1	3/12/2014 6:48:43 PM
91-58-7	2-Chloronaphthalene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
95-57-8	2-Chlorophenol	ND	50		µg/L	1	3/12/2014 6:48:43 PM
7005-72-3	4-Chlorophenyl phenyl ether	ND	50		µg/L	1	3/12/2014 6:48:43 PM
218-01-9	Chrysene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
84-74-2	Di-n-butyl phthalate	ND	50		µg/L	1	3/12/2014 6:48:43 PM

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Received Date: 3/5/2014 3:40:00 PM

EPA METHOD 8270C: SEMIVOLATILES

Analyst: **DAM**

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
117-84-0	Di-n-octyl phthalate	ND	50		µg/L	1	3/12/2014 6:48:43 PM
53-70-3	Dibenz(a,h)anthracene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
132-64-9	Dibenzofuran	ND	50		µg/L	1	3/12/2014 6:48:43 PM
95-50-1	1,2-Dichlorobenzene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
541-73-1	1,3-Dichlorobenzene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
106-46-7	1,4-Dichlorobenzene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
91-94-1	3,3´-Dichlorobenzidine	ND	50		µg/L	1	3/12/2014 6:48:43 PM
84-66-2	Diethyl phthalate	ND	50		µg/L	1	3/12/2014 6:48:43 PM
131-11-3	Dimethyl phthalate	ND	50		µg/L	1	3/12/2014 6:48:43 PM
120-83-2	2,4-Dichlorophenol	ND	100		µg/L	1	3/12/2014 6:48:43 PM
105-67-9	2,4-Dimethylphenol	ND	50		µg/L	1	3/12/2014 6:48:43 PM
534-52-1	4,6-Dinitro-2-methylphenol	ND	100		µg/L	1	3/12/2014 6:48:43 PM
51-28-5	2,4-Dinitrophenol	ND	100		µg/L	1	3/12/2014 6:48:43 PM
121-14-2	2,4-Dinitrotoluene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
606-20-2	2,6-Dinitrotoluene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
206-44-0	Fluoranthene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
86-73-7	Fluorene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
118-74-1	Hexachlorobenzene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
87-68-3	Hexachlorobutadiene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
77-47-4	Hexachlorocyclopentadiene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
67-72-1	Hexachloroethane	ND	50		µg/L	1	3/12/2014 6:48:43 PM
193-39-5	Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
78-59-1	Isophorone	ND	50		µg/L	1	3/12/2014 6:48:43 PM
90-12-0	1-Methylnaphthalene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
91-57-6	2-Methylnaphthalene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
95-48-7	2-Methylphenol	ND	50		µg/L	1	3/12/2014 6:48:43 PM
782-06-0	3+4-Methylphenol	ND	50		µg/L	1	3/12/2014 6:48:43 PM
621-64-7	N-Nitrosodi-n-propylamine	ND	50		µg/L	1	3/12/2014 6:48:43 PM
62-75-9	N-Nitrosodimethylamine	ND	50		µg/L	1	3/12/2014 6:48:43 PM
86-30-6	N-Nitrosodiphenylamine	ND	50		µg/L	1	3/12/2014 6:48:43 PM
91-20-3	Naphthalene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
88-74-4	2-Nitroaniline	ND	50		µg/L	1	3/12/2014 6:48:43 PM
99-09-2	3-Nitroaniline	ND	50		µg/L	1	3/12/2014 6:48:43 PM
100-01-6	4-Nitroaniline	ND	50		µg/L	1	3/12/2014 6:48:43 PM
98-95-3	Nitrobenzene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
88-75-5	2-Nitrophenol	ND	50		µg/L	1	3/12/2014 6:48:43 PM
100-02-7	4-Nitrophenol	ND	50		µg/L	1	3/12/2014 6:48:43 PM
87-86-5	Pentachlorophenol	ND	100		µg/L	1	3/12/2014 6:48:43 PM
85-01-8	Phenanthrene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
108-95-2	Phenol	ND	50		µg/L	1	3/12/2014 6:48:43 PM

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CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**
129-00-0	Pyrene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
110-86-1	Pyridine	ND	50		µg/L	1	3/12/2014 6:48:43 PM
120-82-1	1,2,4-Trichlorobenzene	ND	50		µg/L	1	3/12/2014 6:48:43 PM
95-95-4	2,4,5-Trichlorophenol	ND	50		µg/L	1	3/12/2014 6:48:43 PM
88-06-2	2,4,6-Trichlorophenol	ND	50		µg/L	1	3/12/2014 6:48:43 PM
367-12-4	Surr: 2-Fluorophenol	56.1	22.7-98		%REC	1	3/12/2014 6:48:43 PM
4165-62-2	Surr: Phenol-d5	41.9	23.4-74.9		%REC	1	3/12/2014 6:48:43 PM
118-79-6	Surr: 2,4,6-Tribromophenol	85.2	23.3-111		%REC	1	3/12/2014 6:48:43 PM
4165-60-0	Surr: Nitrobenzene-d5	89.1	36.8-111		%REC	1	3/12/2014 6:48:43 PM
321-60-8	Surr: 2-Fluorobiphenyl	84.2	38.3-110		%REC	1	3/12/2014 6:48:43 PM
1718-51-0	Surr: 4-Terphenyl-d14	79.2	52.1-116		%REC	1	3/12/2014 6:48:43 PM
EPA METHOD 8260B: VOLATILES							Analyst: **KJH**
71-43-2	Benzene	ND	10		µg/L	10	3/11/2014 2:07:57 AM
108-88-3	Toluene	ND	10		µg/L	10	3/11/2014 2:07:57 AM
100-41-4	Ethylbenzene	ND	10		µg/L	10	3/11/2014 2:07:57 AM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	3/11/2014 2:07:57 AM
95-63-6	1,2,4-Trimethylbenzene	ND	10		µg/L	10	3/11/2014 2:07:57 AM
108-67-8	1,3,5-Trimethylbenzene	ND	10		µg/L	10	3/11/2014 2:07:57 AM
107-06-2	1,2-Dichloroethane (EDC)	ND	10		µg/L	10	3/11/2014 2:07:57 AM
106-93-4	1,2-Dibromoethane (EDB)	ND	10		µg/L	10	3/11/2014 2:07:57 AM
91-20-3	Naphthalene	ND	20		µg/L	10	3/11/2014 2:07:57 AM
90-12-0	1-Methylnaphthalene	ND	40		µg/L	10	3/11/2014 2:07:57 AM
91-57-6	2-Methylnaphthalene	ND	40		µg/L	10	3/11/2014 2:07:57 AM
67-64-1	Acetone	ND	100		µg/L	10	3/11/2014 2:07:57 AM
108-86-1	Bromobenzene	ND	10		µg/L	10	3/11/2014 2:07:57 AM
75-27-4	Bromodichloromethane	ND	10		µg/L	10	3/11/2014 2:07:57 AM
75-25-2	Bromoform	ND	10		µg/L	10	3/11/2014 2:07:57 AM
74-83-9	Bromomethane	ND	30		µg/L	10	3/11/2014 2:07:57 AM
78-93-3	2-Butanone	ND	100		µg/L	10	3/11/2014 2:07:57 AM
75-15-0	Carbon disulfide	ND	100		µg/L	10	3/11/2014 2:07:57 AM
56-23-5	Carbon Tetrachloride	ND	10		µg/L	10	3/11/2014 2:07:57 AM
108-90-7	Chlorobenzene	ND	10		µg/L	10	3/11/2014 2:07:57 AM
75-00-3	Chloroethane	ND	20		µg/L	10	3/11/2014 2:07:57 AM
67-66-3	Chloroform	ND	10		µg/L	10	3/11/2014 2:07:57 AM
74-87-3	Chloromethane	ND	30		µg/L	10	3/11/2014 2:07:57 AM
95-49-8	2-Chlorotoluene	ND	10		µg/L	10	3/11/2014 2:07:57 AM
106-43-4	4-Chlorotoluene	ND	10		µg/L	10	3/11/2014 2:07:57 AM
156-59-2	cis-1,2-DCE	ND	10		µg/L	10	3/11/2014 2:07:57 AM
10061-01-5	cis-1,3-Dichloropropene	ND	10		µg/L	10	3/11/2014 2:07:57 AM

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EPA METHOD 8260B: VOLATILES Analyst: **KJH**

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
96-12-8	1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	3/11/2014 2:07:57 AM
124-48-1	Dibromochloromethane	ND	10		µg/L	10	3/11/2014 2:07:57 AM
74-95-3	Dibromomethane	ND	10		µg/L	10	3/11/2014 2:07:57 AM
95-50-1	1,2-Dichlorobenzene	ND	10		µg/L	10	3/11/2014 2:07:57 AM
541-73-1	1,3-Dichlorobenzene	ND	10		µg/L	10	3/11/2014 2:07:57 AM
106-46-7	1,4-Dichlorobenzene	ND	10		µg/L	10	3/11/2014 2:07:57 AM
75-71-8	Dichlorodifluoromethane	ND	10		µg/L	10	3/11/2014 2:07:57 AM
75-34-3	1,1-Dichloroethane	ND	10		µg/L	10	3/11/2014 2:07:57 AM
75-35-4	1,1-Dichloroethene	ND	10		µg/L	10	3/11/2014 2:07:57 AM
78-87-5	1,2-Dichloropropane	ND	10		µg/L	10	3/11/2014 2:07:57 AM
142-28-9	1,3-Dichloropropane	ND	10		µg/L	10	3/11/2014 2:07:57 AM
594-20-7	2,2-Dichloropropane	ND	20		µg/L	10	3/11/2014 2:07:57 AM
563-58-6	1,1-Dichloropropene	ND	10		µg/L	10	3/11/2014 2:07:57 AM
87-68-3	Hexachlorobutadiene	ND	10		µg/L	10	3/11/2014 2:07:57 AM
591-78-6	2-Hexanone	ND	100		µg/L	10	3/11/2014 2:07:57 AM
98-82-8	Isopropylbenzene	ND	10		µg/L	10	3/11/2014 2:07:57 AM
99-87-6	4-Isopropyltoluene	ND	10		µg/L	10	3/11/2014 2:07:57 AM
108-10-1	4-Methyl-2-pentanone	ND	100		µg/L	10	3/11/2014 2:07:57 AM
75-09-2	Methylene Chloride	ND	30		µg/L	10	3/11/2014 2:07:57 AM
104-51-8	n-Butylbenzene	ND	30		µg/L	10	3/11/2014 2:07:57 AM
103-65-1	n-Propylbenzene	ND	10		µg/L	10	3/11/2014 2:07:57 AM
135-98-8	sec-Butylbenzene	ND	10		µg/L	10	3/11/2014 2:07:57 AM
100-42-5	Styrene	ND	10		µg/L	10	3/11/2014 2:07:57 AM
98-06-6	tert-Butylbenzene	ND	10		µg/L	10	3/11/2014 2:07:57 AM
630-20-6	1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	3/11/2014 2:07:57 AM
79-34-5	1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	3/11/2014 2:07:57 AM
127-18-4	Tetrachloroethene (PCE)	ND	10		µg/L	10	3/11/2014 2:07:57 AM
156-60-5	trans-1,2-DCE	ND	10		µg/L	10	3/11/2014 2:07:57 AM
10061-02-6	trans-1,3-Dichloropropene	ND	10		µg/L	10	3/11/2014 2:07:57 AM
87-61-6	1,2,3-Trichlorobenzene	ND	10		µg/L	10	3/11/2014 2:07:57 AM
120-82-1	1,2,4-Trichlorobenzene	ND	10		µg/L	10	3/11/2014 2:07:57 AM
71-55-6	1,1,1-Trichloroethane	ND	10		µg/L	10	3/11/2014 2:07:57 AM
79-00-5	1,1,2-Trichloroethane	ND	10		µg/L	10	3/11/2014 2:07:57 AM
79-01-6	Trichloroethene (TCE)	ND	10		µg/L	10	3/11/2014 2:07:57 AM
75-69-4	Trichlorofluoromethane	ND	10		µg/L	10	3/11/2014 2:07:57 AM
96-18-4	1,2,3-Trichloropropane	ND	20		µg/L	10	3/11/2014 2:07:57 AM
75-01-4	Vinyl chloride	ND	10		µg/L	10	3/11/2014 2:07:57 AM
1330-20-7	Xylenes, Total	ND	15		µg/L	10	3/11/2014 2:07:57 AM
17060-07-0	Surr: 1,2-Dichloroethane-d4	90.5	70-130		%REC	10	3/11/2014 2:07:57 AM
460-00-4	Surr: 4-Bromofluorobenzene	92.3	70-130		%REC	10	3/11/2014 2:07:57 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-11
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 11:50:00 AM
Lab ID: 1403198-007
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **KJH**
1868-53-7	Surr: Dibromofluoromethane	94.8	70-130		%REC	10	3/11/2014 2:07:57 AM
2037-26-5	Surr: Toluene-d8	89.8	70-130		%REC	10	3/11/2014 2:07:57 AM
SM2510B: SPECIFIC CONDUCTANCE							Analyst: **JML**
eC	Conductivity	36000	0.050		µmhos/c	5	3/6/2014 2:24:39 PM
SM4500-H+B: PH							Analyst: **JML**
pH	pH	7.76	1.68	H	pH units	1	3/6/2014 12:58:04 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-12A
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 11:25:00 AM
Lab ID: 1403198-008
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: **JRR**
16984-48-8	Fluoride	34	10	*	mg/L	100	3/7/2014 1:50:04 AM
16887-00-6	Chloride	1800	50		mg/L	100	3/7/2014 1:50:04 AM
7727-37-9	Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	3/7/2014 1:37:39 AM
24959-67-9	Bromide	2.3	1.0		mg/L	10	3/7/2014 1:37:39 AM
7727-37-9	Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	3/7/2014 1:37:39 AM
7723-14-0	Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	3/7/2014 1:37:39 AM
14808-79-8	Sulfate	1100	50		mg/L	100	3/7/2014 1:50:04 AM
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **JLF**
7440-39-3	Barium	0.055	0.0020		mg/L	1	3/6/2014 3:04:09 PM
7440-43-9	Cadmium	ND	0.0020		mg/L	1	3/6/2014 3:04:09 PM
7440-70-2	Calcium	67	1.0		mg/L	1	3/6/2014 3:04:09 PM
7440-47-3	Chromium	0.011	0.0060		mg/L	1	3/6/2014 3:04:09 PM
7440-50-8	Copper	ND	0.0060		mg/L	1	3/6/2014 3:04:09 PM
7439-89-6	Iron	1.4	0.10	*	mg/L	5	3/6/2014 3:05:58 PM
7439-95-4	Magnesium	34	1.0		mg/L	1	3/6/2014 3:04:09 PM
7439-96-5	Manganese	1.0	0.0020	*	mg/L	1	3/6/2014 3:04:09 PM
7440-09-7	Potassium	170	50		mg/L	50	3/7/2014 3:18:05 PM
7440-22-4	Silver	ND	0.0050		mg/L	1	3/7/2014 3:16:18 PM
7440-23-5	Sodium	1700	50		mg/L	50	3/7/2014 3:18:05 PM
7440-66-6	Zinc	0.015	0.010		mg/L	1	3/6/2014 3:04:09 PM
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**
7440-39-3	Barium	0.059	0.0020		mg/L	1	3/10/2014 5:59:59 PM
7440-43-9	Cadmium	ND	0.0020		mg/L	1	3/10/2014 5:59:59 PM
7440-47-3	Chromium	0.014	0.0060		mg/L	1	3/12/2014 2:03:14 PM
7440-50-8	Copper	ND	0.0060		mg/L	1	3/10/2014 5:59:59 PM
7439-89-6	Iron	1.9	0.10	*	mg/L	5	3/12/2014 2:05:05 PM
7439-96-5	Manganese	0.95	0.0020	*	mg/L	1	3/10/2014 5:59:59 PM
7440-22-4	Silver	ND	0.0050		mg/L	1	3/18/2014 3:39:19 PM
7440-66-6	Zinc	0.021	0.010		mg/L	1	3/12/2014 3:48:49 PM
EPA 200.8: DISSOLVED METALS							Analyst: **DBD**
7440-38-2	Arsenic	0.016	0.010	*	mg/L	10	3/13/2014 3:14:08 PM
7439-92-1	Lead	ND	0.010		mg/L	10	3/13/2014 3:14:08 PM
7782-49-2	Selenium	0.017	0.010		mg/L	10	3/13/2014 3:14:08 PM
7440-61-1	Uranium	ND	0.010		mg/L	10	3/13/2014 3:14:08 PM
200.8 ICPMS METALS:TOTAL							Analyst: **DBD**
7440-38-2	Arsenic	0.019	0.010	*	mg/L	10	3/14/2014 3:58:02 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-12A
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 11:25:00 AM
Lab ID: 1403198-008
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
200.8 ICPMS METALS:TOTAL							Analyst: **DBD**
7439-92-1	Lead	ND	0.010		mg/L	10	3/14/2014 3:58:02 PM
7782-49-2	Selenium	0.020	0.010		mg/L	10	3/14/2014 3:58:02 PM
7440-61-1	Uranium	ND	0.010		mg/L	10	3/14/2014 3:58:02 PM
EPA METHOD 245.1: MERCURY							Analyst: **JML**
7439-97-6	Mercury	ND	0.00020		mg/L	1	3/6/2014 5:49:39 PM
SM5210B: BOD							Analyst: **SMS**
BOD	Biochemical Oxygen Demand	210	2.0		mg/L	1	3/11/2014 11:16:00 AM
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **ECH**
1101	E. Coli	<10	10.00		CFU/100	10	3/6/2014 6:40:00 PM
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**
83-32-9	Acenaphthene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
208-96-8	Acenaphthylene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
62-53-3	Aniline	ND	50		µg/L	1	3/12/2014 7:17:56 PM
120-12-7	Anthracene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
103-33-3	Azobenzene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
56-55-3	Benz(a)anthracene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
50-32-8	Benzo(a)pyrene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
205-99-2	Benzo(b)fluoranthene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
191-24-2	Benzo(g,h,i)perylene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
207-08-9	Benzo(k)fluoranthene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
65-85-0	Benzoic acid	ND	100		µg/L	1	3/12/2014 7:17:56 PM
100-51-6	Benzyl alcohol	ND	50		µg/L	1	3/12/2014 7:17:56 PM
111-91-1	Bis(2-chloroethoxy)methane	ND	50		µg/L	1	3/12/2014 7:17:56 PM
111-44-4	Bis(2-chloroethyl)ether	ND	50		µg/L	1	3/12/2014 7:17:56 PM
108-60-1	Bis(2-chloroisopropyl)ether	ND	50		µg/L	1	3/12/2014 7:17:56 PM
117-81-7	Bis(2-ethylhexyl)phthalate	ND	50		µg/L	1	3/12/2014 7:17:56 PM
101-55-3	4-Bromophenyl phenyl ether	ND	50		µg/L	1	3/12/2014 7:17:56 PM
85-68-7	Butyl benzyl phthalate	ND	50		µg/L	1	3/12/2014 7:17:56 PM
86-74-8	Carbazole	ND	50		µg/L	1	3/12/2014 7:17:56 PM
59-50-7	4-Chloro-3-methylphenol	ND	50		µg/L	1	3/12/2014 7:17:56 PM
106-47-8	4-Chloroaniline	ND	50		µg/L	1	3/12/2014 7:17:56 PM
91-58-7	2-Chloronaphthalene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
95-57-8	2-Chlorophenol	ND	50		µg/L	1	3/12/2014 7:17:56 PM
7005-72-3	4-Chlorophenyl phenyl ether	ND	50		µg/L	1	3/12/2014 7:17:56 PM
218-01-9	Chrysene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
84-74-2	Di-n-butyl phthalate	ND	50		µg/L	1	3/12/2014 7:17:56 PM

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-12A
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 11:25:00 AM
Lab ID: 1403198-008
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

EPA METHOD 8270C: SEMIVOLATILES

Analyst: **DAM**

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
117-84-0	Di-n-octyl phthalate	ND	50		µg/L	1	3/12/2014 7:17:56 PM
53-70-3	Dibenz(a,h)anthracene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
132-64-9	Dibenzofuran	ND	50		µg/L	1	3/12/2014 7:17:56 PM
95-50-1	1,2-Dichlorobenzene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
541-73-1	1,3-Dichlorobenzene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
106-46-7	1,4-Dichlorobenzene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
91-94-1	3,3´-Dichlorobenzidine	ND	50		µg/L	1	3/12/2014 7:17:56 PM
84-66-2	Diethyl phthalate	ND	50		µg/L	1	3/12/2014 7:17:56 PM
131-11-3	Dimethyl phthalate	ND	50		µg/L	1	3/12/2014 7:17:56 PM
120-83-2	2,4-Dichlorophenol	ND	100		µg/L	1	3/12/2014 7:17:56 PM
105-67-9	2,4-Dimethylphenol	ND	50		µg/L	1	3/12/2014 7:17:56 PM
534-52-1	4,6-Dinitro-2-methylphenol	ND	100		µg/L	1	3/12/2014 7:17:56 PM
51-28-5	2,4-Dinitrophenol	ND	100		µg/L	1	3/12/2014 7:17:56 PM
121-14-2	2,4-Dinitrotoluene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
606-20-2	2,6-Dinitrotoluene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
206-44-0	Fluoranthene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
86-73-7	Fluorene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
118-74-1	Hexachlorobenzene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
87-68-3	Hexachlorobutadiene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
77-47-4	Hexachlorocyclopentadiene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
67-72-1	Hexachloroethane	ND	50		µg/L	1	3/12/2014 7:17:56 PM
193-39-5	Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
78-59-1	Isophorone	ND	50		µg/L	1	3/12/2014 7:17:56 PM
90-12-0	1-Methylnaphthalene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
91-57-6	2-Methylnaphthalene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
95-48-7	2-Methylphenol	ND	50		µg/L	1	3/12/2014 7:17:56 PM
782-06-0	3+4-Methylphenol	ND	50		µg/L	1	3/12/2014 7:17:56 PM
621-64-7	N-Nitrosodi-n-propylamine	ND	50		µg/L	1	3/12/2014 7:17:56 PM
62-75-9	N-Nitrosodimethylamine	ND	50		µg/L	1	3/12/2014 7:17:56 PM
86-30-6	N-Nitrosodiphenylamine	ND	50		µg/L	1	3/12/2014 7:17:56 PM
91-20-3	Naphthalene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
88-74-4	2-Nitroaniline	ND	50		µg/L	1	3/12/2014 7:17:56 PM
99-09-2	3-Nitroaniline	ND	50		µg/L	1	3/12/2014 7:17:56 PM
100-01-6	4-Nitroaniline	ND	50		µg/L	1	3/12/2014 7:17:56 PM
98-95-3	Nitrobenzene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
88-75-5	2-Nitrophenol	ND	50		µg/L	1	3/12/2014 7:17:56 PM
100-02-7	4-Nitrophenol	ND	50		µg/L	1	3/12/2014 7:17:56 PM
87-86-5	Pentachlorophenol	ND	100		µg/L	1	3/12/2014 7:17:56 PM
85-01-8	Phenanthrene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
108-95-2	Phenol	200	50		µg/L	1	3/12/2014 7:17:56 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-12A
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 11:25:00 AM
Lab ID: 1403198-008
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**
129-00-0	Pyrene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
110-86-1	Pyridine	ND	50		µg/L	1	3/12/2014 7:17:56 PM
120-82-1	1,2,4-Trichlorobenzene	ND	50		µg/L	1	3/12/2014 7:17:56 PM
95-95-4	2,4,5-Trichlorophenol	ND	50		µg/L	1	3/12/2014 7:17:56 PM
88-06-2	2,4,6-Trichlorophenol	ND	50		µg/L	1	3/12/2014 7:17:56 PM
367-12-4	Surr: 2-Fluorophenol	35.1	22.7-98		%REC	1	3/12/2014 7:17:56 PM
4165-62-2	Surr: Phenol-d5	28.2	23.4-74.9		%REC	1	3/12/2014 7:17:56 PM
118-79-6	Surr: 2,4,6-Tribromophenol	69.0	23.3-111		%REC	1	3/12/2014 7:17:56 PM
4165-60-0	Surr: Nitrobenzene-d5	56.1	36.8-111		%REC	1	3/12/2014 7:17:56 PM
321-60-8	Surr: 2-Fluorobiphenyl	57.3	38.3-110		%REC	1	3/12/2014 7:17:56 PM
1718-51-0	Surr: 4-Terphenyl-d14	61.0	52.1-116		%REC	1	3/12/2014 7:17:56 PM
EPA METHOD 8260B: VOLATILES							Analyst: **KJH**
71-43-2	Benzene	ND	10		µg/L	10	3/11/2014 2:35:53 AM
108-88-3	Toluene	ND	10		µg/L	10	3/11/2014 2:35:53 AM
100-41-4	Ethylbenzene	ND	10		µg/L	10	3/11/2014 2:35:53 AM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	3/11/2014 2:35:53 AM
95-63-6	1,2,4-Trimethylbenzene	ND	10		µg/L	10	3/11/2014 2:35:53 AM
108-67-8	1,3,5-Trimethylbenzene	ND	10		µg/L	10	3/11/2014 2:35:53 AM
107-06-2	1,2-Dichloroethane (EDC)	ND	10		µg/L	10	3/11/2014 2:35:53 AM
106-93-4	1,2-Dibromoethane (EDB)	ND	10		µg/L	10	3/11/2014 2:35:53 AM
91-20-3	Naphthalene	ND	20		µg/L	10	3/11/2014 2:35:53 AM
90-12-0	1-Methylnaphthalene	ND	40		µg/L	10	3/11/2014 2:35:53 AM
91-57-6	2-Methylnaphthalene	ND	40		µg/L	10	3/11/2014 2:35:53 AM
67-64-1	Acetone	ND	100		µg/L	10	3/11/2014 2:35:53 AM
108-86-1	Bromobenzene	ND	10		µg/L	10	3/11/2014 2:35:53 AM
75-27-4	Bromodichloromethane	ND	10		µg/L	10	3/11/2014 2:35:53 AM
75-25-2	Bromoform	ND	10		µg/L	10	3/11/2014 2:35:53 AM
74-83-9	Bromomethane	ND	30		µg/L	10	3/11/2014 2:35:53 AM
78-93-3	2-Butanone	ND	100		µg/L	10	3/11/2014 2:35:53 AM
75-15-0	Carbon disulfide	ND	100		µg/L	10	3/11/2014 2:35:53 AM
56-23-5	Carbon Tetrachloride	ND	10		µg/L	10	3/11/2014 2:35:53 AM
108-90-7	Chlorobenzene	ND	10		µg/L	10	3/11/2014 2:35:53 AM
75-00-3	Chloroethane	ND	20		µg/L	10	3/11/2014 2:35:53 AM
67-66-3	Chloroform	ND	10		µg/L	10	3/11/2014 2:35:53 AM
74-87-3	Chloromethane	ND	30		µg/L	10	3/11/2014 2:35:53 AM
95-49-8	2-Chlorotoluene	ND	10		µg/L	10	3/11/2014 2:35:53 AM
106-43-4	4-Chlorotoluene	ND	10		µg/L	10	3/11/2014 2:35:53 AM
156-59-2	cis-1,2-DCE	ND	10		µg/L	10	3/11/2014 2:35:53 AM
10061-01-5	cis-1,3-Dichloropropene	ND	10		µg/L	10	3/11/2014 2:35:53 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-12A
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 11:25:00 AM
Lab ID: 1403198-008
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **KJH**
96-12-8	1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	3/11/2014 2:35:53 AM
124-48-1	Dibromochloromethane	ND	10		µg/L	10	3/11/2014 2:35:53 AM
74-95-3	Dibromomethane	ND	10		µg/L	10	3/11/2014 2:35:53 AM
95-50-1	1,2-Dichlorobenzene	ND	10		µg/L	10	3/11/2014 2:35:53 AM
541-73-1	1,3-Dichlorobenzene	ND	10		µg/L	10	3/11/2014 2:35:53 AM
106-46-7	1,4-Dichlorobenzene	ND	10		µg/L	10	3/11/2014 2:35:53 AM
75-71-8	Dichlorodifluoromethane	ND	10		µg/L	10	3/11/2014 2:35:53 AM
75-34-3	1,1-Dichloroethane	ND	10		µg/L	10	3/11/2014 2:35:53 AM
75-35-4	1,1-Dichloroethene	ND	10		µg/L	10	3/11/2014 2:35:53 AM
78-87-5	1,2-Dichloropropane	ND	10		µg/L	10	3/11/2014 2:35:53 AM
142-28-9	1,3-Dichloropropane	ND	10		µg/L	10	3/11/2014 2:35:53 AM
594-20-7	2,2-Dichloropropane	ND	20		µg/L	10	3/11/2014 2:35:53 AM
563-58-6	1,1-Dichloropropene	ND	10		µg/L	10	3/11/2014 2:35:53 AM
87-68-3	Hexachlorobutadiene	ND	10		µg/L	10	3/11/2014 2:35:53 AM
591-78-6	2-Hexanone	ND	100		µg/L	10	3/11/2014 2:35:53 AM
98-82-8	Isopropylbenzene	ND	10		µg/L	10	3/11/2014 2:35:53 AM
99-87-6	4-Isopropyltoluene	ND	10		µg/L	10	3/11/2014 2:35:53 AM
108-10-1	4-Methyl-2-pentanone	ND	100		µg/L	10	3/11/2014 2:35:53 AM
75-09-2	Methylene Chloride	ND	30		µg/L	10	3/11/2014 2:35:53 AM
104-51-8	n-Butylbenzene	ND	30		µg/L	10	3/11/2014 2:35:53 AM
103-65-1	n-Propylbenzene	ND	10		µg/L	10	3/11/2014 2:35:53 AM
135-98-8	sec-Butylbenzene	ND	10		µg/L	10	3/11/2014 2:35:53 AM
100-42-5	Styrene	ND	10		µg/L	10	3/11/2014 2:35:53 AM
98-06-6	tert-Butylbenzene	ND	10		µg/L	10	3/11/2014 2:35:53 AM
630-20-6	1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	3/11/2014 2:35:53 AM
79-34-5	1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	3/11/2014 2:35:53 AM
127-18-4	Tetrachloroethene (PCE)	ND	10		µg/L	10	3/11/2014 2:35:53 AM
156-60-5	trans-1,2-DCE	ND	10		µg/L	10	3/11/2014 2:35:53 AM
10061-02-6	trans-1,3-Dichloropropene	ND	10		µg/L	10	3/11/2014 2:35:53 AM
87-61-6	1,2,3-Trichlorobenzene	ND	10		µg/L	10	3/11/2014 2:35:53 AM
120-82-1	1,2,4-Trichlorobenzene	ND	10		µg/L	10	3/11/2014 2:35:53 AM
71-55-6	1,1,1-Trichloroethane	ND	10		µg/L	10	3/11/2014 2:35:53 AM
79-00-5	1,1,2-Trichloroethane	ND	10		µg/L	10	3/11/2014 2:35:53 AM
79-01-6	Trichloroethene (TCE)	ND	10		µg/L	10	3/11/2014 2:35:53 AM
75-69-4	Trichlorofluoromethane	ND	10		µg/L	10	3/11/2014 2:35:53 AM
96-18-4	1,2,3-Trichloropropane	ND	20		µg/L	10	3/11/2014 2:35:53 AM
75-01-4	Vinyl chloride	ND	10		µg/L	10	3/11/2014 2:35:53 AM
1330-20-7	Xylenes, Total	ND	15		µg/L	10	3/11/2014 2:35:53 AM
17060-07-0	Surr: 1,2-Dichloroethane-d4	90.2	70-130		%REC	10	3/11/2014 2:35:53 AM
460-00-4	Surr: 4-Bromofluorobenzene	92.9	70-130		%REC	10	3/11/2014 2:35:53 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-12A
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 11:25:00 AM
Lab ID: 1403198-008
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **KJH**
1868-53-7	Surr: Dibromofluoromethane	94.1	70-130		%REC	10	3/11/2014 2:35:53 AM
2037-26-5	Surr: Toluene-d8	89.4	70-130		%REC	10	3/11/2014 2:35:53 AM
SM2510B: SPECIFIC CONDUCTANCE							Analyst: **JML**
eC	Conductivity	8000	0.010		µmhos/c	1	3/6/2014 1:02:08 PM
SM4500-H+B: PH							Analyst: **JML**
pH	pH	7.90	1.68	H	pH units	1	3/6/2014 1:02:08 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-12B
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 11:00:00 AM
Lab ID: 1403198-009
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS							Analyst: **JRR**
16984-48-8	Fluoride	38	10	*	mg/L	100	3/7/2014 2:14:54 AM
16887-00-6	Chloride	1800	50		mg/L	100	3/7/2014 2:14:54 AM
7727-37-9	Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	3/7/2014 2:02:29 AM
24959-67-9	Bromide	2.7	1.0		mg/L	10	3/7/2014 2:02:29 AM
7727-37-9	Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	3/7/2014 2:02:29 AM
7723-14-0	Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	3/7/2014 2:02:29 AM
14808-79-8	Sulfate	710	50		mg/L	100	3/7/2014 2:14:54 AM
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **JLF**
7440-39-3	Barium	0.073	0.0020		mg/L	1	3/6/2014 3:20:14 PM
7440-43-9	Cadmium	ND	0.0020		mg/L	1	3/6/2014 3:20:14 PM
7440-70-2	Calcium	59	1.0		mg/L	1	3/6/2014 3:20:14 PM
7440-47-3	Chromium	0.013	0.0060		mg/L	1	3/6/2014 3:20:14 PM
7440-50-8	Copper	ND	0.0060		mg/L	1	3/6/2014 3:20:14 PM
7439-89-6	Iron	0.61	0.020	*	mg/L	1	3/6/2014 3:20:14 PM
7439-95-4	Magnesium	32	1.0		mg/L	1	3/6/2014 3:20:14 PM
7439-96-5	Manganese	0.57	0.0020	*	mg/L	1	3/6/2014 3:20:14 PM
7440-09-7	Potassium	160	5.0		mg/L	5	3/7/2014 3:31:33 PM
7440-22-4	Silver	ND	0.0050		mg/L	1	3/11/2014 3:10:19 PM
7440-23-5	Sodium	1600	50		mg/L	50	3/7/2014 3:33:27 PM
7440-66-6	Zinc	ND	0.010		mg/L	1	3/6/2014 3:20:14 PM
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**
7440-39-3	Barium	0.080	0.0020		mg/L	1	3/10/2014 6:01:42 PM
7440-43-9	Cadmium	ND	0.0020		mg/L	1	3/10/2014 6:01:42 PM
7440-47-3	Chromium	0.013	0.0060		mg/L	1	3/12/2014 2:07:03 PM
7440-50-8	Copper	ND	0.0060		mg/L	1	3/10/2014 6:01:42 PM
7439-89-6	Iron	1.2	0.10	*	mg/L	5	3/12/2014 2:08:53 PM
7439-96-5	Manganese	0.55	0.0020	*	mg/L	1	3/10/2014 6:01:42 PM
7440-22-4	Silver	ND	0.0050		mg/L	1	3/18/2014 3:40:19 PM
7440-66-6	Zinc	0.014	0.010		mg/L	1	3/12/2014 3:50:09 PM
EPA 200.8: DISSOLVED METALS							Analyst: **DBD**
7440-38-2	Arsenic	0.012	0.010	*	mg/L	10	3/13/2014 3:16:54 PM
7439-92-1	Lead	ND	0.010		mg/L	10	3/13/2014 3:16:54 PM
7782-49-2	Selenium	0.017	0.010		mg/L	10	3/13/2014 3:16:54 PM
7440-61-1	Uranium	ND	0.010		mg/L	10	3/13/2014 3:16:54 PM
200.8 ICPMS METALS:TOTAL							Analyst: **DBD**
7440-38-2	Arsenic	0.014	0.010	*	mg/L	10	3/14/2014 4:08:25 PM

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-12B
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 11:00:00 AM
Lab ID: 1403198-009
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
200.8 ICPMS METALS:TOTAL							Analyst: **DBD**
7439-92-1	Lead	ND	0.010		mg/L	10	3/14/2014 4:08:25 PM
7782-49-2	Selenium	0.014	0.010		mg/L	10	3/14/2014 4:08:25 PM
7440-61-1	Uranium	ND	0.010		mg/L	10	3/14/2014 4:08:25 PM
EPA METHOD 245.1: MERCURY							Analyst: **JML**
7439-97-6	Mercury	ND	0.00020		mg/L	1	3/6/2014 5:51:25 PM
SM5210B: BOD							Analyst: **SMS**
BOD	Biochemical Oxygen Demand	430	2.0		mg/L	1	3/11/2014 11:16:00 AM
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: **ECH**
1101	E. Coli	<10	10.00		CFU/100	10	3/6/2014 6:40:00 PM
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**
83-32-9	Acenaphthene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
208-96-8	Acenaphthylene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
62-53-3	Aniline	ND	50		µg/L	1	3/12/2014 7:46:54 PM
120-12-7	Anthracene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
103-33-3	Azobenzene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
56-55-3	Benz(a)anthracene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
50-32-8	Benzo(a)pyrene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
205-99-2	Benzo(b)fluoranthene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
191-24-2	Benzo(g,h,i)perylene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
207-08-9	Benzo(k)fluoranthene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
65-85-0	Benzoic acid	ND	100		µg/L	1	3/12/2014 7:46:54 PM
100-51-6	Benzyl alcohol	ND	50		µg/L	1	3/12/2014 7:46:54 PM
111-91-1	Bis(2-chloroethoxy)methane	ND	50		µg/L	1	3/12/2014 7:46:54 PM
111-44-4	Bis(2-chloroethyl)ether	ND	50		µg/L	1	3/12/2014 7:46:54 PM
108-60-1	Bis(2-chloroisopropyl)ether	ND	50		µg/L	1	3/12/2014 7:46:54 PM
117-81-7	Bis(2-ethylhexyl)phthalate	ND	50		µg/L	1	3/12/2014 7:46:54 PM
101-55-3	4-Bromophenyl phenyl ether	ND	50		µg/L	1	3/12/2014 7:46:54 PM
85-68-7	Butyl benzyl phthalate	ND	50		µg/L	1	3/12/2014 7:46:54 PM
86-74-8	Carbazole	ND	50		µg/L	1	3/12/2014 7:46:54 PM
59-50-7	4-Chloro-3-methylphenol	ND	50		µg/L	1	3/12/2014 7:46:54 PM
106-47-8	4-Chloroaniline	ND	50		µg/L	1	3/12/2014 7:46:54 PM
91-58-7	2-Chloronaphthalene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
95-57-8	2-Chlorophenol	ND	50		µg/L	1	3/12/2014 7:46:54 PM
7005-72-3	4-Chlorophenyl phenyl ether	ND	50		µg/L	1	3/12/2014 7:46:54 PM
218-01-9	Chrysene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
84-74-2	Di-n-butyl phthalate	ND	50		µg/L	1	3/12/2014 7:46:54 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-12B
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 11:00:00 AM
Lab ID: 1403198-009
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

EPA METHOD 8270C: SEMIVOLATILES

Analyst: **DAM**

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
117-84-0	Di-n-octyl phthalate	ND	50		µg/L	1	3/12/2014 7:46:54 PM
53-70-3	Dibenz(a,h)anthracene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
132-64-9	Dibenzofuran	ND	50		µg/L	1	3/12/2014 7:46:54 PM
95-50-1	1,2-Dichlorobenzene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
541-73-1	1,3-Dichlorobenzene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
106-46-7	1,4-Dichlorobenzene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
91-94-1	3,3´-Dichlorobenzidine	ND	50		µg/L	1	3/12/2014 7:46:54 PM
84-66-2	Diethyl phthalate	ND	50		µg/L	1	3/12/2014 7:46:54 PM
131-11-3	Dimethyl phthalate	ND	50		µg/L	1	3/12/2014 7:46:54 PM
120-83-2	2,4-Dichlorophenol	ND	100		µg/L	1	3/12/2014 7:46:54 PM
105-67-9	2,4-Dimethylphenol	ND	50		µg/L	1	3/12/2014 7:46:54 PM
534-52-1	4,6-Dinitro-2-methylphenol	ND	100		µg/L	1	3/12/2014 7:46:54 PM
51-28-5	2,4-Dinitrophenol	ND	100		µg/L	1	3/12/2014 7:46:54 PM
121-14-2	2,4-Dinitrotoluene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
606-20-2	2,6-Dinitrotoluene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
206-44-0	Fluoranthene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
86-73-7	Fluorene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
118-74-1	Hexachlorobenzene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
87-68-3	Hexachlorobutadiene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
77-47-4	Hexachlorocyclopentadiene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
67-72-1	Hexachloroethane	ND	50		µg/L	1	3/12/2014 7:46:54 PM
193-39-5	Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
78-59-1	Isophorone	ND	50		µg/L	1	3/12/2014 7:46:54 PM
90-12-0	1-Methylnaphthalene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
91-57-6	2-Methylnaphthalene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
95-48-7	2-Methylphenol	ND	50		µg/L	1	3/12/2014 7:46:54 PM
782-06-0	3+4-Methylphenol	79	50		µg/L	1	3/12/2014 7:46:54 PM
621-64-7	N-Nitrosodi-n-propylamine	ND	50		µg/L	1	3/12/2014 7:46:54 PM
62-75-9	N-Nitrosodimethylamine	ND	50		µg/L	1	3/12/2014 7:46:54 PM
86-30-6	N-Nitrosodiphenylamine	ND	50		µg/L	1	3/12/2014 7:46:54 PM
91-20-3	Naphthalene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
88-74-4	2-Nitroaniline	ND	50		µg/L	1	3/12/2014 7:46:54 PM
99-09-2	3-Nitroaniline	ND	50		µg/L	1	3/12/2014 7:46:54 PM
100-01-6	4-Nitroaniline	ND	50		µg/L	1	3/12/2014 7:46:54 PM
98-95-3	Nitrobenzene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
88-75-5	2-Nitrophenol	ND	50		µg/L	1	3/12/2014 7:46:54 PM
100-02-7	4-Nitrophenol	ND	50		µg/L	1	3/12/2014 7:46:54 PM
87-86-5	Pentachlorophenol	ND	100		µg/L	1	3/12/2014 7:46:54 PM
85-01-8	Phenanthrene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
108-95-2	Phenol	600	50		µg/L	1	3/12/2014 7:46:54 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-12B
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 11:00:00 AM
Lab ID: 1403198-009
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES							Analyst: **DAM**
129-00-0	Pyrene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
110-86-1	Pyridine	ND	50		µg/L	1	3/12/2014 7:46:54 PM
120-82-1	1,2,4-Trichlorobenzene	ND	50		µg/L	1	3/12/2014 7:46:54 PM
95-95-4	2,4,5-Trichlorophenol	ND	50		µg/L	1	3/12/2014 7:46:54 PM
88-06-2	2,4,6-Trichlorophenol	ND	50		µg/L	1	3/12/2014 7:46:54 PM
367-12-4	Surr: 2-Fluorophenol	52.3	22.7-98		%REC	1	3/12/2014 7:46:54 PM
4165-62-2	Surr: Phenol-d5	42.3	23.4-74.9		%REC	1	3/12/2014 7:46:54 PM
118-79-6	Surr: 2,4,6-Tribromophenol	83.1	23.3-111		%REC	1	3/12/2014 7:46:54 PM
4165-60-0	Surr: Nitrobenzene-d5	81.2	36.8-111		%REC	1	3/12/2014 7:46:54 PM
321-60-8	Surr: 2-Fluorobiphenyl	74.6	38.3-110		%REC	1	3/12/2014 7:46:54 PM
1718-51-0	Surr: 4-Terphenyl-d14	72.0	52.1-116		%REC	1	3/12/2014 7:46:54 PM
EPA METHOD 8260B: VOLATILES							Analyst: **KJH**
71-43-2	Benzene	ND	10		µg/L	10	3/11/2014 3:03:59 AM
108-88-3	Toluene	ND	10		µg/L	10	3/11/2014 3:03:59 AM
100-41-4	Ethylbenzene	ND	10		µg/L	10	3/11/2014 3:03:59 AM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	3/11/2014 3:03:59 AM
95-63-6	1,2,4-Trimethylbenzene	ND	10		µg/L	10	3/11/2014 3:03:59 AM
108-67-8	1,3,5-Trimethylbenzene	ND	10		µg/L	10	3/11/2014 3:03:59 AM
107-06-2	1,2-Dichloroethane (EDC)	ND	10		µg/L	10	3/11/2014 3:03:59 AM
106-93-4	1,2-Dibromoethane (EDB)	ND	10		µg/L	10	3/11/2014 3:03:59 AM
91-20-3	Naphthalene	ND	20		µg/L	10	3/11/2014 3:03:59 AM
90-12-0	1-Methylnaphthalene	ND	40		µg/L	10	3/11/2014 3:03:59 AM
91-57-6	2-Methylnaphthalene	ND	40		µg/L	10	3/11/2014 3:03:59 AM
67-64-1	Acetone	ND	100		µg/L	10	3/11/2014 3:03:59 AM
108-86-1	Bromobenzene	ND	10		µg/L	10	3/11/2014 3:03:59 AM
75-27-4	Bromodichloromethane	ND	10		µg/L	10	3/11/2014 3:03:59 AM
75-25-2	Bromoform	ND	10		µg/L	10	3/11/2014 3:03:59 AM
74-83-9	Bromomethane	ND	30		µg/L	10	3/11/2014 3:03:59 AM
78-93-3	2-Butanone	ND	100		µg/L	10	3/11/2014 3:03:59 AM
75-15-0	Carbon disulfide	ND	100		µg/L	10	3/11/2014 3:03:59 AM
56-23-5	Carbon Tetrachloride	ND	10		µg/L	10	3/11/2014 3:03:59 AM
108-90-7	Chlorobenzene	ND	10		µg/L	10	3/11/2014 3:03:59 AM
75-00-3	Chloroethane	ND	20		µg/L	10	3/11/2014 3:03:59 AM
67-66-3	Chloroform	ND	10		µg/L	10	3/11/2014 3:03:59 AM
74-87-3	Chloromethane	ND	30		µg/L	10	3/11/2014 3:03:59 AM
95-49-8	2-Chlorotoluene	ND	10		µg/L	10	3/11/2014 3:03:59 AM
106-43-4	4-Chlorotoluene	ND	10		µg/L	10	3/11/2014 3:03:59 AM
156-59-2	cis-1,2-DCE	ND	10		µg/L	10	3/11/2014 3:03:59 AM
10061-01-5	cis-1,3-Dichloropropene	ND	10		µg/L	10	3/11/2014 3:03:59 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-12B
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 11:00:00 AM
Lab ID: 1403198-009
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **KJH**
96-12-8	1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	3/11/2014 3:03:59 AM
124-48-1	Dibromochloromethane	ND	10		µg/L	10	3/11/2014 3:03:59 AM
74-95-3	Dibromomethane	ND	10		µg/L	10	3/11/2014 3:03:59 AM
95-50-1	1,2-Dichlorobenzene	ND	10		µg/L	10	3/11/2014 3:03:59 AM
541-73-1	1,3-Dichlorobenzene	ND	10		µg/L	10	3/11/2014 3:03:59 AM
106-46-7	1,4-Dichlorobenzene	ND	10		µg/L	10	3/11/2014 3:03:59 AM
75-71-8	Dichlorodifluoromethane	ND	10		µg/L	10	3/11/2014 3:03:59 AM
75-34-3	1,1-Dichloroethane	ND	10		µg/L	10	3/11/2014 3:03:59 AM
75-35-4	1,1-Dichloroethene	ND	10		µg/L	10	3/11/2014 3:03:59 AM
78-87-5	1,2-Dichloropropane	ND	10		µg/L	10	3/11/2014 3:03:59 AM
142-28-9	1,3-Dichloropropane	ND	10		µg/L	10	3/11/2014 3:03:59 AM
594-20-7	2,2-Dichloropropane	ND	20		µg/L	10	3/11/2014 3:03:59 AM
563-58-6	1,1-Dichloropropene	ND	10		µg/L	10	3/11/2014 3:03:59 AM
87-68-3	Hexachlorobutadiene	ND	10		µg/L	10	3/11/2014 3:03:59 AM
591-78-6	2-Hexanone	ND	100		µg/L	10	3/11/2014 3:03:59 AM
98-82-8	Isopropylbenzene	ND	10		µg/L	10	3/11/2014 3:03:59 AM
99-87-6	4-Isopropyltoluene	ND	10		µg/L	10	3/11/2014 3:03:59 AM
108-10-1	4-Methyl-2-pentanone	ND	100		µg/L	10	3/11/2014 3:03:59 AM
75-09-2	Methylene Chloride	ND	30		µg/L	10	3/11/2014 3:03:59 AM
104-51-8	n-Butylbenzene	ND	30		µg/L	10	3/11/2014 3:03:59 AM
103-65-1	n-Propylbenzene	ND	10		µg/L	10	3/11/2014 3:03:59 AM
135-98-8	sec-Butylbenzene	ND	10		µg/L	10	3/11/2014 3:03:59 AM
100-42-5	Styrene	ND	10		µg/L	10	3/11/2014 3:03:59 AM
98-06-6	tert-Butylbenzene	ND	10		µg/L	10	3/11/2014 3:03:59 AM
630-20-6	1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	3/11/2014 3:03:59 AM
79-34-5	1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	3/11/2014 3:03:59 AM
127-18-4	Tetrachloroethene (PCE)	ND	10		µg/L	10	3/11/2014 3:03:59 AM
156-60-5	trans-1,2-DCE	ND	10		µg/L	10	3/11/2014 3:03:59 AM
10061-02-6	trans-1,3-Dichloropropene	ND	10		µg/L	10	3/11/2014 3:03:59 AM
87-61-6	1,2,3-Trichlorobenzene	ND	10		µg/L	10	3/11/2014 3:03:59 AM
120-82-1	1,2,4-Trichlorobenzene	ND	10		µg/L	10	3/11/2014 3:03:59 AM
71-55-6	1,1,1-Trichloroethane	ND	10		µg/L	10	3/11/2014 3:03:59 AM
79-00-5	1,1,2-Trichloroethane	ND	10		µg/L	10	3/11/2014 3:03:59 AM
79-01-6	Trichloroethene (TCE)	ND	10		µg/L	10	3/11/2014 3:03:59 AM
75-69-4	Trichlorofluoromethane	ND	10		µg/L	10	3/11/2014 3:03:59 AM
96-18-4	1,2,3-Trichloropropane	ND	20		µg/L	10	3/11/2014 3:03:59 AM
75-01-4	Vinyl chloride	ND	10		µg/L	10	3/11/2014 3:03:59 AM
1330-20-7	Xylenes, Total	ND	15		µg/L	10	3/11/2014 3:03:59 AM
17060-07-0	Surr: 1,2-Dichloroethane-d4	91.9	70-130		%REC	10	3/11/2014 3:03:59 AM
460-00-4	Surr: 4-Bromofluorobenzene	93.3	70-130		%REC	10	3/11/2014 3:03:59 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-12B
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 11:00:00 AM
Lab ID: 1403198-009
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **KJH**
1868-53-7	Surr: Dibromofluoromethane	98.5	70-130		%REC	10	3/11/2014 3:03:59 AM
2037-26-5	Surr: Toluene-d8	90.1	70-130		%REC	10	3/11/2014 3:03:59 AM
SM2510B: SPECIFIC CONDUCTANCE							Analyst: **JML**
eC	Conductivity	7800	0.010		µmhos/c	1	3/6/2014 1:06:07 PM
SM4500-H+B: PH							Analyst: **JML**
pH	pH	7.97	1.68	H	pH units	1	3/6/2014 1:06:07 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP-1 to EP-2
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 9:40:00 AM
Lab ID: 1403198-010
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 200.7: DISSOLVED METALS							Analyst: **JLF**
7440-39-3	Barium	0.20	0.0020		mg/L	1	3/6/2014 3:26:04 PM
7440-43-9	Cadmium	ND	0.0020		mg/L	1	3/6/2014 3:26:04 PM
7440-47-3	Chromium	0.014	0.0060		mg/L	1	3/6/2014 3:26:04 PM
7440-50-8	Copper	ND	0.0060		mg/L	1	3/6/2014 3:26:04 PM
7439-89-6	Iron	0.63	0.10	*	mg/L	5	3/6/2014 3:31:55 PM
7439-96-5	Manganese	0.38	0.0020	*	mg/L	1	3/6/2014 3:26:04 PM
7440-22-4	Silver	ND	0.0050		mg/L	1	3/11/2014 3:14:11 PM
7440-66-6	Zinc	0.019	0.010		mg/L	1	3/6/2014 3:26:04 PM
EPA METHOD 200.7: TOTAL METALS							Analyst: **JLF**
7440-39-3	Barium	0.18	0.0020		mg/L	1	3/10/2014 6:03:35 PM
7440-43-9	Cadmium	ND	0.0020		mg/L	1	3/10/2014 6:03:35 PM
7440-47-3	Chromium	0.014	0.0060		mg/L	1	3/12/2014 2:10:51 PM
7440-50-8	Copper	ND	0.0060		mg/L	1	3/10/2014 6:03:35 PM
7439-89-6	Iron	0.94	0.020	*	mg/L	1	3/12/2014 2:10:51 PM
7439-96-5	Manganese	0.36	0.0020	*	mg/L	1	3/10/2014 6:03:35 PM
7440-22-4	Silver	ND	0.0050		mg/L	1	3/18/2014 3:41:21 PM
7440-66-6	Zinc	0.044	0.010		mg/L	1	3/12/2014 3:51:26 PM
EPA 200.8: DISSOLVED METALS							Analyst: **DBD**
7440-38-2	Arsenic	ND	0.010		mg/L	10	3/13/2014 3:19:39 PM
7439-92-1	Lead	ND	0.010		mg/L	10	3/13/2014 3:19:39 PM
7782-49-2	Selenium	0.060	0.010	*	mg/L	10	3/13/2014 3:19:39 PM
7440-61-1	Uranium	ND	0.010		mg/L	10	3/13/2014 3:19:39 PM
200.8 ICPMS METALS:TOTAL							Analyst: **DBD**
7440-38-2	Arsenic	0.011	0.010	*	mg/L	10	3/14/2014 4:11:52 PM
7439-92-1	Lead	ND	0.0010		mg/L	1	3/12/2014 3:11:56 PM
7782-49-2	Selenium	0.027	0.010		mg/L	10	3/14/2014 4:11:52 PM
7440-61-1	Uranium	0.0040	0.0010		mg/L	1	3/12/2014 3:11:56 PM
EPA METHOD 245.1: MERCURY							Analyst: **JML**
7439-97-6	Mercury	ND	0.00020		mg/L	1	3/6/2014 5:53:12 PM
SM5210B: BOD							Analyst: **SMS**
BOD	Biochemical Oxygen Demand	560	2.0		mg/L	1	3/11/2014 11:16:00 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group #7-20140305
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 8:55:00 AM
Lab ID: 1403198-011
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

EPA METHOD 8260B: VOLATILES

Analyst: **KJH**

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
71-43-2	Benzene	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
108-88-3	Toluene	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
100-41-4	Ethylbenzene	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
95-63-6	1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
108-67-8	1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
107-06-2	1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
106-93-4	1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
91-20-3	Naphthalene	ND	2.0		µg/L	1	3/11/2014 4:00:02 AM
90-12-0	1-Methylnaphthalene	ND	4.0		µg/L	1	3/11/2014 4:00:02 AM
91-57-6	2-Methylnaphthalene	ND	4.0		µg/L	1	3/11/2014 4:00:02 AM
67-64-1	Acetone	ND	10		µg/L	1	3/11/2014 4:00:02 AM
108-86-1	Bromobenzene	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
75-27-4	Bromodichloromethane	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
75-25-2	Bromoform	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
74-83-9	Bromomethane	ND	3.0		µg/L	1	3/11/2014 4:00:02 AM
78-93-3	2-Butanone	ND	10		µg/L	1	3/11/2014 4:00:02 AM
75-15-0	Carbon disulfide	ND	10		µg/L	1	3/11/2014 4:00:02 AM
56-23-5	Carbon Tetrachloride	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
108-90-7	Chlorobenzene	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
75-00-3	Chloroethane	ND	2.0		µg/L	1	3/11/2014 4:00:02 AM
67-66-3	Chloroform	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
74-87-3	Chloromethane	ND	3.0		µg/L	1	3/11/2014 4:00:02 AM
95-49-8	2-Chlorotoluene	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
106-43-4	4-Chlorotoluene	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
156-59-2	cis-1,2-DCE	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
10061-01-5	cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/11/2014 4:00:02 AM
124-48-1	Dibromochloromethane	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
74-95-3	Dibromomethane	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
95-50-1	1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
541-73-1	1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
106-46-7	1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
75-71-8	Dichlorodifluoromethane	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
75-34-3	1,1-Dichloroethane	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
75-35-4	1,1-Dichloroethene	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
78-87-5	1,2-Dichloropropane	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
142-28-9	1,3-Dichloropropane	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
594-20-7	2,2-Dichloropropane	ND	2.0		µg/L	1	3/11/2014 4:00:02 AM
563-58-6	1,1-Dichloropropene	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group #7-20140305
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 8:55:00 AM
Lab ID: 1403198-011
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **KJH**
87-68-3	Hexachlorobutadiene	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
591-78-6	2-Hexanone	ND	10		µg/L	1	3/11/2014 4:00:02 AM
98-82-8	Isopropylbenzene	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
99-87-6	4-Isopropyltoluene	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
108-10-1	4-Methyl-2-pentanone	ND	10		µg/L	1	3/11/2014 4:00:02 AM
75-09-2	Methylene Chloride	ND	3.0		µg/L	1	3/11/2014 4:00:02 AM
104-51-8	n-Butylbenzene	ND	3.0		µg/L	1	3/11/2014 4:00:02 AM
103-65-1	n-Propylbenzene	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
135-98-8	sec-Butylbenzene	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
100-42-5	Styrene	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
98-06-6	tert-Butylbenzene	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/11/2014 4:00:02 AM
127-18-4	Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
156-60-5	trans-1,2-DCE	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
10061-02-6	trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
87-61-6	1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
120-82-1	1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
71-55-6	1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
79-00-5	1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
79-01-6	Trichloroethene (TCE)	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
75-69-4	Trichlorofluoromethane	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
96-18-4	1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/11/2014 4:00:02 AM
75-01-4	Vinyl chloride	ND	1.0		µg/L	1	3/11/2014 4:00:02 AM
1330-20-7	Xylenes, Total	ND	1.5		µg/L	1	3/11/2014 4:00:02 AM
17060-07-0	Surr: 1,2-Dichloroethane-d4	90.8	70-130		%REC	1	3/11/2014 4:00:02 AM
460-00-4	Surr: 4-Bromofluorobenzene	91.2	70-130		%REC	1	3/11/2014 4:00:02 AM
1868-53-7	Surr: Dibromofluoromethane	98.2	70-130		%REC	1	3/11/2014 4:00:02 AM
2037-26-5	Surr: Toluene-d8	92.2	70-130		%REC	1	3/11/2014 4:00:02 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EB-#1-20140305
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 8:50:00 AM
Lab ID: 1403198-012
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

EPA METHOD 8260B: VOLATILES

Analyst: **KJH**

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
71-43-2	Benzene	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
108-88-3	Toluene	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
100-41-4	Ethylbenzene	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
95-63-6	1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
108-67-8	1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
107-06-2	1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
106-93-4	1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
91-20-3	Naphthalene	ND	2.0		µg/L	1	3/11/2014 4:55:47 AM
90-12-0	1-Methylnaphthalene	ND	4.0		µg/L	1	3/11/2014 4:55:47 AM
91-57-6	2-Methylnaphthalene	ND	4.0		µg/L	1	3/11/2014 4:55:47 AM
67-64-1	Acetone	ND	10		µg/L	1	3/11/2014 4:55:47 AM
108-86-1	Bromobenzene	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
75-27-4	Bromodichloromethane	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
75-25-2	Bromoform	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
74-83-9	Bromomethane	ND	3.0		µg/L	1	3/11/2014 4:55:47 AM
78-93-3	2-Butanone	ND	10		µg/L	1	3/11/2014 4:55:47 AM
75-15-0	Carbon disulfide	ND	10		µg/L	1	3/11/2014 4:55:47 AM
56-23-5	Carbon Tetrachloride	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
108-90-7	Chlorobenzene	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
75-00-3	Chloroethane	ND	2.0		µg/L	1	3/11/2014 4:55:47 AM
67-66-3	Chloroform	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
74-87-3	Chloromethane	ND	3.0		µg/L	1	3/11/2014 4:55:47 AM
95-49-8	2-Chlorotoluene	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
106-43-4	4-Chlorotoluene	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
156-59-2	cis-1,2-DCE	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
10061-01-5	cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/11/2014 4:55:47 AM
124-48-1	Dibromochloromethane	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
74-95-3	Dibromomethane	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
95-50-1	1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
541-73-1	1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
106-46-7	1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
75-71-8	Dichlorodifluoromethane	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
75-34-3	1,1-Dichloroethane	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
75-35-4	1,1-Dichloroethene	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
78-87-5	1,2-Dichloropropane	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
142-28-9	1,3-Dichloropropane	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
594-20-7	2,2-Dichloropropane	ND	2.0		µg/L	1	3/11/2014 4:55:47 AM
563-58-6	1,1-Dichloropropene	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EB-#1-20140305
Project: Q1 -2014 Groundwater Sampling
Collection Date: 3/5/2014 8:50:00 AM
Lab ID: 1403198-012
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **KJH**
87-68-3	Hexachlorobutadiene	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
591-78-6	2-Hexanone	ND	10		µg/L	1	3/11/2014 4:55:47 AM
98-82-8	Isopropylbenzene	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
99-87-6	4-Isopropyltoluene	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
108-10-1	4-Methyl-2-pentanone	ND	10		µg/L	1	3/11/2014 4:55:47 AM
75-09-2	Methylene Chloride	ND	3.0		µg/L	1	3/11/2014 4:55:47 AM
104-51-8	n-Butylbenzene	ND	3.0		µg/L	1	3/11/2014 4:55:47 AM
103-65-1	n-Propylbenzene	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
135-98-8	sec-Butylbenzene	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
100-42-5	Styrene	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
98-06-6	tert-Butylbenzene	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/11/2014 4:55:47 AM
127-18-4	Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
156-60-5	trans-1,2-DCE	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
10061-02-6	trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
87-61-6	1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
120-82-1	1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
71-55-6	1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
79-00-5	1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
79-01-6	Trichloroethene (TCE)	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
75-69-4	Trichlorofluoromethane	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
96-18-4	1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/11/2014 4:55:47 AM
75-01-4	Vinyl chloride	ND	1.0		µg/L	1	3/11/2014 4:55:47 AM
1330-20-7	Xylenes, Total	ND	1.5		µg/L	1	3/11/2014 4:55:47 AM
17060-07-0	Surr: 1,2-Dichloroethane-d4	90.4	70-130		%REC	1	3/11/2014 4:55:47 AM
460-00-4	Surr: 4-Bromofluorobenzene	92.1	70-130		%REC	1	3/11/2014 4:55:47 AM
1868-53-7	Surr: Dibromofluoromethane	98.2	70-130		%REC	1	3/11/2014 4:55:47 AM
2037-26-5	Surr: Toluene-d8	90.5	70-130		%REC	1	3/11/2014 4:55:47 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Trip Blank
Project: Q1 -2014 Groundwater Sampling
Collection Date:
Lab ID: 1403198-013
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

EPA METHOD 8260B: VOLATILES

Analyst: **KJH**

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
71-43-2	Benzene	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
108-88-3	Toluene	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
100-41-4	Ethylbenzene	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
95-63-6	1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
108-67-8	1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
107-06-2	1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
106-93-4	1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
91-20-3	Naphthalene	ND	2.0		µg/L	1	3/11/2014 5:51:46 AM
90-12-0	1-Methylnaphthalene	ND	4.0		µg/L	1	3/11/2014 5:51:46 AM
91-57-6	2-Methylnaphthalene	ND	4.0		µg/L	1	3/11/2014 5:51:46 AM
67-64-1	Acetone	ND	10		µg/L	1	3/11/2014 5:51:46 AM
108-86-1	Bromobenzene	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
75-27-4	Bromodichloromethane	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
75-25-2	Bromoform	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
74-83-9	Bromomethane	ND	3.0		µg/L	1	3/11/2014 5:51:46 AM
78-93-3	2-Butanone	ND	10		µg/L	1	3/11/2014 5:51:46 AM
75-15-0	Carbon disulfide	ND	10		µg/L	1	3/11/2014 5:51:46 AM
56-23-5	Carbon Tetrachloride	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
108-90-7	Chlorobenzene	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
75-00-3	Chloroethane	ND	2.0		µg/L	1	3/11/2014 5:51:46 AM
67-66-3	Chloroform	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
74-87-3	Chloromethane	ND	3.0		µg/L	1	3/11/2014 5:51:46 AM
95-49-8	2-Chlorotoluene	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
106-43-4	4-Chlorotoluene	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
156-59-2	cis-1,2-DCE	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
10061-01-5	cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/11/2014 5:51:46 AM
124-48-1	Dibromochloromethane	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
74-95-3	Dibromomethane	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
95-50-1	1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
541-73-1	1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
106-46-7	1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
75-71-8	Dichlorodifluoromethane	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
75-34-3	1,1-Dichloroethane	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
75-35-4	1,1-Dichloroethene	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
78-87-5	1,2-Dichloropropane	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
142-28-9	1,3-Dichloropropane	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
594-20-7	2,2-Dichloropropane	ND	2.0		µg/L	1	3/11/2014 5:51:46 AM
563-58-6	1,1-Dichloropropene	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Trip Blank
Project: Q1 -2014 Groundwater Sampling
Collection Date:
Lab ID: 1403198-013
Matrix: AQUEOUS
Received Date: 3/5/2014 3:40:00 PM

CAS#	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **KJH**
87-68-3	Hexachlorobutadiene	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
591-78-6	2-Hexanone	ND	10		µg/L	1	3/11/2014 5:51:46 AM
98-82-8	Isopropylbenzene	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
99-87-6	4-Isopropyltoluene	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
108-10-1	4-Methyl-2-pentanone	ND	10		µg/L	1	3/11/2014 5:51:46 AM
75-09-2	Methylene Chloride	ND	3.0		µg/L	1	3/11/2014 5:51:46 AM
104-51-8	n-Butylbenzene	ND	3.0		µg/L	1	3/11/2014 5:51:46 AM
103-65-1	n-Propylbenzene	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
135-98-8	sec-Butylbenzene	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
100-42-5	Styrene	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
98-06-6	tert-Butylbenzene	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/11/2014 5:51:46 AM
127-18-4	Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
156-60-5	trans-1,2-DCE	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
10061-02-6	trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
87-61-6	1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
120-82-1	1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
71-55-6	1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
79-00-5	1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
79-01-6	Trichloroethene (TCE)	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
75-69-4	Trichlorofluoromethane	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
96-18-4	1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/11/2014 5:51:46 AM
75-01-4	Vinyl chloride	ND	1.0		µg/L	1	3/11/2014 5:51:46 AM
1330-20-7	Xylenes, Total	ND	1.5		µg/L	1	3/11/2014 5:51:46 AM
17060-07-0	Surr: 1,2-Dichloroethane-d4	90.0	70-130		%REC	1	3/11/2014 5:51:46 AM
460-00-4	Surr: 4-Bromofluorobenzene	91.6	70-130		%REC	1	3/11/2014 5:51:46 AM
1868-53-7	Surr: Dibromofluoromethane	97.9	70-130		%REC	1	3/11/2014 5:51:46 AM
2037-26-5	Surr: Toluene-d8	90.0	70-130		%REC	1	3/11/2014 5:51:46 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Anne Thorne
Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

March 13, 2014

ESC Sample # : L686672-01

Date Received : March 07, 2014
Description :

Site ID :

Sample ID : 1403198-001H EP-1

Project # :

Collected By :
Collection Date : 03/05/14 09:10

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	560	10.	mg/l	410.4	03/10/14	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 03/13/14 16:17 Printed: 03/13/14 16:18

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REPORT OF ANALYSIS

Anne Thorne
Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

March 13, 2014

ESC Sample # : L686672-02

Date Received : March 07, 2014
Description :

Site ID :

Sample ID : 1403198-002H EP-2

Project # :

Collected By :
Collection Date : 03/05/14 10:20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	1000	20.	mg/l	410.4	03/11/14	2

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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Reported: 03/13/14 16:17 Printed: 03/13/14 16:18

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REPORT OF ANALYSIS

Anne Thorne
Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

March 13, 2014

ESC Sample # : L686672-03

Date Received : March 07, 2014
Description :

Site ID :

Sample ID : 1403198-003H EP-6

Project # :

Collected By :
Collection Date : 03/05/14 13:25

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	600	50.	mg/l	410.4	03/11/14	5

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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Reported: 03/13/14 16:17 Printed: 03/13/14 16:18

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Tax I.D. 62-0814289

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REPORT OF ANALYSIS

Anne Thorne
Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

March 13, 2014

ESC Sample # : L686672-04

Date Received : March 07, 2014
Description :

Site ID :

Sample ID : 1403198-004H EP-7

Project # :

Collected By :
Collection Date : 03/05/14 12:35

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	3900	1000	mg/l	410.4	03/10/14	100

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
This report shall not be reproduced, except in full, without the written approval from ESC.
.
Reported: 03/13/14 16:17 Printed: 03/13/14 16:18

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Tax I.D. 62-0814289

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REPORT OF ANALYSIS

Anne Thorne
Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

March 13, 2014

ESC Sample # : L686672-05

Date Received : March 07, 2014
Description :

Site ID :

Sample ID : 1403198-005H EP-8

Project # :

Collected By :
Collection Date : 03/05/14 12:15

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	2900	50.	mg/l	410.4	03/13/14	5

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 03/13/14 16:17 Printed: 03/13/14 16:18

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Tax I.D. 62-0814289

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REPORT OF ANALYSIS

Anne Thorne
Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

March 13, 2014

ESC Sample # : L686672-06

Date Received : March 07, 2014
Description :

Site ID :

Sample ID : 1403198-006H EP-9

Project # :

Collected By :
Collection Date : 03/05/14 12:55

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	3700	1000	mg/l	410.4	03/10/14	100

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
This report shall not be reproduced, except in full, without the written approval from ESC.
.
Reported: 03/13/14 16:17 Printed: 03/13/14 16:18

ESC
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REPORT OF ANALYSIS

Anne Thorne
Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

March 13, 2014

ESC Sample # : L686672-07

Date Received : March 07, 2014
Description :

Site ID :

Sample ID : 1403198-007H EP-11

Project # :

Collected By :
Collection Date : 03/05/14 11:50

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	570	100	mg/l	410.4	03/10/14	10

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
This report shall not be reproduced, except in full, without the written approval from ESC.
.
Reported: 03/13/14 16:17 Printed: 03/13/14 16:18

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REPORT OF ANALYSIS

Anne Thorne
Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

March 13, 2014

ESC Sample # : L686672-08

Date Received : March 07, 2014
Description :

Site ID :

Sample ID : 1403198-008H EP-12A

Project # :

Collected By :
Collection Date : 03/05/14 11:25

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	560	10.	mg/l	410.4	03/10/14	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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Est. 1970

REPORT OF ANALYSIS

Anne Thorne
Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

March 13, 2014

ESC Sample # : L686672-09

Date Received : March 07, 2014
Description :

Site ID :

Sample ID : 1403198-009H EP-12B

Project # :

Collected By :
Collection Date : 03/05/14 11:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	810	10.	mg/l	410.4	03/10/14	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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REPORT OF ANALYSIS

Anne Thorne
Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

March 13, 2014

ESC Sample # : L686672-10

Date Received : March 07, 2014
Description :

Site ID :

Sample ID : 1403198-010D STP-1 TO EP-2

Project # :

Collected By :
Collection Date : 03/05/14 09:40

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	1500	100	mg/l	410.4	03/11/14	10

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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Hall Environmental Analysis Laboratory
Anne Thorne
4901 Hawkins NE

Albuquerque, NM 87109

Quality Assurance Report
Level II

L686672

March 13, 2014

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
COD	< 10	mg/l			WG709939	03/10/14 14:19
COD	< 10	mg/l			WG710160	03/11/14 13:22
COD	< 10	mg/l			WG710548	03/13/14 14:38

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
COD	mg/l	3200	3200	0.0	5	L686660-01	WG709939
COD	mg/l	180000	180000	0.0	5	L686678-01	WG710160
COD	mg/l	990000	990000	0.0	5	L686678-02	WG710160
COD	mg/l	1000	1000	0.0	5	L686672-02	WG710160
COD	mg/l	1000	1000	0.0	5	L686665-01	WG710160
COD	mg/l	600.	600.	0.0	5	L686672-03	WG710160
COD	mg/l	34.0	35.0	2.90	5	L687243-01	WG710548
COD	mg/l	2900	2900	0.0	5	L686672-05	WG710548

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
COD	mg/l	183	190.	104.	90-110	WG709939
COD	mg/l	183	175.	95.6	90-110	WG710160
COD	mg/l	183	183.	100.	90-110	WG710548

Laboratory Control Sample Duplicate

Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
COD	mg/l	190.	190.	104.	90-110	0.0	5	WG709939
COD	mg/l	178.	175.	97.0	90-110	1.70	5	WG710160
COD	mg/l	185.	183.	101.	90-110	1.09	5	WG710548

Matrix Spike

Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
COD	mg/l	1830	1000	400	100.	90-110	L686672-02	WG710160
COD	mg/l	550.	150.	400	100.	90-110	L687091-01	WG710548

Matrix Spike Duplicate

Analyte	Units	MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
COD	mg/l	1820	1830	102.	90-110	0.549	5	L686672-02	WG710160

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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Hall Environmental Analysis Laboratory
Anne Thorne
4901 Hawkins NE

Albuquerque, NM 87109

Quality Assurance Report
Level II

L686672

March 13, 2014

Analyte	Units	Matrix Spike Duplicate MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
COD	mg/l	552.	550.	100.	90-110	0.363	5	L687091-01	WG710548

Batch number /Run number / Sample number cross reference

WG709939: R2892040: L686672-01 04 06 07 08 09
WG710160: R2892133: L686672-02 03 10
WG710548: R2893011: L686672-05

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403198**
24-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1 -2014 Groundwater Sampling

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17148** RunNo: **17148**
Prep Date: **2/5/2014** Analysis Date: **3/6/2014** SeqNo: **493068** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17148** RunNo: **17148**
Prep Date: Analysis Date: **3/6/2014** SeqNo: **493069** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	102	85	115			
Cadmium	0.50	0.0020	0.5000	0	101	85	115			
Calcium	50	1.0	50.00	0	99.8	85	115			
Chromium	0.50	0.0060	0.5000	0	99.3	85	115			
Copper	0.49	0.0060	0.5000	0	98.0	85	115			
Iron	0.52	0.020	0.5000	0	104	85	115			
Magnesium	50	1.0	50.00	0	99.0	85	115			
Manganese	0.51	0.0020	0.5000	0	102	85	115			
Potassium	49	1.0	50.00	0	98.0	85	115			
Zinc	0.52	0.010	0.5000	0	104	85	115			

Sample ID **1403198-010BMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **STP-1 to EP-2** Batch ID: **R17148** RunNo: **17148**
Prep Date: Analysis Date: **3/6/2014** SeqNo: **493144** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.72	0.0020	0.5000	0.1992	104	70	130			
Cadmium	0.48	0.0020	0.5000	0	96.5	70	130			
Chromium	0.51	0.0060	0.5000	0.01360	99.7	70	130			
Copper	0.43	0.0060	0.5000	0	85.6	70	130			
Manganese	0.88	0.0020	0.5000	0.3795	99.9	70	130			
Zinc	0.54	0.010	0.5000	0.01880	104	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403198**
24-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1 -2014 Groundwater Sampling

Sample ID **1403198-010BMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **STP-1 to EP-2** Batch ID: **R17148** RunNo: **17148**
Prep Date: Analysis Date: **3/6/2014** SeqNo: **493145** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.72	0.0020	0.5000	0.1992	103	70	130	0.694	20	
Cadmium	0.48	0.0020	0.5000	0	96.3	70	130	0.216	20	
Chromium	0.51	0.0060	0.5000	0.01360	99.2	70	130	0.509	20	
Copper	0.43	0.0060	0.5000	0	85.2	70	130	0.403	20	
Manganese	0.88	0.0020	0.5000	0.3795	99.9	70	130	0.0159	20	
Zinc	0.53	0.010	0.5000	0.01880	103	70	130	1.09	20	

Sample ID **1403198-010BMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **STP-1 to EP-2** Batch ID: **R17148** RunNo: **17148**
Prep Date: Analysis Date: **3/6/2014** SeqNo: **493147** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	3.3	0.10	2.500	0.6302	107	70	130			

Sample ID **1403198-010BMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **STP-1 to EP-2** Batch ID: **R17148** RunNo: **17148**
Prep Date: Analysis Date: **3/6/2014** SeqNo: **493148** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	3.4	0.10	2.500	0.6302	111	70	130	3.05	20	

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17186** RunNo: **17186**
Prep Date: **2/5/2014** Analysis Date: **3/7/2014** SeqNo: **494522** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17186** RunNo: **17186**
Prep Date: Analysis Date: **3/7/2014** SeqNo: **494523** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	48	1.0	50.00	0	95.5	85	115			
Silver	0.10	0.0050	0.1000	0	101	85	115			
Sodium	49	1.0	50.00	0	98.3	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403198**
24-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1 -2014 Groundwater Sampling

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17234** RunNo: **17234**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496101** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	101	85	115			

Sample ID **1403198-010BMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **STP-1 to EP-2** Batch ID: **R17234** RunNo: **17234**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496167** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.095	0.0050	0.1000	0	95.0	70	130			

Sample ID **1403198-010BMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **STP-1 to EP-2** Batch ID: **R17234** RunNo: **17234**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496171** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.096	0.0050	0.1000	0	95.6	70	130	0.577	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403198**
24-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1 -2014 Groundwater Sampling

Sample ID **MB-12081** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **12081** RunNo: **17220**
Prep Date: **3/7/2014** Analysis Date: **3/10/2014** SeqNo: **495498** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-12081** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **12081** RunNo: **17220**
Prep Date: **3/7/2014** Analysis Date: **3/10/2014** SeqNo: **495499** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	101	85	115			
Cadmium	0.51	0.0020	0.5000	0	103	85	115			
Chromium	0.51	0.0060	0.5000	0	102	85	115			
Copper	0.51	0.0060	0.5000	0	101	85	115			
Iron	0.50	0.020	0.5000	0	100	85	115			
Manganese	0.49	0.0020	0.5000	0	98.9	85	115			
Silver	0.11	0.0050	0.1000	0	106	85	115			
Zinc	0.52	0.010	0.5000	0	104	85	115			

Sample ID **MB-12082** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **12082** RunNo: **17220**
Prep Date: **3/7/2014** Analysis Date: **3/10/2014** SeqNo: **495500** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403198**
24-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1 -2014 Groundwater Sampling

Sample ID **LCS-12082** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **12082** RunNo: **17220**
Prep Date: **3/7/2014** Analysis Date: **3/10/2014** SeqNo: **495501** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	101	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Copper	0.50	0.0060	0.5000	0	100	85	115			
Iron	0.50	0.020	0.5000	0	99.6	85	115			
Manganese	0.49	0.0020	0.5000	0	98.2	85	115			
Silver	0.11	0.0050	0.1000	0	105	85	115			
Zinc	0.51	0.010	0.5000	0	102	85	115			

Sample ID **1403198-005GMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **EP-8** Batch ID: **12081** RunNo: **17256**
Prep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **496978** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.65	0.010	0.5000	0.1218	106	70	130			
Cadmium	0.56	0.010	0.5000	0	112	70	130			
Chromium	0.51	0.030	0.5000	0.02275	96.5	70	130			
Copper	0.52	0.030	0.5000	0	103	70	130			
Iron	0.89	0.10	0.5000	0.2802	121	70	130			
Manganese	2.8	0.010	0.5000	2.230	108	70	130			

Sample ID **1403198-005GMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **EP-8** Batch ID: **12081** RunNo: **17256**
Prep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **496979** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.60	0.010	0.5000	0.1218	95.0	70	130	8.78	20	
Cadmium	0.51	0.010	0.5000	0	103	70	130	8.46	20	
Chromium	0.46	0.030	0.5000	0.02275	86.7	70	130	10.3	20	
Copper	0.48	0.030	0.5000	0	95.8	70	130	7.60	20	
Iron	0.79	0.10	0.5000	0.2802	101	70	130	11.9	20	
Manganese	2.6	0.010	0.5000	2.230	67.5	70	130	7.50	20	S

Sample ID **1403198-006GMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **EP-9** Batch ID: **12082** RunNo: **17256**
Prep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **496982** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.71	0.010	0.5000	0.1793	106	70	130			
Cadmium	0.54	0.010	0.5000	0	109	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403198**
24-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1 -2014 Groundwater Sampling

Sample ID **1403198-006GMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **EP-9** Batch ID: **12082** RunNo: **17256**
Prep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **496982** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.50	0.030	0.5000	0.01995	96.4	70	130			
Copper	0.54	0.030	0.5000	0	108	70	130			
Iron	0.82	0.10	0.5000	0.2555	113	70	130			

Sample ID **1403198-006GMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **EP-9** Batch ID: **12082** RunNo: **17256**
Prep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **496983** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.70	0.010	0.5000	0.1793	105	70	130	0.766	20	
Cadmium	0.54	0.010	0.5000	0	108	70	130	0.990	20	
Chromium	0.50	0.030	0.5000	0.01995	95.7	70	130	0.700	20	
Copper	0.54	0.030	0.5000	0	107	70	130	0.928	20	
Iron	0.82	0.10	0.5000	0.2555	114	70	130	0.225	20	

Sample ID **1403198-005GMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **EP-8** Batch ID: **12081** RunNo: **17256**
Prep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **497043** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.54	0.050	0.5000	0.03110	103	70	130			

Sample ID **1403198-005GMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **EP-8** Batch ID: **12081** RunNo: **17256**
Prep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **497044** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.51	0.050	0.5000	0.03110	95.7	70	130	6.64	20	

Sample ID **1403198-006GMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **EP-9** Batch ID: **12082** RunNo: **17256**
Prep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **497046** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.51	0.050	0.5000	0.02245	96.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403198**
24-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1 -2014 Groundwater Sampling

Sample ID **1403198-006GMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **EP-9** Batch ID: **12082** RunNo: **17256**
Prep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **497047** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.50	0.050	0.5000	0.02245	96.0	70	130	0.754	20	

Sample ID **1403198-005GMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **EP-8** Batch ID: **12081** RunNo: **17408**
Prep Date: **3/7/2014** Analysis Date: **3/18/2014** SeqNo: **501377** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.13	0.025	0.1000	0	127	70	130			

Sample ID **1403198-005GMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **EP-8** Batch ID: **12081** RunNo: **17408**
Prep Date: **3/7/2014** Analysis Date: **3/18/2014** SeqNo: **501378** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.12	0.025	0.1000	0	122	70	130	4.00	20	

Sample ID **1403198-006GMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **EP-9** Batch ID: **12082** RunNo: **17408**
Prep Date: **3/7/2014** Analysis Date: **3/18/2014** SeqNo: **501384** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.12	0.025	0.1000	0	125	70	130			

Sample ID **1403198-006GMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **EP-9** Batch ID: **12082** RunNo: **17408**
Prep Date: **3/7/2014** Analysis Date: **3/18/2014** SeqNo: **501392** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.12	0.025	0.1000	0	120	70	130	4.04	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403198**
24-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1 -2014 Groundwater Sampling

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17281** RunNo: **17281**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **497670** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.5	85	115			
Lead	0.025	0.0010	0.02500	0	98.0	85	115			
Selenium	0.024	0.0010	0.02500	0	96.2	85	115			
Uranium	0.025	0.0010	0.02500	0	98.4	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17281** RunNo: **17281**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **497671** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17281** RunNo: **17281**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498009** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.1	85	115			
Lead	0.025	0.0010	0.02500	0	98.1	85	115			
Selenium	0.024	0.0010	0.02500	0	94.7	85	115			
Uranium	0.024	0.0010	0.02500	0	96.4	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17281** RunNo: **17281**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498010** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403198**
24-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1 -2014 Groundwater Sampling

Sample ID **LLLCS-12081** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **12081** RunNo: **17259**
Prep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **497153** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.7	85	115			
Lead	0.024	0.0010	0.02500	0	97.1	85	115			
Selenium	0.023	0.0010	0.02500	0	92.3	85	115			
Uranium	0.025	0.0010	0.02500	0	99.5	85	115			

Sample ID **LLLCS-12082** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **12082** RunNo: **17259**
Prep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **497154** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.025	0.0010	0.02500	0	99.7	85	115			B
Uranium	0.024	0.0010	0.02500	0	97.5	85	115			B

Sample ID **LLLCS-12082** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **12082** RunNo: **17259**
Prep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **497155** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.3	85	115			
Selenium	0.022	0.0010	0.02500	0	89.1	85	115			

Sample ID **MB-12081** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **12081** RunNo: **17259**
Prep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **497157** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB-12082** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **12082** RunNo: **17259**
Prep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **497158** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403198**
24-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1 -2014 Groundwater Sampling

Sample ID	**MB-12082**	SampType:	**MBLK**		TestCode:	**200.8 ICPMS Metals:Total**					
Client ID:	**PBW**	Batch ID:	**12082**		RunNo:	**17259**					
Prep Date:	**3/7/2014**	Analysis Date:	**3/12/2014**		SeqNo:	**497159**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		ND	0.0010								
Selenium		ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403198**
24-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1 -2014 Groundwater Sampling

Sample ID **MB-12063** SampType: **MBLK** TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW** Batch ID: **12063** RunNo: **17150**
Prep Date: **3/6/2014** Analysis Date: **3/6/2014** SeqNo: **493661** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID **LCS-12063** SampType: **LCS** TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW** Batch ID: **12063** RunNo: **17150**
Prep Date: **3/6/2014** Analysis Date: **3/6/2014** SeqNo: **493664** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0	102	80	120			

Sample ID **1403198-002GMS** SampType: **MS** TestCode: **EPA Method 245.1: Mercury**
Client ID: **EP-2** Batch ID: **12063** RunNo: **17150**
Prep Date: **3/6/2014** Analysis Date: **3/6/2014** SeqNo: **493681** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.0010	0.005000	0	103	75	125			

Sample ID **1403198-002GMSD** SampType: **MSD** TestCode: **EPA Method 245.1: Mercury**
Client ID: **EP-2** Batch ID: **12063** RunNo: **17150**
Prep Date: **3/6/2014** Analysis Date: **3/6/2014** SeqNo: **493682** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0052	0.0010	0.005000	0	103	75	125	0.550	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403198**
24-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1 -2014 Groundwater Sampling

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R17165** RunNo: **17165**
Prep Date: Analysis Date: **3/6/2014** SeqNo: **493874** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R17165** RunNo: **17165**
Prep Date: Analysis Date: **3/6/2014** SeqNo: **493875** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	101	90	110			
Chloride	4.6	0.50	5.000	0	91.4	90	110			
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	94.5	90	110			
Bromide	2.4	0.10	2.500	0	96.3	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	96.6	90	110			
Phosphorus, Orthophosphate (As P	4.6	0.50	5.000	0	92.8	90	110			
Sulfate	9.2	0.50	10.00	0	92.1	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R17244** RunNo: **17244**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496579** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS-b** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R17244** RunNo: **17244**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496581** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.6	90	110			
Sulfate	9.5	0.50	10.00	0	94.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403198**
24-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1 -2014 Groundwater Sampling

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**			
Client ID: **PBW**	Batch ID: **R17244**	RunNo: **17244**			
Prep Date:	Analysis Date: **3/11/2014**	SeqNo: **496606**	Units: **mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**			
Client ID: **LCSW**	Batch ID: **R17244**	RunNo: **17244**			
Prep Date:	Analysis Date: **3/11/2014**	SeqNo: **496607**	Units: **mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	95.0	90	110			
Sulfate	9.5	0.50	10.00	0	95.5	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403198**
24-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1 -2014 Groundwater Sampling

Sample ID **5ml-rb2**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R17223**	RunNo: **17223**			
Prep Date:	Analysis Date: **3/10/2014**	SeqNo: **495688**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403198**
24-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1 -2014 Groundwater Sampling

Sample ID **5ml-rb2** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R17223** RunNo: **17223**
Prep Date: Analysis Date: **3/10/2014** SeqNo: **495688** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.7	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		86.7	70	130			
Surr: Dibromofluoromethane	8.4		10.00		83.6	70	130			
Surr: Toluene-d8	9.3		10.00		92.8	70	130			

Sample ID **lcs2** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R17223** RunNo: **17223**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **495690** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	24	1.0	20.00	0	121	70	130			
Toluene	21	1.0	20.00	0	106	80	120			
Chlorobenzene	20	1.0	20.00	0	102	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403198**
24-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1 -2014 Groundwater Sampling

Sample ID **lcs2** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R17223** RunNo: **17223**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **495690** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	23	1.0	20.00	0	117	90	143			
Trichloroethene (TCE)	23	1.0	20.00	0	115	70	130			
Surr: 1,2-Dichloroethane-d4	9.2		10.00		91.8	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		91.6	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.2	70	130			
Surr: Toluene-d8	9.0		10.00		89.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403198**
24-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1 -2014 Groundwater Sampling

Sample ID **MB-12139**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **12139**	RunNo: **17268**			
Prep Date: **3/12/2014**	Analysis Date: **3/12/2014**	SeqNo: **497414**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403198**
24-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1 -2014 Groundwater Sampling

Sample ID	**MB-12139**	SampType:	**MBLK**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**PBW**	Batch ID:	**12139**	RunNo:	**17268**
Prep Date:	**3/12/2014**	Analysis Date:	**3/12/2014**	SeqNo:	**497414** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	140		200.0		70.8	22.7	98			
Surr: Phenol-d5	100		200.0		50.6	23.4	74.9			
Surr: 2,4,6-Tribromophenol	210		200.0		104	23.3	111			
Surr: Nitrobenzene-d5	95		100.0		95.2	36.8	111			
Surr: 2-Fluorobiphenyl	87		100.0		87.3	38.3	110			
Surr: 4-Terphenyl-d14	92		100.0		91.7	52.1	116			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403198**
24-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1 -2014 Groundwater Sampling

Sample ID **LCS-12139** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **12139** RunNo: **17268**
Prep Date: **3/12/2014** Analysis Date: **3/12/2014** SeqNo: **497415** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	88	10	100.0	0	88.4	48	101			
4-Chloro-3-methylphenol	160	10	200.0	0	82.4	47.9	109			
2-Chlorophenol	170	10	200.0	0	85.9	40	105			
1,4-Dichlorobenzene	99	10	100.0	0	98.8	40.8	94.3			S
2,4-Dinitrotoluene	78	10	100.0	0	77.8	28.3	131			
N-Nitrosodi-n-propylamine	110	10	100.0	0	107	46.2	119			
4-Nitrophenol	93	10	200.0	0	46.6	10.5	67.9			
Pentachlorophenol	130	20	200.0	0	65.3	22.4	81.1			
Phenol	110	10	200.0	0	54.4	21.4	72.9			
Pyrene	78	10	100.0	0	77.8	46.9	109			
1,2,4-Trichlorobenzene	83	10	100.0	0	83.0	43.1	98.4			
Surr: 2-Fluorophenol	140		200.0		71.0	22.7	98			
Surr: Phenol-d5	100		200.0		52.4	23.4	74.9			
Surr: 2,4,6-Tribromophenol	210		200.0		105	23.3	111			
Surr: Nitrobenzene-d5	92		100.0		91.9	36.8	111			
Surr: 2-Fluorobiphenyl	88		100.0		87.7	38.3	110			
Surr: 4-Terphenyl-d14	98		100.0		98.4	52.1	116			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403198**
24-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1 -2014 Groundwater Sampling

Sample ID **MB-12054** SampType: **MBLK** TestCode: **SM5210B: BOD**
Client ID: **PBW** Batch ID: **12054** RunNo: **17265**
Prep Date: **3/6/2014** Analysis Date: **3/11/2014** SeqNo: **497309** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID **MB--12054** SampType: **MBLK** TestCode: **SM5210B: BOD**
Client ID: **PBW** Batch ID: **12054** RunNo: **17265**
Prep Date: **3/6/2014** Analysis Date: **3/11/2014** SeqNo: **497310** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID **LCS-12054** SampType: **LCS** TestCode: **SM5210B: BOD**
Client ID: **LCSW** Batch ID: **12054** RunNo: **17265**
Prep Date: **3/6/2014** Analysis Date: **3/11/2014** SeqNo: **497311** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	230	2.0	198.0	0	117	84.6	115.4			S

Sample ID **LCSD-12054** SampType: **LCSD** TestCode: **SM5210B: BOD**
Client ID: **LCSS02** Batch ID: **12054** RunNo: **17265**
Prep Date: **3/6/2014** Analysis Date: **3/11/2014** SeqNo: **497312** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	220	2.0	198.0	0	113	84.6	115.4	3.50	21	

Sample ID **MB-12055** SampType: **MBLK** TestCode: **SM5210B: BOD**
Client ID: **PBW** Batch ID: **12055** RunNo: **17269**
Prep Date: **3/6/2014** Analysis Date: **3/11/2014** SeqNo: **497439** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID **MB--12055** SampType: **MBLK** TestCode: **SM5210B: BOD**
Client ID: **PBW** Batch ID: **12055** RunNo: **17269**
Prep Date: **3/6/2014** Analysis Date: **3/11/2014** SeqNo: **497440** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403198**
24-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1 -2014 Groundwater Sampling

Sample ID **LCS-12055** SampType: **LCS** TestCode: **SM5210B: BOD**
Client ID: **LCSW** Batch ID: **12055** RunNo: **17269**
Prep Date: **3/6/2014** Analysis Date: **3/11/2014** SeqNo: **497441** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	220	2.0	198.0	0	112	84.6	115.4			

Sample ID **LCSD-12055** SampType: **LCSD** TestCode: **SM5210B: BOD**
Client ID: **LCSS02** Batch ID: **12055** RunNo: **17269**
Prep Date: **3/6/2014** Analysis Date: **3/11/2014** SeqNo: **497442** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	210	2.0	198.0	0	107	84.6	115.4	4.61	21	

Sample ID **MB-12083** SampType: **MBLK** TestCode: **SM5210B: BOD**
Client ID: **PBW** Batch ID: **12083** RunNo: **17292**
Prep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **498191** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID **MB--12083** SampType: **MBLK** TestCode: **SM5210B: BOD**
Client ID: **PBW** Batch ID: **12083** RunNo: **17292**
Prep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **498192** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID **LCS-12083** SampType: **LCS** TestCode: **SM5210B: BOD**
Client ID: **LCSW** Batch ID: **12083** RunNo: **17292**
Prep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **498193** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	230	2.0	198.0	0	114	84.6	115.4			

Sample ID **LCSD-12083** SampType: **LCSD** TestCode: **SM5210B: BOD**
Client ID: **LCSS02** Batch ID: **12083** RunNo: **17292**
Prep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **498194** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	230	2.0	198.0	0	114	84.6	115.4	0.222	21	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403198**
24-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1 -2014 Groundwater Sampling

Sample ID	**MB-12046**	SampType:	**MBLK**	TestCode:	**SM 9223B Fecal Indicator: E. coli MPN**
Client ID:	**PBW**	Batch ID:	**12046**	RunNo:	**17205**
Prep Date:	**3/5/2014**	Analysis Date:	**3/6/2014**	SeqNo:	**495088** Units: **CFU/100ml**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
E. Coli	<1	1.000								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403198**
24-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1 -2014 Groundwater Sampling

Sample ID	**1403198-002e dup**	SampType:	**dup**	TestCode:	**SM2510B: Specific Conductance**
Client ID:	**EP-2**	Batch ID:	**R17167**	RunNo:	**17167**
Prep Date:		Analysis Date:	**3/6/2014**	SeqNo:	**493946** Units: **µmhos/cm**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	7600	0.010						0.290	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403198**
24-Mar-14

Client: Western Refining Southwest, Gallup
Project: Q1 -2014 Groundwater Sampling

Sample ID	**1403198-002e dup**	SampType:	**dup**	TestCode:	**SM4500-H+B: pH**
Client ID:	**EP-2**	Batch ID:	**R17167**	RunNo:	**17167**
Prep Date:		Analysis Date:	**3/6/2014**	SeqNo:	**493976** Units: **pH units**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	7.87	1.68								H

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Western Refining Gallup** Work Order Number: **1403198** RcptNo: **1**

Received by/date: LM 03/05/14

Logged By: **Anne Thorne** 3/5/2014 3:40:00 PM Anne Thorne

Completed By: **Anne Thorne** 3/5/2014 Anne Thorne

Reviewed By: JB/mg 03/06/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? ~~Yes ☑~~ No ☑
9. Was preservative added to bottles? Yes ☑ ~~No ☑~~ NA ☐

FOR METALS ANALYSIS: ADDED 1mL HNO3 (00026, -0016 -002C) FOR ACCEPTABLE pH. HELD IN LOGIN FOR 24 HOURS AFTER PRESERVATION 03/06/14 @1115

10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH:	39
(<2 or >12 unless noted)	
Adjusted?	YES
Checked by:	

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Yes			

Chain-of-Custody Record

Client: Western Refining

Mailing Address: Rt 3 Box 7
Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-722-0210

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other

☐ EDD (Type) Trihydro format

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: Q1-2014 Groundwater Sampling

Project #: Quarterly Sampling

Project Manager: Cheryl Johnson

Sampler: Tom Heenes | Pak Sanders

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.3

www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1403198	8270+Phenols	WQCC Metals (Total and Dissolved)	BOD/COD	[illegible]	[illegible]	[illegible]	[illegible]							Air Bubbles (Y or N)
3/5/14			~~BW to EP-2~~ HW								~~x~~	~~x~~	HW							
3/5/14	0910	H_2O	EP-1	12	HCl, H_2SO_4, HNO_3, +un	-001	x	x	x	x	x	x	x	x						
3/5/14	10:20	H_2O	EP-2	11	" "	-002	x	x	x	x	x	x	x	x						
			HW ~~EP-3~~				~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	HW					
			HW ~~EP-4~~				~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	HW					
			HW ~~EP-5~~				~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	HW					
3/5/14	13:25	H_2O	EP-6	11	" "	-003	x	x	x	x	x	x	x	x						
3/5/14	12:35	H_2O	EP-7	11	" "	-004	x	x	x	x	x	x	x	x						
3/5/14	12:15	H_2O	EP-8	11	" "	-005	x	x	x	x	x	x	x	x						
3/5/14	12:55	H_2O	EP-9	11	" "	-006	x	x	x	x	x	x	x	x						
3/5/14	11:50	H_2O	EP-11	11	" "	-007	x	x	x	x	x	x	x	x						
3/5/14	11:25	H_2O	EP-12A	11	" "	-008	x	x	x	x	x	x	x	x						
3/5/14	1100	H_2O	EP-12B	11	" "	-009	x	x	x	x	x	x	x	x						
3/5/14	0940	H_2O	STP-1 to EP-2	11	HCl, H_2SO_4, HNO_3, +un	-010			x	x				x						
3/5/14	0855	H_2O	FB-Group#7-20140305	3	HCl	-011	x													

Date:	Time:	Relinquished by:	Received by:	Date	Time
3/5/14	1346	[signature]	[signature]	3-5-14	1346
3-5-14	340	[signature]	[signature]	03/05/14	1540

Remarks:
Page 1 of 2
- TDS on separate COC
- 1 extra bottle for 8270+Phenols for internal QC

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: Western Refining

Mailing Address: Rt 3 Box 7
Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-722-0210

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other
☐ EDD (Type) Trihydro format

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: Q1-2014 Groundwater Sampling

Project #: Quarterly Sampling

Project Manager: Cheryl Johnson

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.3

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 14 03198	8260B - MTBE		8015B (DRO/GRO)	WQCC Metals (Total and Dissolved)	8270 4-Phenols		BOD and COD	Cations, anions, alkalinity, pH			Nitrates	Cyanide				Air Bubbles (Y or N)
3/5/14	0850	H_2O	EB-#1-20140305	3	HCl	-012	X															
Lab		H_2O	TB	12	HCl	-013	X															

Date:	Time:	Relinquished by:	Received by:	Date	Time
3/5/14	1326	Hoy Walt		4-5-14	1326
3-5-14	340			03/05/14	1540

Remarks:
Page 2 of 2
*1 TB per cooler

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 25, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: Q1-2014 Groundwater Sampling OrderNo.: 1403217

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 5 sample(s) on 3/6/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: **1403217**
Date: **3/25/2014**

CLIENT: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Method 8270:
Sample #1403217-001 was extracted and analyzed with poor phenol surrogate recoveries. The sample was re-extracted and reanalyzed outside of the 7 day holding time period. Surrogate recoveries were acceptable in the re-extraction. The hit for phenol was higher in the re-extraction (716ug) versus the original analysis (260ug).

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-5
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/5/2014 2:25:00 PM
Lab ID: 1403217-001
Matrix: AQUEOUS
Received Date: 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	12	1.0	*	mg/L	10	3/7/2014 1:52:45 AM	R17173
Chloride	5200	250		mg/L	500	3/12/2014 2:57:28 AM	R17244
Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	3/7/2014 1:52:45 AM	R17173
Bromide	2.8	1.0		mg/L	10	3/7/2014 1:52:45 AM	R17173
Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	3/7/2014 1:52:45 AM	R17173
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	3/7/2014 1:52:45 AM	R17173
Sulfate	740	50		mg/L	100	3/7/2014 2:05:09 AM	R17173
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.10	0.010		mg/L	5	3/6/2014 3:54:07 PM	R17148
Cadmium	ND	0.010		mg/L	5	3/6/2014 3:54:07 PM	R17148
Calcium	350	50		mg/L	50	3/6/2014 4:00:17 PM	R17148
Chromium	ND	0.030		mg/L	5	3/6/2014 3:54:07 PM	R17148
Copper	ND	0.030		mg/L	5	3/6/2014 3:54:07 PM	R17148
Iron	0.46	0.10	*	mg/L	5	3/6/2014 3:54:07 PM	R17148
Magnesium	99	5.0		mg/L	5	3/6/2014 3:54:07 PM	R17148
Manganese	0.55	0.010	*	mg/L	5	3/6/2014 3:54:07 PM	R17148
Potassium	180	5.0		mg/L	5	3/6/2014 3:54:07 PM	R17148
Silver	ND	0.025		mg/L	5	3/11/2014 2:58:21 PM	R17234
Sodium	3300	50		mg/L	50	3/7/2014 3:47:34 PM	R17186
Zinc	ND	0.050		mg/L	5	3/6/2014 3:54:07 PM	R17148
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.12	0.010		mg/L	5	3/12/2014 2:12:39 PM	12082
Cadmium	ND	0.010		mg/L	5	3/12/2014 2:12:39 PM	12082
Chromium	ND	0.030		mg/L	5	3/12/2014 2:12:39 PM	12082
Copper	ND	0.030		mg/L	5	3/12/2014 2:12:39 PM	12082
Iron	0.60	0.10	*	mg/L	5	3/12/2014 2:12:39 PM	12082
Manganese	0.55	0.010	*	mg/L	5	3/12/2014 2:12:39 PM	12082
Silver	ND	0.025		mg/L	5	3/12/2014 2:12:39 PM	12082
Zinc	ND	0.050		mg/L	5	3/12/2014 3:52:42 PM	12082
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.012	0.010	*	mg/L	10	3/13/2014 3:27:59 PM	R17281
Lead	ND	0.010		mg/L	10	3/13/2014 3:27:59 PM	R17281
Selenium	0.021	0.010		mg/L	10	3/13/2014 3:27:59 PM	R17281
Uranium	ND	0.010		mg/L	10	3/13/2014 3:27:59 PM	R17281
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.015	0.010	*	mg/L	10	3/14/2014 4:15:18 PM	12082
Lead	ND	0.010		mg/L	10	3/14/2014 4:15:18 PM	12082

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling
Lab ID: 1403217-001 **Matrix:** AQUEOUS

Client Sample ID: EP-5
Collection Date: 3/5/2014 2:25:00 PM
Received Date: 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Selenium	0.016	0.010		mg/L	10	3/14/2014 4:15:18 PM	12082
Uranium	ND	0.010		mg/L	10	3/14/2014 4:15:18 PM	12082
EPA METHOD 245.1: MERCURY						Analyst:	**JML**
Mercury	ND	0.00020		mg/L	1	3/11/2014 12:14:43 PM	12102
SM5210B: BOD						Analyst:	**SMS**
Biochemical Oxygen Demand	>69.15	2.0	E	mg/L	1	3/12/2014 3:12:00 PM	12083
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst:	**ECH**
E. Coli	<1	1.000	H	CFU/100ml	1	3/7/2014 2:40:00 PM	12058
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Acenaphthylene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Aniline	23	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Anthracene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Azobenzene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Benz(a)anthracene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Benzo(a)pyrene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Benzo(b)fluoranthene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Benzo(g,h,i)perylene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Benzo(k)fluoranthene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Benzoic acid	ND	20		µg/L	1	3/12/2014 8:15:50 PM	12139
Benzyl alcohol	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Bis(2-chloroethyl)ether	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
4-Bromophenyl phenyl ether	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Butyl benzyl phthalate	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Carbazole	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
4-Chloro-3-methylphenol	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
4-Chloroaniline	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
2-Chloronaphthalene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
2-Chlorophenol	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Chrysene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Di-n-butyl phthalate	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Di-n-octyl phthalate	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Dibenz(a,h)anthracene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-5
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/5/2014 2:25:00 PM
Lab ID: 1403217-001
Matrix: AQUEOUS
Received Date: 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenzofuran	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
1,2-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
1,3-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
1,4-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
3,3´-Dichlorobenzidine	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Diethyl phthalate	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Dimethyl phthalate	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
2,4-Dichlorophenol	ND	20		µg/L	1	3/12/2014 8:15:50 PM	12139
2,4-Dimethylphenol	18	10		µg/L	1	3/12/2014 8:15:50 PM	12139
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	3/12/2014 8:15:50 PM	12139
2,4-Dinitrophenol	ND	20		µg/L	1	3/12/2014 8:15:50 PM	12139
2,4-Dinitrotoluene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
2,6-Dinitrotoluene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Fluoranthene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Fluorene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Hexachlorobenzene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Hexachlorobutadiene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Hexachlorocyclopentadiene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Hexachloroethane	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Isophorone	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
1-Methylnaphthalene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
2-Methylnaphthalene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
2-Methylphenol	82	10		µg/L	1	3/12/2014 8:15:50 PM	12139
3+4-Methylphenol	200	20		µg/L	2	3/13/2014 1:49:11 PM	12139
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
N-Nitrosodimethylamine	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
N-Nitrosodiphenylamine	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Naphthalene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
2-Nitroaniline	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
3-Nitroaniline	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
4-Nitroaniline	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Nitrobenzene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
2-Nitrophenol	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
4-Nitrophenol	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Pentachlorophenol	ND	20		µg/L	1	3/12/2014 8:15:50 PM	12139
Phenanthrene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Phenol	260	20		µg/L	2	3/13/2014 1:49:11 PM	12139
Pyrene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling
Lab ID: 1403217-001 **Matrix:** AQUEOUS

Client Sample ID: EP-5
Collection Date: 3/5/2014 2:25:00 PM
Received Date: 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyridine	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
1,2,4-Trichlorobenzene	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
2,4,5-Trichlorophenol	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
2,4,6-Trichlorophenol	ND	10		µg/L	1	3/12/2014 8:15:50 PM	12139
Surr: 2-Fluorophenol	5.63	22.7-98	S	%REC	1	3/12/2014 8:15:50 PM	12139
Surr: Phenol-d5	19.4	23.4-74.9	S	%REC	1	3/12/2014 8:15:50 PM	12139
Surr: 2,4,6-Tribromophenol	11.1	23.3-111	S	%REC	1	3/12/2014 8:15:50 PM	12139
Surr: Nitrobenzene-d5	89.7	36.8-111		%REC	1	3/12/2014 8:15:50 PM	12139
Surr: 2-Fluorobiphenyl	74.7	38.3-110		%REC	1	3/12/2014 8:15:50 PM	12139
Surr: 4-Terphenyl-d14	76.3	52.1-116		%REC	1	3/12/2014 8:15:50 PM	12139
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Toluene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Ethylbenzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,2,4-Trimethylbenzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,3,5-Trimethylbenzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Naphthalene	ND	20		µg/L	10	3/11/2014 4:17:15 AM	R17213
1-Methylnaphthalene	ND	40		µg/L	10	3/11/2014 4:17:15 AM	R17213
2-Methylnaphthalene	ND	40		µg/L	10	3/11/2014 4:17:15 AM	R17213
Acetone	280	100		µg/L	10	3/11/2014 4:17:15 AM	R17213
Bromobenzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Bromodichloromethane	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Bromoform	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Bromomethane	ND	30		µg/L	10	3/11/2014 4:17:15 AM	R17213
2-Butanone	ND	100		µg/L	10	3/11/2014 4:17:15 AM	R17213
Carbon disulfide	120	100		µg/L	10	3/11/2014 4:17:15 AM	R17213
Carbon Tetrachloride	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Chlorobenzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Chloroethane	ND	20		µg/L	10	3/11/2014 4:17:15 AM	R17213
Chloroform	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Chloromethane	ND	30		µg/L	10	3/11/2014 4:17:15 AM	R17213
2-Chlorotoluene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
4-Chlorotoluene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
cis-1,2-DCE	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
cis-1,3-Dichloropropene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	3/11/2014 4:17:15 AM	R17213

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling
Lab ID: 1403217-001 **Matrix:** AQUEOUS

Client Sample ID: EP-5
Collection Date: 3/5/2014 2:25:00 PM
Received Date: 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Dibromochloromethane	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Dibromomethane	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,2-Dichlorobenzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,3-Dichlorobenzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,4-Dichlorobenzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Dichlorodifluoromethane	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,1-Dichloroethane	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,1-Dichloroethene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,2-Dichloropropane	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,3-Dichloropropane	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
2,2-Dichloropropane	ND	20		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,1-Dichloropropene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Hexachlorobutadiene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
2-Hexanone	ND	100		µg/L	10	3/11/2014 4:17:15 AM	R17213
Isopropylbenzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
4-Isopropyltoluene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
4-Methyl-2-pentanone	ND	100		µg/L	10	3/11/2014 4:17:15 AM	R17213
Methylene Chloride	ND	30		µg/L	10	3/11/2014 4:17:15 AM	R17213
n-Butylbenzene	ND	30		µg/L	10	3/11/2014 4:17:15 AM	R17213
n-Propylbenzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
sec-Butylbenzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Styrene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
tert-Butylbenzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	3/11/2014 4:17:15 AM	R17213
Tetrachloroethene (PCE)	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
trans-1,2-DCE	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
trans-1,3-Dichloropropene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,2,3-Trichlorobenzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,2,4-Trichlorobenzene	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,1,1-Trichloroethane	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,1,2-Trichloroethane	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Trichloroethene (TCE)	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Trichlorofluoromethane	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
1,2,3-Trichloropropane	ND	20		µg/L	10	3/11/2014 4:17:15 AM	R17213
Vinyl chloride	ND	10		µg/L	10	3/11/2014 4:17:15 AM	R17213
Xylenes, Total	ND	15		µg/L	10	3/11/2014 4:17:15 AM	R17213
Surr: 1,2-Dichloroethane-d4	102	70-130		%REC	10	3/11/2014 4:17:15 AM	R17213
Surr: 4-Bromofluorobenzene	102	70-130		%REC	10	3/11/2014 4:17:15 AM	R17213

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-5
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/5/2014 2:25:00 PM
Lab ID: 1403217-001
Matrix: AQUEOUS
Received Date: 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Surr: Dibromofluoromethane	107	70-130		%REC	10	3/11/2014 4:17:15 AM	R17213
Surr: Toluene-d8	96.7	70-130		%REC	10	3/11/2014 4:17:15 AM	R17213
EPA METHOD 410.4: COD						Analyst:	**SUB**
Chemical Oxygen Demand	1000	20		mg/L	2	3/11/2014	R17540
SM2510B: SPECIFIC CONDUCTANCE						Analyst:	**JML**
Conductivity	16000	0.025		µmhos/cm	2.5	3/6/2014 6:26:10 PM	R17167
SM4500-H+B: PH						Analyst:	**JML**
pH	7.83	1.68	H	pH units	1	3/6/2014 1:53:26 PM	R17167

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-4
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/5/2014 2:50:00 PM
Lab ID: 1403217-002 **Matrix:** AQUEOUS **Received Date:** 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	18	1.0	*	mg/L	10	3/7/2014 2:17:34 AM	R17173
Chloride	4300	250		mg/L	500	3/12/2014 3:09:52 AM	R17244
Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	3/7/2014 2:17:34 AM	R17173
Bromide	3.1	1.0		mg/L	10	3/7/2014 2:17:34 AM	R17173
Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	3/7/2014 2:17:34 AM	R17173
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	3/7/2014 2:17:34 AM	R17173
Sulfate	650	50		mg/L	100	3/7/2014 2:30:00 AM	R17173
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.13	0.0020		mg/L	1	3/6/2014 4:01:59 PM	R17148
Cadmium	ND	0.0020		mg/L	1	3/6/2014 4:01:59 PM	R17148
Calcium	310	5.0		mg/L	5	3/6/2014 4:04:03 PM	R17148
Chromium	0.012	0.0060		mg/L	1	3/6/2014 4:01:59 PM	R17148
Copper	ND	0.0060		mg/L	1	3/6/2014 4:01:59 PM	R17148
Iron	0.58	0.020	*	mg/L	1	3/6/2014 4:01:59 PM	R17148
Magnesium	84	1.0		mg/L	1	3/6/2014 4:01:59 PM	R17148
Manganese	0.43	0.0020	*	mg/L	1	3/6/2014 4:01:59 PM	R17148
Potassium	170	5.0		mg/L	5	3/6/2014 4:04:03 PM	R17148
Silver	ND	0.0050		mg/L	1	3/11/2014 3:04:41 PM	R17234
Sodium	2800	50		mg/L	50	3/7/2014 4:00:32 PM	R17186
Zinc	ND	0.010		mg/L	1	3/6/2014 4:01:59 PM	R17148
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.14	0.010		mg/L	5	3/12/2014 2:29:21 PM	12082
Cadmium	ND	0.010		mg/L	5	3/12/2014 2:29:21 PM	12082
Chromium	ND	0.030		mg/L	5	3/12/2014 2:29:21 PM	12082
Copper	ND	0.030		mg/L	5	3/12/2014 2:29:21 PM	12082
Iron	0.99	0.10	*	mg/L	5	3/12/2014 2:29:21 PM	12082
Manganese	0.43	0.010	*	mg/L	5	3/12/2014 2:29:21 PM	12082
Silver	ND	0.025		mg/L	5	3/12/2014 2:29:21 PM	12082
Zinc	ND	0.050		mg/L	5	3/12/2014 3:56:25 PM	12082
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	3/13/2014 3:30:44 PM	R17281
Lead	ND	0.010		mg/L	10	3/13/2014 3:30:44 PM	R17281
Selenium	0.021	0.010		mg/L	10	3/13/2014 3:30:44 PM	R17281
Uranium	ND	0.010		mg/L	10	3/13/2014 3:30:44 PM	R17281
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.012	0.010	*	mg/L	10	3/14/2014 4:18:45 PM	12082
Lead	ND	0.010		mg/L	10	3/14/2014 4:18:45 PM	12082

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-4
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/5/2014 2:50:00 PM
Lab ID: 1403217-002
Matrix: AQUEOUS
Received Date: 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Selenium	0.018	0.010		mg/L	10	3/14/2014 4:18:45 PM	12082
Uranium	ND	0.010		mg/L	10	3/14/2014 4:18:45 PM	12082
EPA METHOD 245.1: MERCURY						Analyst:	**JML**
Mercury	ND	0.00020		mg/L	1	3/11/2014 12:16:29 PM	12102
SM5210B: BOD						Analyst:	**SMS**
Biochemical Oxygen Demand	500	2.0		mg/L	1	3/12/2014 3:12:00 PM	12083
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst:	**ECH**
E. Coli	1.0	1.000	H	CFU/100ml	1	3/7/2014 2:40:00 PM	12058
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Acenaphthylene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Aniline	40	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Anthracene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Azobenzene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Benz(a)anthracene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Benzo(a)pyrene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Benzo(b)fluoranthene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Benzo(g,h,i)perylene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Benzo(k)fluoranthene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Benzoic acid	ND	20		µg/L	1	3/12/2014 5:21:48 PM	12139
Benzyl alcohol	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Bis(2-chloroethyl)ether	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
4-Bromophenyl phenyl ether	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Butyl benzyl phthalate	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Carbazole	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
4-Chloro-3-methylphenol	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
4-Chloroaniline	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
2-Chloronaphthalene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
2-Chlorophenol	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Chrysene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Di-n-butyl phthalate	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Di-n-octyl phthalate	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Dibenz(a,h)anthracene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-4
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/5/2014 2:50:00 PM
Lab ID: 1403217-002
Matrix: AQUEOUS
Received Date: 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Dibenzofuran	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
1,2-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
1,3-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
1,4-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
3,3´-Dichlorobenzidine	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Diethyl phthalate	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Dimethyl phthalate	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
2,4-Dichlorophenol	ND	20		µg/L	1	3/12/2014 5:21:48 PM	12139
2,4-Dimethylphenol	22	10		µg/L	1	3/12/2014 5:21:48 PM	12139
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	3/12/2014 5:21:48 PM	12139
2,4-Dinitrophenol	ND	20		µg/L	1	3/12/2014 5:21:48 PM	12139
2,4-Dinitrotoluene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
2,6-Dinitrotoluene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Fluoranthene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Fluorene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Hexachlorobenzene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Hexachlorobutadiene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Hexachlorocyclopentadiene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Hexachloroethane	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Isophorone	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
1-Methylnaphthalene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
2-Methylnaphthalene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
2-Methylphenol	80	10		µg/L	1	3/12/2014 5:21:48 PM	12139
3+4-Methylphenol	210	50		µg/L	5	3/13/2014 2:18:10 PM	12139
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
N-Nitrosodimethylamine	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
N-Nitrosodiphenylamine	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Naphthalene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
2-Nitroaniline	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
3-Nitroaniline	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
4-Nitroaniline	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Nitrobenzene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
2-Nitrophenol	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
4-Nitrophenol	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Pentachlorophenol	ND	20		µg/L	1	3/12/2014 5:21:48 PM	12139
Phenanthrene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Phenol	420	50		µg/L	5	3/13/2014 2:18:10 PM	12139
Pyrene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-4
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/5/2014 2:50:00 PM
Lab ID: 1403217-002
Matrix: AQUEOUS
Received Date: 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyridine	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
1,2,4-Trichlorobenzene	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
2,4,5-Trichlorophenol	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
2,4,6-Trichlorophenol	ND	10		µg/L	1	3/12/2014 5:21:48 PM	12139
Surr: 2-Fluorophenol	25.5	22.7-98		%REC	1	3/12/2014 5:21:48 PM	12139
Surr: Phenol-d5	31.4	23.4-74.9		%REC	1	3/12/2014 5:21:48 PM	12139
Surr: 2,4,6-Tribromophenol	38.1	23.3-111		%REC	1	3/12/2014 5:21:48 PM	12139
Surr: Nitrobenzene-d5	95.6	36.8-111		%REC	1	3/12/2014 5:21:48 PM	12139
Surr: 2-Fluorobiphenyl	77.9	38.3-110		%REC	1	3/12/2014 5:21:48 PM	12139
Surr: 4-Terphenyl-d14	71.4	52.1-116		%REC	1	3/12/2014 5:21:48 PM	12139
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Toluene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Ethylbenzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,2,4-Trimethylbenzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,3,5-Trimethylbenzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Naphthalene	ND	20		µg/L	10	3/11/2014 4:46:02 AM	R17213
1-Methylnaphthalene	ND	40		µg/L	10	3/11/2014 4:46:02 AM	R17213
2-Methylnaphthalene	ND	40		µg/L	10	3/11/2014 4:46:02 AM	R17213
Acetone	310	100		µg/L	10	3/11/2014 4:46:02 AM	R17213
Bromobenzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Bromodichloromethane	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Bromoform	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Bromomethane	ND	30		µg/L	10	3/11/2014 4:46:02 AM	R17213
2-Butanone	ND	100		µg/L	10	3/11/2014 4:46:02 AM	R17213
Carbon disulfide	150	100		µg/L	10	3/11/2014 4:46:02 AM	R17213
Carbon Tetrachloride	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Chlorobenzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Chloroethane	ND	20		µg/L	10	3/11/2014 4:46:02 AM	R17213
Chloroform	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Chloromethane	ND	30		µg/L	10	3/11/2014 4:46:02 AM	R17213
2-Chlorotoluene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
4-Chlorotoluene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
cis-1,2-DCE	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
cis-1,3-Dichloropropene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	3/11/2014 4:46:02 AM	R17213

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-4
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/5/2014 2:50:00 PM
Lab ID: 1403217-002
Matrix: AQUEOUS
Received Date: 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Dibromochloromethane	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Dibromomethane	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,2-Dichlorobenzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,3-Dichlorobenzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,4-Dichlorobenzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Dichlorodifluoromethane	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,1-Dichloroethane	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,1-Dichloroethene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,2-Dichloropropane	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,3-Dichloropropane	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
2,2-Dichloropropane	ND	20		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,1-Dichloropropene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Hexachlorobutadiene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
2-Hexanone	ND	100		µg/L	10	3/11/2014 4:46:02 AM	R17213
Isopropylbenzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
4-Isopropyltoluene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
4-Methyl-2-pentanone	ND	100		µg/L	10	3/11/2014 4:46:02 AM	R17213
Methylene Chloride	ND	30		µg/L	10	3/11/2014 4:46:02 AM	R17213
n-Butylbenzene	ND	30		µg/L	10	3/11/2014 4:46:02 AM	R17213
n-Propylbenzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
sec-Butylbenzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Styrene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
tert-Butylbenzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	3/11/2014 4:46:02 AM	R17213
Tetrachloroethene (PCE)	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
trans-1,2-DCE	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
trans-1,3-Dichloropropene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,2,3-Trichlorobenzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,2,4-Trichlorobenzene	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,1,1-Trichloroethane	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,1,2-Trichloroethane	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Trichloroethene (TCE)	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Trichlorofluoromethane	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
1,2,3-Trichloropropane	ND	20		µg/L	10	3/11/2014 4:46:02 AM	R17213
Vinyl chloride	ND	10		µg/L	10	3/11/2014 4:46:02 AM	R17213
Xylenes, Total	ND	15		µg/L	10	3/11/2014 4:46:02 AM	R17213
Surr: 1,2-Dichloroethane-d4	104	70-130		%REC	10	3/11/2014 4:46:02 AM	R17213
Surr: 4-Bromofluorobenzene	111	70-130		%REC	10	3/11/2014 4:46:02 AM	R17213

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling
Lab ID: 1403217-002 **Matrix:** AQUEOUS

Client Sample ID: EP-4
Collection Date: 3/5/2014 2:50:00 PM
Received Date: 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Surr: Dibromofluoromethane	105	70-130		%REC	10	3/11/2014 4:46:02 AM	R17213
Surr: Toluene-d8	95.7	70-130		%REC	10	3/11/2014 4:46:02 AM	R17213
EPA METHOD 410.4: COD						Analyst:	**SUB**
Chemical Oxygen Demand	1000	10		mg/L	1	3/10/2014	R17540
SM2510B: SPECIFIC CONDUCTANCE						Analyst:	**JML**
Conductivity	14000	0.025		µmhos/cm	2.5	3/6/2014 6:30:19 PM	R17167
SM4500-H+B: PH						Analyst:	**JML**
pH	7.84	1.68	H	pH units	1	3/6/2014 1:59:18 PM	R17167

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-3
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/5/2014 3:30:00 PM
Lab ID: 1403217-003 **Matrix:** AQUEOUS **Received Date:** 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	23	1.0	*	mg/L	10	3/7/2014 2:42:25 AM	R17173
Chloride	3700	250		mg/L	500	3/12/2014 3:22:16 AM	R17244
Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	3/7/2014 2:42:25 AM	R17173
Bromide	3.2	1.0		mg/L	10	3/7/2014 2:42:25 AM	R17173
Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	3/7/2014 2:42:25 AM	R17173
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	3/7/2014 2:42:25 AM	R17173
Sulfate	670	50		mg/L	100	3/7/2014 2:54:50 AM	R17173
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.13	0.0020		mg/L	1	3/6/2014 4:16:12 PM	R17148
Cadmium	ND	0.0020		mg/L	1	3/6/2014 4:16:12 PM	R17148
Calcium	270	5.0		mg/L	5	3/6/2014 4:18:18 PM	R17148
Chromium	0.013	0.0060		mg/L	1	3/6/2014 4:16:12 PM	R17148
Copper	ND	0.0060		mg/L	1	3/6/2014 4:16:12 PM	R17148
Iron	0.65	0.020	*	mg/L	1	3/6/2014 4:16:12 PM	R17148
Magnesium	73	1.0		mg/L	1	3/6/2014 4:16:12 PM	R17148
Manganese	0.41	0.0020	*	mg/L	1	3/6/2014 4:16:12 PM	R17148
Potassium	170	5.0		mg/L	5	3/6/2014 4:18:18 PM	R17148
Silver	ND	0.0050		mg/L	1	3/11/2014 3:06:39 PM	R17234
Sodium	2400	50		mg/L	50	3/7/2014 4:04:15 PM	R17186
Zinc	ND	0.010		mg/L	1	3/6/2014 4:16:12 PM	R17148
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.15	0.010		mg/L	5	3/12/2014 2:31:14 PM	12082
Cadmium	ND	0.010		mg/L	5	3/12/2014 2:31:14 PM	12082
Chromium	ND	0.030		mg/L	5	3/12/2014 2:31:14 PM	12082
Copper	ND	0.030		mg/L	5	3/12/2014 2:31:14 PM	12082
Iron	1.0	0.10	*	mg/L	5	3/12/2014 2:31:14 PM	12082
Manganese	0.41	0.010	*	mg/L	5	3/12/2014 2:31:14 PM	12082
Silver	ND	0.025		mg/L	5	3/12/2014 2:31:14 PM	12082
Zinc	ND	0.050		mg/L	5	3/12/2014 3:57:36 PM	12082
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	3/13/2014 3:33:29 PM	R17281
Lead	ND	0.010		mg/L	10	3/13/2014 3:33:29 PM	R17281
Selenium	0.021	0.010		mg/L	10	3/13/2014 3:33:29 PM	R17281
Uranium	ND	0.010		mg/L	10	3/13/2014 3:33:29 PM	R17281
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.011	0.010	*	mg/L	10	3/14/2014 4:22:12 PM	12082
Lead	ND	0.010		mg/L	10	3/14/2014 4:22:12 PM	12082

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-3
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/5/2014 3:30:00 PM
Lab ID: 1403217-003
Matrix: AQUEOUS
Received Date: 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Selenium	0.019	0.010		mg/L	10	3/14/2014 4:22:12 PM	12082
Uranium	ND	0.010		mg/L	10	3/14/2014 4:22:12 PM	12082
EPA METHOD 245.1: MERCURY						Analyst:	**JML**
Mercury	ND	0.00020		mg/L	1	3/11/2014 12:18:15 PM	12102
SM5210B: BOD						Analyst:	**SMS**
Biochemical Oxygen Demand	440	2.0		mg/L	1	3/12/2014 3:12:00 PM	12083
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst:	**ECH**
E. Coli	122	10.00	H	CFU/100ml	10	3/7/2014 2:40:00 PM	12058
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Acenaphthylene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Aniline	45	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Anthracene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Azobenzene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Benz(a)anthracene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Benzo(a)pyrene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Benzo(b)fluoranthene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Benzo(g,h,i)perylene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Benzo(k)fluoranthene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Benzoic acid	ND	20		µg/L	1	3/12/2014 3:26:00 PM	12139
Benzyl alcohol	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Bis(2-chloroethyl)ether	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
4-Bromophenyl phenyl ether	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Butyl benzyl phthalate	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Carbazole	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
4-Chloro-3-methylphenol	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
4-Chloroaniline	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
2-Chloronaphthalene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
2-Chlorophenol	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Chrysene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Di-n-butyl phthalate	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Di-n-octyl phthalate	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Dibenz(a,h)anthracene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling
Lab ID: 1403217-003 **Matrix:** AQUEOUS

Client Sample ID: EP-3
Collection Date: 3/5/2014 3:30:00 PM
Received Date: 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenzofuran	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
1,2-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
1,3-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
1,4-Dichlorobenzene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
3,3'-Dichlorobenzidine	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Diethyl phthalate	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Dimethyl phthalate	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
2,4-Dichlorophenol	ND	20		µg/L	1	3/12/2014 3:26:00 PM	12139
2,4-Dimethylphenol	26	10		µg/L	1	3/12/2014 3:26:00 PM	12139
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	3/12/2014 3:26:00 PM	12139
2,4-Dinitrophenol	ND	20		µg/L	1	3/12/2014 3:26:00 PM	12139
2,4-Dinitrotoluene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
2,6-Dinitrotoluene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Fluoranthene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Fluorene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Hexachlorobenzene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Hexachlorobutadiene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Hexachlorocyclopentadiene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Hexachloroethane	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Isophorone	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
1-Methylnaphthalene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
2-Methylnaphthalene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
2-Methylphenol	110	10		µg/L	1	3/12/2014 3:26:00 PM	12139
3+4-Methylphenol	290	100		µg/L	10	3/13/2014 2:47:18 PM	12139
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
N-Nitrosodimethylamine	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
N-Nitrosodiphenylamine	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Naphthalene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
2-Nitroaniline	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
3-Nitroaniline	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
4-Nitroaniline	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Nitrobenzene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
2-Nitrophenol	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
4-Nitrophenol	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Pentachlorophenol	ND	20		µg/L	1	3/12/2014 3:26:00 PM	12139
Phenanthrene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Phenol	790	100		µg/L	10	3/13/2014 2:47:18 PM	12139
Pyrene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling
Lab ID: 1403217-003 **Matrix:** AQUEOUS

Client Sample ID: EP-3
Collection Date: 3/5/2014 3:30:00 PM
Received Date: 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyridine	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
1,2,4-Trichlorobenzene	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
2,4,5-Trichlorophenol	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
2,4,6-Trichlorophenol	ND	10		µg/L	1	3/12/2014 3:26:00 PM	12139
Surr: 2-Fluorophenol	58.3	22.7-98		%REC	1	3/12/2014 3:26:00 PM	12139
Surr: Phenol-d5	54.2	23.4-74.9		%REC	1	3/12/2014 3:26:00 PM	12139
Surr: 2,4,6-Tribromophenol	87.3	23.3-111		%REC	1	3/12/2014 3:26:00 PM	12139
Surr: Nitrobenzene-d5	108	36.8-111		%REC	1	3/12/2014 3:26:00 PM	12139
Surr: 2-Fluorobiphenyl	79.7	38.3-110		%REC	1	3/12/2014 3:26:00 PM	12139
Surr: 4-Terphenyl-d14	84.8	52.1-116		%REC	1	3/12/2014 3:26:00 PM	12139
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Toluene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Ethylbenzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,2,4-Trimethylbenzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,3,5-Trimethylbenzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Naphthalene	ND	20		µg/L	10	3/11/2014 5:14:44 AM	R17213
1-Methylnaphthalene	ND	40		µg/L	10	3/11/2014 5:14:44 AM	R17213
2-Methylnaphthalene	ND	40		µg/L	10	3/11/2014 5:14:44 AM	R17213
Acetone	300	100		µg/L	10	3/11/2014 5:14:44 AM	R17213
Bromobenzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Bromodichloromethane	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Bromoform	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Bromomethane	ND	30		µg/L	10	3/11/2014 5:14:44 AM	R17213
2-Butanone	ND	100		µg/L	10	3/11/2014 5:14:44 AM	R17213
Carbon disulfide	140	100		µg/L	10	3/11/2014 5:14:44 AM	R17213
Carbon Tetrachloride	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Chlorobenzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Chloroethane	ND	20		µg/L	10	3/11/2014 5:14:44 AM	R17213
Chloroform	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Chloromethane	ND	30		µg/L	10	3/11/2014 5:14:44 AM	R17213
2-Chlorotoluene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
4-Chlorotoluene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
cis-1,2-DCE	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
cis-1,3-Dichloropropene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	3/11/2014 5:14:44 AM	R17213

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-3
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/5/2014 3:30:00 PM
Lab ID: 1403217-003 **Matrix:** AQUEOUS **Received Date:** 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Dibromochloromethane	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Dibromomethane	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,2-Dichlorobenzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,3-Dichlorobenzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,4-Dichlorobenzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Dichlorodifluoromethane	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,1-Dichloroethane	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,1-Dichloroethene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,2-Dichloropropane	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,3-Dichloropropane	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
2,2-Dichloropropane	ND	20		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,1-Dichloropropene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Hexachlorobutadiene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
2-Hexanone	ND	100		µg/L	10	3/11/2014 5:14:44 AM	R17213
Isopropylbenzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
4-Isopropyltoluene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
4-Methyl-2-pentanone	ND	100		µg/L	10	3/11/2014 5:14:44 AM	R17213
Methylene Chloride	ND	30		µg/L	10	3/11/2014 5:14:44 AM	R17213
n-Butylbenzene	ND	30		µg/L	10	3/11/2014 5:14:44 AM	R17213
n-Propylbenzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
sec-Butylbenzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Styrene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
tert-Butylbenzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	3/11/2014 5:14:44 AM	R17213
Tetrachloroethene (PCE)	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
trans-1,2-DCE	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
trans-1,3-Dichloropropene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,2,3-Trichlorobenzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,2,4-Trichlorobenzene	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,1,1-Trichloroethane	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,1,2-Trichloroethane	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Trichloroethene (TCE)	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Trichlorofluoromethane	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
1,2,3-Trichloropropane	ND	20		µg/L	10	3/11/2014 5:14:44 AM	R17213
Vinyl chloride	ND	10		µg/L	10	3/11/2014 5:14:44 AM	R17213
Xylenes, Total	ND	15		µg/L	10	3/11/2014 5:14:44 AM	R17213
Surr: 1,2-Dichloroethane-d4	107	70-130		%REC	10	3/11/2014 5:14:44 AM	R17213
Surr: 4-Bromofluorobenzene	104	70-130		%REC	10	3/11/2014 5:14:44 AM	R17213

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-3
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/5/2014 3:30:00 PM
Lab ID: 1403217-003
Matrix: AQUEOUS
Received Date: 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Surr: Dibromofluoromethane	113	70-130		%REC	10	3/11/2014 5:14:44 AM	R17213
Surr: Toluene-d8	98.1	70-130		%REC	10	3/11/2014 5:14:44 AM	R17213
EPA METHOD 410.4: COD						Analyst:	**SUB**
Chemical Oxygen Demand	990	10		mg/L	1	3/10/2014	R17540
SM2510B: SPECIFIC CONDUCTANCE						Analyst:	**JML**
Conductivity	12000	0.025		µmhos/cm	2.5	3/6/2014 6:34:27 PM	R17167
SM4500-H+B: PH						Analyst:	**JML**
pH	7.85	1.68	H	pH units	1	3/6/2014 2:03:47 PM	R17167

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW to EP-2
Project: Q1-2014 Groundwater Sampling
Collection Date: 3/5/2014 3:45:00 PM
Lab ID: 1403217-004
Matrix: AQUEOUS
Received Date: 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	ND	0.10		mg/L	1	3/7/2014 3:32:04 AM	R17173
Chloride	2800	100		mg/L	200	3/12/2014 3:34:41 AM	R17244
Nitrogen, Nitrite (As N)	ND	2.0		mg/L	20	3/7/2014 3:44:28 AM	R17173
Bromide	0.13	0.10		mg/L	1	3/7/2014 3:32:04 AM	R17173
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	3/7/2014 3:32:04 AM	R17173
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	3/7/2014 3:32:04 AM	R17173
Sulfate	870	10		mg/L	20	3/7/2014 3:44:28 AM	R17173
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Calcium	110	5.0		mg/L	5	3/14/2014 2:56:33 PM	R17335
Magnesium	18	1.0		mg/L	1	3/13/2014 1:03:07 PM	R17289
Potassium	22	1.0		mg/L	1	3/13/2014 1:03:07 PM	R17289
Sodium	2300	50		mg/L	50	3/14/2014 2:58:33 PM	R17335

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Trip Blank
Project: Q1-2014 Groundwater Sampling
Collection Date:
Lab ID: 1403217-005
Matrix: AQUEOUS
Received Date: 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst:	cadg
Benzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Toluene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Ethylbenzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Naphthalene	ND	2.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1-Methylnaphthalene	ND	4.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
2-Methylnaphthalene	ND	4.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Acetone	ND	10		µg/L	1	3/11/2014 5:43:26 AM	R17213
Bromobenzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Bromodichloromethane	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Bromoform	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Bromomethane	ND	3.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
2-Butanone	ND	10		µg/L	1	3/11/2014 5:43:26 AM	R17213
Carbon disulfide	ND	10		µg/L	1	3/11/2014 5:43:26 AM	R17213
Carbon Tetrachloride	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Chlorobenzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Chloroethane	ND	2.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Chloroform	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Chloromethane	ND	3.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
2-Chlorotoluene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
4-Chlorotoluene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
cis-1,2-DCE	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Dibromochloromethane	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Dibromomethane	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,1-Dichloroethane	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,1-Dichloroethene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,2-Dichloropropane	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,3-Dichloropropane	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
2,2-Dichloropropane	ND	2.0		µg/L	1	3/11/2014 5:43:26 AM	R17213

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Trip Blank
Project: Q1-2014 Groundwater Sampling
Collection Date:
Lab ID: 1403217-005 **Matrix:** AQUEOUS **Received Date:** 3/6/2014 9:12:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,1-Dichloropropene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Hexachlorobutadiene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
2-Hexanone	ND	10		µg/L	1	3/11/2014 5:43:26 AM	R17213
Isopropylbenzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
4-Isopropyltoluene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
4-Methyl-2-pentanone	ND	10		µg/L	1	3/11/2014 5:43:26 AM	R17213
Methylene Chloride	ND	3.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
n-Butylbenzene	ND	3.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
n-Propylbenzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
sec-Butylbenzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Styrene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
tert-Butylbenzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
trans-1,2-DCE	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Trichlorofluoromethane	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Vinyl chloride	ND	1.0		µg/L	1	3/11/2014 5:43:26 AM	R17213
Xylenes, Total	ND	1.5		µg/L	1	3/11/2014 5:43:26 AM	R17213
Surr: 1,2-Dichloroethane-d4	104	70-130		%REC	1	3/11/2014 5:43:26 AM	R17213
Surr: 4-Bromofluorobenzene	106	70-130		%REC	1	3/11/2014 5:43:26 AM	R17213
Surr: Dibromofluoromethane	107	70-130		%REC	1	3/11/2014 5:43:26 AM	R17213
Surr: Toluene-d8	100	70-130		%REC	1	3/11/2014 5:43:26 AM	R17213

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

ESC
L·A·B S·C·I·E·N·C·E·S
YOUR LAB OF CHOICE

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Anne Thorne
Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

March 11, 2014

ESC Sample # : L686665-01

Date Received : March 07, 2014
Description :

Site ID :

Sample ID : 1403217-001H EP-5

Project # :

Collected By :
Collection Date : 03/05/14 14:25

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	1000	20.	mg/l	410.4	03/11/14	2

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 03/11/14 17:06 Printed: 03/11/14 17:06

ESC
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Mt. Juliet, TN 37122
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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Anne Thorne
Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

March 11, 2014

ESC Sample # : L686665-02

Date Received : March 07, 2014
Description :

Site ID :

Sample ID : 1403217-002H EP-4

Project # :

Collected By :
Collection Date : 03/05/14 14:50

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	1000	10.	mg/l	410.4	03/10/14	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 03/11/14 17:06 Printed: 03/11/14 17:06

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REPORT OF ANALYSIS

Anne Thorne
Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

March 11, 2014

ESC Sample # : L686665-03

Date Received : March 07, 2014
Description :

Site ID :

Sample ID : 1403217-002H EP-3

Project # :

Collected By :
Collection Date : 03/05/14 15:30

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	990	10.	mg/l	410.4	03/10/14	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 03/11/14 17:06 Printed: 03/11/14 17:06

ESC
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YOUR LAB OF CHOICE

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Mt. Juliet, TN 37122
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1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Hall Environmental Analysis Laboratory
Anne Thorne
4901 Hawkins NE

Albuquerque, NM 87109

Quality Assurance Report
Level II

L686665

March 11, 2014

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
COD	< 10	mg/l			WG709939	03/10/14 14:19
COD	< 10	mg/l			WG710160	03/11/14 13:22

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
COD	mg/l	3200	3200	0.0	5	L686660-01	WG709939
COD	mg/l	180000	180000	0.0	5	L686678-01	WG710160
COD	mg/l	990000	990000	0.0	5	L686678-02	WG710160
COD	mg/l	1000	1000	0.0	5	L686672-02	WG710160
COD	mg/l	1000	1000	0.0	5	L686665-01	WG710160
COD	mg/l	600	600	0.0	5	L686672-03	WG710160

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
COD	mg/l	183	190.	104.	90-110	WG709939
COD	mg/l	183	175.	95.6	90-110	WG710160

Laboratory Control Sample Duplicate

Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
COD	mg/l	190.	190.	104.	90-110	0.0	5	WG709939
COD	mg/l	178.	175.	97.0	90-110	1.70	5	WG710160

Matrix Spike

Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
COD	mg/l	1830.	1000	400	100.	90-110	L686672-02	WG710160

Matrix Spike Duplicate

Analyte	Units	MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
COD	mg/l	1820	1830	102.	90-110	0.549	5	L686672-02	WG710160

Batch number /Run number / Sample number cross reference

WG709939: R2892040: L686665-02 03
WG710160: R2892133: L686665-01

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1403217**

01-Apr-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17148** RunNo: **17148**
Prep Date: **2/5/2014** Analysis Date: **3/6/2014** SeqNo: **493068** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17148** RunNo: **17148**
Prep Date: Analysis Date: **3/6/2014** SeqNo: **493069** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	102	85	115			
Cadmium	0.50	0.0020	0.5000	0	101	85	115			
Calcium	50	1.0	50.00	0	99.8	85	115			
Chromium	0.50	0.0060	0.5000	0	99.3	85	115			
Copper	0.49	0.0060	0.5000	0	98.0	85	115			
Iron	0.52	0.020	0.5000	0	104	85	115			
Magnesium	50	1.0	50.00	0	99.0	85	115			
Manganese	0.51	0.0020	0.5000	0	102	85	115			
Potassium	49	1.0	50.00	0	98.0	85	115			
Zinc	0.52	0.010	0.5000	0	104	85	115			

Sample ID **1403198-010BMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17148** RunNo: **17148**
Prep Date: Analysis Date: **3/6/2014** SeqNo: **493144** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.72	0.0020	0.5000	0.1992	104	70	130			
Cadmium	0.48	0.0020	0.5000	0	96.5	70	130			
Chromium	0.51	0.0060	0.5000	0.01360	99.7	70	130			
Copper	0.43	0.0060	0.5000	0	85.6	70	130			
Manganese	0.88	0.0020	0.5000	0.3795	99.9	70	130			
Zinc	0.54	0.010	0.5000	0.01880	104	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

)C SUMMARY REPORT

[all Environmental Analysis Laboratory, Inc.

WO#: **1403217**

01-Apr-14

lient: Western Refining Southwest, Gallup

roject: Q1-2014 Groundwater Sampling

ample ID **1403198-010BMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**

lient ID: **BatchQC** Batch ID: **R17148** RunNo: **17148**

rep Date: Analysis Date: **3/6/2014** SeqNo: **493145** Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
rium	0.72	0.0020	0.5000	0.1992	103	70	130	0.694	20	
dmium	0.48	0.0020	0.5000	0	96.3	70	130	0.216	20	
romium	0.51	0.0060	0.5000	0.01360	99.2	70	130	0.509	20	
pper	0.43	0.0060	0.5000	0	85.2	70	130	0.403	20	
nganese	0.88	0.0020	0.5000	0.3795	99.9	70	130	0.0159	20	
c	0.53	0.010	0.5000	0.01880	103	70	130	1.09	20	

ample ID **1403198-010BMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**

lient ID: **BatchQC** Batch ID: **R17148** RunNo: **17148**

rep Date: Analysis Date: **3/6/2014** SeqNo: **493147** Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
n	3.3	0.10	2.500	0.6302	107	70	130			

ample ID **1403198-010BMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**

lient ID: **BatchQC** Batch ID: **R17148** RunNo: **17148**

rep Date: Analysis Date: **3/6/2014** SeqNo: **493148** Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
n	3.4	0.10	2.500	0.6302	111	70	130	3.05	20	

ample ID **1403217-001DMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**

lient ID: **EP-5** Batch ID: **R17148** RunNo: **17148**

rep Date: Analysis Date: **3/6/2014** SeqNo: **493157** Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
rium	2.7	0.010	2.500	0.1033	104	70	130			
dmium	2.4	0.010	2.500	0	94.6	70	130			
romium	2.5	0.030	2.500	0.01125	99.8	70	130			
pper	2.6	0.030	2.500	0	104	70	130			
n	3.1	0.10	2.500	0.4648	106	70	130			
gnesium	340	5.0	250.0	99.04	97.8	70	130			
nganese	3.2	0.010	2.500	0.5538	105	70	130			
tassium	440	5.0	250.0	175.0	104	70	130			
c	2.6	0.050	2.500	0.01055	102	70	130			

ualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403217**
01-Apr-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **1403217-001DMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **EP-5** Batch ID: **R17148** RunNo: **17148**
Prep Date: Analysis Date: **3/6/2014** SeqNo: **493158** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	2.7	0.010	2.500	0.1033	106	70	130	1.48	20	
Cadmium	2.4	0.010	2.500	0	97.0	70	130	2.57	20	
Chromium	2.5	0.030	2.500	0.01125	99.3	70	130	0.470	20	
Copper	2.6	0.030	2.500	0	105	70	130	1.16	20	
Iron	3.2	0.10	2.500	0.4648	108	70	130	1.07	20	
Magnesium	350	5.0	250.0	99.04	99.3	70	130	1.05	20	
Manganese	3.2	0.010	2.500	0.5538	107	70	130	1.44	20	
Potassium	440	5.0	250.0	175.0	106	70	130	0.861	20	
Zinc	2.6	0.050	2.500	0.01055	105	70	130	2.52	20	

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17186** RunNo: **17186**
Prep Date: **2/5/2014** Analysis Date: **3/7/2014** SeqNo: **494522** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17186** RunNo: **17186**
Prep Date: Analysis Date: **3/7/2014** SeqNo: **494523** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	49	1.0	50.00	0	98.3	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17234** RunNo: **17234**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496101** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	101	85	115			

Sample ID **1403281-001BMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17234** RunNo: **17234**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496103** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	103	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1403217**

01-Apr-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **1403281-001BMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17234** RunNo: **17234**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496104** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	104	70	130	1.49	20	

Sample ID **1403217-001DMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **EP-5** Batch ID: **R17234** RunNo: **17234**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496159** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.39	0.025	0.5000	0	77.7	70	130			

Sample ID **1403217-001DMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **EP-5** Batch ID: **R17234** RunNo: **17234**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496160** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.42	0.025	0.5000	0	83.3	70	130	6.95	20	

Sample ID **1403198-010BMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17234** RunNo: **17234**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496167** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.095	0.0050	0.1000	0	95.0	70	130			

Sample ID **1403198-010BMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17234** RunNo: **17234**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496171** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.096	0.0050	0.1000	0	95.6	70	130	0.577	20	

Sample ID **1403273-022AMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17234** RunNo: **17234**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496186** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.094	0.0050	0.1000	0	93.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1403217**

01-Apr-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **1403273-022AMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17234** RunNo: **17234**
Prep Date: Analysis Date: **3/11/2014** SeqNo: **496187** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
ver	0.097	0.0050	0.1000	0	96.7	70	130	3.28	20	

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17289** RunNo: **17289**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498058** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
agnesium	ND	1.0								
tassium	ND	1.0								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17289** RunNo: **17289**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498059** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
agnesium	51	1.0	50.00	0	103	85	115			
tassium	50	1.0	50.00	0	100	85	115			

Sample ID **1403477-001BMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17289** RunNo: **17289**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498102** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
agnesium	59	1.0	50.00	7.323	103	70	130			

Sample ID **1403477-001BMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17289** RunNo: **17289**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498103** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
agnesium	59	1.0	50.00	7.323	104	70	130	0.629	20	

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17335** RunNo: **17335**
Prep Date: Analysis Date: **3/14/2014** SeqNo: **499202** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
alcium	ND	1.0								
odium	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1403217**

01-Apr-14

Client; Western Refining Southwest, Gallup

Project: Q1-2014 Groundwater Sampling

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**

Client ID: **LCSW** Batch ID: **R17335** RunNo: **17335**

Prep Date: Analysis Date: **3/14/2014** SeqNo: **499203** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	51	1.0	50.00	0	101	85	115			
Sodium	50	1.0	50.00	0	99.5	85	115			

Sample ID **1403477-001BMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**

Client ID: **BatchQC** Batch ID: **R17335** RunNo: **17335**

Prep Date: Analysis Date: **3/14/2014** SeqNo: **499268** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	310	5.0	250.0	56.32	103	70	130			

Sample ID **1403477-001BMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**

Client ID: **BatchQC** Batch ID: **R17335** RunNo: **17335**

Prep Date: Analysis Date: **3/14/2014** SeqNo: **499269** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	330	5.0	250.0	56.32	110	70	130	5.54	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403217**
01-Apr-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **MB-12082** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **12082** RunNo: **17220**
Prep Date: **3/7/2014** Analysis Date: **3/10/2014** SeqNo: **495500** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
arium	ND	0.0020								
admium	ND	0.0020								
hromium	ND	0.0060								
opper	ND	0.0060								
on	ND	0.020								
anganese	ND	0.0020								
lver	ND	0.0050								
nc	ND	0.010								

Sample ID **LCS-12082** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **12082** RunNo: **17220**
Prep Date: **3/7/2014** Analysis Date: **3/10/2014** SeqNo: **495501** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
arium	0.50	0.0020	0.5000	0	101	85	115			
admium	0.51	0.0020	0.5000	0	102	85	115			
hromium	0.50	0.0060	0.5000	0	100	85	115			
opper	0.50	0.0060	0.5000	0	100	85	115			
on	0.50	0.020	0.5000	0	99.6	85	115			
anganese	0.49	0.0020	0.5000	0	98.2	85	115			
lver	0.11	0.0050	0.1000	0	105	85	115			
nc	0.51	0.010	0.5000	0	102	85	115			

Sample ID **1403198-006GMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC** Batch ID: **12082** RunNo: **17256**
Prep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **496982** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
arium	0.71	0.010	0.5000	0.1793	106	70	130			
admium	0.54	0.010	0.5000	0	109	70	130			
hromium	0.50	0.030	0.5000	0.01995	96.4	70	130			
opper	0.54	0.030	0.5000	0	108	70	130			
on	0.82	0.10	0.5000	0.2555	113	70	130			

Sample ID **1403198-006GMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC** Batch ID: **12082** RunNo: **17256**
Prep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **496983** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
arium	0.70	0.010	0.5000	0.1793	105	70	130	0.766	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

)C SUMMARY REPORT

Iall Environmental Analysis Laboratory, Inc.

WO#: **1403217**

01-Apr-14

lient: Western Refining Southwest, Gallup

roject: Q1-2014 Groundwater Sampling

ample ID **1403198-006GMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**

lient ID: **BatchQC** Batch ID: **12082** RunNo: **17256**

rep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **496983** Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
idmium	0.54	0.010	0.5000	0	108	70	130	0.990	20	
iromium	0.50	0.030	0.5000	0.01995	95.7	70	130	0.700	20	
ipper	0.54	0.030	0.5000	0	107	70	130	0.928	20	
n	0.82	0.10	0.5000	0.2555	114	70	130	0.225	20	

ample ID **1403217-001EMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**

lient ID: **EP-5** Batch ID: **12082** RunNo: **17256**

rep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **496996** Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
rium	0.65	0.010	0.5000	0.1154	107	70	130			
idmium	0.54	0.010	0.5000	0	107	70	130			
iromium	0.51	0.030	0.5000	0	102	70	130			
pper	0.53	0.030	0.5000	0	106	70	130			
n	1.1	0.10	0.5000	0.6030	95.8	70	130			
anganese	1.0	0.010	0.5000	0.5504	98.9	70	130			
ver	0.13	0.025	0.1000	0	131	70	130			S

ample ID **1403217-001EMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**

lient ID: **EP-5** Batch ID: **12082** RunNo: **17256**

rep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **496997** Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
rium	0.64	0.010	0.5000	0.1154	106	70	130	0.796	20	
idmium	0.53	0.010	0.5000	0	107	70	130	0.299	20	
iromium	0.52	0.030	0.5000	0	103	70	130	1.09	20	
pper	0.52	0.030	0.5000	0	103	70	130	2.90	20	
n	1.1	0.10	0.5000	0.6030	96.5	70	130	0.328	20	
anganese	1.0	0.010	0.5000	0.5504	90.9	70	130	3.90	20	
lver	0.13	0.025	0.1000	0	126	70	130	4.47	20	

ample ID **1403198-006GMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**

lient ID: **BatchQC** Batch ID: **12082** RunNo: **17256**

rep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **497046** Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
nc	0.51	0.050	0.5000	0.02245	96.7	70	130			

ualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

)C SUMMARY REPORT

lall Environmental Analysis Laboratory, Inc.

WO#: **1403217**

01-Apr-14

lient: Western Refining Southwest, Gallup

roject: Q1-2014 Groundwater Sampling

ample ID	**1403198-006GMSD**	SampType: **MSD**		TestCode: **EPA Method 200.7: Total Metals**	
lient ID:	**BatchQC**	Batch ID: **12082**		RunNo: **17256**	
rep Date:	**3/7/2014**	Analysis Date: **3/12/2014**		SeqNo: **497047**	Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
ıc	0.50	0.050	0.5000	0.02245	96.0	70	130	0.754	20	

ample ID	**1403217-001EMS**	SampType: **MS**		TestCode: **EPA Method 200.7: Total Metals**	
lient ID:	**EP-5**	Batch ID: **12082**		RunNo: **17256**	
rep Date:	**3/7/2014**	Analysis Date: **3/12/2014**		SeqNo: **497055**	Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
ıc	0.52	0.050	0.5000	0.02170	99.4	70	130			

ample ID	**1403217-001EMSD**	SampType: **MSD**		TestCode: **EPA Method 200.7: Total Metals**	
lient ID:	**EP-5**	Batch ID: **12082**		RunNo: **17256**	
rep Date:	**3/7/2014**	Analysis Date: **3/12/2014**		SeqNo: **497056**	Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
ıc	0.52	0.050	0.5000	0.02170	100	70	130	0.702	20	

ample ID	**1403198-006GMS**	SampType: **MS**		TestCode: **EPA Method 200.7: Total Metals**	
lient ID:	**BatchQC**	Batch ID: **12082**		RunNo: **17408**	
rep Date:	**3/7/2014**	Analysis Date: **3/18/2014**		SeqNo: **501384**	Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
lver	0.12	0.025	0.1000	0	125	70	130			

ample ID	**1403198-006GMSD**	SampType: **MSD**		TestCode: **EPA Method 200.7: Total Metals**	
lient ID:	**BatchQC**	Batch ID: **12082**		RunNo: **17408**	
rep Date:	**3/7/2014**	Analysis Date: **3/18/2014**		SeqNo: **501392**	Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
lver	0.12	0.025	0.1000	0	120	70	130	4.04	20	

ualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1403217**

01-Apr-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R17281** RunNo: **17281**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **497670** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.5	85	115			
Lead	0.025	0.0010	0.02500	0	98.0	85	115			
Selenium	0.024	0.0010	0.02500	0	96.2	85	115			
Uranium	0.025	0.0010	0.02500	0	98.4	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R17281** RunNo: **17281**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **497671** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **1403055-004AMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17281** RunNo: **17281**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **497989** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.12	0.0050	0.1250	0	96.4	70	130			
Selenium	0.12	0.0050	0.1250	0	92.5	70	130			

Sample ID **1403055-004AMSD** SampType: **MSD** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17281** RunNo: **17281**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **497990** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.12	0.0050	0.1250	0	94.6	70	130	1.85	20	
Selenium	0.11	0.0050	0.1250	0	90.6	70	130	2.08	20	

Sample ID **1403273-002AMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **R17281** RunNo: **17281**
Prep Date: Analysis Date: **3/13/2014** SeqNo: **498008** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.023	0.0010	0.02500	.00004399	93.7	70	130			
Uranium	0.039	0.0010	0.02500	0.01814	83.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

)C SUMMARY REPORT

[all Environmental Analysis Laboratory, Inc.

WO#: **1403217**

01-Apr-14

lient: Western Refining Southwest, Gallup

·oject: Q1-2014 Groundwater Sampling

ample ID	**LCS**	SampType: **LCS**			TestCode: **EPA 200.8: Dissolved Metals**						
lient ID:	**LCSW**	Batch ID: **R17281**			RunNo: **17281**						
rep Date:		Analysis Date: **3/13/2014**			SeqNo: **498009**			Units: **mg/L**			
nalyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
·enic		0.024	0.0010	0.02500	0	95.1	85	115			
ıd		0.025	0.0010	0.02500	0	98.1	85	115			
'enium		0.024	0.0010	0.02500	0	94.7	85	115			
ınium		0.024	0.0010	0.02500	0	96.4	85	115			

ample ID	**MB**	SampType: **MBLK**			TestCode: **EPA 200.8: Dissolved Metals**						
lient ID:	**PBW**	Batch ID: **R17281**			RunNo: **17281**						
rep Date:		Analysis Date: **3/13/2014**			SeqNo: **498010**			Units: **mg/L**			
nalyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
·enic		ND	0.0010								
ıd		ND	0.0010								
lenium		ND	0.0010								
ınium		ND	0.0010								

ualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

)C SUMMARY REPORT

[all Environmental Analysis Laboratory, Inc.

WO#: **1403217**

01-Apr-14

lient: Western Refining Southwest, Gallup

·oject: Q1-2014 Groundwater Sampling

ample ID **1403215-001BLLMS** SampType: **MSLL** TestCode: **200.8 ICPMS Metals:Total**

lient ID: **BatchQC** Batch ID: **12082** RunNo: **17259**

rep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **497137** Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
;enic	0.032	0.0010	0.02500	0.007774	98.1	70	130			

ample ID **1403215-001BLLMS** SampType: **MSDLL** TestCode: **200.8 ICPMS Metals:Total**

lient ID: **BatchQC** Batch ID: **12082** RunNo: **17259**

rep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **497138** Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
;enic	0.033	0.0010	0.02500	0.007774	99.7	70	130	1.23	20	

ample ID **LLLCS-12082** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**

lient ID: **BatchQC** Batch ID: **12082** RunNo: **17259**

rep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **497154** Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
ad	0.025	0.0010	0.02500	0	99.7	85	115			B
anium	0.024	0.0010	0.02500	0	97.5	85	115			B

ample ID **LLLCS-12082** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**

lient ID: **BatchQC** Batch ID: **12082** RunNo: **17259**

rep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **497155** Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
;enic	0.024	0.0010	0.02500	0	94.3	85	115			
lenium	0.022	0.0010	0.02500	0	89.1	85	115			

ample ID **MB-12082** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**

lient ID: **PBW** Batch ID: **12082** RunNo: **17259**

rep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **497158** Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
ad	ND	0.0010								
anium	ND	0.0010								

ample ID **MB-12082** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**

lient ID: **PBW** Batch ID: **12082** RunNo: **17259**

rep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **497159** Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
senic	ND	0.0010								
lenium	ND	0.0010								

ualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403217**
01-Apr-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **MB-12102** SampType: **MBLK** TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW** Batch ID: **12102** RunNo: **17228**
Prep Date: **3/10/2014** Analysis Date: **3/11/2014** SeqNo: **495950** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID **LCS-12102** SampType: **LCS** TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW** Batch ID: **12102** RunNo: **17228**
Prep Date: **3/10/2014** Analysis Date: **3/11/2014** SeqNo: **495951** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0052	0.00020	0.005000	0	104	80	120			

Sample ID **1403273-001BMS** SampType: **MS** TestCode: **EPA Method 245.1: Mercury**
Client ID: **BatchQC** Batch ID: **12102** RunNo: **17228**
Prep Date: **3/10/2014** Analysis Date: **3/11/2014** SeqNo: **495962** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0.0001023	100	75	125			

Sample ID **1403273-001BMSD** SampType: **MSD** TestCode: **EPA Method 245.1: Mercury**
Client ID: **BatchQC** Batch ID: **12102** RunNo: **17228**
Prep Date: **3/10/2014** Analysis Date: **3/11/2014** SeqNo: **495963** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0.0001023	101	75	125	0.386	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

)C SUMMARY REPORT

:all Environmental Analysis Laboratory, Inc.

WO#: **1403217**

01-Apr-14

ient: Western Refining Southwest, Gallup

oject: Q1-2014 Groundwater Sampling

ample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**

lient ID: **PBW** Batch ID: **R17173** RunNo: **17173**

ep Date: Analysis Date: **3/6/2014** SeqNo: **494059** Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
oride	ND	0.10								
ogen, Nitrite (As N)	ND	0.10								
mide	ND	0.10								
ogen, Nitrate (As N)	ND	0.10								
osphorus, Orthophosphate (As P	ND	0.50								
fate	ND	0.50								

ample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**

lient ID: **LCSW** Batch ID: **R17173** RunNo: **17173**

rep Date: Analysis Date: **3/6/2014** SeqNo: **494060** Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
oride	0.47	0.10	0.5000	0	93.7	90	110			
ogen, Nitrite (As N)	0.94	0.10	1.000	0	94.3	90	110			
mide	2.4	0.10	2.500	0	96.3	90	110			
ogen, Nitrate (As N)	2.4	0.10	2.500	0	97.7	90	110			
osphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.3	90	110			
fate	9.5	0.50	10.00	0	94.6	90	110			

ample ID **1403164-002AMS** SampType: **MS** TestCode: **EPA Method 300.0: Anions**

lient ID: **BatchQC** Batch ID: **R17173** RunNo: **17173**

rep Date: Analysis Date: **3/6/2014** SeqNo: **494064** Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
oride	0.88	0.10	0.5000	0.4850	78.5	76.4	109			
rogen, Nitrite (As N)	0.80	0.10	1.000	0	80.4	85.2	109			S
mide	2.4	0.10	2.500	0.09010	91.5	85.9	111			
rogen, Nitrate (As N)	8.2	0.10	2.500	5.549	104	93.8	111			
osphorus, Orthophosphate (As P	6.4	0.50	5.000	1.685	93.6	81.1	108			

ample ID **1403164-002AMSD** SampType: **MSD** TestCode: **EPA Method 300.0: Anions**

lient ID: **BatchQC** Batch ID: **R17173** RunNo: **17173**

rep Date: Analysis Date: **3/6/2014** SeqNo: **494065** Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
oride	0.90	0.10	0.5000	0.4850	82.3	76.4	109	2.13	20	
rogen, Nitrite (As N)	0.80	0.10	1.000	0	79.7	85.2	109	0.825	20	S
mide	2.4	0.10	2.500	0.09010	90.7	85.9	111	0.916	20	
rogen, Nitrate (As N)	8.1	0.10	2.500	5.549	103	93.8	111	0.221	20	
osphorus, Orthophosphate (As P	6.4	0.50	5.000	1.685	93.5	81.1	108	0.0849	20	

ualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

)C SUMMARY REPORT

[all Environmental Analysis Laboratory, Inc.

WO#: **1403217**

01-Apr-14

lient: Western Refining Southwest, Gallup

roject: Q1-2014 Groundwater Sampling

ample ID **1403173-001AMS** SampType: **MS** TestCode: **EPA Method 300.0: Anions**

lient ID: **BatchQC** Batch ID: **R17173** RunNo: **17173**

rep Date: Analysis Date: **3/6/2014** SeqNo: **494078** Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
ıoride	0.93	0.10	0.5000	0.4828	90.2	76.4	109			
rogen, Nitrite (As N)	0.92	0.10	1.000	0	91.8	85.2	109			
ɔmide	2.4	0.10	2.500	0	96.2	85.9	111			
rogen, Nitrate (As N)	2.4	0.10	2.500	0	95.5	93.8	111			
osphorus, Orthophosphate (As P	4.7	0.50	5.000	0	93.1	81.1	108			

ample ID **1403173-001AMSD** SampType: **MSD** TestCode: **EPA Method 300.0: Anions**

lient ID: **BatchQC** Batch ID: **R17173** RunNo: **17173**

rep Date: Analysis Date: **3/6/2014** SeqNo: **494079** Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
ıoride	0.94	0.10	0.5000	0.4828	91.0	76.4	109	0.438	20	
rogen, Nitrite (As N)	0.92	0.10	1.000	0	92.2	85.2	109	0.522	20	
ɔmide	2.4	0.10	2.500	0	96.0	85.9	111	0.208	20	
rogen, Nitrate (As N)	2.4	0.10	2.500	0	96.2	93.8	111	0.722	20	
osphorus, Orthophosphate (As P	4.7	0.50	5.000	0	93.9	81.1	108	0.830	20	

ample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**

lient ID: **PBW** Batch ID: **R17173** RunNo: **17173**

rep Date: Analysis Date: **3/6/2014** SeqNo: **494113** Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
ıoride	ND	0.10								
rogen, Nitrite (As N)	ND	0.10								
ɔmide	ND	0.10								
rogen, Nitrate (As N)	ND	0.10								
osphorus, Orthophosphate (As P	ND	0.50								
lfate	ND	0.50								

ample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**

lient ID: **LCSW** Batch ID: **R17173** RunNo: **17173**

rep Date: Analysis Date: **3/6/2014** SeqNo: **494114** Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
ıoride	0.51	0.10	0.5000	0	101	90	110			
rogen, Nitrite (As N)	0.96	0.10	1.000	0	95.9	90	110			
ɔmide	2.4	0.10	2.500	0	97.1	90	110			
rogen, Nitrate (As N)	2.5	0.10	2.500	0	98.7	90	110			
osphorus, Orthophosphate (As P	4.9	0.50	5.000	0	97.4	90	110			
lfate	9.5	0.50	10.00	0	94.9	90	110			

ualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1403217**

01-Apr-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **1403244-001BMS** SampType: **MS** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R17173** RunNo: **17173**
Prep Date: Analysis Date: **3/6/2014** SeqNo: **494120** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	2.1	0.10	0.5000	1.696	85.4	76.4	109			
Nitrogen, Nitrite (As N)	0.90	0.10	1.000	0	90.5	85.2	109			
Bromide	2.7	0.10	2.500	0.3702	93.1	85.9	111			
Nitrogen, Nitrate (As N)	4.3	0.10	2.500	1.833	99.0	93.8	111			
Phosphorus, Orthophosphate (As P	4.5	0.50	5.000	0	91.0	81.1	108			

Sample ID **1403244-001BMSD** SampType: **MSD** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R17173** RunNo: **17173**
Prep Date: Analysis Date: **3/6/2014** SeqNo: **494121** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	2.1	0.10	0.5000	1.696	84.2	76.4	109	0.283	20	
Nitrogen, Nitrite (As N)	0.91	0.10	1.000	0	90.6	85.2	109	0.133	20	
Bromide	2.7	0.10	2.500	0.3702	92.8	85.9	111	0.315	20	
Nitrogen, Nitrate (As N)	4.3	0.10	2.500	1.833	99.3	93.8	111	0.188	20	
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.4	81.1	108	3.63	20	

Sample ID **1403258-001BMS** SampType: **MS** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R17173** RunNo: **17173**
Prep Date: Analysis Date: **3/6/2014** SeqNo: **494124** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.95	0.10	0.5000	0.4825	93.0	76.4	109			
Nitrogen, Nitrite (As N)	0.91	0.10	1.000	0	90.9	85.2	109			
Bromide	2.6	0.10	2.500	0.2497	93.0	85.9	111			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0.1388	96.3	93.8	111			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.8	81.1	108			

Sample ID **1403258-001BMSD** SampType: **MSD** TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC** Batch ID: **R17173** RunNo: **17173**
Prep Date: Analysis Date: **3/6/2014** SeqNo: **494125** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.96	0.10	0.5000	0.4825	95.1	76.4	109	1.10	20	
Nitrogen, Nitrite (As N)	0.92	0.10	1.000	0	91.8	85.2	109	0.931	20	
Bromide	2.6	0.10	2.500	0.2497	94.2	85.9	111	1.13	20	
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0.1388	97.8	93.8	111	1.45	20	
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.7	81.1	108	2.04	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

)C SUMMARY REPORT

[all Environmental Analysis Laboratory, Inc.

WO#: **1403217**

01-Apr-14

lient: Western Refining Southwest, Gallup

·oject: Q1-2014 Groundwater Sampling

ample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**

lient ID: **PBW** Batch ID: **R17244** RunNo: **17244**

rep Date: Analysis Date: **3/11/2014** SeqNo: **496579** Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
loride	ND	0.50								

ample ID **LCS-b** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**

lient ID: **LCSW** Batch ID: **R17244** RunNo: **17244**

rep Date: Analysis Date: **3/11/2014** SeqNo: **496581** Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
loride	4.7	0.50	5.000	0	93.6	90	110			

ample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**

lient ID: **PBW** Batch ID: **R17244** RunNo: **17244**

rep Date: Analysis Date: **3/11/2014** SeqNo: **496606** Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
loride	ND	0.50								

ample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**

lient ID: **LCSW** Batch ID: **R17244** RunNo: **17244**

rep Date: Analysis Date: **3/11/2014** SeqNo: **496607** Units: **mg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
loride	4.8	0.50	5.000	0	95.0	90	110			

ualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1403217**

01-Apr-14

Client: Western Refining Southwest, Gallup

Project: Q1-2014 Groundwater Sampling

Sample ID **5mL rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R17213**	RunNo: **17213**	
Prep Date:	Analysis Date: **3/10/2014**	SeqNo: **495288**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
enzene	ND	1.0								
oluene	ND	1.0								
hylbenzene	ND	1.0								
ethyl tert-butyl ether (MTBE)	ND	1.0								
2,4-Trimethylbenzene	ND	1.0								
3,5-Trimethylbenzene	ND	1.0								
2-Dichloroethane (EDC)	ND	1.0								
2-Dibromoethane (EDB)	ND	1.0								
aphthalene	ND	2.0								
Methylnaphthalene	ND	4.0								
Methylnaphthalene	ND	4.0								
etone	ND	10								
omobenzene	ND	1.0								
omodichloromethane	ND	1.0								
omoform	ND	1.0								
omomethane	ND	3.0								
Butanone	ND	10								
arbon disulfide	ND	10								
arbon Tetrachloride	ND	1.0								
lorobenzene	ND	1.0								
loroethane	ND	2.0								
loroform	ND	1.0								
loromethane	ND	3.0								
Chlorotoluene	ND	1.0								
Chlorotoluene	ND	1.0								
-1,2-DCE	ND	1.0								
-1,3-Dichloropropene	ND	1.0								
2-Dibromo-3-chloropropane	ND	2.0								
romochloromethane	ND	1.0								
romomethane	ND	1.0								
2-Dichlorobenzene	ND	1.0								
3-Dichlorobenzene	ND	1.0								
4-Dichlorobenzene	ND	1.0								
chlorodifluoromethane	ND	1.0								
1-Dichloroethane	ND	1.0								
1-Dichloroethene	ND	1.0								
2-Dichloropropane	ND	1.0								
3-Dichloropropane	ND	1.0								
2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1403217**

01-Apr-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **5mL rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R17213** RunNo: **17213**
Prep Date: Analysis Date: **3/10/2014** SeqNo: **495288** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		104	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R17213** RunNo: **17213**
Prep Date: Analysis Date: **3/10/2014** SeqNo: **495290** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	105	70	130			
Toluene	18	1.0	20.00	0	89.1	80	120			
Chlorobenzene	17	1.0	20.00	0	86.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

)C SUMMARY REPORT

WO#: **1403217**

:all Environmental Analysis Laboratory, Inc.

01-Apr-14

ient: Western Refining Southwest, Gallup
oject: Q1-2014 Groundwater Sampling

ample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
lient ID: **LCSW** Batch ID: **R17213** RunNo: **17213**
rep Date: Analysis Date: **3/10/2014** SeqNo: **495290** Units: **µg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
-Dichloroethene	20	1.0	20.00	0	100	90	143			
:hloroethene (TCE)	17	1.0	20.00	0	86.9	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.5		10.00		95.4	70	130			

ample ID **1403303-003a ms** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**
lient ID: **BatchQC** Batch ID: **R17213** RunNo: **17213**
rep Date: Analysis Date: **3/10/2014** SeqNo: **495313** Units: **µg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
nzene	20	1.0	20.00	0	101	70	130			
luene	18	1.0	20.00	0	88.4	67.5	123			
lorobenzene	17	1.0	20.00	0	85.0	70	130			
-Dichloroethene	19	1.0	20.00	0	94.4	81.9	134			
chloroethene (TCE)	18	1.0	20.00	0	87.5	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	9.9		10.00		98.9	70	130			
Surr: Toluene-d8	9.9		10.00		99.0	70	130			

:ample ID **1403303-003a msd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
:lient ID: **BatchQC** Batch ID: **R17213** RunNo: **17213**
'rep Date: Analysis Date: **3/10/2014** SeqNo: **495314** Units: **µg/L**

ınalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
ınzene	22	1.0	20.00	0	112	70	130	10.5	20	
ıluene	19	1.0	20.00	0	95.0	67.5	123	7.22	20	
ılorobenzene	19	1.0	20.00	0	94.5	70	130	10.6	20	
1-Dichloroethene	20	1.0	20.00	0	101	81.9	134	7.20	20	
ichloroethene (TCE)	18	1.0	20.00	0	92.2	70	130	5.16	20	
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130	0	0	
Surr: Dibromofluoromethane	9.9		10.00		98.7	70	130	0	0	
Surr: Toluene-d8	10		10.00		99.8	70	130	0	0	

ıualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1403217**

01-Apr-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **MB-12139** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **12139** RunNo: **17268**
Prep Date: **3/12/2014** Analysis Date: **3/12/2014** SeqNo: **497414** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3'-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1403217**

01-Apr-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **MB-12139** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **12139** RunNo: **17268**
Prep Date: **3/12/2014** Analysis Date: **3/12/2014** SeqNo: **497414** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Dinitrotoluene	ND	10								
6-Dinitrotoluene	ND	10								
uoranthene	ND	10								
uorene	ND	10								
exachlorobenzene	ND	10								
exachlorobutadiene	ND	10								
exachlorocyclopentadiene	ND	10								
exachloroethane	ND	10								
deno(1,2,3-cd)pyrene	ND	10								
phorone	ND	10								
Methylnaphthalene	ND	10								
Methylnaphthalene	ND	10								
Methylphenol	ND	10								
4-Methylphenol	ND	10								
Nitrosodi-n-propylamine	ND	10								
Nitrosodimethylamine	ND	10								
Nitrosodiphenylamine	ND	10								
aphthalene	ND	10								
Nitroaniline	ND	10								
Nitroaniline	ND	10								
Nitroaniline	ND	10								
trobenzene	ND	10								
Nitrophenol	ND	10								
Nitrophenol	ND	10								
entachlorophenol	ND	20								
henanthrene	ND	10								
henol	ND	10								
rene	ND	10								
ridine	ND	10								
2,4-Trichlorobenzene	ND	10								
4,5-Trichlorophenol	ND	10								
4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	140		200.0		70.8	22.7	98			
Surr: Phenol-d5	100		200.0		50.6	23.4	74.9			
Surr: 2,4,6-Tribromophenol	210		200.0		104	23.3	111			
Surr: Nitrobenzene-d5	95		100.0		95.2	36.8	111			
Surr: 2-Fluorobiphenyl	87		100.0		87.3	38.3	110			
Surr: 4-Terphenyl-d14	92		100.0		91.7	52.1	116			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1403217**

01-Apr-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **LCS-12139** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **12139** RunNo: **17268**
Prep Date: **3/12/2014** Analysis Date: **3/12/2014** SeqNo: **497415** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	88	10	100.0	0	88.4	48	101			
4-Chloro-3-methylphenol	160	10	200.0	0	82.4	47.9	109			
2-Chlorophenol	170	10	200.0	0	85.9	40	105			
1,4-Dichlorobenzene	99	10	100.0	0	98.8	40.8	94.3			S
2,4-Dinitrotoluene	78	10	100.0	0	77.8	28.3	131			
N-Nitrosodi-n-propylamine	110	10	100.0	0	107	46.2	119			
2-Nitrophenol	93	10	200.0	0	46.6	10.5	67.9			
Pentachlorophenol	130	20	200.0	0	65.3	22.4	81.1			
Phenol	110	10	200.0	0	54.4	21.4	72.9			
Pyrene	78	10	100.0	0	77.8	46.9	109			
1,2,4-Trichlorobenzene	83	10	100.0	0	83.0	43.1	98.4			
Surr: 2-Fluorophenol	140		200.0		71.0	22.7	98			
Surr: Phenol-d5	100		200.0		52.4	23.4	74.9			
Surr: 2,4,6-Tribromophenol	210		200.0		105	23.3	111			
Surr: Nitrobenzene-d5	92		100.0		91.9	36.8	111			
Surr: 2-Fluorobiphenyl	88		100.0		87.7	38.3	110			
Surr: 4-Terphenyl-d14	98		100.0		98.4	52.1	116			

Sample ID **1403354-002gms** SampType: **MS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **BatchQC** Batch ID: **12139** RunNo: **17268**
Prep Date: **3/12/2014** Analysis Date: **3/12/2014** SeqNo: **497433** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	81	10	100.0	2.960	78.5	52.5	94.5			
4-Chloro-3-methylphenol	170	10	200.0	0	87.0	45	103			
2-Chlorophenol	110	10	200.0	0	55.6	32.3	101			
1,4-Dichlorobenzene	68	10	100.0	0	67.5	34.5	97.5			
2,4-Dinitrotoluene	85	10	100.0	0	84.6	20.1	123			
N-Nitrosodi-n-propylamine	80	10	100.0	0	79.9	26.9	131			
2-Nitrophenol	68	10	200.0	0	34.2	11.6	55.4			
Pentachlorophenol	130	20	200.0	5.380	62.2	17.6	88.9			
Phenol	62	10	200.0	0	31.0	18.4	66.5			
Pyrene	72	10	100.0	0	71.9	43.1	111			
1,2,4-Trichlorobenzene	62	10	100.0	0	61.9	38.8	95.6			
Surr: 2-Fluorophenol	75		200.0		37.6	22.7	98			
Surr: Phenol-d5	57		200.0		28.5	23.4	74.9			
Surr: 2,4,6-Tribromophenol	170		200.0		86.5	23.3	111			
Surr: Nitrobenzene-d5	65		100.0		65.0	36.8	111			
Surr: 2-Fluorobiphenyl	73		100.0		73.3	38.3	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

)C SUMMARY REPORT

WO#: **1403217**

[all Environmental Analysis Laboratory, Inc.

01-Apr-14

lient: Western Refining Southwest, Gallup
·oject: Q1-2014 Groundwater Sampling

ample ID **1403354-002gms** SampType: **MS** TestCode: **EPA Method 8270C: Semivolatiles**
lient ID: **BatchQC** Batch ID: **12139** RunNo: **17268**
rep Date: **3/12/2014** Analysis Date: **3/12/2014** SeqNo: **497433** Units: **µg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	70		100.0		70.5	52.1	116			

ample ID **1403354-002gmsd** SampType: **MSD** TestCode: **EPA Method 8270C: Semivolatiles**
lient ID: **BatchQC** Batch ID: **12139** RunNo: **17268**
rep Date: **3/12/2014** Analysis Date: **3/12/2014** SeqNo: **497434** Units: **µg/L**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
enaphthene	80	10	100.0	2.960	76.7	52.5	94.5	2.21	20	
Chloro-3-methylphenol	200	10	200.0	0	98.5	45	103	12.4	20	
Chlorophenol	120	10	200.0	0	59.0	32.3	101	5.92	20	
l-Dichlorobenzene	71	10	100.0	0	70.6	34.5	97.5	4.46	20	
l-Dinitrotoluene	82	10	100.0	0	81.6	20.1	123	3.66	20	
Nitrosodi-n-propylamine	83	10	100.0	0	82.8	26.9	131	3.52	20	
Nitrophenol	74	10	200.0	0	36.8	11.6	55.4	7.19	20	
ntachlorophenol	140	20	200.0	5.380	67.5	17.6	88.9	7.94	20	
enol	70	10	200.0	0	35.2	18.4	66.5	12.5	20	
rene	75	10	100.0	0	75.0	43.1	111	4.22	20	
2,4-Trichlorobenzene	71	10	100.0	0	71.1	38.8	95.6	13.9	20	
Surr: 2-Fluorophenol	85		200.0		42.7	22.7	98	0	0	
Surr: Phenol-d5	64		200.0		32.1	23.4	74.9	0	0	
Surr: 2,4,6-Tribromophenol	170		200.0		87.0	23.3	111	0	0	
Surr: Nitrobenzene-d5	69		100.0		69.0	36.8	111	0	0	
Surr: 2-Fluorobiphenyl	65		100.0		65.1	38.3	110	0	0	
Surr: 4-Terphenyl-d14	72		100.0		71.9	52.1	116	0	0	

)ualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1403217**
01-Apr-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **MB-12083** SampType: **MBLK** TestCode: **SM5210B: BOD**
Client ID: **PBW** Batch ID: **12083** RunNo: **17292**
Prep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **498191** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID **MB--12083** SampType: **MBLK** TestCode: **SM5210B: BOD**
Client ID: **PBW** Batch ID: **12083** RunNo: **17292**
Prep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **498192** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID **LCS-12083** SampType: **LCS** TestCode: **SM5210B: BOD**
Client ID: **LCSW** Batch ID: **12083** RunNo: **17292**
Prep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **498193** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	230	2.0	198.0	0	114	84.6	115.4			

Sample ID **LCSD-12083** SampType: **LCSD** TestCode: **SM5210B: BOD**
Client ID: **LCSS02** Batch ID: **12083** RunNo: **17292**
Prep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **498194** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	230	2.0	198.0	0	114	84.6	115.4	0.222	21	

Sample ID **1403186-002ADUP** SampType: **DUP** TestCode: **SM5210B: BOD**
Client ID: **BatchQC** Batch ID: **12083** RunNo: **17292**
Prep Date: **3/7/2014** Analysis Date: **3/12/2014** SeqNo: **498196** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	320	2.0						6.91	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

)C SUMMARY REPORT

WO#: **1403217**

[all Environmental Analysis Laboratory, Inc.

01-Apr-14

lient: Western Refining Southwest, Gallup

:oject: Q1-2014 Groundwater Sampling

ample ID **MB-12058** SampType: **MBLK** TestCode: **SM 9223B Fecal Indicator: E. coli MPN**

lient ID: **PBW** Batch ID: **12058** RunNo: **17207**

rep Date: **3/6/2014** Analysis Date: **3/7/2014** SeqNo: **495105** Units: **CFU/100ml**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Coli	<1	1.000								

ualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

)C SUMMARY REPORT

Iall Environmental Analysis Laboratory, Inc.

WO#: **1403217**

01-Apr-14

lient: Western Refining Southwest, Gallup

roject: Q1-2014 Groundwater Sampling

ample ID	**1403198-002e dup**	SampType: **dup**		TestCode: **SM2510B: Specific Conductance**	
lient ID:	**BatchQC**	Batch ID: **R17167**		RunNo: **17167**	
rep Date:		Analysis Date: **3/6/2014**		SeqNo: **493946**	Units: **µmhos/cm**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
nductivity	7600	0.010						0.290	20	

ample ID	**1403235-002b dup**	SampType: **dup**		TestCode: **SM2510B: Specific Conductance**	
lient ID:	**BatchQC**	Batch ID: **R17167**		RunNo: **17167**	
rep Date:		Analysis Date: **3/6/2014**		SeqNo: **493965**	Units: **µmhos/cm**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
nductivity	3100	0.010						0.290	20	

ualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1403217**

01-Apr-14

Client: Western Refining Southwest, Gallup
Project: Q1-2014 Groundwater Sampling

Sample ID **1403198-002e dup** SampType: **dup** TestCode: **SM4500-H+B: pH**
Client ID: **BatchQC** Batch ID: **R17167** RunNo: **17167**
Prep Date: Analysis Date: **3/6/2014** SeqNo: **493976** Units: **pH units**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	7.87	1.68								H

Sample ID **1403235-002b dup** SampType: **dup** TestCode: **SM4500-H+B: pH**
Client ID: **BatchQC** Batch ID: **R17167** RunNo: **17167**
Prep Date: Analysis Date: **3/6/2014** SeqNo: **493991** Units: **pH units**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	7.41	1.68								H

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Western Refining Gallup** Work Order Number: **1403217** RcptNo: 1

Received by/date: AT 03/06/14

Logged By: **Anne Thorne** 3/6/2014 9:12:00 AM Anne Thorne

Completed By: **Anne Thorne** 3/6/2014 Anne Thorne

Reviewed By: mg 03/06/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? ~~Yes ☑~~ No ☑
9. Was preservative added to bottles? Yes ☐ ~~No ☑~~ NA ☐
   SEE REMARKS AT 03/06/14
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 14 (<2 or >12 unless noted)
Adjusted? YES
Checked by: AT

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks: FOR METALS ANALYSIS: ADDED 1mL HNO_3 TO -002E FOR ACCEPTABLE pH.
FOR DISSOLVED METALS ANALYSIS: POURED OFF & FILTERED FROM -002A INTO -002B FOR -002B & ADDED 0.4 mL HNO_3 FOR ACCEPTABLE pH. HELD IN LOGIN FOR 24 HOURS AFTER PRESERVATION.
AT 03/06/14 @ 1320

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Not Present			

Chain-of-Custody Record

Client: Western Refining

Mailing Address: Rt 3 Box 7
Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-722-0210

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other

☒ EDD (Type) Tabydro format

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: Q1-2014 Groundwater Sampling

Project #: Qtrly Sampling

Project Manager: Cheryl Johnson

Sampler: Tom Fleener / Pat Landers

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1403217	[redacted]	[redacted]	8015B (DRO/GRO)	WQCC Metals (Total and Dissolved)	[redacted]	[redacted]	BOD and COD	[redacted]	[redacted]	[redacted]	Nitrates	Cyanide	e-coli	[redacted]	[redacted]	Air Bubbles (Y or N)
3/5/14	1425	H_2O	EP-5	11	All	-001	X			X	X	X	X	X					X			
	1450	H_2O	EP-4	11	All	-002	X			X	X	X	X	X					X			
	1530	H_2O	EP-3	11	All	-003	X			X	X	X	X	X					X			
	1545	H_2O	BW to EP-2	2		-004						X										
	Lab	H_2O	TB	2	HCl	-005	X															

Date:	Time:	Relinquished by:	Received by:	Date	Time
3/6/14	9:12	Tracy Walker	[signature]	03/06/14	0912
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

November 17, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: Q4 2014 OrderNo.: 1411527

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 14 sample(s) on 11/13/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1411527**
Date Reported: **11/17/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-9
Project: Q4 2014
Collection Date: 11/13/2014 8:30:00 AM
Lab ID: 1411527-001
Matrix: AQUEOUS
Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **MRA**	
E. Coli	<1	1.000		CFU/100ml	1	11/14/2014 4:36:00 PM	16383

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-2
Project: Q4 2014
Collection Date: 11/13/2014 8:58:00 AM
Lab ID: 1411527-002
Matrix: AQUEOUS
Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **MRA**	
E. Coli	>24196	10.00		CFU/100ml	10	11/14/2014 4:36:00 PM	16383

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-3
Project: Q4 2014
Collection Date: 11/13/2014 9:03:00 AM
Lab ID: 1411527-003
Matrix: AQUEOUS
Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **MRA**	
E. Coli	408	10.00		CFU/100ml	10	11/14/2014 4:36:00 PM	16383

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-4
Project: Q4 2014
Collection Date: 11/13/2014 9:05:00 AM
Lab ID: 1411527-004
Matrix: AQUEOUS
Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **MRA**	
E. Coli	63	10.00		CFU/100ml	10	11/14/2014 4:36:00 PM	16383

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-5
Project: Q4 2014
Collection Date: 11/13/2014 9:13:00 AM
Lab ID: 1411527-005
Matrix: AQUEOUS
Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **MRA**	
E. Coli	<1	1.000		CFU/100ml	1	11/14/2014 4:36:00 PM	16383

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-6
Project: Q4 2014
Collection Date: 11/13/2014 9:16:00 AM
Lab ID: 1411527-006
Matrix: AQUEOUS
Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **MRA**	
E. Coli	<1	1.000		CFU/100ml	1	11/14/2014 4:36:00 PM	16383

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-7
Project: Q4 2014
Collection Date: 11/13/2014 9:31:00 AM
Lab ID: 1411527-007
Matrix: AQUEOUS
Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **MRA**	
E. Coli	20	10.00		CFU/100ml	10	11/14/2014 4:36:00 PM	16383

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-8
Project: Q4 2014
Collection Date: 11/13/2014 9:24:00 AM
Lab ID: 1411527-008
Matrix: AQUEOUS
Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **MRA**	
E. Coli	10	10.00		CFU/100ml	10	11/14/2014 4:36:00 PM	16383

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-11
Project: Q4 2014
Collection Date: 11/13/2014 9:34:00 AM
Lab ID: 1411527-009
Matrix: AQUEOUS
Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **MRA**	
E. Coli	<10	10.00		CFU/100ml	10	11/14/2014 4:36:00 PM	16383

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-12A
Project: Q4 2014
Collection Date: 11/13/2014 9:42:00 AM
Lab ID: 1411527-010
Matrix: AQUEOUS
Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **MRA**	
E. Coli	131	10.00		CFU/100ml	10	11/14/2014 4:36:00 PM	16383

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EP-12B
Project: Q4 2014
Collection Date: 11/13/2014 9:44:00 AM
Lab ID: 1411527-011
Matrix: AQUEOUS
Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **MRA**	
E. Coli	1012	10.00		CFU/100ml	10	11/14/2014 4:36:00 PM	16383

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EB-111314
Project: Q4 2014
Collection Date: 11/13/2014 10:20:00 AM
Lab ID: 1411527-012
Matrix: AQUEOUS
Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Toluene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Ethylbenzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Naphthalene	ND	2.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
2-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Acetone	ND	10		µg/L	1	11/14/2014 10:54:51 AM	R22565
Bromobenzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Bromodichloromethane	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Bromoform	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Bromomethane	ND	3.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
2-Butanone	ND	10		µg/L	1	11/14/2014 10:54:51 AM	R22565
Carbon disulfide	ND	10		µg/L	1	11/14/2014 10:54:51 AM	R22565
Carbon Tetrachloride	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Chlorobenzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Chloroethane	ND	2.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Chloroform	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Chloromethane	ND	3.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
2-Chlorotoluene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
4-Chlorotoluene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
cis-1,2-DCE	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Dibromochloromethane	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Dibromomethane	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,1-Dichloroethane	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,1-Dichloroethene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,2-Dichloropropane	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,3-Dichloropropane	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
2,2-Dichloropropane	ND	2.0		µg/L	1	11/14/2014 10:54:51 AM	R22565

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EB-111314
Project: Q4 2014
Collection Date: 11/13/2014 10:20:00 AM
Lab ID: 1411527-012
Matrix: AQUEOUS
Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Hexachlorobutadiene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
2-Hexanone	ND	10		µg/L	1	11/14/2014 10:54:51 AM	R22565
Isopropylbenzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
4-Isopropyltoluene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
4-Methyl-2-pentanone	ND	10		µg/L	1	11/14/2014 10:54:51 AM	R22565
Methylene Chloride	ND	3.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
n-Butylbenzene	ND	3.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
n-Propylbenzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
sec-Butylbenzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Styrene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
tert-Butylbenzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
trans-1,2-DCE	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Trichlorofluoromethane	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Vinyl chloride	ND	1.0		µg/L	1	11/14/2014 10:54:51 AM	R22565
Xylenes, Total	ND	1.5		µg/L	1	11/14/2014 10:54:51 AM	R22565
Surr: 1,2-Dichloroethane-d4	101	70-130		%REC	1	11/14/2014 10:54:51 AM	R22565
Surr: 4-Bromofluorobenzene	91.1	70-130		%REC	1	11/14/2014 10:54:51 AM	R22565
Surr: Dibromofluoromethane	107	70-130		%REC	1	11/14/2014 10:54:51 AM	R22565
Surr: Toluene-d8	103	70-130		%REC	1	11/14/2014 10:54:51 AM	R22565

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-111314
Project: Q4 2014
Collection Date: 11/13/2014 10:16:00 AM
Lab ID: 1411527-013
Matrix: AQUEOUS
Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Toluene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Ethylbenzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Naphthalene	ND	2.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
2-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Acetone	ND	10		µg/L	1	11/14/2014 12:24:28 PM	R22565
Bromobenzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Bromodichloromethane	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Bromoform	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Bromomethane	ND	3.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
2-Butanone	ND	10		µg/L	1	11/14/2014 12:24:28 PM	R22565
Carbon disulfide	ND	10		µg/L	1	11/14/2014 12:24:28 PM	R22565
Carbon Tetrachloride	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Chlorobenzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Chloroethane	ND	2.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Chloroform	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Chloromethane	ND	3.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
2-Chlorotoluene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
4-Chlorotoluene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
cis-1,2-DCE	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Dibromochloromethane	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Dibromomethane	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,1-Dichloroethane	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,1-Dichloroethene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,2-Dichloropropane	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,3-Dichloropropane	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
2,2-Dichloropropane	ND	2.0		µg/L	1	11/14/2014 12:24:28 PM	R22565

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-111314
Project: Q4 2014
Collection Date: 11/13/2014 10:16:00 AM
Lab ID: 1411527-013
Matrix: AQUEOUS
Received Date: 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Hexachlorobutadiene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
2-Hexanone	ND	10		µg/L	1	11/14/2014 12:24:28 PM	R22565
Isopropylbenzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
4-Isopropyltoluene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
4-Methyl-2-pentanone	ND	10		µg/L	1	11/14/2014 12:24:28 PM	R22565
Methylene Chloride	ND	3.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
n-Butylbenzene	ND	3.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
n-Propylbenzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
sec-Butylbenzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Styrene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
tert-Butylbenzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
trans-1,2-DCE	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Trichlorofluoromethane	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Vinyl chloride	ND	1.0		µg/L	1	11/14/2014 12:24:28 PM	R22565
Xylenes, Total	ND	1.5		µg/L	1	11/14/2014 12:24:28 PM	R22565
Surr: 1,2-Dichloroethane-d4	91.6	70-130		%REC	1	11/14/2014 12:24:28 PM	R22565
Surr: 4-Bromofluorobenzene	97.6	70-130		%REC	1	11/14/2014 12:24:28 PM	R22565
Surr: Dibromofluoromethane	92.2	70-130		%REC	1	11/14/2014 12:24:28 PM	R22565
Surr: Toluene-d8	90.2	70-130		%REC	1	11/14/2014 12:24:28 PM	R22565

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup **Client Sample ID:** TB-401
Project: Q4 2014 **Collection Date:**
Lab ID: 1411527-014 **Matrix:** TRIP BLANK **Received Date:** 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Toluene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Ethylbenzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Naphthalene	ND	2.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
2-Methylnaphthalene	ND	4.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Acetone	ND	10		µg/L	1	11/14/2014 12:54:21 PM	R22565
Bromobenzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Bromodichloromethane	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Bromoform	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Bromomethane	ND	3.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
2-Butanone	ND	10		µg/L	1	11/14/2014 12:54:21 PM	R22565
Carbon disulfide	ND	10		µg/L	1	11/14/2014 12:54:21 PM	R22565
Carbon Tetrachloride	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Chlorobenzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Chloroethane	ND	2.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Chloroform	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Chloromethane	ND	3.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
2-Chlorotoluene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
4-Chlorotoluene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
cis-1,2-DCE	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Dibromochloromethane	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Dibromomethane	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,1-Dichloroethane	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,1-Dichloroethene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,2-Dichloropropane	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,3-Dichloropropane	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
2,2-Dichloropropane	ND	2.0		µg/L	1	11/14/2014 12:54:21 PM	R22565

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup **Client Sample ID:** TB-401
Project: Q4 2014 **Collection Date:**
Lab ID: 1411527-014 **Matrix:** TRIP BLANK **Received Date:** 11/13/2014 2:48:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Hexachlorobutadiene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
2-Hexanone	ND	10		µg/L	1	11/14/2014 12:54:21 PM	R22565
Isopropylbenzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
4-Isopropyltoluene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
4-Methyl-2-pentanone	ND	10		µg/L	1	11/14/2014 12:54:21 PM	R22565
Methylene Chloride	ND	3.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
n-Butylbenzene	ND	3.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
n-Propylbenzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
sec-Butylbenzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Styrene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
tert-Butylbenzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
trans-1,2-DCE	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Trichlorofluoromethane	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Vinyl chloride	ND	1.0		µg/L	1	11/14/2014 12:54:21 PM	R22565
Xylenes, Total	ND	1.5		µg/L	1	11/14/2014 12:54:21 PM	R22565
Surr: 1,2-Dichloroethane-d4	98.2	70-130		%REC	1	11/14/2014 12:54:21 PM	R22565
Surr: 4-Bromofluorobenzene	103	70-130		%REC	1	11/14/2014 12:54:21 PM	R22565
Surr: Dibromofluoromethane	98.2	70-130		%REC	1	11/14/2014 12:54:21 PM	R22565
Surr: Toluene-d8	94.0	70-130		%REC	1	11/14/2014 12:54:21 PM	R22565

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411527**
17-Nov-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **b3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R22565**	RunNo: **22565**			
Prep Date:	Analysis Date: **11/14/2014**	SeqNo: **665381**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411527**
17-Nov-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **b3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R22565**	RunNo: **22565**
Prep Date:	Analysis Date: **11/14/2014**	SeqNo: **665381** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.9	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.3	70	130			
Surr: Dibromofluoromethane	9.8		10.00		97.6	70	130			
Surr: Toluene-d8	9.5		10.00		94.6	70	130			

Sample ID **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R22565**	RunNo: **22565**
Prep Date:	Analysis Date: **11/14/2014**	SeqNo: **665383** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	100	70	130			
Toluene	20	1.0	20.00	0	102	80	120			
Chlorobenzene	20	1.0	20.00	0	98.2	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411527**
17-Nov-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **100ng lcs2** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22565** RunNo: **22565**
Prep Date: Analysis Date: **11/14/2014** SeqNo: **665383** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22	1.0	20.00	0	110	82.6	131			
Trichloroethene (TCE)	15	1.0	20.00	0	75.1	70	130			
Surr: 1,2-Dichloroethane-d4	9.4		10.00		94.3	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		90.6	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.7	70	130			
Surr: Toluene-d8	9.9		10.00		98.6	70	130			

Sample ID **1411527-012a ms** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **EB-111314** Batch ID: **R22565** RunNo: **22565**
Prep Date: Analysis Date: **11/14/2014** SeqNo: **665390** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	16	1.0	20.00	0.1700	77.6	70	130			
Toluene	16	1.0	20.00	0.3620	79.6	70	130			
Chlorobenzene	15	1.0	20.00	0	75.9	70	130			
1,1-Dichloroethene	17	1.0	20.00	0	85.3	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	80.5	70	130			
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.2	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.1	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.5		10.00		95.3	70	130			

Sample ID **1411527-012a msd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **EB-111314** Batch ID: **R22565** RunNo: **22565**
Prep Date: Analysis Date: **11/14/2014** SeqNo: **665391** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0.1700	88.0	70	130	12.5	20	
Toluene	19	1.0	20.00	0.3620	91.6	70	130	13.7	20	
Chlorobenzene	16	1.0	20.00	0	81.9	70	130	7.57	20	
1,1-Dichloroethene	18	1.0	20.00	0	88.6	70	130	3.81	20	
Trichloroethene (TCE)	18	1.0	20.00	0	89.2	70	130	10.3	20	
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.5	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.5		10.00		95.0	70	130	0	0	
Surr: Dibromofluoromethane	9.6		10.00		95.9	70	130	0	0	
Surr: Toluene-d8	9.8		10.00		98.0	70	130	0	0	

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411527**
17-Nov-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**MB-16383**	SampType:	**MBLK**	TestCode:	**SM 9223B Fecal Indicator: E. coli MPN**
Client ID:	**PBW**	Batch ID:	**16383**	RunNo:	**22577**
Prep Date:	**11/13/2014**	Analysis Date:	**11/14/2014**	SeqNo:	**665666** Units: **CFU/100ml**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
E. Coli	<1	1.000								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

ENVIRONMENTAL ANALYSIS LABORATORY

4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1411527 RcptNo: 1

Received by/date: 11/13/14

Logged By: Ashley Gallegos 11/13/2014 2:48:00 PM

Completed By: Ashley Gallegos 11/13/2014 2:55:59 PM

Reviewed By: 11/13/14 @ 1512

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

2 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard ☐ Rush

Project Name:

Q4 2014

Project #:

Evap Pond Study - ~~TDS~~ E-Coli

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1411527	E-Coli	8260										Air Bubbles (Y or N)
11-13-14	830		EP-9	1		-001	X											
	858		EP-2	1		-002	X											
	903		EP-3	1		-003	X											
	905		EP-4	1		-004	X											
	913		EP-5	1		-005	X											
	916		EP-6	1		-006	X											
	931		EP-7	1		-007	X											
	924		EP-8	1		-008	X											
	934		EP-11	1		-009	X											
	942		EP-12A	1		-010	X											
	948		EP-12B	1		-011	X											
	1020		EB-111314	3		-012		X										
	1016		FB-111314	3		-013		X										
	—		TB-401	3		-014		X										
11-13-14	1100		Pam Kimbrell / Pam Sanders															

Date: 11/13/14 Time: 1100 Relinquished by: Received by: Date 11/13/14 Time 1348 Remarks:

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 02, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: 2014 Annual GW OrderNo.: 1409453

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 9/10/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1409453**
Date Reported: **10/2/2014**

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: PW-3
Project: 2014 Annual GW
Collection Date: 9/10/2014 8:05:00 AM
Lab ID: 1409453-001
Matrix: AQUEOUS
Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	9/10/2014 9:46:44 PM	R21137
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.011	0.0020		mg/L	1	9/11/2014 2:27:41 PM	R21155
Cadmium	ND	0.0020		mg/L	1	9/11/2014 2:27:41 PM	R21155
Chromium	ND	0.0060		mg/L	1	9/11/2014 2:27:41 PM	R21155
Copper	ND	0.0060		mg/L	1	9/11/2014 2:27:41 PM	R21155
Iron	0.13	0.020		mg/L	1	9/11/2014 2:27:41 PM	R21155
Manganese	ND	0.0020		mg/L	1	9/11/2014 2:27:41 PM	R21155
Silver	ND	0.0050		mg/L	1	9/11/2014 2:27:41 PM	R21155
Zinc	0.011	0.010		mg/L	1	9/11/2014 2:27:41 PM	R21155
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.011	0.0020		mg/L	1	9/12/2014 5:18:47 PM	15250
Cadmium	ND	0.0020		mg/L	1	9/12/2014 5:18:47 PM	15250
Chromium	ND	0.0060		mg/L	1	9/15/2014 11:15:52 AM	15250
Copper	ND	0.0060		mg/L	1	9/12/2014 5:18:47 PM	15250
Iron	0.30	0.020		mg/L	1	9/15/2014 11:15:52 AM	15250
Manganese	0.0025	0.0020		mg/L	1	9/12/2014 5:18:47 PM	15250
Silver	ND	0.0050		mg/L	1	9/30/2014 5:26:10 PM	15563
Zinc	0.010	0.010		mg/L	1	9/12/2014 5:18:47 PM	15250
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0039	0.0010		mg/L	1	9/19/2014 12:43:00 PM	R21332
Lead	ND	0.0010		mg/L	1	9/19/2014 12:43:00 PM	R21332
Selenium	0.0020	0.0010		mg/L	1	9/19/2014 12:43:00 PM	R21332
Uranium	0.0016	0.0010		mg/L	1	9/19/2014 12:43:00 PM	R21332
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0039	0.0010		mg/L	1	9/18/2014 5:22:51 PM	15250
Lead	ND	0.0010		mg/L	1	9/18/2014 5:22:51 PM	15250
Selenium	0.0019	0.0010		mg/L	1	9/18/2014 5:22:51 PM	15250
Uranium	0.0016	0.0010		mg/L	1	9/18/2014 5:22:51 PM	15250
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/15/2014 2:30:43 PM	15279
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Acenaphthylene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Aniline	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Anthracene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: PW-3
Project: 2014 Annual GW
Collection Date: 9/10/2014 8:05:00 AM
Lab ID: 1409453-001
Matrix: AQUEOUS
Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Azobenzene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Benz(a)anthracene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Benzo(a)pyrene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Benzo(b)fluoranthene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Benzo(k)fluoranthene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Benzoic acid	ND	20		µg/L	1	9/15/2014 4:35:49 PM	15274
Benzyl alcohol	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Butyl benzyl phthalate	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Carbazole	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
4-Chloroaniline	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
2-Chloronaphthalene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
2-Chlorophenol	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Chrysene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Di-n-butyl phthalate	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Di-n-octyl phthalate	ND	20		µg/L	1	9/15/2014 4:35:49 PM	15274
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Dibenzofuran	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
1,2-Dichlorobenzene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
1,3-Dichlorobenzene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
1,4-Dichlorobenzene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Diethyl phthalate	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Dimethyl phthalate	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
2,4-Dichlorophenol	ND	20		µg/L	1	9/15/2014 4:35:49 PM	15274
2,4-Dimethylphenol	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/15/2014 4:35:49 PM	15274
2,4-Dinitrophenol	ND	20		µg/L	1	9/15/2014 4:35:49 PM	15274
2,4-Dinitrotoluene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
2,6-Dinitrotoluene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Fluoranthene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Fluorene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: PW-3
Project: 2014 Annual GW
Collection Date: 9/10/2014 8:05:00 AM
Lab ID: 1409453-001
Matrix: AQUEOUS
Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Hexachlorobenzene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Hexachlorobutadiene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Hexachloroethane	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Isophorone	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
1-Methylnaphthalene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
2-Methylnaphthalene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
2-Methylphenol	ND	20		µg/L	1	9/15/2014 4:35:49 PM	15274
3+4-Methylphenol	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
N-Nitrosodimethylamine	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Naphthalene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
2-Nitroaniline	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
3-Nitroaniline	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
4-Nitroaniline	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Nitrobenzene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
2-Nitrophenol	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
4-Nitrophenol	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Pentachlorophenol	ND	20		µg/L	1	9/15/2014 4:35:49 PM	15274
Phenanthrene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Phenol	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Pyrene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Pyridine	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/15/2014 4:35:49 PM	15274
Surr: 2-Fluorophenol	52.4	12.1-85.8		%REC	1	9/15/2014 4:35:49 PM	15274
Surr: Phenol-d5	35.1	17.7-65.8		%REC	1	9/15/2014 4:35:49 PM	15274
Surr: 2,4,6-Tribromophenol	57.6	26-138		%REC	1	9/15/2014 4:35:49 PM	15274
Surr: Nitrobenzene-d5	71.0	47.5-119		%REC	1	9/15/2014 4:35:49 PM	15274
Surr: 2-Fluorobiphenyl	69.2	48.1-106		%REC	1	9/15/2014 4:35:49 PM	15274
Surr: 4-Terphenyl-d14	65.9	44-113		%REC	1	9/15/2014 4:35:49 PM	15274
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Toluene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Ethylbenzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: PW-3
Project: 2014 Annual GW
Collection Date: 9/10/2014 8:05:00 AM
Lab ID: 1409453-001
Matrix: AQUEOUS
Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Naphthalene	ND	2.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1-Methylnaphthalene	ND	4.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
2-Methylnaphthalene	ND	4.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Acetone	ND	10		µg/L	1	9/16/2014 10:55:14 PM	R21241
Bromobenzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Bromodichloromethane	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Bromoform	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Bromomethane	ND	3.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
2-Butanone	ND	10		µg/L	1	9/16/2014 10:55:14 PM	R21241
Carbon disulfide	ND	10		µg/L	1	9/16/2014 10:55:14 PM	R21241
Carbon Tetrachloride	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Chlorobenzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Chloroethane	ND	2.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Chloroform	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Chloromethane	ND	3.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
2-Chlorotoluene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
4-Chlorotoluene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
cis-1,2-DCE	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Dibromochloromethane	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Dibromomethane	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,1-Dichloroethane	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,1-Dichloroethene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,2-Dichloropropane	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,3-Dichloropropane	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
2,2-Dichloropropane	ND	2.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,1-Dichloropropene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Hexachlorobutadiene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
2-Hexanone	ND	10		µg/L	1	9/16/2014 10:55:14 PM	R21241
Isopropylbenzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: PW-3
Project: 2014 Annual GW
Collection Date: 9/10/2014 8:05:00 AM
Lab ID: 1409453-001
Matrix: AQUEOUS
Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
4-Isopropyltoluene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
4-Methyl-2-pentanone	ND	10		µg/L	1	9/16/2014 10:55:14 PM	R21241
Methylene Chloride	ND	3.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
n-Butylbenzene	ND	3.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
n-Propylbenzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
sec-Butylbenzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Styrene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
tert-Butylbenzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
trans-1,2-DCE	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Trichlorofluoromethane	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Vinyl chloride	ND	1.0		µg/L	1	9/16/2014 10:55:14 PM	R21241
Xylenes, Total	ND	1.5		µg/L	1	9/16/2014 10:55:14 PM	R21241
Surr: 1,2-Dichloroethane-d4	94.7	70-130		%REC	1	9/16/2014 10:55:14 PM	R21241
Surr: 4-Bromofluorobenzene	102	70-130		%REC	1	9/16/2014 10:55:14 PM	R21241
Surr: Dibromofluoromethane	83.8	70-130		%REC	1	9/16/2014 10:55:14 PM	R21241
Surr: Toluene-d8	97.4	70-130		%REC	1	9/16/2014 10:55:14 PM	R21241

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: PW-2
Project: 2014 Annual GW
Collection Date: 9/10/2014 8:50:00 AM
Lab ID: 1409453-002
Matrix: AQUEOUS
Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Nitrogen, Nitrate (As N)	0.12	0.10		mg/L	1	9/10/2014 10:11:33 PM	R21137
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.012	0.0020		mg/L	1	9/11/2014 2:40:37 PM	R21155
Cadmium	ND	0.0020		mg/L	1	9/11/2014 2:40:37 PM	R21155
Chromium	ND	0.0060		mg/L	1	9/11/2014 2:40:37 PM	R21155
Copper	ND	0.0060		mg/L	1	9/11/2014 2:40:37 PM	R21155
Iron	0.042	0.020		mg/L	1	9/11/2014 2:40:37 PM	R21155
Manganese	ND	0.0020		mg/L	1	9/11/2014 2:40:37 PM	R21155
Silver	ND	0.0050		mg/L	1	9/11/2014 2:40:37 PM	R21155
Zinc	0.012	0.010		mg/L	1	9/11/2014 2:40:37 PM	R21155
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.014	0.0020		mg/L	1	9/12/2014 5:36:53 PM	15250
Cadmium	ND	0.0020		mg/L	1	9/12/2014 5:36:53 PM	15250
Chromium	ND	0.0060		mg/L	1	9/15/2014 11:23:08 AM	15250
Copper	ND	0.0060		mg/L	1	9/12/2014 5:36:53 PM	15250
Iron	0.050	0.020		mg/L	1	9/15/2014 11:23:08 AM	15250
Manganese	ND	0.0020		mg/L	1	9/12/2014 5:36:53 PM	15250
Silver	ND	0.0050		mg/L	1	9/30/2014 5:30:04 PM	15563
Zinc	ND	0.010		mg/L	1	9/12/2014 5:36:53 PM	15250
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0031	0.0010		mg/L	1	9/19/2014 12:46:06 PM	R21332
Lead	ND	0.0010		mg/L	1	9/19/2014 12:46:06 PM	R21332
Selenium	0.0014	0.0010		mg/L	1	9/19/2014 12:46:06 PM	R21332
Uranium	0.0024	0.0010		mg/L	1	9/19/2014 12:46:06 PM	R21332
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0033	0.0010		mg/L	1	9/18/2014 5:25:56 PM	15250
Lead	ND	0.0010		mg/L	1	9/18/2014 5:25:56 PM	15250
Selenium	0.0014	0.0010		mg/L	1	9/18/2014 5:25:56 PM	15250
Uranium	0.0024	0.0010		mg/L	1	9/18/2014 5:25:56 PM	15250
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/15/2014 2:32:34 PM	15279
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Acenaphthylene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Aniline	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Anthracene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274

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Hall Environmental Analysis Laboratory, Inc.

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Client Sample ID: PW-2
Project: 2014 Annual GW
Collection Date: 9/10/2014 8:50:00 AM
Lab ID: 1409453-002
Matrix: AQUEOUS
Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Azobenzene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Benz(a)anthracene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Benzo(a)pyrene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Benzo(b)fluoranthene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Benzo(k)fluoranthene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Benzoic acid	ND	20		µg/L	1	9/15/2014 5:05:10 PM	15274
Benzyl alcohol	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Butyl benzyl phthalate	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Carbazole	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
4-Chloroaniline	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
2-Chloronaphthalene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
2-Chlorophenol	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Chrysene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Di-n-butyl phthalate	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Di-n-octyl phthalate	ND	20		µg/L	1	9/15/2014 5:05:10 PM	15274
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Dibenzofuran	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
1,2-Dichlorobenzene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
1,3-Dichlorobenzene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
1,4-Dichlorobenzene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Diethyl phthalate	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Dimethyl phthalate	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
2,4-Dichlorophenol	ND	20		µg/L	1	9/15/2014 5:05:10 PM	15274
2,4-Dimethylphenol	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/15/2014 5:05:10 PM	15274
2,4-Dinitrophenol	ND	20		µg/L	1	9/15/2014 5:05:10 PM	15274
2,4-Dinitrotoluene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
2,6-Dinitrotoluene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Fluoranthene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Fluorene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274

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Hall Environmental Analysis Laboratory, Inc.

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Client Sample ID: PW-2
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Collection Date: 9/10/2014 8:50:00 AM
Lab ID: 1409453-002
Matrix: AQUEOUS
Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Hexachlorobenzene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Hexachlorobutadiene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Hexachloroethane	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Isophorone	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
1-Methylnaphthalene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
2-Methylnaphthalene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
2-Methylphenol	ND	20		µg/L	1	9/15/2014 5:05:10 PM	15274
3+4-Methylphenol	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
N-Nitrosodimethylamine	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Naphthalene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
2-Nitroaniline	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
3-Nitroaniline	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
4-Nitroaniline	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Nitrobenzene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
2-Nitrophenol	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
4-Nitrophenol	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Pentachlorophenol	ND	20		µg/L	1	9/15/2014 5:05:10 PM	15274
Phenanthrene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Phenol	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Pyrene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Pyridine	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/15/2014 5:05:10 PM	15274
Surr: 2-Fluorophenol	53.2	12.1-85.8		%REC	1	9/15/2014 5:05:10 PM	15274
Surr: Phenol-d5	35.8	17.7-65.8		%REC	1	9/15/2014 5:05:10 PM	15274
Surr: 2,4,6-Tribromophenol	57.5	26-138		%REC	1	9/15/2014 5:05:10 PM	15274
Surr: Nitrobenzene-d5	71.0	47.5-119		%REC	1	9/15/2014 5:05:10 PM	15274
Surr: 2-Fluorobiphenyl	66.9	48.1-106		%REC	1	9/15/2014 5:05:10 PM	15274
Surr: 4-Terphenyl-d14	67.2	44-113		%REC	1	9/15/2014 5:05:10 PM	15274
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Toluene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Ethylbenzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
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Project: 2014 Annual GW
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Lab ID: 1409453-002
Matrix: AQUEOUS
Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Naphthalene	ND	2.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1-Methylnaphthalene	ND	4.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
2-Methylnaphthalene	ND	4.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Acetone	ND	10		µg/L	1	9/16/2014 11:24:55 PM	R21241
Bromobenzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Bromodichloromethane	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Bromoform	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Bromomethane	ND	3.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
2-Butanone	ND	10		µg/L	1	9/16/2014 11:24:55 PM	R21241
Carbon disulfide	ND	10		µg/L	1	9/16/2014 11:24:55 PM	R21241
Carbon Tetrachloride	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Chlorobenzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Chloroethane	ND	2.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Chloroform	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Chloromethane	ND	3.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
2-Chlorotoluene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
4-Chlorotoluene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
cis-1,2-DCE	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Dibromochloromethane	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Dibromomethane	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,1-Dichloroethane	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,1-Dichloroethene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,2-Dichloropropane	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,3-Dichloropropane	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
2,2-Dichloropropane	ND	2.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,1-Dichloropropene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Hexachlorobutadiene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
2-Hexanone	ND	10		µg/L	1	9/16/2014 11:24:55 PM	R21241
Isopropylbenzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241

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Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
4-Isopropyltoluene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
4-Methyl-2-pentanone	ND	10		µg/L	1	9/16/2014 11:24:55 PM	R21241
Methylene Chloride	ND	3.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
n-Butylbenzene	ND	3.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
n-Propylbenzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
sec-Butylbenzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Styrene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
tert-Butylbenzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
trans-1,2-DCE	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Trichlorofluoromethane	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Vinyl chloride	ND	1.0		µg/L	1	9/16/2014 11:24:55 PM	R21241
Xylenes, Total	ND	1.5		µg/L	1	9/16/2014 11:24:55 PM	R21241
Surr: 1,2-Dichloroethane-d4	96.9	70-130		%REC	1	9/16/2014 11:24:55 PM	R21241
Surr: 4-Bromofluorobenzene	107	70-130		%REC	1	9/16/2014 11:24:55 PM	R21241
Surr: Dibromofluoromethane	89.6	70-130		%REC	1	9/16/2014 11:24:55 PM	R21241
Surr: Toluene-d8	95.4	70-130		%REC	1	9/16/2014 11:24:55 PM	R21241

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group 12
Project: 2014 Annual GW
Collection Date: 9/10/2014 8:20:00 AM
Lab ID: 1409453-003
Matrix: AQUEOUS
Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Toluene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Ethylbenzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Naphthalene	ND	2.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1-Methylnaphthalene	ND	4.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
2-Methylnaphthalene	ND	4.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Acetone	ND	10		µg/L	1	9/17/2014 2:22:46 AM	R21241
Bromobenzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Bromodichloromethane	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Bromoform	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Bromomethane	ND	3.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
2-Butanone	ND	10		µg/L	1	9/17/2014 2:22:46 AM	R21241
Carbon disulfide	ND	10		µg/L	1	9/17/2014 2:22:46 AM	R21241
Carbon Tetrachloride	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Chlorobenzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Chloroethane	ND	2.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Chloroform	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Chloromethane	ND	3.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
2-Chlorotoluene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
4-Chlorotoluene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
cis-1,2-DCE	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Dibromochloromethane	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Dibromomethane	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,1-Dichloroethane	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,1-Dichloroethene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,2-Dichloropropane	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,3-Dichloropropane	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
2,2-Dichloropropane	ND	2.0		µg/L	1	9/17/2014 2:22:46 AM	R21241

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group 12
Project: 2014 Annual GW
Collection Date: 9/10/2014 8:20:00 AM
Lab ID: 1409453-003
Matrix: AQUEOUS
Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Hexachlorobutadiene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
2-Hexanone	ND	10		µg/L	1	9/17/2014 2:22:46 AM	R21241
Isopropylbenzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
4-Isopropyltoluene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
4-Methyl-2-pentanone	ND	10		µg/L	1	9/17/2014 2:22:46 AM	R21241
Methylene Chloride	ND	3.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
n-Butylbenzene	ND	3.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
n-Propylbenzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
sec-Butylbenzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Styrene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
tert-Butylbenzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
trans-1,2-DCE	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Trichlorofluoromethane	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Vinyl chloride	ND	1.0		µg/L	1	9/17/2014 2:22:46 AM	R21241
Xylenes, Total	ND	1.5		µg/L	1	9/17/2014 2:22:46 AM	R21241
Surr: 1,2-Dichloroethane-d4	99.3	70-130		%REC	1	9/17/2014 2:22:46 AM	R21241
Surr: 4-Bromofluorobenzene	93.4	70-130		%REC	1	9/17/2014 2:22:46 AM	R21241
Surr: Dibromofluoromethane	91.2	70-130		%REC	1	9/17/2014 2:22:46 AM	R21241
Surr: Toluene-d8	92.9	70-130		%REC	1	9/17/2014 2:22:46 AM	R21241

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Trip Blank
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409453-004
Matrix: TRIP BLANK
Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Toluene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Ethylbenzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Naphthalene	ND	2.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1-Methylnaphthalene	ND	4.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
2-Methylnaphthalene	ND	4.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Acetone	ND	10		µg/L	1	9/17/2014 2:52:29 AM	R21241
Bromobenzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Bromodichloromethane	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Bromoform	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Bromomethane	ND	3.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
2-Butanone	ND	10		µg/L	1	9/17/2014 2:52:29 AM	R21241
Carbon disulfide	ND	10		µg/L	1	9/17/2014 2:52:29 AM	R21241
Carbon Tetrachloride	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Chlorobenzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Chloroethane	ND	2.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Chloroform	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Chloromethane	ND	3.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
2-Chlorotoluene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
4-Chlorotoluene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
cis-1,2-DCE	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Dibromochloromethane	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Dibromomethane	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,1-Dichloroethane	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,1-Dichloroethene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,2-Dichloropropane	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,3-Dichloropropane	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
2,2-Dichloropropane	ND	2.0		µg/L	1	9/17/2014 2:52:29 AM	R21241

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Trip Blank
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409453-004
Matrix: TRIP BLANK
Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Hexachlorobutadiene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
2-Hexanone	ND	10		µg/L	1	9/17/2014 2:52:29 AM	R21241
Isopropylbenzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
4-Isopropyltoluene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
4-Methyl-2-pentanone	ND	10		µg/L	1	9/17/2014 2:52:29 AM	R21241
Methylene Chloride	ND	3.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
n-Butylbenzene	ND	3.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
n-Propylbenzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
sec-Butylbenzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Styrene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
tert-Butylbenzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
trans-1,2-DCE	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Trichlorofluoromethane	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Vinyl chloride	ND	1.0		µg/L	1	9/17/2014 2:52:29 AM	R21241
Xylenes, Total	ND	1.5		µg/L	1	9/17/2014 2:52:29 AM	R21241
Surr: 1,2-Dichloroethane-d4	98.8	70-130		%REC	1	9/17/2014 2:52:29 AM	R21241
Surr: 4-Bromofluorobenzene	94.6	70-130		%REC	1	9/17/2014 2:52:29 AM	R21241
Surr: Dibromofluoromethane	90.2	70-130		%REC	1	9/17/2014 2:52:29 AM	R21241
Surr: Toluene-d8	96.6	70-130		%REC	1	9/17/2014 2:52:29 AM	R21241

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 140911039
Project Name: 1409453

Analytical Results Report

Sample Number 140911039-001 **Sampling Date** 9/10/2014 **Date/Time Received** 9/11/2014 11:55 AM
Client Sample ID 1409453-001F / PW-3 **Sampling Time** 8:05 AM
Matrix Water
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/L	0.01	9/17/2014	CRW	EPA 335.4	

Sample Number 140911039-002 **Sampling Date** 9/10/2014 **Date/Time Received** 9/11/2014 11:55 AM
Client Sample ID 1409453-002F / PW-2 **Sampling Time** 8:50 AM
Matrix Water
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/L	0.01	9/17/2014	CRW	EPA 335.4	

Authorized Signature

John Coddington, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Anatek Labs, Inc.

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 140911039
Project Name: 1409453

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Cyanide	0.519	mg/L	0.5	103.8	90-110	9/17/2014	9/17/2014

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
140911039-002	Cyanide	ND	0.502	mg/L	0.5	100.4	90-110	9/17/2014	9/17/2014

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide	0.506	mg/L	0.5	101.3	0.8	0-20	9/17/2014	9/17/2014

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide	ND	mg/L	0.01	9/17/2014	9/17/2014

AR Acceptable Range
ND Not Detected
PQL Practical Quantitation Limit
RPD Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409453**
02-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21155** RunNo: **21155**
Prep Date: Analysis Date: **9/11/2014** SeqNo: **615741** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21155** RunNo: **21155**
Prep Date: Analysis Date: **9/11/2014** SeqNo: **615742** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.7	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.2	85	115			
Chromium	0.47	0.0060	0.5000	0	94.7	85	115			
Copper	0.47	0.0060	0.5000	0	95.0	85	115			
Iron	0.47	0.020	0.5000	0	94.5	85	115			
Manganese	0.49	0.0020	0.5000	0	98.8	85	115			
Silver	0.49	0.0050	0.5000	0	98.2	85	115			
Zinc	0.50	0.010	0.5000	0	100	85	115			

Sample ID **1409453-002EMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PW-2** Batch ID: **R21155** RunNo: **21155**
Prep Date: Analysis Date: **9/11/2014** SeqNo: **615834** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0.01222	95.3	70	130			
Cadmium	0.47	0.0020	0.5000	0	93.8	70	130			
Chromium	0.47	0.0060	0.5000	0	93.6	70	130			
Copper	0.46	0.0060	0.5000	0	92.1	70	130			
Iron	0.54	0.020	0.5000	0.04219	99.0	70	130			
Manganese	0.49	0.0020	0.5000	0.001050	97.7	70	130			
Silver	0.41	0.0050	0.5000	0.003690	80.9	70	130			
Zinc	0.48	0.010	0.5000	0.01236	93.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409453**
02-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **1409453-002EMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PW-2** Batch ID: **R21155** RunNo: **21155**
Prep Date: Analysis Date: **9/11/2014** SeqNo: **615835** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0.01222	95.8	70	130	0.490	20	
Cadmium	0.47	0.0020	0.5000	0	94.7	70	130	0.957	20	
Chromium	0.47	0.0060	0.5000	0	93.5	70	130	0.0470	20	
Copper	0.47	0.0060	0.5000	0	93.2	70	130	1.26	20	
Iron	0.54	0.020	0.5000	0.04219	98.7	70	130	0.229	20	
Manganese	0.49	0.0020	0.5000	0.001050	98.2	70	130	0.450	20	
Silver	0.41	0.0050	0.5000	0.003690	82.0	70	130	1.27	20	
Zinc	0.50	0.010	0.5000	0.01236	97.3	70	130	4.39	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409453**
02-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB-15250** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **15250** RunNo: **21179**
Prep Date: **9/12/2014** Analysis Date: **9/12/2014** SeqNo: **616404** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Manganese	ND	0.0020								
Zinc	ND	0.010								

Sample ID **LCS-15250** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **15250** RunNo: **21179**
Prep Date: **9/12/2014** Analysis Date: **9/12/2014** SeqNo: **616405** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.7	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.3	85	115			
Chromium	0.50	0.0060	0.5000	0	99.2	85	115			
Copper	0.49	0.0060	0.5000	0	98.2	85	115			
Manganese	0.51	0.0020	0.5000	0	101	85	115			
Zinc	0.52	0.010	0.5000	0	105	85	115			

Sample ID **1409453-001DMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PW-3** Batch ID: **15250** RunNo: **21179**
Prep Date: **9/12/2014** Analysis Date: **9/12/2014** SeqNo: **616700** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.53	0.0020	0.5000	0.01058	104	70	130			
Cadmium	0.52	0.0020	0.5000	0	105	70	130			
Copper	0.49	0.0060	0.5000	0	98.2	70	130			
Manganese	0.49	0.0020	0.5000	0.002490	97.7	70	130			
Zinc	0.50	0.010	0.5000	0.01050	98.5	70	130			

Sample ID **1409453-001DMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PW-3** Batch ID: **15250** RunNo: **21179**
Prep Date: **9/12/2014** Analysis Date: **9/12/2014** SeqNo: **616701** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.52	0.0020	0.5000	0.01058	103	70	130	0.714	20	
Cadmium	0.52	0.0020	0.5000	0	103	70	130	1.46	20	
Copper	0.49	0.0060	0.5000	0	98.4	70	130	0.159	20	
Manganese	0.49	0.0020	0.5000	0.002490	96.6	70	130	1.10	20	
Zinc	0.51	0.010	0.5000	0.01050	99.6	70	130	1.11	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409453**
02-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **1409453-002DMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PW-2** Batch ID: **15250** RunNo: **21179**
Prep Date: **9/12/2014** Analysis Date: **9/12/2014** SeqNo: **616710** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0.01387	99.8	70	130			
Cadmium	0.50	0.0020	0.5000	0	101	70	130			
Copper	0.50	0.0060	0.5000	0	99.2	70	130			
Manganese	0.51	0.0020	0.5000	0.001120	102	70	130			
Zinc	0.50	0.010	0.5000	0	100	70	130			

Sample ID **1409453-002DMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PW-2** Batch ID: **15250** RunNo: **21179**
Prep Date: **9/12/2014** Analysis Date: **9/12/2014** SeqNo: **616711** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0.01387	95.7	70	130	4.02	20	
Cadmium	0.49	0.0020	0.5000	0	97.6	70	130	3.22	20	
Copper	0.48	0.0060	0.5000	0	96.1	70	130	3.23	20	
Manganese	0.49	0.0020	0.5000	0.001120	97.9	70	130	4.20	20	
Zinc	0.50	0.010	0.5000	0	99.6	70	130	0.908	20	

Sample ID **MB-15250** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **15250** RunNo: **21196**
Prep Date: **9/12/2014** Analysis Date: **9/15/2014** SeqNo: **617274** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								

Sample ID **LCS-15250** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **15250** RunNo: **21196**
Prep Date: **9/12/2014** Analysis Date: **9/15/2014** SeqNo: **617275** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.53	0.020	0.5000	0	105	85	115			

Sample ID **1409453-001DMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PW-3** Batch ID: **15250** RunNo: **21196**
Prep Date: **9/12/2014** Analysis Date: **9/15/2014** SeqNo: **617290** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.47	0.0060	0.5000	0	93.6	70	130			
Iron	0.76	0.020	0.5000	0.2988	92.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409453**
02-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **1409453-001DMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PW-3** Batch ID: **15250** RunNo: **21196**
Prep Date: **9/12/2014** Analysis Date: **9/15/2014** SeqNo: **617291** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.47	0.0060	0.5000	0	93.3	70	130	0.298	20	
Iron	0.76	0.020	0.5000	0.2988	91.7	70	130	0.457	20	

Sample ID **1409453-002DMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PW-2** Batch ID: **15250** RunNo: **21196**
Prep Date: **9/12/2014** Analysis Date: **9/15/2014** SeqNo: **617294** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.48	0.0060	0.5000	0	96.1	70	130			
Iron	0.54	0.020	0.5000	0.05024	98.6	70	130			

Sample ID **1409453-002DMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PW-2** Batch ID: **15250** RunNo: **21196**
Prep Date: **9/12/2014** Analysis Date: **9/15/2014** SeqNo: **617295** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.47	0.0060	0.5000	0	93.6	70	130	2.63	20	
Iron	0.53	0.020	0.5000	0.05024	96.6	70	130	1.85	20	

Sample ID **MB-15563** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **15563** RunNo: **21558**
Prep Date: **9/27/2014** Analysis Date: **9/30/2014** SeqNo: **631358** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								

Sample ID **LCS1-15563** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **15563** RunNo: **21558**
Prep Date: **9/27/2014** Analysis Date: **9/30/2014** SeqNo: **631359** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.11	0.0050	0.1000	0	105	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409453**
02-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21332** RunNo: **21332**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622621** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.4	85	115			
Lead	0.025	0.0010	0.02500	0	101	85	115			
Selenium	0.024	0.0010	0.02500	0	96.3	85	115			
Uranium	0.026	0.0010	0.02500	0	103	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21332** RunNo: **21332**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622622** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	93.2	85	115			
Lead	0.025	0.0010	0.02500	0	101	85	115			
Selenium	0.024	0.0010	0.02500	0	96.4	85	115			
Uranium	0.026	0.0010	0.02500	0	104	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21332** RunNo: **21332**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622623** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21332** RunNo: **21332**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622624** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409453**
02-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LLLCS-15250** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **15250** RunNo: **21206**
Prep Date: **9/12/2014** Analysis Date: **9/15/2014** SeqNo: **617630** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.1	85	115			
Lead	0.025	0.0010	0.02500	0	99.5	85	115			
Selenium	0.023	0.0010	0.02500	0	91.4	85	115			
Uranium	0.026	0.0010	0.02500	0	102	85	115			

Sample ID **MB-15250** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **15250** RunNo: **21206**
Prep Date: **9/12/2014** Analysis Date: **9/15/2014** SeqNo: **617631** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409453**
02-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**MB-15279**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**
Client ID:	**PBW**	Batch ID:	**15279**	RunNo:	**21205**
Prep Date:	**9/15/2014**	Analysis Date:	**9/15/2014**	SeqNo:	**617635** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-15279**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**
Client ID:	**LCSW**	Batch ID:	**15279**	RunNo:	**21205**
Prep Date:	**9/15/2014**	Analysis Date:	**9/15/2014**	SeqNo:	**617636** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0055	0.00020	0.005000	0	109	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409453**
02-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB**	SampType: **MBLK**			TestCode: **EPA Method 300.0: Anions**						
Client ID: **PBW**	Batch ID: **R21137**			RunNo: **21137**						
Prep Date:	Analysis Date: **9/10/2014**			SeqNo: **615456**			Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	ND	0.10								

Sample ID **LCS**	SampType: **LCS**			TestCode: **EPA Method 300.0: Anions**						
Client ID: **LCSW**	Batch ID: **R21137**			RunNo: **21137**						
Prep Date:	Analysis Date: **9/10/2014**			SeqNo: **615457**			Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	100	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409453**
02-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **b3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R21241**	RunNo: **21241**	
Prep Date:	Analysis Date: **9/16/2014**	SeqNo: **619016**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409453**
02-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **b3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R21241**	RunNo: **21241**
Prep Date:	Analysis Date: **9/16/2014**	SeqNo: **619016** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.6		10.00		95.9	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130			
Surr: Dibromofluoromethane	8.7		10.00		87.0	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R21241**	RunNo: **21241**
Prep Date:	Analysis Date: **9/16/2014**	SeqNo: **619018** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	93.4	70	130			
Toluene	22	1.0	20.00	0	112	80	120			
Chlorobenzene	21	1.0	20.00	0	104	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409453**
02-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **LCSW**	Batch ID: **R21241**	RunNo: **21241**			
Prep Date:	Analysis Date: **9/16/2014**	SeqNo: **619018**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	20	1.0	20.00	0	101	82.6	131			
Trichloroethene (TCE)	20	1.0	20.00	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		109	70	130			
Surr: Dibromofluoromethane	8.8		10.00		88.3	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409453**
02-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15274**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **15274**	RunNo: **21200**			
Prep Date: **9/15/2014**	Analysis Date: **9/15/2014**	SeqNo: **617967**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409453**
02-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15274**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **15274**	RunNo: **21200**			
Prep Date: **9/15/2014**	Analysis Date: **9/15/2014**	SeqNo: **617967**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	100		200.0		50.8	12.1	85.8			
Surr: Phenol-d5	70		200.0		35.0	17.7	65.8			
Surr: 2,4,6-Tribromophenol	130		200.0		65.9	26	138			
Surr: Nitrobenzene-d5	70		100.0		69.7	47.5	119			
Surr: 2-Fluorobiphenyl	66		100.0		65.5	48.1	106			
Surr: 4-Terphenyl-d14	73		100.0		73.2	44	113			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409453**
02-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **lcs-15274** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **15274** RunNo: **21200**
Prep Date: **9/15/2014** Analysis Date: **9/15/2014** SeqNo: **617970** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	62	10	100.0	0	62.2	50.3	109			
4-Chloro-3-methylphenol	140	10	200.0	0	69.5	51.2	113			
2-Chlorophenol	130	10	200.0	0	66.8	48.5	104			
1,4-Dichlorobenzene	52	10	100.0	0	52.0	39.5	106			
2,4-Dinitrotoluene	54	10	100.0	0	54.5	45.4	107			
N-Nitrosodi-n-propylamine	61	10	100.0	0	60.8	50.4	119			
4-Nitrophenol	66	10	200.0	0	33.0	15.5	62.2			
Pentachlorophenol	100	20	200.0	0	50.1	23.5	93.5			
Phenol	80	10	200.0	0	40.0	26.8	65.6			
Pyrene	71	10	100.0	0	70.7	54.4	108			
1,2,4-Trichlorobenzene	55	10	100.0	0	54.7	39.9	106			
Surr: 2-Fluorophenol	100		200.0		50.2	12.1	85.8			
Surr: Phenol-d5	70		200.0		35.1	17.7	65.8			
Surr: 2,4,6-Tribromophenol	150		200.0		74.4	26	138			
Surr: Nitrobenzene-d5	68		100.0		67.9	47.5	119			
Surr: 2-Fluorobiphenyl	68		100.0		68.0	48.1	106			
Surr: 4-Terphenyl-d14	82		100.0		82.5	44	113			

Sample ID **lcsd-15274** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **15274** RunNo: **21200**
Prep Date: **9/15/2014** Analysis Date: **9/15/2014** SeqNo: **617972** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	65	10	100.0	0	65.4	50.3	109	4.98	27.2	
4-Chloro-3-methylphenol	140	10	200.0	0	70.9	51.2	113	1.99	25.9	
2-Chlorophenol	150	10	200.0	0	73.3	48.5	104	9.27	22.5	
1,4-Dichlorobenzene	55	10	100.0	0	55.4	39.5	106	6.29	24.6	
2,4-Dinitrotoluene	65	10	100.0	0	64.8	45.4	107	17.3	25.3	
N-Nitrosodi-n-propylamine	66	10	100.0	0	66.2	50.4	119	8.48	23.6	
4-Nitrophenol	61	10	200.0	0	30.5	15.5	62.2	7.87	34.7	
Pentachlorophenol	100	20	200.0	0	51.0	23.5	93.5	1.82	32.8	
Phenol	90	10	200.0	0	45.0	26.8	65.6	11.7	25.5	
Pyrene	78	10	100.0	0	77.8	54.4	108	9.51	31.4	
1,2,4-Trichlorobenzene	56	10	100.0	0	55.5	39.9	106	1.60	25.9	
Surr: 2-Fluorophenol	97		200.0		48.6	12.1	85.8	0	0	
Surr: Phenol-d5	72		200.0		35.9	17.7	65.8	0	0	
Surr: 2,4,6-Tribromophenol	130		200.0		67.3	26	138	0	0	
Surr: Nitrobenzene-d5	64		100.0		64.1	47.5	119	0	0	
Surr: 2-Fluorobiphenyl	63		100.0		62.7	48.1	106	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409453**
02-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**lcsd-15274**	SampType:	**LCSD**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**LCSS02**	Batch ID:	**15274**	RunNo:	**21200**
Prep Date:	**9/15/2014**	Analysis Date:	**9/15/2014**	SeqNo:	**617972** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	79		100.0		79.4	44	113	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1409453 RcptNo: 1

Received by/date: MA 09/10/14

Logged By: Lindsay Mangin 9/10/2014 12:00:00 PM

Completed By: Lindsay Mangin 9/10/2014 12:16:46 PM

Reviewed By: MG 09/10/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 6, 2
(<2 or >12 unless noted)
Adjusted? no
Checked by: CS

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.4	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

2 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard ☐ Rush

Project Name:

~~2014~~ 14 09/10/14 ANNUAL GW

Project #:

PW-2,-3,-4 BS

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☑ Yes ☐ No

Sample Temperature: 2-4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1409153	8260 + MTBE	8270 + phenols	WQCC Metals - Total	WQCC Metals - Dissolved, filtered	Cyanide	Nitrates							Air Bubbles (Y or N)
9/10/14	0805	H_2O	PW-3	VARIOUS	VARIOUS	-001	X	X	X	X	X	X							
9/10/14	0850	H_2O	PW-2	VARIOUS	VARIOUS	-002	X	X	X	X	X	X							
9/10/14	0820	H_2O	FB-Group 12	VOA	HCl	-003	X												
			Trip blank	3 VOA	HCl	-004	X												
					09/10/14														

Date:	Time:	Relinquished by:	Received by:	Date Time	Remarks:
9/10/14	0946	[signature]	[signature]	9/10/14 @ 0946	
09/10/14	1200	[signature]	[signature]	09/10/14 1200	

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 08, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: 2014 Annual GW OrderNo.: 1409A38

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 8 sample(s) on 9/19/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1409A38**
Date Reported: **10/8/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MW-1
Project: 2014 Annual GW
Collection Date: 9/16/2014 4:15:00 PM
Lab ID: 1409A38-001
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/23/2014 11:13:20 PM	15389
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/23/2014 11:13:20 PM	15389
Surr: DNOP	112	59-141		%REC	1	9/23/2014 11:13:20 PM	15389
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/25/2014 7:32:53 PM	R21468
Surr: BFB	88.3	70.9-130		%REC	1	9/25/2014 7:32:53 PM	R21468
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	0.69	0.10		mg/L	1	9/22/2014 10:20:55 PM	R21368
Chloride	44	10		mg/L	20	9/22/2014 10:33:19 PM	R21368
Bromide	0.11	0.10		mg/L	1	9/22/2014 10:20:55 PM	R21368
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/22/2014 10:20:55 PM	R21368
Sulfate	150	10		mg/L	20	9/22/2014 10:33:19 PM	R21368
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/23/2014 12:25:02 AM	R21368
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.0095	0.0020		mg/L	1	9/24/2014 4:47:29 PM	R21433
Cadmium	ND	0.0020		mg/L	1	9/24/2014 4:47:29 PM	R21433
Calcium	1.6	1.0		mg/L	1	9/24/2014 4:47:29 PM	R21433
Chromium	ND	0.0060		mg/L	1	9/24/2014 4:47:29 PM	R21433
Copper	ND	0.0060		mg/L	1	9/24/2014 4:47:29 PM	R21433
Iron	ND	0.020		mg/L	1	9/24/2014 4:47:29 PM	R21433
Magnesium	ND	1.0		mg/L	1	9/24/2014 4:47:29 PM	R21433
Manganese	0.0027	0.0020		mg/L	1	9/24/2014 4:47:29 PM	R21433
Potassium	1.5	1.0		mg/L	1	9/24/2014 4:47:29 PM	R21433
Silver	ND	0.0050		mg/L	1	9/24/2014 4:47:29 PM	R21433
Sodium	250	10		mg/L	10	9/25/2014 2:03:16 PM	R21450
Zinc	0.014	0.010		mg/L	1	9/24/2014 4:47:29 PM	R21433
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.012	0.0020		mg/L	1	9/25/2014 3:24:08 PM	15445
Cadmium	ND	0.0020		mg/L	1	9/25/2014 3:24:08 PM	15445
Chromium	ND	0.0060		mg/L	1	9/25/2014 3:24:08 PM	15445
Copper	ND	0.0060		mg/L	1	9/25/2014 3:24:08 PM	15445
Iron	0.11	0.020		mg/L	1	9/25/2014 3:24:08 PM	15445
Manganese	0.012	0.0020		mg/L	1	9/25/2014 3:24:08 PM	15445
Silver	ND	0.0050		mg/L	1	9/25/2014 3:24:08 PM	15445
Zinc	ND	0.010		mg/L	1	9/25/2014 3:24:08 PM	15445
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0012	0.0010		mg/L	1	9/30/2014 2:35:45 PM	R21559

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MW-1
Project: 2014 Annual GW
Collection Date: 9/16/2014 4:15:00 PM
Lab ID: 1409A38-001
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.0010		mg/L	1	9/30/2014 2:35:45 PM	R21559
Selenium	ND	0.0010		mg/L	1	10/2/2014 5:53:54 PM	R21629
Uranium	0.011	0.0010		mg/L	1	9/30/2014 2:35:45 PM	R21559
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0011	0.0010		mg/L	1	10/2/2014 2:29:54 PM	15445
Lead	0.0017	0.0010		mg/L	1	10/2/2014 2:29:54 PM	15445
Selenium	ND	0.0010		mg/L	1	10/2/2014 2:29:54 PM	15445
Uranium	0.012	0.0010		mg/L	1	10/2/2014 2:29:54 PM	15445
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/26/2014 3:28:16 PM	15531
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
Acenaphthene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Acenaphthylene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Aniline	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Anthracene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Azobenzene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Benz(a)anthracene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Benzo(a)pyrene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Benzo(b)fluoranthene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Benzo(k)fluoranthene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Benzoic acid	ND	20		µg/L	1	9/25/2014 12:03:48 PM	15441
Benzyl alcohol	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Butyl benzyl phthalate	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Carbazole	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
4-Chloroaniline	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
2-Chloronaphthalene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
2-Chlorophenol	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Chrysene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Di-n-butyl phthalate	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Di-n-octyl phthalate	ND	20		µg/L	1	9/25/2014 12:03:48 PM	15441

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MW-1
Project: 2014 Annual GW
Collection Date: 9/16/2014 4:15:00 PM
Lab ID: 1409A38-001
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Dibenzofuran	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
1,2-Dichlorobenzene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
1,3-Dichlorobenzene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
1,4-Dichlorobenzene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Diethyl phthalate	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Dimethyl phthalate	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
2,4-Dichlorophenol	ND	20		µg/L	1	9/25/2014 12:03:48 PM	15441
2,4-Dimethylphenol	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/25/2014 12:03:48 PM	15441
2,4-Dinitrophenol	ND	20		µg/L	1	9/25/2014 12:03:48 PM	15441
2,4-Dinitrotoluene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
2,6-Dinitrotoluene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Fluoranthene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Fluorene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Hexachlorobenzene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Hexachlorobutadiene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Hexachloroethane	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Isophorone	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
1-Methylnaphthalene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
2-Methylnaphthalene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
2-Methylphenol	ND	20		µg/L	1	9/25/2014 12:03:48 PM	15441
3+4-Methylphenol	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
N-Nitrosodimethylamine	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Naphthalene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
2-Nitroaniline	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
3-Nitroaniline	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
4-Nitroaniline	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Nitrobenzene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
2-Nitrophenol	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
4-Nitrophenol	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Pentachlorophenol	ND	20		µg/L	1	9/25/2014 12:03:48 PM	15441
Phenanthrene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Phenol	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MW-1
Project: 2014 Annual GW
Collection Date: 9/16/2014 4:15:00 PM
Lab ID: 1409A38-001
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
Pyrene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Pyridine	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/25/2014 12:03:48 PM	15441
Surr: 2-Fluorophenol	75.1	12.1-85.8		%REC	1	9/25/2014 12:03:48 PM	15441
Surr: Phenol-d5	63.8	17.7-65.8		%REC	1	9/25/2014 12:03:48 PM	15441
Surr: 2,4,6-Tribromophenol	68.6	26-138		%REC	1	9/25/2014 12:03:48 PM	15441
Surr: Nitrobenzene-d5	88.7	47.5-119		%REC	1	9/25/2014 12:03:48 PM	15441
Surr: 2-Fluorobiphenyl	82.0	48.1-106		%REC	1	9/25/2014 12:03:48 PM	15441
Surr: 4-Terphenyl-d14	82.2	44-113		%REC	1	9/25/2014 12:03:48 PM	15441
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Toluene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Ethylbenzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Naphthalene	ND	2.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
2-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Acetone	ND	10		µg/L	1	9/25/2014 12:33:11 AM	R21429
Bromobenzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Bromodichloromethane	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Bromoform	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Bromomethane	ND	3.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
2-Butanone	ND	10		µg/L	1	9/25/2014 12:33:11 AM	R21429
Carbon disulfide	ND	10		µg/L	1	9/25/2014 12:33:11 AM	R21429
Carbon Tetrachloride	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Chlorobenzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Chloroethane	ND	2.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Chloroform	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Chloromethane	ND	3.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
2-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
4-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
cis-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429

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Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MW-1
Project: 2014 Annual GW
Collection Date: 9/16/2014 4:15:00 PM
Lab ID: 1409A38-001
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Dibromochloromethane	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Dibromomethane	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,1-Dichloroethane	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,1-Dichloroethene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,2-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,3-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
2,2-Dichloropropane	ND	2.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,1-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Hexachlorobutadiene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
2-Hexanone	ND	10		µg/L	1	9/25/2014 12:33:11 AM	R21429
Isopropylbenzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
4-Isopropyltoluene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
4-Methyl-2-pentanone	ND	10		µg/L	1	9/25/2014 12:33:11 AM	R21429
Methylene Chloride	ND	3.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
n-Butylbenzene	ND	3.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
n-Propylbenzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
sec-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Styrene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
tert-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
trans-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Trichlorofluoromethane	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Vinyl chloride	ND	1.0		µg/L	1	9/25/2014 12:33:11 AM	R21429
Xylenes, Total	ND	1.5		µg/L	1	9/25/2014 12:33:11 AM	R21429
Surr: 1,2-Dichloroethane-d4	97.6	70-130		%REC	1	9/25/2014 12:33:11 AM	R21429

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MW-1
Project: 2014 Annual GW
Collection Date: 9/16/2014 4:15:00 PM
Lab ID: 1409A38-001
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Surr: 4-Bromofluorobenzene	99.9	70-130		%REC	1	9/25/2014 12:33:11 AM	R21429
Surr: Dibromofluoromethane	97.2	70-130		%REC	1	9/25/2014 12:33:11 AM	R21429
Surr: Toluene-d8	92.3	70-130		%REC	1	9/25/2014 12:33:11 AM	R21429

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MW-2
Project: 2014 Annual GW
Collection Date: 9/16/2014 7:00:00 PM
Lab ID: 1409A38-002
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/23/2014 11:34:38 PM	15389
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/23/2014 11:34:38 PM	15389
Surr: DNOP	136	59-141		%REC	1	9/23/2014 11:34:38 PM	15389
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/25/2014 9:33:32 PM	R21468
Surr: BFB	87.6	70.9-130		%REC	1	9/25/2014 9:33:32 PM	R21468
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	0.73	0.10		mg/L	1	9/22/2014 11:10:34 PM	R21368
Chloride	51	10		mg/L	20	9/22/2014 11:22:58 PM	R21368
Bromide	0.11	0.10		mg/L	1	9/22/2014 11:10:34 PM	R21368
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/22/2014 11:10:34 PM	R21368
Sulfate	150	10		mg/L	20	9/22/2014 11:22:58 PM	R21368
Nitrate+Nitrite as N	21	1.0	*	mg/L	5	10/2/2014 6:19:18 AM	R21604
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.017	0.0020		mg/L	1	9/24/2014 4:49:22 PM	R21433
Cadmium	ND	0.0020		mg/L	1	9/24/2014 4:49:22 PM	R21433
Calcium	1.5	1.0		mg/L	1	9/24/2014 4:49:22 PM	R21433
Chromium	ND	0.0060		mg/L	1	9/24/2014 4:49:22 PM	R21433
Copper	ND	0.0060		mg/L	1	9/24/2014 4:49:22 PM	R21433
Iron	ND	0.020		mg/L	1	9/24/2014 4:49:22 PM	R21433
Magnesium	ND	1.0		mg/L	1	9/24/2014 4:49:22 PM	R21433
Manganese	0.0026	0.0020		mg/L	1	9/24/2014 4:49:22 PM	R21433
Potassium	1.5	1.0		mg/L	1	9/24/2014 4:49:22 PM	R21433
Silver	ND	0.0050		mg/L	1	9/24/2014 4:49:22 PM	R21433
Sodium	250	10		mg/L	10	9/25/2014 2:04:57 PM	R21450
Zinc	0.026	0.010		mg/L	1	9/24/2014 4:49:22 PM	R21433
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.019	0.0020		mg/L	1	9/25/2014 3:26:02 PM	15445
Cadmium	ND	0.0020		mg/L	1	9/25/2014 3:26:02 PM	15445
Chromium	ND	0.0060		mg/L	1	9/25/2014 3:26:02 PM	15445
Copper	ND	0.0060		mg/L	1	9/25/2014 3:26:02 PM	15445
Iron	ND	0.020		mg/L	1	9/25/2014 3:26:02 PM	15445
Manganese	0.0031	0.0020		mg/L	1	9/25/2014 3:26:02 PM	15445
Silver	ND	0.0050		mg/L	1	9/25/2014 3:26:02 PM	15445
Zinc	ND	0.010		mg/L	1	9/25/2014 3:26:02 PM	15445
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0012	0.0010		mg/L	1	9/30/2014 2:38:52 PM	R21559

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MW-2
Project: 2014 Annual GW
Collection Date: 9/16/2014 7:00:00 PM
Lab ID: 1409A38-002
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.0010		mg/L	1	9/30/2014 2:38:52 PM	R21559
Selenium	ND	0.0010		mg/L	1	10/2/2014 5:57:01 PM	R21629
Uranium	0.0093	0.0010		mg/L	1	9/30/2014 2:38:52 PM	R21559
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0010		mg/L	1	10/2/2014 2:33:00 PM	15445
Lead	ND	0.0010		mg/L	1	10/2/2014 2:33:00 PM	15445
Selenium	ND	0.0010		mg/L	1	10/2/2014 2:33:00 PM	15445
Uranium	0.0095	0.0010		mg/L	1	10/2/2014 2:33:00 PM	15445
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/26/2014 3:30:01 PM	15531
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
Acenaphthene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Acenaphthylene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Aniline	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Anthracene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Azobenzene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Benz(a)anthracene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Benzo(a)pyrene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Benzo(b)fluoranthene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Benzo(k)fluoranthene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Benzoic acid	ND	20		µg/L	1	9/25/2014 12:32:58 PM	15441
Benzyl alcohol	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Butyl benzyl phthalate	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Carbazole	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
4-Chloroaniline	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
2-Chloronaphthalene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
2-Chlorophenol	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Chrysene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Di-n-butyl phthalate	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Di-n-octyl phthalate	ND	20		µg/L	1	9/25/2014 12:32:58 PM	15441

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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Dibenzofuran	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
1,2-Dichlorobenzene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
1,3-Dichlorobenzene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
1,4-Dichlorobenzene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Diethyl phthalate	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Dimethyl phthalate	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
2,4-Dichlorophenol	ND	20		µg/L	1	9/25/2014 12:32:58 PM	15441
2,4-Dimethylphenol	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/25/2014 12:32:58 PM	15441
2,4-Dinitrophenol	ND	20		µg/L	1	9/25/2014 12:32:58 PM	15441
2,4-Dinitrotoluene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
2,6-Dinitrotoluene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Fluoranthene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Fluorene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Hexachlorobenzene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Hexachlorobutadiene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Hexachloroethane	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Isophorone	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
1-Methylnaphthalene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
2-Methylnaphthalene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
2-Methylphenol	ND	20		µg/L	1	9/25/2014 12:32:58 PM	15441
3+4-Methylphenol	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
N-Nitrosodimethylamine	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Naphthalene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
2-Nitroaniline	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
3-Nitroaniline	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
4-Nitroaniline	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Nitrobenzene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
2-Nitrophenol	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
4-Nitrophenol	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Pentachlorophenol	ND	20		µg/L	1	9/25/2014 12:32:58 PM	15441
Phenanthrene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Phenol	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441

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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
Pyrene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Pyridine	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/25/2014 12:32:58 PM	15441
Surr: 2-Fluorophenol	77.6	12.1-85.8		%REC	1	9/25/2014 12:32:58 PM	15441
Surr: Phenol-d5	69.0	17.7-65.8	S	%REC	1	9/25/2014 12:32:58 PM	15441
Surr: 2,4,6-Tribromophenol	74.4	26-138		%REC	1	9/25/2014 12:32:58 PM	15441
Surr: Nitrobenzene-d5	100	47.5-119		%REC	1	9/25/2014 12:32:58 PM	15441
Surr: 2-Fluorobiphenyl	91.0	48.1-106		%REC	1	9/25/2014 12:32:58 PM	15441
Surr: 4-Terphenyl-d14	95.2	44-113		%REC	1	9/25/2014 12:32:58 PM	15441
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Toluene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Ethylbenzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Naphthalene	ND	2.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
2-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Acetone	ND	10		µg/L	1	9/25/2014 1:02:50 AM	R21429
Bromobenzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Bromodichloromethane	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Bromoform	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Bromomethane	ND	3.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
2-Butanone	ND	10		µg/L	1	9/25/2014 1:02:50 AM	R21429
Carbon disulfide	ND	10		µg/L	1	9/25/2014 1:02:50 AM	R21429
Carbon Tetrachloride	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Chlorobenzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Chloroethane	ND	2.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Chloroform	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Chloromethane	ND	3.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
2-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
4-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
cis-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429

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Client Sample ID: MW-2
Project: 2014 Annual GW
Collection Date: 9/16/2014 7:00:00 PM
Lab ID: 1409A38-002
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Dibromochloromethane	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Dibromomethane	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,1-Dichloroethane	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,1-Dichloroethene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,2-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,3-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
2,2-Dichloropropane	ND	2.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,1-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Hexachlorobutadiene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
2-Hexanone	ND	10		µg/L	1	9/25/2014 1:02:50 AM	R21429
Isopropylbenzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
4-Isopropyltoluene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
4-Methyl-2-pentanone	ND	10		µg/L	1	9/25/2014 1:02:50 AM	R21429
Methylene Chloride	ND	3.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
n-Butylbenzene	ND	3.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
n-Propylbenzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
sec-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Styrene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
tert-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
trans-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Trichlorofluoromethane	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Vinyl chloride	ND	1.0		µg/L	1	9/25/2014 1:02:50 AM	R21429
Xylenes, Total	ND	1.5		µg/L	1	9/25/2014 1:02:50 AM	R21429
Surr: 1,2-Dichloroethane-d4	92.4	70-130		%REC	1	9/25/2014 1:02:50 AM	R21429

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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Surr: 4-Bromofluorobenzene	96.7	70-130		%REC	1	9/25/2014 1:02:50 AM	R21429
Surr: Dibromofluoromethane	94.0	70-130		%REC	1	9/25/2014 1:02:50 AM	R21429
Surr: Toluene-d8	90.3	70-130		%REC	1	9/25/2014 1:02:50 AM	R21429

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MW-5
Project: 2014 Annual GW
Collection Date: 9/17/2014 11:40:00 AM
Lab ID: 1409A38-003
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/23/2014 11:56:03 PM	15389
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/23/2014 11:56:03 PM	15389
Surr: DNOP	143	59-141	S	%REC	1	9/23/2014 11:56:03 PM	15389
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/25/2014 10:03:38 PM	R21468
Surr: BFB	90.5	70.9-130		%REC	1	9/25/2014 10:03:38 PM	R21468
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	0.73	0.10		mg/L	1	9/22/2014 11:35:23 PM	R21368
Chloride	56	10		mg/L	20	9/22/2014 11:47:48 PM	R21368
Bromide	0.12	0.10		mg/L	1	9/22/2014 11:35:23 PM	R21368
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/22/2014 11:35:23 PM	R21368
Sulfate	150	10		mg/L	20	9/22/2014 11:47:48 PM	R21368
Nitrate+Nitrite as N	1.1	1.0		mg/L	5	9/23/2014 12:49:52 AM	R21368
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.015	0.0020		mg/L	1	9/24/2014 4:51:16 PM	R21433
Cadmium	ND	0.0020		mg/L	1	9/24/2014 4:51:16 PM	R21433
Calcium	1.6	1.0		mg/L	1	9/24/2014 4:51:16 PM	R21433
Chromium	ND	0.0060		mg/L	1	9/24/2014 4:51:16 PM	R21433
Copper	ND	0.0060		mg/L	1	9/24/2014 4:51:16 PM	R21433
Iron	ND	0.020		mg/L	1	9/24/2014 4:51:16 PM	R21433
Magnesium	ND	1.0		mg/L	1	9/24/2014 4:51:16 PM	R21433
Manganese	0.0045	0.0020		mg/L	1	9/24/2014 4:51:16 PM	R21433
Potassium	1.6	1.0		mg/L	1	9/24/2014 4:51:16 PM	R21433
Silver	ND	0.0050		mg/L	1	9/24/2014 4:51:16 PM	R21433
Sodium	250	10		mg/L	10	9/25/2014 2:06:38 PM	R21450
Zinc	0.025	0.010		mg/L	1	9/24/2014 4:51:16 PM	R21433
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.019	0.0020		mg/L	1	9/25/2014 3:27:55 PM	15445
Cadmium	ND	0.0020		mg/L	1	9/25/2014 3:27:55 PM	15445
Chromium	ND	0.0060		mg/L	1	9/25/2014 3:27:55 PM	15445
Copper	ND	0.0060		mg/L	1	9/25/2014 3:27:55 PM	15445
Iron	ND	0.020		mg/L	1	9/25/2014 3:27:55 PM	15445
Manganese	0.0046	0.0020		mg/L	1	9/25/2014 3:27:55 PM	15445
Silver	ND	0.0050		mg/L	1	9/25/2014 3:27:55 PM	15445
Zinc	ND	0.010		mg/L	1	9/25/2014 3:27:55 PM	15445
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0012	0.0010		mg/L	1	9/30/2014 2:41:59 PM	R21559

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Hall Environmental Analysis Laboratory, Inc.

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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.0010		mg/L	1	9/30/2014 2:41:59 PM	R21559
Selenium	ND	0.0010		mg/L	1	10/2/2014 6:00:07 PM	R21629
Uranium	0.0094	0.0010		mg/L	1	9/30/2014 2:41:59 PM	R21559
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0010	0.0010		mg/L	1	10/2/2014 2:36:07 PM	15445
Lead	ND	0.0010		mg/L	1	10/2/2014 2:36:07 PM	15445
Selenium	ND	0.0010		mg/L	1	10/2/2014 2:36:07 PM	15445
Uranium	0.0098	0.0010		mg/L	1	10/2/2014 2:36:07 PM	15445
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/26/2014 3:31:47 PM	15531
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
Acenaphthene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Acenaphthylene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Aniline	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Anthracene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Azobenzene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Benz(a)anthracene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Benzo(a)pyrene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Benzo(b)fluoranthene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Benzo(k)fluoranthene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Benzoic acid	ND	20		µg/L	1	9/25/2014 1:02:13 PM	15441
Benzyl alcohol	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Butyl benzyl phthalate	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Carbazole	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
4-Chloroaniline	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
2-Chloronaphthalene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
2-Chlorophenol	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Chrysene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Di-n-butyl phthalate	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Di-n-octyl phthalate	ND	20		µg/L	1	9/25/2014 1:02:13 PM	15441

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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Dibenzofuran	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
1,2-Dichlorobenzene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
1,3-Dichlorobenzene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
1,4-Dichlorobenzene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Diethyl phthalate	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Dimethyl phthalate	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
2,4-Dichlorophenol	ND	20		µg/L	1	9/25/2014 1:02:13 PM	15441
2,4-Dimethylphenol	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/25/2014 1:02:13 PM	15441
2,4-Dinitrophenol	ND	20		µg/L	1	9/25/2014 1:02:13 PM	15441
2,4-Dinitrotoluene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
2,6-Dinitrotoluene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Fluoranthene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Fluorene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Hexachlorobenzene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Hexachlorobutadiene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Hexachloroethane	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Isophorone	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
1-Methylnaphthalene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
2-Methylnaphthalene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
2-Methylphenol	ND	20		µg/L	1	9/25/2014 1:02:13 PM	15441
3+4-Methylphenol	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
N-Nitrosodimethylamine	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Naphthalene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
2-Nitroaniline	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
3-Nitroaniline	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
4-Nitroaniline	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Nitrobenzene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
2-Nitrophenol	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
4-Nitrophenol	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Pentachlorophenol	ND	20		µg/L	1	9/25/2014 1:02:13 PM	15441
Phenanthrene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Phenol	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441

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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
Pyrene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Pyridine	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/25/2014 1:02:13 PM	15441
Surr: 2-Fluorophenol	65.6	12.1-85.8		%REC	1	9/25/2014 1:02:13 PM	15441
Surr: Phenol-d5	56.1	17.7-65.8		%REC	1	9/25/2014 1:02:13 PM	15441
Surr: 2,4,6-Tribromophenol	63.5	26-138		%REC	1	9/25/2014 1:02:13 PM	15441
Surr: Nitrobenzene-d5	77.7	47.5-119		%REC	1	9/25/2014 1:02:13 PM	15441
Surr: 2-Fluorobiphenyl	71.6	48.1-106		%REC	1	9/25/2014 1:02:13 PM	15441
Surr: 4-Terphenyl-d14	84.7	44-113		%REC	1	9/25/2014 1:02:13 PM	15441
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Toluene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Ethylbenzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Naphthalene	ND	2.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
2-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Acetone	ND	10		µg/L	1	9/25/2014 1:32:26 AM	R21429
Bromobenzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Bromodichloromethane	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Bromoform	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Bromomethane	ND	3.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
2-Butanone	ND	10		µg/L	1	9/25/2014 1:32:26 AM	R21429
Carbon disulfide	ND	10		µg/L	1	9/25/2014 1:32:26 AM	R21429
Carbon Tetrachloride	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Chlorobenzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Chloroethane	ND	2.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Chloroform	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Chloromethane	ND	3.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
2-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
4-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
cis-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429

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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Dibromochloromethane	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Dibromomethane	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,1-Dichloroethane	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,1-Dichloroethene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,2-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,3-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
2,2-Dichloropropane	ND	2.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,1-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Hexachlorobutadiene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
2-Hexanone	ND	10		µg/L	1	9/25/2014 1:32:26 AM	R21429
Isopropylbenzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
4-Isopropyltoluene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
4-Methyl-2-pentanone	ND	10		µg/L	1	9/25/2014 1:32:26 AM	R21429
Methylene Chloride	ND	3.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
n-Butylbenzene	ND	3.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
n-Propylbenzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
sec-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Styrene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
tert-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
trans-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Trichlorofluoromethane	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Vinyl chloride	ND	1.0		µg/L	1	9/25/2014 1:32:26 AM	R21429
Xylenes, Total	ND	1.5		µg/L	1	9/25/2014 1:32:26 AM	R21429
Surr: 1,2-Dichloroethane-d4	92.5	70-130		%REC	1	9/25/2014 1:32:26 AM	R21429

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MW-5
Project: 2014 Annual GW
Collection Date: 9/17/2014 11:40:00 AM
Lab ID: 1409A38-003
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Surr: 4-Bromofluorobenzene	99.3	70-130		%REC	1	9/25/2014 1:32:26 AM	R21429
Surr: Dibromofluoromethane	95.0	70-130		%REC	1	9/25/2014 1:32:26 AM	R21429
Surr: Toluene-d8	95.3	70-130		%REC	1	9/25/2014 1:32:26 AM	R21429

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MW-4
Project: 2014 Annual GW
Collection Date: 9/17/2014 3:15:00 PM
Lab ID: 1409A38-004
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/24/2014 12:17:27 AM	15389
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/24/2014 12:17:27 AM	15389
Surr: DNOP	141	59-141	S	%REC	1	9/24/2014 12:17:27 AM	15389
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/25/2014 10:33:48 PM	R21468
Surr: BFB	91.6	70.9-130		%REC	1	9/25/2014 10:33:48 PM	R21468
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	0.31	0.10		mg/L	1	9/23/2014 12:00:12 AM	R21368
Chloride	18	0.50		mg/L	1	9/23/2014 12:00:12 AM	R21368
Bromide	0.14	0.10		mg/L	1	9/23/2014 12:00:12 AM	R21368
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/23/2014 12:00:12 AM	R21368
Sulfate	140	10		mg/L	20	9/23/2014 12:12:37 AM	R21368
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/23/2014 2:04:19 AM	R21368
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.018	0.0020		mg/L	1	9/24/2014 4:53:10 PM	R21433
Cadmium	ND	0.0020		mg/L	1	9/24/2014 4:53:10 PM	R21433
Calcium	1.9	1.0		mg/L	1	9/24/2014 4:53:10 PM	R21433
Chromium	ND	0.0060		mg/L	1	9/24/2014 4:53:10 PM	R21433
Copper	ND	0.0060		mg/L	1	9/24/2014 4:53:10 PM	R21433
Iron	ND	0.020		mg/L	1	9/24/2014 4:53:10 PM	R21433
Magnesium	ND	1.0		mg/L	1	9/24/2014 4:53:10 PM	R21433
Manganese	0.0057	0.0020		mg/L	1	9/24/2014 4:53:10 PM	R21433
Potassium	1.7	1.0		mg/L	1	9/24/2014 4:53:10 PM	R21433
Silver	ND	0.0050		mg/L	1	9/24/2014 4:53:10 PM	R21433
Sodium	280	5.0		mg/L	5	9/25/2014 5:11:53 PM	R21450
Zinc	ND	0.010		mg/L	1	9/24/2014 4:53:10 PM	R21433
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.022	0.0020		mg/L	1	9/25/2014 3:29:48 PM	15445
Cadmium	ND	0.0020		mg/L	1	9/25/2014 3:29:48 PM	15445
Chromium	ND	0.0060		mg/L	1	9/25/2014 3:29:48 PM	15445
Copper	ND	0.0060		mg/L	1	9/25/2014 3:29:48 PM	15445
Iron	ND	0.020		mg/L	1	9/25/2014 3:29:48 PM	15445
Manganese	0.0061	0.0020		mg/L	1	9/25/2014 3:29:48 PM	15445
Silver	ND	0.0050		mg/L	1	9/25/2014 3:29:48 PM	15445
Zinc	ND	0.010		mg/L	1	9/25/2014 3:29:48 PM	15445
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0010		mg/L	1	9/30/2014 2:45:05 PM	R21559

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MW-4
Project: 2014 Annual GW
Collection Date: 9/17/2014 3:15:00 PM
Lab ID: 1409A38-004
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.0010		mg/L	1	9/30/2014 2:45:05 PM	R21559
Selenium	ND	0.0010		mg/L	1	10/2/2014 6:03:13 PM	R21629
Uranium	0.017	0.0010		mg/L	1	9/30/2014 2:45:05 PM	R21559
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.0010		mg/L	1	10/2/2014 2:39:13 PM	15445
Lead	ND	0.0010		mg/L	1	10/2/2014 2:39:13 PM	15445
Selenium	ND	0.0010		mg/L	1	10/2/2014 2:39:13 PM	15445
Uranium	0.018	0.0010		mg/L	1	10/2/2014 2:39:13 PM	15445
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/26/2014 3:33:32 PM	15531
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
Acenaphthene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Acenaphthylene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Aniline	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Anthracene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Azobenzene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Benz(a)anthracene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Benzo(a)pyrene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Benzo(b)fluoranthene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Benzo(k)fluoranthene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Benzoic acid	ND	20		µg/L	1	9/25/2014 1:31:36 PM	15441
Benzyl alcohol	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Butyl benzyl phthalate	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Carbazole	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
4-Chloroaniline	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
2-Chloronaphthalene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
2-Chlorophenol	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Chrysene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Di-n-butyl phthalate	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Di-n-octyl phthalate	ND	20		µg/L	1	9/25/2014 1:31:36 PM	15441

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MW-4
Project: 2014 Annual GW
Collection Date: 9/17/2014 3:15:00 PM
Lab ID: 1409A38-004
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Dibenzofuran	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
1,2-Dichlorobenzene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
1,3-Dichlorobenzene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
1,4-Dichlorobenzene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Diethyl phthalate	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Dimethyl phthalate	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
2,4-Dichlorophenol	ND	20		µg/L	1	9/25/2014 1:31:36 PM	15441
2,4-Dimethylphenol	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/25/2014 1:31:36 PM	15441
2,4-Dinitrophenol	ND	20		µg/L	1	9/25/2014 1:31:36 PM	15441
2,4-Dinitrotoluene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
2,6-Dinitrotoluene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Fluoranthene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Fluorene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Hexachlorobenzene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Hexachlorobutadiene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Hexachloroethane	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Isophorone	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
1-Methylnaphthalene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
2-Methylnaphthalene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
2-Methylphenol	ND	20		µg/L	1	9/25/2014 1:31:36 PM	15441
3+4-Methylphenol	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
N-Nitrosodimethylamine	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Naphthalene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
2-Nitroaniline	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
3-Nitroaniline	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
4-Nitroaniline	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Nitrobenzene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
2-Nitrophenol	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
4-Nitrophenol	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Pentachlorophenol	ND	20		µg/L	1	9/25/2014 1:31:36 PM	15441
Phenanthrene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Phenol	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MW-4
Project: 2014 Annual GW
Collection Date: 9/17/2014 3:15:00 PM
Lab ID: 1409A38-004
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
Pyrene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Pyridine	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/25/2014 1:31:36 PM	15441
Surr: 2-Fluorophenol	78.8	12.1-85.8		%REC	1	9/25/2014 1:31:36 PM	15441
Surr: Phenol-d5	68.9	17.7-65.8	S	%REC	1	9/25/2014 1:31:36 PM	15441
Surr: 2,4,6-Tribromophenol	65.9	26-138		%REC	1	9/25/2014 1:31:36 PM	15441
Surr: Nitrobenzene-d5	90.0	47.5-119		%REC	1	9/25/2014 1:31:36 PM	15441
Surr: 2-Fluorobiphenyl	86.7	48.1-106		%REC	1	9/25/2014 1:31:36 PM	15441
Surr: 4-Terphenyl-d14	91.9	44-113		%REC	1	9/25/2014 1:31:36 PM	15441
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Toluene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Ethylbenzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Naphthalene	ND	2.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
2-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Acetone	ND	10		µg/L	1	9/25/2014 2:02:01 AM	R21429
Bromobenzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Bromodichloromethane	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Bromoform	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Bromomethane	ND	3.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
2-Butanone	ND	10		µg/L	1	9/25/2014 2:02:01 AM	R21429
Carbon disulfide	ND	10		µg/L	1	9/25/2014 2:02:01 AM	R21429
Carbon Tetrachloride	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Chlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Chloroethane	ND	2.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Chloroform	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Chloromethane	ND	3.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
2-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
4-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
cis-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MW-4
Project: 2014 Annual GW
Collection Date: 9/17/2014 3:15:00 PM
Lab ID: 1409A38-004
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Dibromochloromethane	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Dibromomethane	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,1-Dichloroethane	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,1-Dichloroethene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,2-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,3-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
2,2-Dichloropropane	ND	2.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,1-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Hexachlorobutadiene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
2-Hexanone	ND	10		µg/L	1	9/25/2014 2:02:01 AM	R21429
Isopropylbenzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
4-Isopropyltoluene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
4-Methyl-2-pentanone	ND	10		µg/L	1	9/25/2014 2:02:01 AM	R21429
Methylene Chloride	ND	3.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
n-Butylbenzene	ND	3.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
n-Propylbenzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
sec-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Styrene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
tert-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
trans-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Trichlorofluoromethane	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Vinyl chloride	ND	1.0		µg/L	1	9/25/2014 2:02:01 AM	R21429
Xylenes, Total	ND	1.5		µg/L	1	9/25/2014 2:02:01 AM	R21429
Surr: 1,2-Dichloroethane-d4	93.4	70-130		%REC	1	9/25/2014 2:02:01 AM	R21429

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MW-4
Project: 2014 Annual GW
Collection Date: 9/17/2014 3:15:00 PM
Lab ID: 1409A38-004
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Surr: 4-Bromofluorobenzene	101	70-130		%REC	1	9/25/2014 2:02:01 AM	R21429
Surr: Dibromofluoromethane	94.2	70-130		%REC	1	9/25/2014 2:02:01 AM	R21429
Surr: Toluene-d8	94.0	70-130		%REC	1	9/25/2014 2:02:01 AM	R21429

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409A38-005
Matrix: TRIP BLANK
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/25/2014 11:03:55 PM	R21468
Surr: BFB	88.3	70.9-130		%REC	1	9/25/2014 11:03:55 PM	R21468
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Toluene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Ethylbenzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Naphthalene	ND	2.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
2-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Acetone	ND	10		µg/L	1	9/25/2014 2:31:36 AM	R21429
Bromobenzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Bromodichloromethane	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Bromoform	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Bromomethane	ND	3.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
2-Butanone	ND	10		µg/L	1	9/25/2014 2:31:36 AM	R21429
Carbon disulfide	ND	10		µg/L	1	9/25/2014 2:31:36 AM	R21429
Carbon Tetrachloride	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Chlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Chloroethane	ND	2.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Chloroform	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Chloromethane	ND	3.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
2-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
4-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
cis-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Dibromochloromethane	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Dibromomethane	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,1-Dichloroethane	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,1-Dichloroethene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409A38-005
Matrix: TRIP BLANK
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,3-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
2,2-Dichloropropane	ND	2.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,1-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Hexachlorobutadiene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
2-Hexanone	ND	10		µg/L	1	9/25/2014 2:31:36 AM	R21429
Isopropylbenzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
4-Isopropyltoluene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
4-Methyl-2-pentanone	ND	10		µg/L	1	9/25/2014 2:31:36 AM	R21429
Methylene Chloride	ND	3.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
n-Butylbenzene	ND	3.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
n-Propylbenzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
sec-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Styrene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
tert-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
trans-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Trichlorofluoromethane	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Vinyl chloride	ND	1.0		µg/L	1	9/25/2014 2:31:36 AM	R21429
Xylenes, Total	ND	1.5		µg/L	1	9/25/2014 2:31:36 AM	R21429
Surr: 1,2-Dichloroethane-d4	92.0	70-130		%REC	1	9/25/2014 2:31:36 AM	R21429
Surr: 4-Bromofluorobenzene	107	70-130		%REC	1	9/25/2014 2:31:36 AM	R21429
Surr: Dibromofluoromethane	94.0	70-130		%REC	1	9/25/2014 2:31:36 AM	R21429
Surr: Toluene-d8	92.6	70-130		%REC	1	9/25/2014 2:31:36 AM	R21429

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EB-#2-9/19/14
Project: 2014 Annual GW
Collection Date: 9/19/2014 8:40:00 AM
Lab ID: 1409A38-006
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Toluene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Ethylbenzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Naphthalene	ND	2.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
2-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Acetone	ND	10		µg/L	1	9/25/2014 3:01:17 AM	R21429
Bromobenzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Bromodichloromethane	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Bromoform	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Bromomethane	ND	3.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
2-Butanone	ND	10		µg/L	1	9/25/2014 3:01:17 AM	R21429
Carbon disulfide	ND	10		µg/L	1	9/25/2014 3:01:17 AM	R21429
Carbon Tetrachloride	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Chlorobenzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Chloroethane	ND	2.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Chloroform	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Chloromethane	ND	3.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
2-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
4-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
cis-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Dibromochloromethane	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Dibromomethane	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,1-Dichloroethane	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,1-Dichloroethene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,2-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,3-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
2,2-Dichloropropane	ND	2.0		µg/L	1	9/25/2014 3:01:17 AM	R21429

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EB-#2-9/19/14
Project: 2014 Annual GW
Collection Date: 9/19/2014 8:40:00 AM
Lab ID: 1409A38-006
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Hexachlorobutadiene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
2-Hexanone	ND	10		µg/L	1	9/25/2014 3:01:17 AM	R21429
Isopropylbenzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
4-Isopropyltoluene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
4-Methyl-2-pentanone	ND	10		µg/L	1	9/25/2014 3:01:17 AM	R21429
Methylene Chloride	ND	3.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
n-Butylbenzene	ND	3.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
n-Propylbenzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
sec-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Styrene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
tert-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
trans-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Trichlorofluoromethane	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Vinyl chloride	ND	1.0		µg/L	1	9/25/2014 3:01:17 AM	R21429
Xylenes, Total	ND	1.5		µg/L	1	9/25/2014 3:01:17 AM	R21429
Surr: 1,2-Dichloroethane-d4	89.0	70-130		%REC	1	9/25/2014 3:01:17 AM	R21429
Surr: 4-Bromofluorobenzene	100	70-130		%REC	1	9/25/2014 3:01:17 AM	R21429
Surr: Dibromofluoromethane	91.1	70-130		%REC	1	9/25/2014 3:01:17 AM	R21429
Surr: Toluene-d8	92.4	70-130		%REC	1	9/25/2014 3:01:17 AM	R21429

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EB-#1-9/19/14
Project: 2014 Annual GW
Collection Date: 9/19/2014 8:30:00 AM
Lab ID: 1409A38-007
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Toluene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Ethylbenzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Naphthalene	ND	2.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
2-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Acetone	ND	10		µg/L	1	9/25/2014 2:18:02 PM	R21469
Bromobenzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Bromodichloromethane	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Bromoform	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Bromomethane	ND	3.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
2-Butanone	ND	10		µg/L	1	9/25/2014 2:18:02 PM	R21469
Carbon disulfide	ND	10		µg/L	1	9/25/2014 2:18:02 PM	R21469
Carbon Tetrachloride	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Chlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Chloroethane	ND	2.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Chloroform	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Chloromethane	ND	3.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
2-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
4-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
cis-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Dibromochloromethane	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Dibromomethane	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,1-Dichloroethane	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,1-Dichloroethene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,2-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,3-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
2,2-Dichloropropane	ND	2.0		µg/L	1	9/25/2014 2:18:02 PM	R21469

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: EB-#1-9/19/14
Project: 2014 Annual GW
Collection Date: 9/19/2014 8:30:00 AM
Lab ID: 1409A38-007
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Hexachlorobutadiene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
2-Hexanone	ND	10		µg/L	1	9/25/2014 2:18:02 PM	R21469
Isopropylbenzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
4-Isopropyltoluene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
4-Methyl-2-pentanone	ND	10		µg/L	1	9/25/2014 2:18:02 PM	R21469
Methylene Chloride	ND	3.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
n-Butylbenzene	ND	3.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
n-Propylbenzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
sec-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Styrene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
tert-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
trans-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Trichlorofluoromethane	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Vinyl chloride	ND	1.0		µg/L	1	9/25/2014 2:18:02 PM	R21469
Xylenes, Total	ND	1.5		µg/L	1	9/25/2014 2:18:02 PM	R21469
Surr: 1,2-Dichloroethane-d4	88.5	70-130		%REC	1	9/25/2014 2:18:02 PM	R21469
Surr: 4-Bromofluorobenzene	102	70-130		%REC	1	9/25/2014 2:18:02 PM	R21469
Surr: Dibromofluoromethane	85.8	70-130		%REC	1	9/25/2014 2:18:02 PM	R21469
Surr: Toluene-d8	92.7	70-130		%REC	1	9/25/2014 2:18:02 PM	R21469

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group 10-9/16/14f
Project: 2014 Annual GW
Collection Date: 9/16/2014 5:00:00 PM
Lab ID: 1409A38-008
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Toluene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Ethylbenzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Naphthalene	ND	2.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
2-Methylnaphthalene	ND	4.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Acetone	ND	10		µg/L	1	9/25/2014 4:00:37 AM	R21429
Bromobenzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Bromodichloromethane	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Bromoform	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Bromomethane	ND	3.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
2-Butanone	ND	10		µg/L	1	9/25/2014 4:00:37 AM	R21429
Carbon disulfide	ND	10		µg/L	1	9/25/2014 4:00:37 AM	R21429
Carbon Tetrachloride	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Chlorobenzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Chloroethane	ND	2.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Chloroform	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Chloromethane	ND	3.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
2-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
4-Chlorotoluene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
cis-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Dibromochloromethane	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Dibromomethane	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,1-Dichloroethane	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,1-Dichloroethene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,2-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,3-Dichloropropane	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
2,2-Dichloropropane	ND	2.0		µg/L	1	9/25/2014 4:00:37 AM	R21429

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group 10-9/16/14f
Project: 2014 Annual GW
Collection Date: 9/16/2014 5:00:00 PM
Lab ID: 1409A38-008
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Hexachlorobutadiene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
2-Hexanone	ND	10		µg/L	1	9/25/2014 4:00:37 AM	R21429
Isopropylbenzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
4-Isopropyltoluene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
4-Methyl-2-pentanone	ND	10		µg/L	1	9/25/2014 4:00:37 AM	R21429
Methylene Chloride	ND	3.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
n-Butylbenzene	ND	3.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
n-Propylbenzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
sec-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Styrene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
tert-Butylbenzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
trans-1,2-DCE	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Trichlorofluoromethane	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Vinyl chloride	ND	1.0		µg/L	1	9/25/2014 4:00:37 AM	R21429
Xylenes, Total	ND	1.5		µg/L	1	9/25/2014 4:00:37 AM	R21429
Surr: 1,2-Dichloroethane-d4	93.6	70-130		%REC	1	9/25/2014 4:00:37 AM	R21429
Surr: 4-Bromofluorobenzene	99.4	70-130		%REC	1	9/25/2014 4:00:37 AM	R21429
Surr: Dibromofluoromethane	90.9	70-130		%REC	1	9/25/2014 4:00:37 AM	R21429
Surr: Toluene-d8	92.5	70-130		%REC	1	9/25/2014 4:00:37 AM	R21429

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 140923034
Project Name: 1409A38

Analytical Results Report

Sample Number 140923034-001 **Sampling Date** 9/16/2014 **Date/Time Received** 9/23/2014 11:40 AM
Client Sample ID 1409A38-001H / MW-1 **Sampling Time** 4:15 PM
Matrix Water
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/L	0.01	9/25/2014	CRW	EPA 335.4	

Sample Number 140923034-002 **Sampling Date** 9/16/2014 **Date/Time Received** 9/23/2014 11:40 AM
Client Sample ID 1409A38-002H / MW-2 **Sampling Time** 7:00 PM
Matrix Water
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/L	0.01	9/25/2014	CRW	EPA 335.4	

Sample Number 140923034-003 **Sampling Date** 9/17/2014 **Date/Time Received** 9/23/2014 11:40 AM
Client Sample ID 1409A38-003H / MW-5 **Sampling Time** 11:40 AM
Matrix Water
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/L	0.01	9/26/2014	CRW	EPA 335.4	

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	140923034
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1409A38
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	140923034-004	**Sampling Date**	9/17/2014	**Date/Time Received**	9/23/2014	11:40 AM
Client Sample ID	1409A38-004H / MW-4	**Sampling Time**	3:15 PM			
Matrix	Water					
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/L	0.01	9/26/2014	CRW	EPA 335.4	

Authorized Signature

John Coddington, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 140923034
Project Name: 1409A38

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Cyanide	0.485	mg/L	0.5	97.0	90-110	9/26/2014	9/26/2014
Cyanide	0.502	mg/L	0.5	100.4	90-110	9/25/2014	9/25/2014

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
140925068-001	Cyanide	ND	0.489	mg/L	0.5	97.8	90-110	9/26/2014	9/26/2014
140923034-002	Cyanide	ND	0.503	mg/L	0.5	100.6	90-110	9/25/2014	9/25/2014

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide	0.477	mg/L	0.5	95.4	2.5	0-20	9/26/2014	9/26/2014
Cyanide	0.514	mg/L	0.5	102.8	2.2	0-20	9/25/2014	9/25/2014

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide	ND	mg/L	0.01	9/26/2014	9/26/2014
Cyanide	ND	mg/L	0.01	9/25/2014	9/25/2014

AR	Acceptable Range
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A38**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21433** RunNo: **21433**
Prep Date: Analysis Date: **9/24/2014** SeqNo: **626248** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21433** RunNo: **21433**
Prep Date: Analysis Date: **9/24/2014** SeqNo: **626249** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.0020	0.5000	0	93.3	85	115			
Cadmium	0.47	0.0020	0.5000	0	93.8	85	115			
Calcium	48	1.0	50.00	0	97.0	85	115			
Chromium	0.46	0.0060	0.5000	0	91.5	85	115			
Copper	0.46	0.0060	0.5000	0	92.7	85	115			
Iron	0.48	0.020	0.5000	0	96.4	85	115			
Magnesium	48	1.0	50.00	0	97.0	85	115			
Manganese	0.47	0.0020	0.5000	0	93.8	85	115			
Potassium	48	1.0	50.00	0	96.1	85	115			
Silver	0.097	0.0050	0.1000	0	97.0	85	115			
Zinc	0.47	0.010	0.5000	0	94.6	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21433** RunNo: **21433**
Prep Date: Analysis Date: **9/24/2014** SeqNo: **626252** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A38**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21433** RunNo: **21433**
Prep Date: Analysis Date: **9/24/2014** SeqNo: **626252** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21433** RunNo: **21433**
Prep Date: Analysis Date: **9/24/2014** SeqNo: **626253** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.6	85	115			
Cadmium	0.49	0.0020	0.5000	0	97.5	85	115			
Calcium	49	1.0	50.00	0	97.1	85	115			
Chromium	0.48	0.0060	0.5000	0	95.3	85	115			
Copper	0.48	0.0060	0.5000	0	96.9	85	115			
Iron	0.50	0.020	0.5000	0	100	85	115			
Magnesium	49	1.0	50.00	0	97.9	85	115			
Manganese	0.49	0.0020	0.5000	0	98.4	85	115			
Potassium	48	1.0	50.00	0	96.2	85	115			
Silver	0.10	0.0050	0.1000	0	101	85	115			
Zinc	0.49	0.010	0.5000	0	98.6	85	115			

Sample ID **1409A38-004GMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **MW-4** Batch ID: **R21433** RunNo: **21433**
Prep Date: Analysis Date: **9/24/2014** SeqNo: **626544** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0.01835	94.6	70	130			
Cadmium	0.46	0.0020	0.5000	0	91.4	70	130			
Calcium	49	1.0	50.00	1.897	93.8	70	130			
Chromium	0.46	0.0060	0.5000	0	91.3	70	130			
Copper	0.47	0.0060	0.5000	0	93.5	70	130			
Iron	0.48	0.020	0.5000	0	95.8	70	130			
Magnesium	47	1.0	50.00	0.1930	92.8	70	130			
Manganese	0.48	0.0020	0.5000	0.005660	95.2	70	130			
Potassium	50	1.0	50.00	1.719	97.3	70	130			
Silver	0.086	0.0050	0.1000	0	86.3	70	130			
Zinc	0.48	0.010	0.5000	0.006380	94.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A38**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **1409A38-004GMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **MW-4** Batch ID: **R21433** RunNo: **21433**
Prep Date: Analysis Date: **9/24/2014** SeqNo: **626546** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0.01835	93.6	70	130	1.01	20	
Cadmium	0.45	0.0020	0.5000	0	90.8	70	130	0.678	20	
Calcium	50	1.0	50.00	1.897	95.6	70	130	1.77	20	
Chromium	0.45	0.0060	0.5000	0	90.6	70	130	0.746	20	
Copper	0.46	0.0060	0.5000	0	92.4	70	130	1.16	20	
Iron	0.49	0.020	0.5000	0	97.4	70	130	1.60	20	
Magnesium	47	1.0	50.00	0.1930	94.6	70	130	1.84	20	
Manganese	0.48	0.0020	0.5000	0.005660	94.3	70	130	0.974	20	
Potassium	51	1.0	50.00	1.719	98.9	70	130	1.58	20	
Silver	0.084	0.0050	0.1000	0	84.2	70	130	2.49	20	
Zinc	0.48	0.010	0.5000	0.006380	95.0	70	130	0.181	20	

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21450** RunNo: **21450**
Prep Date: Analysis Date: **9/25/2014** SeqNo: **626978** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21450** RunNo: **21450**
Prep Date: Analysis Date: **9/25/2014** SeqNo: **626979** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	49	1.0	50.00	0	98.5	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A38**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB-15445** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **15445** RunNo: **21391**
Prep Date: **9/23/2014** Analysis Date: **9/23/2014** SeqNo: **624989** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-15445** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **15445** RunNo: **21391**
Prep Date: **9/23/2014** Analysis Date: **9/23/2014** SeqNo: **624990** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.4	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.0	85	115			
Chromium	0.49	0.0060	0.5000	0	97.7	85	115			
Copper	0.49	0.0060	0.5000	0	98.3	85	115			
Iron	0.49	0.020	0.5000	0	97.3	85	115			
Manganese	0.50	0.0020	0.5000	0	99.8	85	115			
Silver	0.10	0.0050	0.1000	0	101	85	115			
Zinc	0.50	0.010	0.5000	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A38**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21559** RunNo: **21559**
Prep Date: Analysis Date: **9/30/2014** SeqNo: **631540** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	91.5	85	115			
Lead	0.023	0.0010	0.02500	0	92.9	85	115			
Uranium	0.024	0.0010	0.02500	0	94.8	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21559** RunNo: **21559**
Prep Date: Analysis Date: **9/30/2014** SeqNo: **631542** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21559** RunNo: **21559**
Prep Date: Analysis Date: **9/30/2014** SeqNo: **631545** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	90.1	85	115			
Lead	0.023	0.0010	0.02500	0	90.3	85	115			
Uranium	0.023	0.0010	0.02500	0	92.2	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21559** RunNo: **21559**
Prep Date: Analysis Date: **9/30/2014** SeqNo: **631546** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21629** RunNo: **21629**
Prep Date: Analysis Date: **10/2/2014** SeqNo: **634388** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.022	0.0010	0.02500	0	89.3	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A38**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**R21629**	RunNo:	**21629**					
Prep Date:		Analysis Date:	**10/2/2014**	SeqNo:	**634389**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.023	0.0010	0.02500	0	92.8	85	115			

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**R21629**	RunNo:	**21629**					
Prep Date:		Analysis Date:	**10/2/2014**	SeqNo:	**634390**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**R21629**	RunNo:	**21629**					
Prep Date:		Analysis Date:	**10/2/2014**	SeqNo:	**634391**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A38**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **1409A38-004FLLMS** SampType: **MSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **MW-4** Batch ID: **15445** RunNo: **21619**
Prep Date: **9/23/2014** Analysis Date: **10/2/2014** SeqNo: **634154** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0.0005544	100	70	130			
Lead	0.027	0.0010	0.02500	0	109	70	130			
Selenium	0.025	0.0010	0.02500	0	99.8	70	130			
Uranium	0.046	0.0010	0.02500	0.01754	112	70	130			

Sample ID **LLLCS-15445** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **15445** RunNo: **21619**
Prep Date: **9/23/2014** Analysis Date: **10/2/2014** SeqNo: **634155** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	101	85	115			
Lead	0.027	0.0010	0.02500	0	107	85	115			
Selenium	0.026	0.0010	0.02500	0	104	85	115			
Uranium	0.027	0.0010	0.02500	0	106	85	115			

Sample ID **MB-15445** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **15445** RunNo: **21619**
Prep Date: **9/23/2014** Analysis Date: **10/2/2014** SeqNo: **634158** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A38**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**MB-15531**	SampType:	**MBLK**		TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**15531**		RunNo:	**21492**					
Prep Date:	**9/26/2014**	Analysis Date:	**9/26/2014**		SeqNo:	**628445**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		ND	0.00020								

Sample ID	**LCS-15531**	SampType:	**LCS**		TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**15531**		RunNo:	**21492**					
Prep Date:	**9/26/2014**	Analysis Date:	**9/26/2014**		SeqNo:	**628446**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.0056	0.00020	0.005000	0	111	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A38**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R21368** RunNo: **21368**
Prep Date: Analysis Date: **9/22/2014** SeqNo: **623985** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R21368** RunNo: **21368**
Prep Date: Analysis Date: **9/22/2014** SeqNo: **623986** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.8	90	110			
Bromide	2.4	0.10	2.500	0	97.6	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.1	90	110			
Sulfate	9.7	0.50	10.00	0	97.1	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	98.5	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R21368** RunNo: **21368**
Prep Date: Analysis Date: **9/22/2014** SeqNo: **624032** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R21368** RunNo: **21368**
Prep Date: Analysis Date: **9/22/2014** SeqNo: **624033** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	96.4	90	110			
Chloride	4.6	0.50	5.000	0	91.7	90	110			
Bromide	2.4	0.10	2.500	0	94.4	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	93.4	90	110			
Sulfate	9.4	0.50	10.00	0	93.8	90	110			
Nitrate+Nitrite as N	3.3	0.20	3.500	0	95.6	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A38**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R21604**	RunNo: **21604**							
Prep Date:	Analysis Date: **10/1/2014**	SeqNo: **633648**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R21604**	RunNo: **21604**							
Prep Date:	Analysis Date: **10/1/2014**	SeqNo: **633649**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.4	0.20	3.500	0	98.1	90	110			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R21604**	RunNo: **21604**							
Prep Date:	Analysis Date: **10/1/2014**	SeqNo: **633702**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R21604**	RunNo: **21604**							
Prep Date:	Analysis Date: **10/1/2014**	SeqNo: **633703**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.4	0.20	3.500	0	97.6	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A38**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**MB-15389**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Diesel Range**					
Client ID:	**PBW**	Batch ID:	**15389**	RunNo:	**21359**					
Prep Date:	**9/18/2014**	Analysis Date:	**9/23/2014**	SeqNo:	**625279**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.2		1.000		119	59	141			

Sample ID	**LCS-15389**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Diesel Range**					
Client ID:	**LCSW**	Batch ID:	**15389**	RunNo:	**21359**					
Prep Date:	**9/18/2014**	Analysis Date:	**9/23/2014**	SeqNo:	**625280**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.3	1.0	5.000	0	86.6	69.7	142			
Surr: DNOP	0.57		0.5000		115	59	141			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A38**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBW**	Batch ID:	**R21468**	RunNo:	**21468**					
Prep Date:		Analysis Date:	**9/25/2014**	SeqNo:	**627652**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		ND	0.050								
Surr: BFB		17		20.00		82.8	70.9	130			

Sample ID	**2.5UG GRO LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSW**	Batch ID:	**R21468**	RunNo:	**21468**					
Prep Date:		Analysis Date:	**9/25/2014**	SeqNo:	**627653**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		0.46	0.050	0.5000	0	91.4	80	120			
Surr: BFB		19		20.00		94.7	70.9	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A38**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R21429**	RunNo: **21429**	
Prep Date:	Analysis Date: **9/24/2014**	SeqNo: **626079**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A38**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R21429**	RunNo: **21429**
Prep Date:	Analysis Date: **9/24/2014**	SeqNo: **626079** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.2		10.00		91.5	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	9.4		10.00		93.6	70	130			
Surr: Toluene-d8	9.0		10.00		90.1	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R21429**	RunNo: **21429**
Prep Date:	Analysis Date: **9/24/2014**	SeqNo: **626089** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.3	70	130			
Toluene	21	1.0	20.00	0	104	80	120			
Chlorobenzene	20	1.0	20.00	0	98.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A38**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R21429** RunNo: **21429**
Prep Date: Analysis Date: **9/24/2014** SeqNo: **626089** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	23	1.0	20.00	0	113	82.6	131			
Trichloroethene (TCE)	18	1.0	20.00	0	89.6	70	130			
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.4	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	9.5		10.00		95.2	70	130			
Surr: Toluene-d8	9.8		10.00		98.3	70	130			

Sample ID **5mL-rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R21469** RunNo: **21469**
Prep Date: Analysis Date: **9/25/2014** SeqNo: **627686** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A38**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R21469**	RunNo: **21469**	
Prep Date:	Analysis Date: **9/25/2014**	SeqNo: **627686**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.9		10.00		89.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A38**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **5mL-rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R21469** RunNo: **21469**
Prep Date: Analysis Date: **9/25/2014** SeqNo: **627686** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	9.7		10.00		97.1	70	130			
Surr: Dibromofluoromethane	8.9		10.00		89.1	70	130			
Surr: Toluene-d8	9.5		10.00		95.0	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R21469** RunNo: **21469**
Prep Date: Analysis Date: **9/25/2014** SeqNo: **627689** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.3	70	130			
Toluene	20	1.0	20.00	0	102	80	120			
Chlorobenzene	20	1.0	20.00	0	101	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	105	82.6	131			
Trichloroethene (TCE)	18	1.0	20.00	0	89.9	70	130			
Surr: 1,2-Dichloroethane-d4	9.3		10.00		92.7	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.6	70	130			
Surr: Dibromofluoromethane	9.2		10.00		92.4	70	130			
Surr: Toluene-d8	9.8		10.00		97.9	70	130			

Sample ID **1409A38-006a ms** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **EB-#2-9/19/14** Batch ID: **R21469** RunNo: **21469**
Prep Date: Analysis Date: **9/25/2014** SeqNo: **627706** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0.1580	91.3	70	130			
Toluene	18	1.0	20.00	0.3380	89.1	70	130			
Chlorobenzene	19	1.0	20.00	0	93.3	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	99.1	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	84.1	70	130			
Surr: 1,2-Dichloroethane-d4	9.0		10.00		89.7	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	8.6		10.00		86.3	70	130			
Surr: Toluene-d8	9.3		10.00		92.9	70	130			

Sample ID **1409A38-006a msd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **EB-#2-9/19/14** Batch ID: **R21469** RunNo: **21469**
Prep Date: Analysis Date: **9/25/2014** SeqNo: **627707** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0.1580	97.7	70	130	6.70	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A38**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **1409A38-006a msd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **EB-#2-9/19/14** Batch ID: **R21469** RunNo: **21469**
Prep Date: Analysis Date: **9/25/2014** SeqNo: **627707** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	18	1.0	20.00	0.3380	86.7	70	130	2.63	20	
Chlorobenzene	18	1.0	20.00	0	91.9	70	130	1.49	20	
1,1-Dichloroethene	21	1.0	20.00	0	105	70	130	5.30	20	
Trichloroethene (TCE)	16	1.0	20.00	0	80.9	70	130	3.87	20	
Surr: 1,2-Dichloroethane-d4	9.0		10.00		89.6	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130	0	0	
Surr: Dibromofluoromethane	8.8		10.00		87.5	70	130	0	0	
Surr: Toluene-d8	9.1		10.00		90.8	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A38**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15441**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **15441**	RunNo: **21456**			
Prep Date: **9/23/2014**	Analysis Date: **9/25/2014**	SeqNo: **627190**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A38**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15441**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **15441**	RunNo: **21456**	
Prep Date: **9/23/2014**	Analysis Date: **9/25/2014**	SeqNo: **627190**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	140		200.0		70.6	12.1	85.8			
Surr: Phenol-d5	120		200.0		59.6	17.7	65.8			
Surr: 2,4,6-Tribromophenol	110		200.0		57.2	26	138			
Surr: Nitrobenzene-d5	74		100.0		74.0	47.5	119			
Surr: 2-Fluorobiphenyl	68		100.0		67.5	48.1	106			
Surr: 4-Terphenyl-d14	68		100.0		67.6	44	113			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A38**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **lcs-15441** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **15441** RunNo: **21456**
Prep Date: **9/23/2014** Analysis Date: **9/25/2014** SeqNo: **627191** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	80	10	100.0	0	80.1	47.9	114			
4-Chloro-3-methylphenol	170	10	200.0	0	86.8	51.7	122			
2-Chlorophenol	170	10	200.0	0	83.2	40.7	113			
1,4-Dichlorobenzene	66	10	100.0	0	66.5	39.6	99.9			
2,4-Dinitrotoluene	75	10	100.0	0	74.6	40.8	113			
N-Nitrosodi-n-propylamine	77	10	100.0	0	76.5	51.2	111			
4-Nitrophenol	140	10	200.0	0	68.0	15.7	86.9			
Pentachlorophenol	130	20	200.0	0	62.9	21.6	104			
Phenol	140	10	200.0	0	69.0	28.6	71.7			
Pyrene	84	10	100.0	0	83.7	54.2	128			
1,2,4-Trichlorobenzene	64	10	100.0	0	63.7	40.9	101			
Surr: 2-Fluorophenol	140		200.0		70.8	12.1	85.8			
Surr: Phenol-d5	130		200.0		63.4	17.7	65.8			
Surr: 2,4,6-Tribromophenol	140		200.0		71.1	26	138			
Surr: Nitrobenzene-d5	79		100.0		78.9	47.5	119			
Surr: 2-Fluorobiphenyl	78		100.0		77.9	48.1	106			
Surr: 4-Terphenyl-d14	84		100.0		84.3	44	113			

Sample ID **lcsd-15441** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **15441** RunNo: **21456**
Prep Date: **9/23/2014** Analysis Date: **9/25/2014** SeqNo: **627192** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	74	10	100.0	0	74.1	47.9	114	7.78	27.2	
4-Chloro-3-methylphenol	140	10	200.0	0	72.4	51.7	122	18.1	25.9	
2-Chlorophenol	150	10	200.0	0	74.4	40.7	113	11.1	22.5	
1,4-Dichlorobenzene	60	10	100.0	0	60.2	39.6	99.9	9.88	24.6	
2,4-Dinitrotoluene	73	10	100.0	0	73.0	40.8	113	2.28	25.3	
N-Nitrosodi-n-propylamine	69	10	100.0	0	69.5	51.2	111	9.64	23.6	
4-Nitrophenol	110	10	200.0	0	57.4	15.7	86.9	16.9	34.7	
Pentachlorophenol	110	20	200.0	0	55.4	21.6	104	12.6	32.8	
Phenol	110	10	200.0	0	55.3	28.6	71.7	22.1	25.5	
Pyrene	87	10	100.0	0	87.1	54.2	128	3.96	31.4	
1,2,4-Trichlorobenzene	58	10	100.0	0	58.2	40.9	101	8.93	25.9	
Surr: 2-Fluorophenol	110		200.0		54.5	12.1	85.8	0	0	
Surr: Phenol-d5	98		200.0		49.0	17.7	65.8	0	0	
Surr: 2,4,6-Tribromophenol	120		200.0		61.6	26	138	0	0	
Surr: Nitrobenzene-d5	70		100.0		70.4	47.5	119	0	0	
Surr: 2-Fluorobiphenyl	69		100.0		68.9	48.1	106	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A38**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**lcsd-15441**	SampType:	**LCSD**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**LCSS02**	Batch ID:	**15441**	RunNo:	**21456**
Prep Date:	**9/23/2014**	Analysis Date:	**9/25/2014**	SeqNo:	**627192** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	79		100.0		79.2	44	113	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Western Refining Gallup** Work Order Number: **1409A38** RcptNo: **1**

Received by/date: AT 09/19/14

Logged By: **Ashley Gallegos** **9/19/2014 12:45:00 PM** AG

Completed By: **Ashley Gallegos** **9/22/2014 10:59:52 AM** AG

Reviewed By: KMS | mg 09/22/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 12,4
(<2 or >12 unless noted)
Adjusted? No
Checked by: mg

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

2 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ Rush_____

Project Name: 2014 ~~2013~~ 09/22/14 ~~2041~~ ANNUAL GW

Project #: MW-1,-2,-4,-5

Project Manager: C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1409A38	8260 + MTBE	8015B extended	8270 + phenols	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	Major Cations/Anions	Cyanide							Air Bubbles (Y or N)
9/16/14	1615	H_2O	MW-1			-001	X	X	X	X	X	X	X							
9/16/14	1900	H_2O	MW-2			-002	X	X	X	X	X	X	X							
9/17/14	1140	H_2O	MW-5			-003	X	X	X	X	X	X	X							
9/17/14	1515	H_2O	MW-4			-004	X	X	X	X	X	X	X							
			Trip Blank			-005	X	X												
9/19/14	0840	H_2O	EB-#2-9/19/14			-006	X													
9/19/14	0830	H_2O	EB-#1-9/19/14			-007	X													
9/16/14	1700	H_2O	FB-Group10-9/16/14			-008	X													

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/19/14	1245	[signature]	[signature]	09/19/14	1245
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 08, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: 2014 Annual GW OrderNo.: 1409807

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 9/16/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1409807**
Date Reported: **10/8/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: GWM-1
Project: 2014 Annual GW
Collection Date: 9/12/2014 7:50:00 AM
Lab ID: 1409807-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	2.1	1.0		mg/L	1	9/17/2014 6:33:53 PM	15341
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/17/2014 6:33:53 PM	15341
Surr: DNOP	101	59-141		%REC	1	9/17/2014 6:33:53 PM	15341
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**DJF**
Gasoline Range Organics (GRO)	0.51	0.050		mg/L	1	9/18/2014 7:54:49 PM	R21299
Surr: BFB	805	70.9-130	S	%REC	1	9/18/2014 7:54:49 PM	R21299
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	2.4	0.50		mg/L	5	9/17/2014 9:25:30 PM	R21283
Chloride	910	50		mg/L	100	9/19/2014 1:13:37 AM	R21321
Bromide	2.8	0.50		mg/L	5	9/17/2014 9:25:30 PM	R21283
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	9/17/2014 9:25:30 PM	R21283
Sulfate	150	10		mg/L	20	9/17/2014 9:37:55 PM	R21283
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/18/2014 6:19:14 AM	R21283
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.78	0.0020		mg/L	1	9/18/2014 2:06:27 PM	R21290
Cadmium	ND	0.0020		mg/L	1	9/18/2014 2:06:27 PM	R21290
Calcium	280	10		mg/L	10	9/19/2014 5:36:40 PM	R21336
Chromium	ND	0.0060		mg/L	1	9/18/2014 2:06:27 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 2:06:27 PM	R21290
Iron	11	2.0	*	mg/L	100	9/19/2014 5:38:50 PM	R21336
Magnesium	63	1.0		mg/L	1	9/18/2014 2:06:27 PM	R21290
Manganese	2.4	0.020	*	mg/L	10	9/19/2014 5:36:40 PM	R21336
Potassium	3.5	1.0		mg/L	1	9/18/2014 2:06:27 PM	R21290
Silver	ND	0.0050		mg/L	1	9/19/2014 5:34:57 PM	R21336
Sodium	1100	100		mg/L	100	9/19/2014 5:38:50 PM	R21336
Zinc	0.023	0.010		mg/L	1	9/19/2014 5:34:57 PM	R21336
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.67	0.0020		mg/L	1	9/19/2014 11:43:53 AM	15380
Cadmium	ND	0.0020		mg/L	1	9/19/2014 11:43:53 AM	15380
Chromium	ND	0.0060		mg/L	1	9/19/2014 11:43:53 AM	15380
Copper	ND	0.0060		mg/L	1	9/19/2014 11:43:53 AM	15380
Iron	13	0.40	*	mg/L	20	9/19/2014 11:56:36 AM	15380
Manganese	2.6	0.040	*	mg/L	20	9/19/2014 11:56:36 AM	15380
Silver	ND	0.0050		mg/L	1	9/26/2014 12:00:35 PM	15380
Zinc	0.018	0.010		mg/L	1	9/19/2014 11:43:53 AM	15380
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.13	0.0050	*	mg/L	5	9/29/2014 5:05:34 PM	R21527

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: GWM-1
Project: 2014 Annual GW
Collection Date: 9/12/2014 7:50:00 AM
Lab ID: 1409807-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	0.0026	0.0010		mg/L	1	9/26/2014 11:57:26 AM	R21493
Selenium	0.020	0.0050		mg/L	5	9/29/2014 5:05:34 PM	R21527
Uranium	0.015	0.0010		mg/L	1	9/26/2014 11:57:26 AM	R21493
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.14	0.010	*	mg/L	10	9/29/2014 1:17:32 PM	15380
Lead	0.0042	0.0010		mg/L	1	9/23/2014 4:18:14 PM	15380
Selenium	0.019	0.010		mg/L	10	9/29/2014 1:17:32 PM	15380
Uranium	0.015	0.0010		mg/L	1	9/23/2014 4:18:14 PM	15380
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/24/2014 11:00:40 AM	15449
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Acenaphthylene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Aniline	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Anthracene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Azobenzene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Benz(a)anthracene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Benzo(a)pyrene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Benzo(b)fluoranthene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Benzo(k)fluoranthene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Benzoic acid	ND	20		µg/L	1	9/18/2014 11:38:13 PM	15342
Benzyl alcohol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Butyl benzyl phthalate	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Carbazole	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
4-Chloroaniline	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2-Chloronaphthalene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2-Chlorophenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Chrysene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Di-n-butyl phthalate	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Di-n-octyl phthalate	ND	20		µg/L	1	9/18/2014 11:38:13 PM	15342

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Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: GWM-1
Project: 2014 Annual GW
Collection Date: 9/12/2014 7:50:00 AM
Lab ID: 1409807-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Dibenzofuran	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
1,2-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
1,3-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
1,4-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Diethyl phthalate	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Dimethyl phthalate	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2,4-Dichlorophenol	ND	20		µg/L	1	9/18/2014 11:38:13 PM	15342
2,4-Dimethylphenol	78	10		µg/L	1	9/18/2014 11:38:13 PM	15342
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/18/2014 11:38:13 PM	15342
2,4-Dinitrophenol	ND	20		µg/L	1	9/18/2014 11:38:13 PM	15342
2,4-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2,6-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Fluoranthene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Fluorene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Hexachlorobenzene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Hexachlorobutadiene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Hexachloroethane	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Isophorone	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
1-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2-Methylphenol	ND	20		µg/L	1	9/18/2014 11:38:13 PM	15342
3+4-Methylphenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
N-Nitrosodimethylamine	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Naphthalene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2-Nitroaniline	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
3-Nitroaniline	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
4-Nitroaniline	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Nitrobenzene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2-Nitrophenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
4-Nitrophenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Pentachlorophenol	ND	20		µg/L	1	9/18/2014 11:38:13 PM	15342
Phenanthrene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Phenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342

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Hall Environmental Analysis Laboratory, Inc.

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Client Sample ID: GWM-1
Project: 2014 Annual GW
Collection Date: 9/12/2014 7:50:00 AM
Lab ID: 1409807-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyrene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Pyridine	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Surr: 2-Fluorophenol	31.5	12.1-85.8		%REC	1	9/18/2014 11:38:13 PM	15342
Surr: Phenol-d5	34.8	17.7-65.8		%REC	1	9/18/2014 11:38:13 PM	15342
Surr: 2,4,6-Tribromophenol	28.3	26-138		%REC	1	9/18/2014 11:38:13 PM	15342
Surr: Nitrobenzene-d5	67.8	47.5-119		%REC	1	9/18/2014 11:38:13 PM	15342
Surr: 2-Fluorobiphenyl	64.3	48.1-106		%REC	1	9/18/2014 11:38:13 PM	15342
Surr: 4-Terphenyl-d14	50.5	44-113		%REC	1	9/18/2014 11:38:13 PM	15342
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	10	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Toluene	3.1	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Ethylbenzene	4.0	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Methyl tert-butyl ether (MTBE)	41	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2,4-Trimethylbenzene	9.8	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,3,5-Trimethylbenzene	1.2	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Naphthalene	ND	2.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1-Methylnaphthalene	13	4.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
2-Methylnaphthalene	ND	4.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Acetone	ND	10		µg/L	1	9/22/2014 1:05:28 PM	R21353
Bromobenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Bromodichloromethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Bromoform	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Bromomethane	ND	3.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
2-Butanone	ND	10		µg/L	1	9/22/2014 1:05:28 PM	R21353
Carbon disulfide	ND	10		µg/L	1	9/22/2014 1:05:28 PM	R21353
Carbon Tetrachloride	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Chlorobenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Chloroethane	ND	2.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Chloroform	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Chloromethane	ND	3.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
2-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
4-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
cis-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: GWM-1
Project: 2014 Annual GW
Collection Date: 9/12/2014 7:50:00 AM
Lab ID: 1409807-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Dibromochloromethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Dibromomethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,1-Dichloroethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,1-Dichloroethene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,3-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
2,2-Dichloropropane	ND	2.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,1-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Hexachlorobutadiene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
2-Hexanone	ND	10		µg/L	1	9/22/2014 1:05:28 PM	R21353
Isopropylbenzene	1.4	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
4-Isopropyltoluene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
4-Methyl-2-pentanone	ND	10		µg/L	1	9/22/2014 1:05:28 PM	R21353
Methylene Chloride	ND	3.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
n-Butylbenzene	ND	3.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
n-Propylbenzene	3.0	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
sec-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Styrene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
tert-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
trans-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Trichlorofluoromethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Vinyl chloride	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Xylenes, Total	16	1.5		µg/L	1	9/22/2014 1:05:28 PM	R21353
Surr: 1,2-Dichloroethane-d4	82.6	70-130		%REC	1	9/22/2014 1:05:28 PM	R21353

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: GWM-1
Project: 2014 Annual GW
Collection Date: 9/12/2014 7:50:00 AM
Lab ID: 1409807-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Surr: 4-Bromofluorobenzene	103	70-130		%REC	1	9/22/2014 1:05:28 PM	R21353
Surr: Dibromofluoromethane	89.8	70-130		%REC	1	9/22/2014 1:05:28 PM	R21353
Surr: Toluene-d8	76.3	70-130		%REC	1	9/22/2014 1:05:28 PM	R21353

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: 2014 Annual GW
Collection Date: 9/12/2014 8:05:00 AM
Lab ID: 1409807-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	6.8	1.0		mg/L	1	9/19/2014 4:38:35 PM	15341
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/19/2014 4:38:35 PM	15341
Surr: DNOP	95.6	59-141		%REC	1	9/19/2014 4:38:35 PM	15341
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**DJF**
Gasoline Range Organics (GRO)	0.75	0.050		mg/L	1	9/18/2014 8:24:51 PM	R21299
Surr: BFB	234	70.9-130	S	%REC	1	9/18/2014 8:24:51 PM	R21299
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	1.2	0.50		mg/L	5	9/17/2014 9:50:19 PM	R21283
Chloride	1700	100		mg/L	200	9/19/2014 1:26:02 AM	R21321
Bromide	4.8	0.50		mg/L	5	9/17/2014 9:50:19 PM	R21283
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	9/17/2014 9:50:19 PM	R21283
Sulfate	22	2.5		mg/L	5	9/17/2014 9:50:19 PM	R21283
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/18/2014 6:31:39 AM	R21283
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.78	0.0020		mg/L	1	9/18/2014 2:08:10 PM	R21290
Cadmium	ND	0.0020		mg/L	1	9/18/2014 2:08:10 PM	R21290
Calcium	170	10		mg/L	10	9/19/2014 5:42:28 PM	R21336
Chromium	ND	0.0060		mg/L	1	9/18/2014 2:08:10 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 2:08:10 PM	R21290
Iron	7.2	0.20	*	mg/L	10	9/19/2014 5:42:28 PM	R21336
Magnesium	33	1.0		mg/L	1	9/18/2014 2:08:10 PM	R21290
Manganese	1.8	0.020	*	mg/L	10	9/19/2014 5:42:28 PM	R21336
Potassium	6.0	1.0		mg/L	1	9/18/2014 2:08:10 PM	R21290
Silver	ND	0.0050		mg/L	1	9/19/2014 5:40:42 PM	R21336
Sodium	1400	100		mg/L	100	9/19/2014 5:44:27 PM	R21336
Zinc	0.021	0.010		mg/L	1	9/19/2014 5:40:42 PM	R21336
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.72	0.0020		mg/L	1	9/19/2014 11:45:32 AM	15380
Cadmium	ND	0.0020		mg/L	1	9/19/2014 11:45:32 AM	15380
Chromium	ND	0.0060		mg/L	1	9/19/2014 11:45:32 AM	15380
Copper	ND	0.0060		mg/L	1	9/19/2014 11:45:32 AM	15380
Iron	7.9	0.20	*	mg/L	10	9/19/2014 11:58:37 AM	15380
Manganese	1.9	0.020	*	mg/L	10	9/19/2014 11:58:37 AM	15380
Silver	ND	0.0050		mg/L	1	9/26/2014 12:02:20 PM	15380
Zinc	0.021	0.010		mg/L	1	9/19/2014 11:45:32 AM	15380
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.018	0.010	*	mg/L	10	9/29/2014 5:14:51 PM	R21527

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Lab ID: 1409807-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.0010		mg/L	1	9/26/2014 12:07:02 PM	R21493
Selenium	0.034	0.010		mg/L	10	9/29/2014 5:14:51 PM	R21527
Uranium	0.029	0.0010		mg/L	1	9/26/2014 12:07:02 PM	R21493
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.018	0.010	*	mg/L	10	9/29/2014 1:26:51 PM	15380
Lead	0.0051	0.0010		mg/L	1	9/23/2014 4:21:20 PM	15380
Selenium	0.035	0.010		mg/L	10	9/29/2014 1:26:51 PM	15380
Uranium	0.031	0.0010	*	mg/L	1	9/23/2014 4:21:20 PM	15380
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/24/2014 11:02:28 AM	15449
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Acenaphthylene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Aniline	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Anthracene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Azobenzene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Benz(a)anthracene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Benzo(a)pyrene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Benzo(b)fluoranthene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Benzo(k)fluoranthene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Benzoic acid	ND	20		µg/L	1	9/19/2014 12:07:13 AM	15342
Benzyl alcohol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Butyl benzyl phthalate	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Carbazole	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
4-Chloroaniline	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2-Chloronaphthalene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2-Chlorophenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Chrysene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Di-n-butyl phthalate	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Di-n-octyl phthalate	ND	20		µg/L	1	9/19/2014 12:07:13 AM	15342

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: 2014 Annual GW
Collection Date: 9/12/2014 8:05:00 AM
Lab ID: 1409807-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Dibenzofuran	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
1,2-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
1,3-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
1,4-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Diethyl phthalate	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Dimethyl phthalate	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2,4-Dichlorophenol	ND	20		µg/L	1	9/19/2014 12:07:13 AM	15342
2,4-Dimethylphenol	28	10		µg/L	1	9/19/2014 12:07:13 AM	15342
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/19/2014 12:07:13 AM	15342
2,4-Dinitrophenol	ND	20		µg/L	1	9/19/2014 12:07:13 AM	15342
2,4-Dinitrotoluene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2,6-Dinitrotoluene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Fluoranthene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Fluorene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Hexachlorobenzene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Hexachlorobutadiene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Hexachloroethane	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Isophorone	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
1-Methylnaphthalene	16	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2-Methylnaphthalene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2-Methylphenol	ND	20		µg/L	1	9/19/2014 12:07:13 AM	15342
3+4-Methylphenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
N-Nitrosodimethylamine	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Naphthalene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2-Nitroaniline	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
3-Nitroaniline	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
4-Nitroaniline	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Nitrobenzene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2-Nitrophenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
4-Nitrophenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Pentachlorophenol	ND	20		µg/L	1	9/19/2014 12:07:13 AM	15342
Phenanthrene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Phenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: 2014 Annual GW
Collection Date: 9/12/2014 8:05:00 AM
Lab ID: 1409807-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyrene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Pyridine	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Surr: 2-Fluorophenol	53.6	12.1-85.8		%REC	1	9/19/2014 12:07:13 AM	15342
Surr: Phenol-d5	53.1	17.7-65.8		%REC	1	9/19/2014 12:07:13 AM	15342
Surr: 2,4,6-Tribromophenol	64.2	26-138		%REC	1	9/19/2014 12:07:13 AM	15342
Surr: Nitrobenzene-d5	81.1	47.5-119		%REC	1	9/19/2014 12:07:13 AM	15342
Surr: 2-Fluorobiphenyl	75.3	48.1-106		%REC	1	9/19/2014 12:07:13 AM	15342
Surr: 4-Terphenyl-d14	66.4	44-113		%REC	1	9/19/2014 12:07:13 AM	15342
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	120	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Toluene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Ethylbenzene	13	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Methyl tert-butyl ether (MTBE)	320	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2,4-Trimethylbenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,3,5-Trimethylbenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Naphthalene	ND	10		µg/L	5	9/22/2014 1:35:03 PM	R21353
1-Methylnaphthalene	30	20		µg/L	5	9/22/2014 1:35:03 PM	R21353
2-Methylnaphthalene	ND	20		µg/L	5	9/22/2014 1:35:03 PM	R21353
Acetone	ND	50		µg/L	5	9/22/2014 1:35:03 PM	R21353
Bromobenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Bromodichloromethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Bromoform	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Bromomethane	ND	15		µg/L	5	9/22/2014 1:35:03 PM	R21353
2-Butanone	ND	50		µg/L	5	9/22/2014 1:35:03 PM	R21353
Carbon disulfide	ND	50		µg/L	5	9/22/2014 1:35:03 PM	R21353
Carbon Tetrachloride	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Chlorobenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Chloroethane	ND	10		µg/L	5	9/22/2014 1:35:03 PM	R21353
Chloroform	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Chloromethane	ND	15		µg/L	5	9/22/2014 1:35:03 PM	R21353
2-Chlorotoluene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
4-Chlorotoluene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
cis-1,2-DCE	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
cis-1,3-Dichloropropene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: 2014 Annual GW
Collection Date: 9/12/2014 8:05:00 AM
Lab ID: 1409807-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dibromo-3-chloropropane	ND	10		µg/L	5	9/22/2014 1:35:03 PM	R21353
Dibromochloromethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Dibromomethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2-Dichlorobenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,3-Dichlorobenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,4-Dichlorobenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Dichlorodifluoromethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,1-Dichloroethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,1-Dichloroethene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2-Dichloropropane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,3-Dichloropropane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
2,2-Dichloropropane	ND	10		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,1-Dichloropropene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Hexachlorobutadiene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
2-Hexanone	ND	50		µg/L	5	9/22/2014 1:35:03 PM	R21353
Isopropylbenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
4-Isopropyltoluene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
4-Methyl-2-pentanone	ND	50		µg/L	5	9/22/2014 1:35:03 PM	R21353
Methylene Chloride	ND	15		µg/L	5	9/22/2014 1:35:03 PM	R21353
n-Butylbenzene	ND	15		µg/L	5	9/22/2014 1:35:03 PM	R21353
n-Propylbenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
sec-Butylbenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Styrene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
tert-Butylbenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,1,2,2-Tetrachloroethane	ND	10		µg/L	5	9/22/2014 1:35:03 PM	R21353
Tetrachloroethene (PCE)	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
trans-1,2-DCE	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
trans-1,3-Dichloropropene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2,3-Trichlorobenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2,4-Trichlorobenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,1,1-Trichloroethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,1,2-Trichloroethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Trichloroethene (TCE)	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Trichlorofluoromethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2,3-Trichloropropane	ND	10		µg/L	5	9/22/2014 1:35:03 PM	R21353
Vinyl chloride	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Xylenes, Total	ND	7.5		µg/L	5	9/22/2014 1:35:03 PM	R21353
Surr: 1,2-Dichloroethane-d4	93.3	70-130		%REC	5	9/22/2014 1:35:03 PM	R21353

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: 2014 Annual GW
Collection Date: 9/12/2014 8:05:00 AM
Lab ID: 1409807-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Surr: 4-Bromofluorobenzene	99.2	70-130		%REC	5	9/22/2014 1:35:03 PM	R21353
Surr: Dibromofluoromethane	91.2	70-130		%REC	5	9/22/2014 1:35:03 PM	R21353
Surr: Toluene-d8	86.9	70-130		%REC	5	9/22/2014 1:35:03 PM	R21353

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Project: 2014 Annual GW
Lab ID: 1409807-003 **Matrix:**

Client Sample ID: FB-Group 4- 9/12/2014
Collection Date: 9/12/2014 8:15:00 AM
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Toluene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Ethylbenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Naphthalene	ND	2.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1-Methylnaphthalene	ND	4.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
2-Methylnaphthalene	ND	4.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Acetone	ND	10		µg/L	1	9/22/2014 3:04:13 PM	R21353
Bromobenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Bromodichloromethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Bromoform	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Bromomethane	ND	3.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
2-Butanone	ND	10		µg/L	1	9/22/2014 3:04:13 PM	R21353
Carbon disulfide	ND	10		µg/L	1	9/22/2014 3:04:13 PM	R21353
Carbon Tetrachloride	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Chlorobenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Chloroethane	ND	2.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Chloroform	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Chloromethane	ND	3.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
2-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
4-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
cis-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Dibromochloromethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Dibromomethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,1-Dichloroethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,1-Dichloroethene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,3-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
2,2-Dichloropropane	ND	2.0		µg/L	1	9/22/2014 3:04:13 PM	R21353

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group 4- 9/12/2014
Project: 2014 Annual GW
Collection Date: 9/12/2014 8:15:00 AM
Lab ID: 1409807-003
Matrix:
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Hexachlorobutadiene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
2-Hexanone	ND	10		µg/L	1	9/22/2014 3:04:13 PM	R21353
Isopropylbenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
4-Isopropyltoluene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
4-Methyl-2-pentanone	ND	10		µg/L	1	9/22/2014 3:04:13 PM	R21353
Methylene Chloride	ND	3.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
n-Butylbenzene	ND	3.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
n-Propylbenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
sec-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Styrene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
tert-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
trans-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Trichlorofluoromethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Vinyl chloride	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Xylenes, Total	ND	1.5		µg/L	1	9/22/2014 3:04:13 PM	R21353
Surr: 1,2-Dichloroethane-d4	90.6	70-130		%REC	1	9/22/2014 3:04:13 PM	R21353
Surr: 4-Bromofluorobenzene	97.2	70-130		%REC	1	9/22/2014 3:04:13 PM	R21353
Surr: Dibromofluoromethane	90.5	70-130		%REC	1	9/22/2014 3:04:13 PM	R21353
Surr: Toluene-d8	90.2	70-130		%REC	1	9/22/2014 3:04:13 PM	R21353

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409807-004
Matrix: TRIP BLANK
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/18/2014 8:54:58 PM	R21299
Surr: BFB	87.6	70.9-130		%REC	1	9/18/2014 8:54:58 PM	R21299
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Toluene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Ethylbenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Naphthalene	ND	2.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1-Methylnaphthalene	ND	4.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
2-Methylnaphthalene	ND	4.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Acetone	ND	10		µg/L	1	9/22/2014 12:06:22 PM	R21353
Bromobenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Bromodichloromethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Bromoform	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Bromomethane	ND	3.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
2-Butanone	ND	10		µg/L	1	9/22/2014 12:06:22 PM	R21353
Carbon disulfide	ND	10		µg/L	1	9/22/2014 12:06:22 PM	R21353
Carbon Tetrachloride	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Chlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Chloroethane	ND	2.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Chloroform	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Chloromethane	ND	3.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
2-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
4-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
cis-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Dibromochloromethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Dibromomethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,1-Dichloroethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,1-Dichloroethene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409807-004
Matrix: TRIP BLANK
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,3-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
2,2-Dichloropropane	ND	2.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,1-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Hexachlorobutadiene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
2-Hexanone	ND	10		µg/L	1	9/22/2014 12:06:22 PM	R21353
Isopropylbenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
4-Isopropyltoluene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
4-Methyl-2-pentanone	ND	10		µg/L	1	9/22/2014 12:06:22 PM	R21353
Methylene Chloride	ND	3.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
n-Butylbenzene	ND	3.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
n-Propylbenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
sec-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Styrene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
tert-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
trans-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Trichlorofluoromethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Vinyl chloride	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Xylenes, Total	ND	1.5		µg/L	1	9/22/2014 12:06:22 PM	R21353
Surr: 1,2-Dichloroethane-d4	89.9	70-130		%REC	1	9/22/2014 12:06:22 PM	R21353
Surr: 4-Bromofluorobenzene	100	70-130		%REC	1	9/22/2014 12:06:22 PM	R21353
Surr: Dibromofluoromethane	89.1	70-130		%REC	1	9/22/2014 12:06:22 PM	R21353
Surr: Toluene-d8	95.9	70-130		%REC	1	9/22/2014 12:06:22 PM	R21353

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	140918053
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1409807
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	140918053-001	**Sampling Date**	9/12/2014	**Date/Time Received**	9/18/2014	12:15 PM
Client Sample ID	1409807-002H / OAPIS-1	**Sampling Time**	8:05 AM			
Matrix	Water					
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	0.0908	mg/L	0.01	9/22/2014	ETL	EPA 335.4	

Authorized Signature

John Coddington, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0026; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 140918053
Project Name: 1409807

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Cyanide	0.512	mg/L	0.5	102.4	90-110	9/22/2014	9/22/2014

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
140918049-002	Cyanide	ND	0.550	mg/L	0.5	110.0	90-110	9/22/2014	9/22/2014

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide	0.521	mg/L	0.5	104.2	5.4	0-20	9/22/2014	9/22/2014

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide	ND	mg/L	0.01	9/22/2014	9/22/2014

AR Acceptable Range
ND Not Detected
PQL Practical Quantitation Limit
RPD Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R21290**	RunNo: **21290**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621146** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Magnesium	ND	1.0								
Potassium	ND	1.0								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21290**	RunNo: **21290**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621147** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.6	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.0	85	115			
Chromium	0.48	0.0060	0.5000	0	96.8	85	115			
Copper	0.49	0.0060	0.5000	0	97.1	85	115			
Magnesium	49	1.0	50.00	0	97.8	85	115			
Potassium	48	1.0	50.00	0	96.0	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R21290**	RunNo: **21290**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621149** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Magnesium	ND	1.0								
Potassium	ND	1.0								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21290**	RunNo: **21290**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621150** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.7	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.8	85	115			
Chromium	0.48	0.0060	0.5000	0	96.4	85	115			
Copper	0.48	0.0060	0.5000	0	95.5	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**R21290**	RunNo:	**21290**					
Prep Date:		Analysis Date:	**9/18/2014**	SeqNo:	**621150**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	49	1.0	50.00	0	97.7	85	115			
Potassium	48	1.0	50.00	0	96.3	85	115			

Sample ID	**LCS TEST**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**R21290**	RunNo:	**21290**					
Prep Date:		Analysis Date:	**9/18/2014**	SeqNo:	**621170**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	101	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.6	85	115			
Chromium	0.49	0.0060	0.5000	0	98.7	85	115			
Copper	0.49	0.0060	0.5000	0	97.3	85	115			
Magnesium	50	1.0	50.00	0	99.5	85	115			
Potassium	50	1.0	50.00	0	99.2	85	115			

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**R21336**	RunNo:	**21336**					
Prep Date:		Analysis Date:	**9/19/2014**	SeqNo:	**622776**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**R21336**	RunNo:	**21336**					
Prep Date:		Analysis Date:	**9/19/2014**	SeqNo:	**622777**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50	1.0	50.00	0	99.8	85	115			
Iron	0.47	0.020	0.5000	0	93.2	85	115			
Manganese	0.45	0.0020	0.5000	0	89.7	85	115			
Sodium	50	1.0	50.00	0	99.3	85	115			
Zinc	0.46	0.010	0.5000	0	91.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**LCS Ag**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**R21336**	RunNo:	**21336**					
Prep Date:		Analysis Date:	**9/19/2014**	SeqNo:	**622778**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver		0.096	0.0050	0.1000	0	95.7	85	115			

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**R21336**	RunNo:	**21336**					
Prep Date:		Analysis Date:	**9/19/2014**	SeqNo:	**622779**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium		ND	1.0								
Iron		ND	0.020								
Manganese		ND	0.0020								
Silver		ND	0.0050								
Sodium		ND	1.0								
Zinc		ND	0.010								

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**R21336**	RunNo:	**21336**					
Prep Date:		Analysis Date:	**9/19/2014**	SeqNo:	**622780**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium		50	1.0	50.00	0	99.4	85	115			
Iron		0.48	0.020	0.5000	0	95.4	85	115			
Manganese		0.46	0.0020	0.5000	0	91.5	85	115			
Sodium		49	1.0	50.00	0	98.5	85	115			
Zinc		0.47	0.010	0.5000	0	93.7	85	115			

Sample ID	**LCS Ag**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**R21336**	RunNo:	**21336**					
Prep Date:		Analysis Date:	**9/19/2014**	SeqNo:	**622781**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver		0.10	0.0050	0.1000	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LCS-15380** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **15380** RunNo: **21318**
Prep Date: **9/18/2014** Analysis Date: **9/19/2014** SeqNo: **622068** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.6	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.7	85	115			
Chromium	0.48	0.0060	0.5000	0	96.8	85	115			
Copper	0.50	0.0060	0.5000	0	99.7	85	115			
Iron	0.51	0.020	0.5000	0	102	85	115			
Manganese	0.50	0.0020	0.5000	0	99.1	85	115			
Zinc	0.50	0.010	0.5000	0	100	85	115			

Sample ID **LCS AG-15380** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **15380** RunNo: **21318**
Prep Date: **9/18/2014** Analysis Date: **9/19/2014** SeqNo: **622069** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	104	85	115			

Sample ID **MB-15380** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **15380** RunNo: **21318**
Prep Date: **9/18/2014** Analysis Date: **9/19/2014** SeqNo: **622074** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **1409807-001FMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **GWM-1** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628583** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.029	0.0010	0.02500	0.002633	107	70	130			
Uranium	0.045	0.0010	0.02500	0.01458	120	70	130			

Sample ID **1409807-001FMSD** SampType: **MSD** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **GWM-1** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628584** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.029	0.0010	0.02500	0.002633	106	70	130	0.912	20	
Uranium	0.045	0.0010	0.02500	0.01458	121	70	130	0.526	20	

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628608** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.024	0.0010	0.02500	0	94.4	85	115			
Uranium	0.024	0.0010	0.02500	0	95.1	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628609** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.023	0.0010	0.02500	0	92.6	85	115			
Uranium	0.023	0.0010	0.02500	0	91.6	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628610** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628611** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628611** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **1409807-001FMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **GWM-1** Batch ID: **R21527** RunNo: **21527**
Prep Date: Analysis Date: **9/29/2014** SeqNo: **629862** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.13	0.0050	0.1250	0.02028	88.3	70	130			

Sample ID **1409807-001FMSD** SampType: **MSD** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **GWM-1** Batch ID: **R21527** RunNo: **21527**
Prep Date: Analysis Date: **9/29/2014** SeqNo: **629863** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.13	0.0050	0.1250	0.02028	90.8	70	130	2.44	20	

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21527** RunNo: **21527**
Prep Date: Analysis Date: **9/29/2014** SeqNo: **629894** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.5	85	115			
Selenium	0.024	0.0010	0.02500	0	94.6	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21527** RunNo: **21527**
Prep Date: Analysis Date: **9/29/2014** SeqNo: **629895** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	100	85	115			
Selenium	0.024	0.0010	0.02500	0	94.2	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21527** RunNo: **21527**
Prep Date: Analysis Date: **9/29/2014** SeqNo: **629896** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**MB**	SampType:	**MBLK**		TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**R21527**		RunNo:	**21527**					
Prep Date:		Analysis Date:	**9/29/2014**		SeqNo:	**629897**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		ND	0.0010								
Selenium		ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LLLCS-15380** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **15380** RunNo: **21376**
Prep Date: **9/18/2014** Analysis Date: **9/23/2014** SeqNo: **624956** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.6	85	115			
Lead	0.024	0.0010	0.02500	0	97.8	85	115			
Selenium	0.024	0.0010	0.02500	0	97.9	85	115			
Uranium	0.025	0.0010	0.02500	0	99.1	85	115			

Sample ID **MB-15380** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **15380** RunNo: **21376**
Prep Date: **9/18/2014** Analysis Date: **9/23/2014** SeqNo: **624959** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**MB-15449**	SampType:	**MBLK**		TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**15449**		RunNo:	**21410**					
Prep Date:	**9/23/2014**	Analysis Date:	**9/24/2014**		SeqNo:	**625480**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		ND	0.00020								

Sample ID	**LCS-15449**	SampType:	**LCS**		TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**15449**		RunNo:	**21410**					
Prep Date:	**9/23/2014**	Analysis Date:	**9/24/2014**		SeqNo:	**625481**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.0049	0.00020	0.005000	0	97.5	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R21283** RunNo: **21283**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **621017** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R21283** RunNo: **21283**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **621018** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.47	0.10	0.5000	0	94.8	90	110			
Bromide	2.4	0.10	2.500	0	96.3	90	110			
Phosphorus, Orthophosphate (As P	4.6	0.50	5.000	0	91.2	90	110			
Sulfate	9.5	0.50	10.00	0	94.9	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	97.6	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R21321** RunNo: **21321**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **622134** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R21321** RunNo: **21321**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **622135** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.9	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB-15341** SampType: **MBLK** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **PBW** Batch ID: **15341** RunNo: **21248**
Prep Date: **9/17/2014** Analysis Date: **9/17/2014** SeqNo: **619741** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		106	59	141			

Sample ID **LCS-15341** SampType: **LCS** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSW** Batch ID: **15341** RunNo: **21248**
Prep Date: **9/17/2014** Analysis Date: **9/17/2014** SeqNo: **619742** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	100	69.7	142			
Surr: DNOP	0.52		0.5000		105	59	141			

Sample ID **1409807-001CMS** SampType: **MS** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **GWM-1** Batch ID: **15341** RunNo: **21248**
Prep Date: **9/17/2014** Analysis Date: **9/17/2014** SeqNo: **620447** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	8.2	1.0	5.000	2.084	123	55	159			
Surr: DNOP	0.53		0.5000		105	59	141			

Sample ID **1409807-001CMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **GWM-1** Batch ID: **15341** RunNo: **21248**
Prep Date: **9/17/2014** Analysis Date: **9/17/2014** SeqNo: **620448** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	8.1	1.0	5.000	2.084	120	55	159	1.79	20	
Surr: DNOP	0.53		0.5000		105	59	141	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**		
Client ID:	**PBW**	Batch ID:	**R21299**	RunNo:	**21299**		
Prep Date:		Analysis Date:	**9/18/2014**	SeqNo:	**621575**	Units:	**mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		93.8	70.9	130			

Sample ID	**2.5UG GRO LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**		
Client ID:	**LCSW**	Batch ID:	**R21299**	RunNo:	**21299**		
Prep Date:		Analysis Date:	**9/18/2014**	SeqNo:	**624430**	Units:	**mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.48	0.050	0.5000	0	95.7	80	120			
Surr: BFB	20		20.00		101	70.9	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R21353**	RunNo: **21353**			
Prep Date:	Analysis Date: **9/22/2014**	SeqNo: **623590**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R21353**	RunNo: **21353**
Prep Date:	Analysis Date: **9/22/2014**	SeqNo: **623590** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.7	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.2	70	130			
Surr: Dibromofluoromethane	9.0		10.00		89.9	70	130			
Surr: Toluene-d8	9.2		10.00		91.7	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R21353**	RunNo: **21353**
Prep Date:	Analysis Date: **9/22/2014**	SeqNo: **623592** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	93.7	70	130			
Toluene	19	1.0	20.00	0	93.1	80	120			
Chlorobenzene	19	1.0	20.00	0	95.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R21353**	RunNo: **21353**
Prep Date:	Analysis Date: **9/22/2014**	SeqNo: **623592** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22	1.0	20.00	0	109	82.6	131			
Trichloroethene (TCE)	17	1.0	20.00	0	83.6	70	130			
Surr: 1,2-Dichloroethane-d4	8.7		10.00		87.2	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.2	70	130			
Surr: Dibromofluoromethane	8.9		10.00		88.8	70	130			
Surr: Toluene-d8	9.4		10.00		94.4	70	130			

Sample ID **b3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R21353**	RunNo: **21353**
Prep Date:	Analysis Date: **9/22/2014**	SeqNo: **623718** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **b3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R21353**	RunNo: **21353**	
Prep Date:	Analysis Date: **9/22/2014**	SeqNo: **623718**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.0		10.00		90.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **b3** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R21353** RunNo: **21353**
Prep Date: Analysis Date: **9/22/2014** SeqNo: **623718** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	9.0		10.00		89.5	70	130			
Surr: Toluene-d8	8.7		10.00		87.0	70	130			

Sample ID **100ng lcs2** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R21353** RunNo: **21353**
Prep Date: Analysis Date: **9/22/2014** SeqNo: **623720** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	18	1.0	20.00	0	91.1	80	120			
Chlorobenzene	19	1.0	20.00	0	94.0	70	130			
1,1-Dichloroethene	25	1.0	20.00	0	125	82.6	131			
Trichloroethene (TCE)	18	1.0	20.00	0	92.0	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		91.1	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	9.0		10.00		90.2	70	130			
Surr: Toluene-d8	9.2		10.00		91.6	70	130			

Sample ID **1409807-002a ms** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OAPIS-1** Batch ID: **R21353** RunNo: **21388**
Prep Date: Analysis Date: **9/23/2014** SeqNo: **624745** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	210	5.0	100.0	116.8	88.6	70	130			
Toluene	86	5.0	100.0	1.670	84.5	70	130			
Chlorobenzene	82	5.0	100.0	0.8700	81.0	70	130			
1,1-Dichloroethene	95	5.0	100.0	0	95.0	70	130			
Trichloroethene (TCE)	72	5.0	100.0	0	72.4	70	130			
Surr: 1,2-Dichloroethane-d4	44		50.00		87.5	70	130			
Surr: 4-Bromofluorobenzene	56		50.00		112	70	130			
Surr: Dibromofluoromethane	43		50.00		86.7	70	130			
Surr: Toluene-d8	47		50.00		94.5	70	130			

Sample ID **1409807-002a msd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OAPIS-1** Batch ID: **R21353** RunNo: **21388**
Prep Date: Analysis Date: **9/23/2014** SeqNo: **624746** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	210	5.0	100.0	116.8	88.8	70	130	0.0730	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **1409807-002a msd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OAPIS-1** Batch ID: **R21353** RunNo: **21388**
Prep Date: Analysis Date: **9/23/2014** SeqNo: **624746** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	94	5.0	100.0	1.670	91.9	70	130	8.28	20	
Chlorobenzene	85	5.0	100.0	0.8700	84.3	70	130	3.93	20	
1,1-Dichloroethene	100	5.0	100.0	0	104	70	130	8.78	20	
Trichloroethene (TCE)	77	5.0	100.0	0	77.4	70	130	6.60	20	
Surr: 1,2-Dichloroethane-d4	46		50.00		91.5	70	130	0	0	
Surr: 4-Bromofluorobenzene	58		50.00		116	70	130	0	0	
Surr: Dibromofluoromethane	45		50.00		89.8	70	130	0	0	
Surr: Toluene-d8	47		50.00		94.0	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15342**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **15342**	RunNo: **21301**			
Prep Date: **9/17/2014**	Analysis Date: **9/18/2014**	SeqNo: **621609**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15342**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **15342**	RunNo: **21301**			
Prep Date: **9/17/2014**	Analysis Date: **9/18/2014**	SeqNo: **621609**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	93		200.0		46.3	12.1	85.8			
Surr: Phenol-d5	84		200.0		41.9	17.7	65.8			
Surr: 2,4,6-Tribromophenol	130		200.0		64.4	26	138			
Surr: Nitrobenzene-d5	66		100.0		65.5	47.5	119			
Surr: 2-Fluorobiphenyl	63		100.0		62.6	48.1	106			
Surr: 4-Terphenyl-d14	74		100.0		73.5	44	113			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **lcs-15342** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **15342** RunNo: **21301**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621610** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	58	10	100.0	0	58.1	47.9	114			
4-Chloro-3-methylphenol	130	10	200.0	0	62.8	51.7	122			
2-Chlorophenol	120	10	200.0	0	58.4	40.7	113			
1,4-Dichlorobenzene	50	10	100.0	0	50.4	39.6	99.9			
2,4-Dinitrotoluene	47	10	100.0	0	47.3	40.8	113			
N-Nitrosodi-n-propylamine	64	10	100.0	0	64.3	51.2	111			
4-Nitrophenol	66	10	200.0	0	32.8	15.7	86.9			
Pentachlorophenol	93	20	200.0	0	46.4	21.6	104			
Phenol	86	10	200.0	0	43.1	28.6	71.7			
Pyrene	64	10	100.0	0	64.2	54.2	128			
1,2,4-Trichlorobenzene	49	10	100.0	0	49.5	40.9	101			
Surr: 2-Fluorophenol	84		200.0		42.0	12.1	85.8			
Surr: Phenol-d5	80		200.0		39.9	17.7	65.8			
Surr: 2,4,6-Tribromophenol	110		200.0		55.7	26	138			
Surr: Nitrobenzene-d5	61		100.0		60.6	47.5	119			
Surr: 2-Fluorobiphenyl	57		100.0		56.6	48.1	106			
Surr: 4-Terphenyl-d14	67		100.0		66.5	44	113			

Sample ID **lcsd-15342** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **15342** RunNo: **21301**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621611** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	70	10	100.0	0	70.1	47.9	114	18.7	27.2	
4-Chloro-3-methylphenol	140	10	200.0	0	72.1	51.7	122	13.7	25.9	
2-Chlorophenol	110	10	200.0	0	55.9	40.7	113	4.29	22.5	
1,4-Dichlorobenzene	52	10	100.0	0	51.9	39.6	99.9	2.93	24.6	
2,4-Dinitrotoluene	71	10	100.0	0	70.6	40.8	113	39.5	25.3	R
N-Nitrosodi-n-propylamine	70	10	100.0	0	69.7	51.2	111	8.09	23.6	
4-Nitrophenol	69	10	200.0	0	34.4	15.7	86.9	4.53	34.7	
Pentachlorophenol	83	20	200.0	0	41.3	21.6	104	11.6	32.8	
Phenol	87	10	200.0	0	43.3	28.6	71.7	0.509	25.5	
Pyrene	82	10	100.0	0	82.0	54.2	128	24.4	31.4	
1,2,4-Trichlorobenzene	53	10	100.0	0	52.5	40.9	101	6.00	25.9	
Surr: 2-Fluorophenol	73		200.0		36.5	12.1	85.8	0	0	
Surr: Phenol-d5	77		200.0		38.4	17.7	65.8	0	0	
Surr: 2,4,6-Tribromophenol	110		200.0		53.7	26	138	0	0	
Surr: Nitrobenzene-d5	61		100.0		60.9	47.5	119	0	0	
Surr: 2-Fluorobiphenyl	64		100.0		63.6	48.1	106	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**lcsd-15342**	SampType:	**LCSD**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**LCSS02**	Batch ID:	**15342**	RunNo:	**21301**
Prep Date:	**9/17/2014**	Analysis Date:	**9/18/2014**	SeqNo:	**621611** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	85		100.0		84.6	44	113	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Western Refining Gallup** Work Order Number: **1409807** RcptNo: **1**

Received by/date: CS 09/16/14

Logged By: **Ashley Gallegos** **9/16/2014 5:03:00 PM** AG

Completed By: **Ashley Gallegos** **9/17/2014 8:13:28 AM** AG

Reviewed By: AT 09/17/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☑ No ☑ MG 09/17/14 NA ☐

For Metals analysis: Added 1mL HNO_3 to -001G for acceptable pH. Held in login for 24 hours.

10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 6
(<2 or >12 unless noted)
Adjusted? yes
Checked by: mg

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

2 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

2014 ~~2013~~ 09/17/14

~~2041~~ ANNUAL GW

Project #:

GWM-1,-2,-3,OAPIS-1

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.1°

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1409807	8260 + MTBE	8015B extended	8270 + phenols	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	Major Cations/Anions	Cyanide						Air Bubbles (Y or N)
9/12/14	0250	H_2O	GWM-2			-001	X	X	X	X	X	X							
9/12/14	0805	H_2O	OAPIS-2			-002	X	X	X	X	X	X	X						
9/12/14	0815	H_2O	FB-Group 4-9/12/14			-003	X												
			Trip Blank			-004	X	X											
			09/17/14																

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/16/14	1450			9/16/14	1450
Date:	Time:	Relinquished by:	Received by:	Date	Time
9/16/14	1703		Celina Sa	09/16/14	1703

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 08, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: 2014 Annual GW OrderNo.: 1409807

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 9/16/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1409807**
Date Reported: **10/8/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: GWM-1
Project: 2014 Annual GW
Collection Date: 9/12/2014 7:50:00 AM
Lab ID: 1409807-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	2.1	1.0		mg/L	1	9/17/2014 6:33:53 PM	15341
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/17/2014 6:33:53 PM	15341
Surr: DNOP	101	59-141		%REC	1	9/17/2014 6:33:53 PM	15341
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**DJF**
Gasoline Range Organics (GRO)	0.51	0.050		mg/L	1	9/18/2014 7:54:49 PM	R21299
Surr: BFB	805	70.9-130	S	%REC	1	9/18/2014 7:54:49 PM	R21299
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	2.4	0.50		mg/L	5	9/17/2014 9:25:30 PM	R21283
Chloride	910	50		mg/L	100	9/19/2014 1:13:37 AM	R21321
Bromide	2.8	0.50		mg/L	5	9/17/2014 9:25:30 PM	R21283
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	9/17/2014 9:25:30 PM	R21283
Sulfate	150	10		mg/L	20	9/17/2014 9:37:55 PM	R21283
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/18/2014 6:19:14 AM	R21283
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.78	0.0020		mg/L	1	9/18/2014 2:06:27 PM	R21290
Cadmium	ND	0.0020		mg/L	1	9/18/2014 2:06:27 PM	R21290
Calcium	280	10		mg/L	10	9/19/2014 5:36:40 PM	R21336
Chromium	ND	0.0060		mg/L	1	9/18/2014 2:06:27 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 2:06:27 PM	R21290
Iron	11	2.0	*	mg/L	100	9/19/2014 5:38:50 PM	R21336
Magnesium	63	1.0		mg/L	1	9/18/2014 2:06:27 PM	R21290
Manganese	2.4	0.020	*	mg/L	10	9/19/2014 5:36:40 PM	R21336
Potassium	3.5	1.0		mg/L	1	9/18/2014 2:06:27 PM	R21290
Silver	ND	0.0050		mg/L	1	9/19/2014 5:34:57 PM	R21336
Sodium	1100	100		mg/L	100	9/19/2014 5:38:50 PM	R21336
Zinc	0.023	0.010		mg/L	1	9/19/2014 5:34:57 PM	R21336
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.67	0.0020		mg/L	1	9/19/2014 11:43:53 AM	15380
Cadmium	ND	0.0020		mg/L	1	9/19/2014 11:43:53 AM	15380
Chromium	ND	0.0060		mg/L	1	9/19/2014 11:43:53 AM	15380
Copper	ND	0.0060		mg/L	1	9/19/2014 11:43:53 AM	15380
Iron	13	0.40	*	mg/L	20	9/19/2014 11:56:36 AM	15380
Manganese	2.6	0.040	*	mg/L	20	9/19/2014 11:56:36 AM	15380
Silver	ND	0.0050		mg/L	1	9/26/2014 12:00:35 PM	15380
Zinc	0.018	0.010		mg/L	1	9/19/2014 11:43:53 AM	15380
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.13	0.0050	*	mg/L	5	9/29/2014 5:05:34 PM	R21527

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: GWM-1
Project: 2014 Annual GW
Collection Date: 9/12/2014 7:50:00 AM
Lab ID: 1409807-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	0.0026	0.0010		mg/L	1	9/26/2014 11:57:26 AM	R21493
Selenium	0.020	0.0050		mg/L	5	9/29/2014 5:05:34 PM	R21527
Uranium	0.015	0.0010		mg/L	1	9/26/2014 11:57:26 AM	R21493
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.14	0.010	*	mg/L	10	9/29/2014 1:17:32 PM	15380
Lead	0.0042	0.0010		mg/L	1	9/23/2014 4:18:14 PM	15380
Selenium	0.019	0.010		mg/L	10	9/29/2014 1:17:32 PM	15380
Uranium	0.015	0.0010		mg/L	1	9/23/2014 4:18:14 PM	15380
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/24/2014 11:00:40 AM	15449
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Acenaphthylene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Aniline	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Anthracene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Azobenzene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Benz(a)anthracene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Benzo(a)pyrene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Benzo(b)fluoranthene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Benzo(k)fluoranthene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Benzoic acid	ND	20		µg/L	1	9/18/2014 11:38:13 PM	15342
Benzyl alcohol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Butyl benzyl phthalate	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Carbazole	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
4-Chloroaniline	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2-Chloronaphthalene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2-Chlorophenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Chrysene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Di-n-butyl phthalate	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Di-n-octyl phthalate	ND	20		µg/L	1	9/18/2014 11:38:13 PM	15342

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Dibenzofuran	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
1,2-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
1,3-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
1,4-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Diethyl phthalate	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Dimethyl phthalate	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2,4-Dichlorophenol	ND	20		µg/L	1	9/18/2014 11:38:13 PM	15342
2,4-Dimethylphenol	78	10		µg/L	1	9/18/2014 11:38:13 PM	15342
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/18/2014 11:38:13 PM	15342
2,4-Dinitrophenol	ND	20		µg/L	1	9/18/2014 11:38:13 PM	15342
2,4-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2,6-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Fluoranthene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Fluorene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Hexachlorobenzene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Hexachlorobutadiene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Hexachloroethane	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Isophorone	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
1-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2-Methylphenol	ND	20		µg/L	1	9/18/2014 11:38:13 PM	15342
3+4-Methylphenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
N-Nitrosodimethylamine	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Naphthalene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2-Nitroaniline	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
3-Nitroaniline	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
4-Nitroaniline	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Nitrobenzene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2-Nitrophenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
4-Nitrophenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Pentachlorophenol	ND	20		µg/L	1	9/18/2014 11:38:13 PM	15342
Phenanthrene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Phenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342

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Qualifiers:

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R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: GWM-1
Project: 2014 Annual GW
Collection Date: 9/12/2014 7:50:00 AM
Lab ID: 1409807-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyrene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Pyridine	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/18/2014 11:38:13 PM	15342
Surr: 2-Fluorophenol	31.5	12.1-85.8		%REC	1	9/18/2014 11:38:13 PM	15342
Surr: Phenol-d5	34.8	17.7-65.8		%REC	1	9/18/2014 11:38:13 PM	15342
Surr: 2,4,6-Tribromophenol	28.3	26-138		%REC	1	9/18/2014 11:38:13 PM	15342
Surr: Nitrobenzene-d5	67.8	47.5-119		%REC	1	9/18/2014 11:38:13 PM	15342
Surr: 2-Fluorobiphenyl	64.3	48.1-106		%REC	1	9/18/2014 11:38:13 PM	15342
Surr: 4-Terphenyl-d14	50.5	44-113		%REC	1	9/18/2014 11:38:13 PM	15342
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	10	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Toluene	3.1	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Ethylbenzene	4.0	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Methyl tert-butyl ether (MTBE)	41	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2,4-Trimethylbenzene	9.8	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,3,5-Trimethylbenzene	1.2	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Naphthalene	ND	2.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1-Methylnaphthalene	13	4.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
2-Methylnaphthalene	ND	4.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Acetone	ND	10		µg/L	1	9/22/2014 1:05:28 PM	R21353
Bromobenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Bromodichloromethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Bromoform	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Bromomethane	ND	3.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
2-Butanone	ND	10		µg/L	1	9/22/2014 1:05:28 PM	R21353
Carbon disulfide	ND	10		µg/L	1	9/22/2014 1:05:28 PM	R21353
Carbon Tetrachloride	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Chlorobenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Chloroethane	ND	2.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Chloroform	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Chloromethane	ND	3.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
2-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
4-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
cis-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

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Collection Date: 9/12/2014 7:50:00 AM
Lab ID: 1409807-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Dibromochloromethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Dibromomethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,1-Dichloroethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,1-Dichloroethene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,3-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
2,2-Dichloropropane	ND	2.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,1-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Hexachlorobutadiene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
2-Hexanone	ND	10		µg/L	1	9/22/2014 1:05:28 PM	R21353
Isopropylbenzene	1.4	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
4-Isopropyltoluene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
4-Methyl-2-pentanone	ND	10		µg/L	1	9/22/2014 1:05:28 PM	R21353
Methylene Chloride	ND	3.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
n-Butylbenzene	ND	3.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
n-Propylbenzene	3.0	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
sec-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Styrene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
tert-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
trans-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Trichlorofluoromethane	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Vinyl chloride	ND	1.0		µg/L	1	9/22/2014 1:05:28 PM	R21353
Xylenes, Total	16	1.5		µg/L	1	9/22/2014 1:05:28 PM	R21353
Surr: 1,2-Dichloroethane-d4	82.6	70-130		%REC	1	9/22/2014 1:05:28 PM	R21353

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: GWM-1
Project: 2014 Annual GW
Collection Date: 9/12/2014 7:50:00 AM
Lab ID: 1409807-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Surr: 4-Bromofluorobenzene	103	70-130		%REC	1	9/22/2014 1:05:28 PM	R21353
Surr: Dibromofluoromethane	89.8	70-130		%REC	1	9/22/2014 1:05:28 PM	R21353
Surr: Toluene-d8	76.3	70-130		%REC	1	9/22/2014 1:05:28 PM	R21353

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: 2014 Annual GW
Collection Date: 9/12/2014 8:05:00 AM
Lab ID: 1409807-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	6.8	1.0		mg/L	1	9/19/2014 4:38:35 PM	15341
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/19/2014 4:38:35 PM	15341
Surr: DNOP	95.6	59-141		%REC	1	9/19/2014 4:38:35 PM	15341
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**DJF**
Gasoline Range Organics (GRO)	0.75	0.050		mg/L	1	9/18/2014 8:24:51 PM	R21299
Surr: BFB	234	70.9-130	S	%REC	1	9/18/2014 8:24:51 PM	R21299
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	1.2	0.50		mg/L	5	9/17/2014 9:50:19 PM	R21283
Chloride	1700	100		mg/L	200	9/19/2014 1:26:02 AM	R21321
Bromide	4.8	0.50		mg/L	5	9/17/2014 9:50:19 PM	R21283
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	9/17/2014 9:50:19 PM	R21283
Sulfate	22	2.5		mg/L	5	9/17/2014 9:50:19 PM	R21283
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/18/2014 6:31:39 AM	R21283
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.78	0.0020		mg/L	1	9/18/2014 2:08:10 PM	R21290
Cadmium	ND	0.0020		mg/L	1	9/18/2014 2:08:10 PM	R21290
Calcium	170	10		mg/L	10	9/19/2014 5:42:28 PM	R21336
Chromium	ND	0.0060		mg/L	1	9/18/2014 2:08:10 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 2:08:10 PM	R21290
Iron	7.2	0.20	*	mg/L	10	9/19/2014 5:42:28 PM	R21336
Magnesium	33	1.0		mg/L	1	9/18/2014 2:08:10 PM	R21290
Manganese	1.8	0.020	*	mg/L	10	9/19/2014 5:42:28 PM	R21336
Potassium	6.0	1.0		mg/L	1	9/18/2014 2:08:10 PM	R21290
Silver	ND	0.0050		mg/L	1	9/19/2014 5:40:42 PM	R21336
Sodium	1400	100		mg/L	100	9/19/2014 5:44:27 PM	R21336
Zinc	0.021	0.010		mg/L	1	9/19/2014 5:40:42 PM	R21336
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.72	0.0020		mg/L	1	9/19/2014 11:45:32 AM	15380
Cadmium	ND	0.0020		mg/L	1	9/19/2014 11:45:32 AM	15380
Chromium	ND	0.0060		mg/L	1	9/19/2014 11:45:32 AM	15380
Copper	ND	0.0060		mg/L	1	9/19/2014 11:45:32 AM	15380
Iron	7.9	0.20	*	mg/L	10	9/19/2014 11:58:37 AM	15380
Manganese	1.9	0.020	*	mg/L	10	9/19/2014 11:58:37 AM	15380
Silver	ND	0.0050		mg/L	1	9/26/2014 12:02:20 PM	15380
Zinc	0.021	0.010		mg/L	1	9/19/2014 11:45:32 AM	15380
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.018	0.010	*	mg/L	10	9/29/2014 5:14:51 PM	R21527

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: 2014 Annual GW
Collection Date: 9/12/2014 8:05:00 AM
Lab ID: 1409807-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.0010		mg/L	1	9/26/2014 12:07:02 PM	R21493
Selenium	0.034	0.010		mg/L	10	9/29/2014 5:14:51 PM	R21527
Uranium	0.029	0.0010		mg/L	1	9/26/2014 12:07:02 PM	R21493
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.018	0.010	*	mg/L	10	9/29/2014 1:26:51 PM	15380
Lead	0.0051	0.0010		mg/L	1	9/23/2014 4:21:20 PM	15380
Selenium	0.035	0.010		mg/L	10	9/29/2014 1:26:51 PM	15380
Uranium	0.031	0.0010	*	mg/L	1	9/23/2014 4:21:20 PM	15380
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/24/2014 11:02:28 AM	15449
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Acenaphthylene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Aniline	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Anthracene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Azobenzene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Benz(a)anthracene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Benzo(a)pyrene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Benzo(b)fluoranthene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Benzo(k)fluoranthene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Benzoic acid	ND	20		µg/L	1	9/19/2014 12:07:13 AM	15342
Benzyl alcohol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Butyl benzyl phthalate	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Carbazole	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
4-Chloroaniline	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2-Chloronaphthalene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2-Chlorophenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Chrysene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Di-n-butyl phthalate	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Di-n-octyl phthalate	ND	20		µg/L	1	9/19/2014 12:07:13 AM	15342

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Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Dibenzofuran	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
1,2-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
1,3-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
1,4-Dichlorobenzene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Diethyl phthalate	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Dimethyl phthalate	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2,4-Dichlorophenol	ND	20		µg/L	1	9/19/2014 12:07:13 AM	15342
2,4-Dimethylphenol	28	10		µg/L	1	9/19/2014 12:07:13 AM	15342
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/19/2014 12:07:13 AM	15342
2,4-Dinitrophenol	ND	20		µg/L	1	9/19/2014 12:07:13 AM	15342
2,4-Dinitrotoluene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2,6-Dinitrotoluene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Fluoranthene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Fluorene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Hexachlorobenzene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Hexachlorobutadiene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Hexachloroethane	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Isophorone	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
1-Methylnaphthalene	16	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2-Methylnaphthalene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2-Methylphenol	ND	20		µg/L	1	9/19/2014 12:07:13 AM	15342
3+4-Methylphenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
N-Nitrosodimethylamine	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Naphthalene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2-Nitroaniline	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
3-Nitroaniline	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
4-Nitroaniline	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Nitrobenzene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2-Nitrophenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
4-Nitrophenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Pentachlorophenol	ND	20		µg/L	1	9/19/2014 12:07:13 AM	15342
Phenanthrene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Phenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: 2014 Annual GW
Collection Date: 9/12/2014 8:05:00 AM
Lab ID: 1409807-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyrene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Pyridine	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/19/2014 12:07:13 AM	15342
Surr: 2-Fluorophenol	53.6	12.1-85.8		%REC	1	9/19/2014 12:07:13 AM	15342
Surr: Phenol-d5	53.1	17.7-65.8		%REC	1	9/19/2014 12:07:13 AM	15342
Surr: 2,4,6-Tribromophenol	64.2	26-138		%REC	1	9/19/2014 12:07:13 AM	15342
Surr: Nitrobenzene-d5	81.1	47.5-119		%REC	1	9/19/2014 12:07:13 AM	15342
Surr: 2-Fluorobiphenyl	75.3	48.1-106		%REC	1	9/19/2014 12:07:13 AM	15342
Surr: 4-Terphenyl-d14	66.4	44-113		%REC	1	9/19/2014 12:07:13 AM	15342
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	120	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Toluene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Ethylbenzene	13	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Methyl tert-butyl ether (MTBE)	320	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2,4-Trimethylbenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,3,5-Trimethylbenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Naphthalene	ND	10		µg/L	5	9/22/2014 1:35:03 PM	R21353
1-Methylnaphthalene	30	20		µg/L	5	9/22/2014 1:35:03 PM	R21353
2-Methylnaphthalene	ND	20		µg/L	5	9/22/2014 1:35:03 PM	R21353
Acetone	ND	50		µg/L	5	9/22/2014 1:35:03 PM	R21353
Bromobenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Bromodichloromethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Bromoform	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Bromomethane	ND	15		µg/L	5	9/22/2014 1:35:03 PM	R21353
2-Butanone	ND	50		µg/L	5	9/22/2014 1:35:03 PM	R21353
Carbon disulfide	ND	50		µg/L	5	9/22/2014 1:35:03 PM	R21353
Carbon Tetrachloride	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Chlorobenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Chloroethane	ND	10		µg/L	5	9/22/2014 1:35:03 PM	R21353
Chloroform	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Chloromethane	ND	15		µg/L	5	9/22/2014 1:35:03 PM	R21353
2-Chlorotoluene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
4-Chlorotoluene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
cis-1,2-DCE	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
cis-1,3-Dichloropropene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: 2014 Annual GW
Collection Date: 9/12/2014 8:05:00 AM
Lab ID: 1409807-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dibromo-3-chloropropane	ND	10		µg/L	5	9/22/2014 1:35:03 PM	R21353
Dibromochloromethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Dibromomethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2-Dichlorobenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,3-Dichlorobenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,4-Dichlorobenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Dichlorodifluoromethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,1-Dichloroethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,1-Dichloroethene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2-Dichloropropane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,3-Dichloropropane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
2,2-Dichloropropane	ND	10		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,1-Dichloropropene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Hexachlorobutadiene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
2-Hexanone	ND	50		µg/L	5	9/22/2014 1:35:03 PM	R21353
Isopropylbenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
4-Isopropyltoluene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
4-Methyl-2-pentanone	ND	50		µg/L	5	9/22/2014 1:35:03 PM	R21353
Methylene Chloride	ND	15		µg/L	5	9/22/2014 1:35:03 PM	R21353
n-Butylbenzene	ND	15		µg/L	5	9/22/2014 1:35:03 PM	R21353
n-Propylbenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
sec-Butylbenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Styrene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
tert-Butylbenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,1,2,2-Tetrachloroethane	ND	10		µg/L	5	9/22/2014 1:35:03 PM	R21353
Tetrachloroethene (PCE)	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
trans-1,2-DCE	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
trans-1,3-Dichloropropene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2,3-Trichlorobenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2,4-Trichlorobenzene	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,1,1-Trichloroethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,1,2-Trichloroethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Trichloroethene (TCE)	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Trichlorofluoromethane	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
1,2,3-Trichloropropane	ND	10		µg/L	5	9/22/2014 1:35:03 PM	R21353
Vinyl chloride	ND	5.0		µg/L	5	9/22/2014 1:35:03 PM	R21353
Xylenes, Total	ND	7.5		µg/L	5	9/22/2014 1:35:03 PM	R21353
Surr: 1,2-Dichloroethane-d4	93.3	70-130		%REC	5	9/22/2014 1:35:03 PM	R21353

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OAPIS-1
Project: 2014 Annual GW
Collection Date: 9/12/2014 8:05:00 AM
Lab ID: 1409807-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Surr: 4-Bromofluorobenzene	99.2	70-130		%REC	5	9/22/2014 1:35:03 PM	R21353
Surr: Dibromofluoromethane	91.2	70-130		%REC	5	9/22/2014 1:35:03 PM	R21353
Surr: Toluene-d8	86.9	70-130		%REC	5	9/22/2014 1:35:03 PM	R21353

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Project: 2014 Annual GW
Lab ID: 1409807-003 **Matrix:**

Client Sample ID: FB-Group 4- 9/12/2014
Collection Date: 9/12/2014 8:15:00 AM
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Toluene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Ethylbenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Naphthalene	ND	2.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1-Methylnaphthalene	ND	4.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
2-Methylnaphthalene	ND	4.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Acetone	ND	10		µg/L	1	9/22/2014 3:04:13 PM	R21353
Bromobenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Bromodichloromethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Bromoform	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Bromomethane	ND	3.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
2-Butanone	ND	10		µg/L	1	9/22/2014 3:04:13 PM	R21353
Carbon disulfide	ND	10		µg/L	1	9/22/2014 3:04:13 PM	R21353
Carbon Tetrachloride	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Chlorobenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Chloroethane	ND	2.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Chloroform	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Chloromethane	ND	3.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
2-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
4-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
cis-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Dibromochloromethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Dibromomethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,1-Dichloroethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,1-Dichloroethene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,3-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
2,2-Dichloropropane	ND	2.0		µg/L	1	9/22/2014 3:04:13 PM	R21353

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group 4- 9/12/2014
Project: 2014 Annual GW
Collection Date: 9/12/2014 8:15:00 AM
Lab ID: 1409807-003
Matrix:
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Hexachlorobutadiene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
2-Hexanone	ND	10		µg/L	1	9/22/2014 3:04:13 PM	R21353
Isopropylbenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
4-Isopropyltoluene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
4-Methyl-2-pentanone	ND	10		µg/L	1	9/22/2014 3:04:13 PM	R21353
Methylene Chloride	ND	3.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
n-Butylbenzene	ND	3.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
n-Propylbenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
sec-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Styrene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
tert-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
trans-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Trichlorofluoromethane	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Vinyl chloride	ND	1.0		µg/L	1	9/22/2014 3:04:13 PM	R21353
Xylenes, Total	ND	1.5		µg/L	1	9/22/2014 3:04:13 PM	R21353
Surr: 1,2-Dichloroethane-d4	90.6	70-130		%REC	1	9/22/2014 3:04:13 PM	R21353
Surr: 4-Bromofluorobenzene	97.2	70-130		%REC	1	9/22/2014 3:04:13 PM	R21353
Surr: Dibromofluoromethane	90.5	70-130		%REC	1	9/22/2014 3:04:13 PM	R21353
Surr: Toluene-d8	90.2	70-130		%REC	1	9/22/2014 3:04:13 PM	R21353

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409807-004
Matrix: TRIP BLANK
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/18/2014 8:54:58 PM	R21299
Surr: BFB	87.6	70.9-130		%REC	1	9/18/2014 8:54:58 PM	R21299
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Toluene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Ethylbenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Naphthalene	ND	2.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1-Methylnaphthalene	ND	4.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
2-Methylnaphthalene	ND	4.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Acetone	ND	10		µg/L	1	9/22/2014 12:06:22 PM	R21353
Bromobenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Bromodichloromethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Bromoform	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Bromomethane	ND	3.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
2-Butanone	ND	10		µg/L	1	9/22/2014 12:06:22 PM	R21353
Carbon disulfide	ND	10		µg/L	1	9/22/2014 12:06:22 PM	R21353
Carbon Tetrachloride	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Chlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Chloroethane	ND	2.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Chloroform	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Chloromethane	ND	3.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
2-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
4-Chlorotoluene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
cis-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Dibromochloromethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Dibromomethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,1-Dichloroethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,1-Dichloroethene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409807-004
Matrix: TRIP BLANK
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,3-Dichloropropane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
2,2-Dichloropropane	ND	2.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,1-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Hexachlorobutadiene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
2-Hexanone	ND	10		µg/L	1	9/22/2014 12:06:22 PM	R21353
Isopropylbenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
4-Isopropyltoluene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
4-Methyl-2-pentanone	ND	10		µg/L	1	9/22/2014 12:06:22 PM	R21353
Methylene Chloride	ND	3.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
n-Butylbenzene	ND	3.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
n-Propylbenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
sec-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Styrene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
tert-Butylbenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
trans-1,2-DCE	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Trichlorofluoromethane	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Vinyl chloride	ND	1.0		µg/L	1	9/22/2014 12:06:22 PM	R21353
Xylenes, Total	ND	1.5		µg/L	1	9/22/2014 12:06:22 PM	R21353
Surr: 1,2-Dichloroethane-d4	89.9	70-130		%REC	1	9/22/2014 12:06:22 PM	R21353
Surr: 4-Bromofluorobenzene	100	70-130		%REC	1	9/22/2014 12:06:22 PM	R21353
Surr: Dibromofluoromethane	89.1	70-130		%REC	1	9/22/2014 12:06:22 PM	R21353
Surr: Toluene-d8	95.9	70-130		%REC	1	9/22/2014 12:06:22 PM	R21353

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	140918053
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1409807
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	140918053-001	**Sampling Date**	9/12/2014	**Date/Time Received**	9/18/2014	12:15 PM
Client Sample ID	1409807-002H / OAPIS-1	**Sampling Time**	8:05 AM			
Matrix	Water					
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	0.0908	mg/L	0.01	9/22/2014	ETL	EPA 335.4	

Authorized Signature

John Coddington, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0026; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 140918053
Project Name: 1409807

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Cyanide	0.512	mg/L	0.5	102.4	90-110	9/22/2014	9/22/2014

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
140918049-002	Cyanide	ND	0.550	mg/L	0.5	110.0	90-110	9/22/2014	9/22/2014

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide	0.521	mg/L	0.5	104.2	5.4	0-20	9/22/2014	9/22/2014

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide	ND	mg/L	0.01	9/22/2014	9/22/2014

AR Acceptable Range
ND Not Detected
PQL Practical Quantitation Limit
RPD Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R21290**	RunNo: **21290**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621146** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Magnesium	ND	1.0								
Potassium	ND	1.0								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21290**	RunNo: **21290**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621147** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.6	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.0	85	115			
Chromium	0.48	0.0060	0.5000	0	96.8	85	115			
Copper	0.49	0.0060	0.5000	0	97.1	85	115			
Magnesium	49	1.0	50.00	0	97.8	85	115			
Potassium	48	1.0	50.00	0	96.0	85	115			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **R21290**	RunNo: **21290**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621149** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Magnesium	ND	1.0								
Potassium	ND	1.0								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **R21290**	RunNo: **21290**
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621150** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.7	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.8	85	115			
Chromium	0.48	0.0060	0.5000	0	96.4	85	115			
Copper	0.48	0.0060	0.5000	0	95.5	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**R21290**	RunNo:	**21290**					
Prep Date:		Analysis Date:	**9/18/2014**	SeqNo:	**621150**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	49	1.0	50.00	0	97.7	85	115			
Potassium	48	1.0	50.00	0	96.3	85	115			

Sample ID	**LCS TEST**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**R21290**	RunNo:	**21290**					
Prep Date:		Analysis Date:	**9/18/2014**	SeqNo:	**621170**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	101	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.6	85	115			
Chromium	0.49	0.0060	0.5000	0	98.7	85	115			
Copper	0.49	0.0060	0.5000	0	97.3	85	115			
Magnesium	50	1.0	50.00	0	99.5	85	115			
Potassium	50	1.0	50.00	0	99.2	85	115			

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**R21336**	RunNo:	**21336**					
Prep Date:		Analysis Date:	**9/19/2014**	SeqNo:	**622776**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**R21336**	RunNo:	**21336**					
Prep Date:		Analysis Date:	**9/19/2014**	SeqNo:	**622777**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50	1.0	50.00	0	99.8	85	115			
Iron	0.47	0.020	0.5000	0	93.2	85	115			
Manganese	0.45	0.0020	0.5000	0	89.7	85	115			
Sodium	50	1.0	50.00	0	99.3	85	115			
Zinc	0.46	0.010	0.5000	0	91.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**LCS Ag**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**R21336**	RunNo:	**21336**					
Prep Date:		Analysis Date:	**9/19/2014**	SeqNo:	**622778**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver		0.096	0.0050	0.1000	0	95.7	85	115			

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**R21336**	RunNo:	**21336**					
Prep Date:		Analysis Date:	**9/19/2014**	SeqNo:	**622779**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium		ND	1.0								
Iron		ND	0.020								
Manganese		ND	0.0020								
Silver		ND	0.0050								
Sodium		ND	1.0								
Zinc		ND	0.010								

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**R21336**	RunNo:	**21336**					
Prep Date:		Analysis Date:	**9/19/2014**	SeqNo:	**622780**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium		50	1.0	50.00	0	99.4	85	115			
Iron		0.48	0.020	0.5000	0	95.4	85	115			
Manganese		0.46	0.0020	0.5000	0	91.5	85	115			
Sodium		49	1.0	50.00	0	98.5	85	115			
Zinc		0.47	0.010	0.5000	0	93.7	85	115			

Sample ID	**LCS Ag**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**R21336**	RunNo:	**21336**					
Prep Date:		Analysis Date:	**9/19/2014**	SeqNo:	**622781**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver		0.10	0.0050	0.1000	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LCS-15380** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **15380** RunNo: **21318**
Prep Date: **9/18/2014** Analysis Date: **9/19/2014** SeqNo: **622068** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.6	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.7	85	115			
Chromium	0.48	0.0060	0.5000	0	96.8	85	115			
Copper	0.50	0.0060	0.5000	0	99.7	85	115			
Iron	0.51	0.020	0.5000	0	102	85	115			
Manganese	0.50	0.0020	0.5000	0	99.1	85	115			
Zinc	0.50	0.010	0.5000	0	100	85	115			

Sample ID **LCS AG-15380** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **15380** RunNo: **21318**
Prep Date: **9/18/2014** Analysis Date: **9/19/2014** SeqNo: **622069** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	104	85	115			

Sample ID **MB-15380** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **15380** RunNo: **21318**
Prep Date: **9/18/2014** Analysis Date: **9/19/2014** SeqNo: **622074** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **1409807-001FMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **GWM-1** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628583** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.029	0.0010	0.02500	0.002633	107	70	130			
Uranium	0.045	0.0010	0.02500	0.01458	120	70	130			

Sample ID **1409807-001FMSD** SampType: **MSD** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **GWM-1** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628584** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.029	0.0010	0.02500	0.002633	106	70	130	0.912	20	
Uranium	0.045	0.0010	0.02500	0.01458	121	70	130	0.526	20	

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628608** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.024	0.0010	0.02500	0	94.4	85	115			
Uranium	0.024	0.0010	0.02500	0	95.1	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628609** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.023	0.0010	0.02500	0	92.6	85	115			
Uranium	0.023	0.0010	0.02500	0	91.6	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628610** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628611** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628611** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **1409807-001FMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **GWM-1** Batch ID: **R21527** RunNo: **21527**
Prep Date: Analysis Date: **9/29/2014** SeqNo: **629862** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.13	0.0050	0.1250	0.02028	88.3	70	130			

Sample ID **1409807-001FMSD** SampType: **MSD** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **GWM-1** Batch ID: **R21527** RunNo: **21527**
Prep Date: Analysis Date: **9/29/2014** SeqNo: **629863** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.13	0.0050	0.1250	0.02028	90.8	70	130	2.44	20	

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21527** RunNo: **21527**
Prep Date: Analysis Date: **9/29/2014** SeqNo: **629894** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.5	85	115			
Selenium	0.024	0.0010	0.02500	0	94.6	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21527** RunNo: **21527**
Prep Date: Analysis Date: **9/29/2014** SeqNo: **629895** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	100	85	115			
Selenium	0.024	0.0010	0.02500	0	94.2	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21527** RunNo: **21527**
Prep Date: Analysis Date: **9/29/2014** SeqNo: **629896** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**MB**	SampType:	**MBLK**		TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**R21527**		RunNo:	**21527**					
Prep Date:		Analysis Date:	**9/29/2014**		SeqNo:	**629897**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		ND	0.0010								
Selenium		ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LLLCS-15380** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **15380** RunNo: **21376**
Prep Date: **9/18/2014** Analysis Date: **9/23/2014** SeqNo: **624956** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.6	85	115			
Lead	0.024	0.0010	0.02500	0	97.8	85	115			
Selenium	0.024	0.0010	0.02500	0	97.9	85	115			
Uranium	0.025	0.0010	0.02500	0	99.1	85	115			

Sample ID **MB-15380** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **15380** RunNo: **21376**
Prep Date: **9/18/2014** Analysis Date: **9/23/2014** SeqNo: **624959** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**MB-15449**	SampType:	**MBLK**		TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**15449**		RunNo:	**21410**					
Prep Date:	**9/23/2014**	Analysis Date:	**9/24/2014**		SeqNo:	**625480**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		ND	0.00020								

Sample ID	**LCS-15449**	SampType:	**LCS**		TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**LCSW**	Batch ID:	**15449**		RunNo:	**21410**					
Prep Date:	**9/23/2014**	Analysis Date:	**9/24/2014**		SeqNo:	**625481**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.0049	0.00020	0.005000	0	97.5	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R21283** RunNo: **21283**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **621017** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R21283** RunNo: **21283**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **621018** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.47	0.10	0.5000	0	94.8	90	110			
Bromide	2.4	0.10	2.500	0	96.3	90	110			
Phosphorus, Orthophosphate (As P	4.6	0.50	5.000	0	91.2	90	110			
Sulfate	9.5	0.50	10.00	0	94.9	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	97.6	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R21321** RunNo: **21321**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **622134** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R21321** RunNo: **21321**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **622135** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.9	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB-15341** SampType: **MBLK** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **PBW** Batch ID: **15341** RunNo: **21248**
Prep Date: **9/17/2014** Analysis Date: **9/17/2014** SeqNo: **619741** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		106	59	141			

Sample ID **LCS-15341** SampType: **LCS** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSW** Batch ID: **15341** RunNo: **21248**
Prep Date: **9/17/2014** Analysis Date: **9/17/2014** SeqNo: **619742** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	100	69.7	142			
Surr: DNOP	0.52		0.5000		105	59	141			

Sample ID **1409807-001CMS** SampType: **MS** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **GWM-1** Batch ID: **15341** RunNo: **21248**
Prep Date: **9/17/2014** Analysis Date: **9/17/2014** SeqNo: **620447** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	8.2	1.0	5.000	2.084	123	55	159			
Surr: DNOP	0.53		0.5000		105	59	141			

Sample ID **1409807-001CMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **GWM-1** Batch ID: **15341** RunNo: **21248**
Prep Date: **9/17/2014** Analysis Date: **9/17/2014** SeqNo: **620448** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	8.1	1.0	5.000	2.084	120	55	159	1.79	20	
Surr: DNOP	0.53		0.5000		105	59	141	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**		
Client ID:	**PBW**	Batch ID:	**R21299**	RunNo:	**21299**		
Prep Date:		Analysis Date:	**9/18/2014**	SeqNo:	**621575**	Units:	**mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		93.8	70.9	130			

Sample ID	**2.5UG GRO LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**		
Client ID:	**LCSW**	Batch ID:	**R21299**	RunNo:	**21299**		
Prep Date:		Analysis Date:	**9/18/2014**	SeqNo:	**624430**	Units:	**mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.48	0.050	0.5000	0	95.7	80	120			
Surr: BFB	20		20.00		101	70.9	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R21353**	RunNo: **21353**			
Prep Date:	Analysis Date: **9/22/2014**	SeqNo: **623590**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R21353**	RunNo: **21353**
Prep Date:	Analysis Date: **9/22/2014**	SeqNo: **623590** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.7	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.2	70	130			
Surr: Dibromofluoromethane	9.0		10.00		89.9	70	130			
Surr: Toluene-d8	9.2		10.00		91.7	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R21353**	RunNo: **21353**
Prep Date:	Analysis Date: **9/22/2014**	SeqNo: **623592** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	93.7	70	130			
Toluene	19	1.0	20.00	0	93.1	80	120			
Chlorobenzene	19	1.0	20.00	0	95.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R21353**	RunNo: **21353**
Prep Date:	Analysis Date: **9/22/2014**	SeqNo: **623592** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22	1.0	20.00	0	109	82.6	131			
Trichloroethene (TCE)	17	1.0	20.00	0	83.6	70	130			
Surr: 1,2-Dichloroethane-d4	8.7		10.00		87.2	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		98.2	70	130			
Surr: Dibromofluoromethane	8.9		10.00		88.8	70	130			
Surr: Toluene-d8	9.4		10.00		94.4	70	130			

Sample ID **b3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R21353**	RunNo: **21353**
Prep Date:	Analysis Date: **9/22/2014**	SeqNo: **623718** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **b3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R21353**	RunNo: **21353**	
Prep Date:	Analysis Date: **9/22/2014**	SeqNo: **623718**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.0		10.00		90.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **b3** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R21353** RunNo: **21353**
Prep Date: Analysis Date: **9/22/2014** SeqNo: **623718** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	11		10.00		107	70	130			
Surr: Dibromofluoromethane	9.0		10.00		89.5	70	130			
Surr: Toluene-d8	8.7		10.00		87.0	70	130			

Sample ID **100ng lcs2** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R21353** RunNo: **21353**
Prep Date: Analysis Date: **9/22/2014** SeqNo: **623720** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	18	1.0	20.00	0	91.1	80	120			
Chlorobenzene	19	1.0	20.00	0	94.0	70	130			
1,1-Dichloroethene	25	1.0	20.00	0	125	82.6	131			
Trichloroethene (TCE)	18	1.0	20.00	0	92.0	70	130			
Surr: 1,2-Dichloroethane-d4	9.1		10.00		91.1	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	9.0		10.00		90.2	70	130			
Surr: Toluene-d8	9.2		10.00		91.6	70	130			

Sample ID **1409807-002a ms** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OAPIS-1** Batch ID: **R21353** RunNo: **21388**
Prep Date: Analysis Date: **9/23/2014** SeqNo: **624745** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	210	5.0	100.0	116.8	88.6	70	130			
Toluene	86	5.0	100.0	1.670	84.5	70	130			
Chlorobenzene	82	5.0	100.0	0.8700	81.0	70	130			
1,1-Dichloroethene	95	5.0	100.0	0	95.0	70	130			
Trichloroethene (TCE)	72	5.0	100.0	0	72.4	70	130			
Surr: 1,2-Dichloroethane-d4	44		50.00		87.5	70	130			
Surr: 4-Bromofluorobenzene	56		50.00		112	70	130			
Surr: Dibromofluoromethane	43		50.00		86.7	70	130			
Surr: Toluene-d8	47		50.00		94.5	70	130			

Sample ID **1409807-002a msd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OAPIS-1** Batch ID: **R21353** RunNo: **21388**
Prep Date: Analysis Date: **9/23/2014** SeqNo: **624746** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	210	5.0	100.0	116.8	88.8	70	130	0.0730	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **1409807-002a msd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **OAPIS-1** Batch ID: **R21353** RunNo: **21388**
Prep Date: Analysis Date: **9/23/2014** SeqNo: **624746** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	94	5.0	100.0	1.670	91.9	70	130	8.28	20	
Chlorobenzene	85	5.0	100.0	0.8700	84.3	70	130	3.93	20	
1,1-Dichloroethene	100	5.0	100.0	0	104	70	130	8.78	20	
Trichloroethene (TCE)	77	5.0	100.0	0	77.4	70	130	6.60	20	
Surr: 1,2-Dichloroethane-d4	46		50.00		91.5	70	130	0	0	
Surr: 4-Bromofluorobenzene	58		50.00		116	70	130	0	0	
Surr: Dibromofluoromethane	45		50.00		89.8	70	130	0	0	
Surr: Toluene-d8	47		50.00		94.0	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15342**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **15342**	RunNo: **21301**			
Prep Date: **9/17/2014**	Analysis Date: **9/18/2014**	SeqNo: **621609**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15342**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **15342**	RunNo: **21301**			
Prep Date: **9/17/2014**	Analysis Date: **9/18/2014**	SeqNo: **621609**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	93		200.0		46.3	12.1	85.8			
Surr: Phenol-d5	84		200.0		41.9	17.7	65.8			
Surr: 2,4,6-Tribromophenol	130		200.0		64.4	26	138			
Surr: Nitrobenzene-d5	66		100.0		65.5	47.5	119			
Surr: 2-Fluorobiphenyl	63		100.0		62.6	48.1	106			
Surr: 4-Terphenyl-d14	74		100.0		73.5	44	113			

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **lcs-15342** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **15342** RunNo: **21301**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621610** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	58	10	100.0	0	58.1	47.9	114			
4-Chloro-3-methylphenol	130	10	200.0	0	62.8	51.7	122			
2-Chlorophenol	120	10	200.0	0	58.4	40.7	113			
1,4-Dichlorobenzene	50	10	100.0	0	50.4	39.6	99.9			
2,4-Dinitrotoluene	47	10	100.0	0	47.3	40.8	113			
N-Nitrosodi-n-propylamine	64	10	100.0	0	64.3	51.2	111			
4-Nitrophenol	66	10	200.0	0	32.8	15.7	86.9			
Pentachlorophenol	93	20	200.0	0	46.4	21.6	104			
Phenol	86	10	200.0	0	43.1	28.6	71.7			
Pyrene	64	10	100.0	0	64.2	54.2	128			
1,2,4-Trichlorobenzene	49	10	100.0	0	49.5	40.9	101			
Surr: 2-Fluorophenol	84		200.0		42.0	12.1	85.8			
Surr: Phenol-d5	80		200.0		39.9	17.7	65.8			
Surr: 2,4,6-Tribromophenol	110		200.0		55.7	26	138			
Surr: Nitrobenzene-d5	61		100.0		60.6	47.5	119			
Surr: 2-Fluorobiphenyl	57		100.0		56.6	48.1	106			
Surr: 4-Terphenyl-d14	67		100.0		66.5	44	113			

Sample ID **lcsd-15342** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **15342** RunNo: **21301**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621611** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	70	10	100.0	0	70.1	47.9	114	18.7	27.2	
4-Chloro-3-methylphenol	140	10	200.0	0	72.1	51.7	122	13.7	25.9	
2-Chlorophenol	110	10	200.0	0	55.9	40.7	113	4.29	22.5	
1,4-Dichlorobenzene	52	10	100.0	0	51.9	39.6	99.9	2.93	24.6	
2,4-Dinitrotoluene	71	10	100.0	0	70.6	40.8	113	39.5	25.3	R
N-Nitrosodi-n-propylamine	70	10	100.0	0	69.7	51.2	111	8.09	23.6	
4-Nitrophenol	69	10	200.0	0	34.4	15.7	86.9	4.53	34.7	
Pentachlorophenol	83	20	200.0	0	41.3	21.6	104	11.6	32.8	
Phenol	87	10	200.0	0	43.3	28.6	71.7	0.509	25.5	
Pyrene	82	10	100.0	0	82.0	54.2	128	24.4	31.4	
1,2,4-Trichlorobenzene	53	10	100.0	0	52.5	40.9	101	6.00	25.9	
Surr: 2-Fluorophenol	73		200.0		36.5	12.1	85.8	0	0	
Surr: Phenol-d5	77		200.0		38.4	17.7	65.8	0	0	
Surr: 2,4,6-Tribromophenol	110		200.0		53.7	26	138	0	0	
Surr: Nitrobenzene-d5	61		100.0		60.9	47.5	119	0	0	
Surr: 2-Fluorobiphenyl	64		100.0		63.6	48.1	106	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409807**
08-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**lcsd-15342**	SampType:	**LCSD**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**LCSS02**	Batch ID:	**15342**	RunNo:	**21301**
Prep Date:	**9/17/2014**	Analysis Date:	**9/18/2014**	SeqNo:	**621611** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	85		100.0		84.6	44	113	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory
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Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Western Refining Gallup** Work Order Number: **1409807** RcptNo: **1**

Received by/date: CS 09/16/14

Logged By: **Ashley Gallegos** **9/16/2014 5:03:00 PM** AG

Completed By: **Ashley Gallegos** **9/17/2014 8:13:28 AM** AG

Reviewed By: AT 09/17/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☑ No ☑ MG 09/17/14 NA ☐

For Metals analysis: Added 1mL HNO_3 to -001G for acceptable pH. Held in login for 24 hours.

10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 6
(<2 or >12 unless noted)
Adjusted? yes
Checked by: mg

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

2 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

2014 ~~2013~~ 09/17/14

~~2041~~ ANNUAL GW

Project #:

GWM-1,-2,-3,OAPIS-1

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.1°

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1409807	8260 + MTBE	8015B extended	8270 + phenols	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	Major Cations/Anions	Cyanide						Air Bubbles (Y or N)
9/12/14	0250	H_2O	GWM-2			-001	X	X	X	X	X	X							
9/12/14	0805	H_2O	OAPIS-2			-002	X	X	X	X	X	X	X						
9/12/14	0815	H_2O	FB-Group 4-9/12/14			-003	X												
			Trip Blank			-004	X	X											
			09/17/14																

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/16/14	1450			9/16/14	1450
Date:	Time:	Relinquished by:	Received by:	Date	Time
9/16/14	1703		Celina Sa	09/16/14	1703

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

November 25, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: Hydrocarbon Seep OrderNo.: 1411731

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 5 sample(s) on 11/18/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1411731**
Date Reported: **11/25/2014**

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-43
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 8:20:00 AM
Lab ID: 1411731-001
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/19/2014 6:49:23 PM	16462
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/19/2014 6:49:23 PM	16462
Surr: DNOP	103	59-141		%REC	1	11/19/2014 6:49:23 PM	16462
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/19/2014 6:37:43 PM	R22638
Surr: BFB	92.3	80-120		%REC	1	11/19/2014 6:37:43 PM	R22638
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Acenaphthylene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Aniline	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Anthracene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Azobenzene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Benz(a)anthracene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Benzo(a)pyrene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Benzo(b)fluoranthene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Benzo(k)fluoranthene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Benzoic acid	ND	20		µg/L	1	11/20/2014 3:43:36 PM	16481
Benzyl alcohol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Butyl benzyl phthalate	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Carbazole	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
4-Chloroaniline	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
2-Chloronaphthalene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
2-Chlorophenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Chrysene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Di-n-butyl phthalate	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Di-n-octyl phthalate	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Dibenzofuran	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
1,2-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
1,3-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-43
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 8:20:00 AM
Lab ID: 1411731-001
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,4-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Diethyl phthalate	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Dimethyl phthalate	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
2,4-Dichlorophenol	ND	20		µg/L	1	11/20/2014 3:43:36 PM	16481
2,4-Dimethylphenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/20/2014 3:43:36 PM	16481
2,4-Dinitrophenol	ND	20		µg/L	1	11/20/2014 3:43:36 PM	16481
2,4-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
2,6-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Fluoranthene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Fluorene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Hexachlorobenzene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Hexachlorobutadiene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Hexachloroethane	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Isophorone	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
1-Methylnaphthalene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
2-Methylnaphthalene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
2-Methylphenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
3+4-Methylphenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
N-Nitrosodimethylamine	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Naphthalene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
2-Nitroaniline	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
3-Nitroaniline	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
4-Nitroaniline	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Nitrobenzene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
2-Nitrophenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
4-Nitrophenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Pentachlorophenol	ND	20		µg/L	1	11/20/2014 3:43:36 PM	16481
Phenanthrene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Phenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Pyrene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Pyridine	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-43
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 8:20:00 AM
Lab ID: 1411731-001
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/20/2014 3:43:36 PM	16481
Surr: 2-Fluorophenol	30.5	17.6-104		%REC	1	11/20/2014 3:43:36 PM	16481
Surr: Phenol-d5	29.8	17.7-89.9		%REC	1	11/20/2014 3:43:36 PM	16481
Surr: 2,4,6-Tribromophenol	30.6	16.3-122		%REC	1	11/20/2014 3:43:36 PM	16481
Surr: Nitrobenzene-d5	81.1	45.3-117		%REC	1	11/20/2014 3:43:36 PM	16481
Surr: 2-Fluorobiphenyl	74.3	43-113		%REC	1	11/20/2014 3:43:36 PM	16481
Surr: 4-Terphenyl-d14	80.8	47.6-122		%REC	1	11/20/2014 3:43:36 PM	16481
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Toluene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Ethylbenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Naphthalene	ND	2.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
2-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Acetone	ND	10		µg/L	1	11/22/2014 7:34:21 AM	R22714
Bromobenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Bromodichloromethane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Bromoform	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Bromomethane	ND	10		µg/L	1	11/22/2014 7:34:21 AM	R22714
2-Butanone	ND	10		µg/L	1	11/22/2014 7:34:21 AM	R22714
Carbon disulfide	ND	10		µg/L	1	11/22/2014 7:34:21 AM	R22714
Carbon Tetrachloride	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Chlorobenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Chloroethane	ND	2.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Chloroform	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Chloromethane	ND	3.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
2-Chlorotoluene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
4-Chlorotoluene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
cis-1,2-DCE	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Dibromochloromethane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Dibromomethane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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Hall Environmental Analysis Laboratory, Inc.

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Matrix: AQUEOUS
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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,1-Dichloroethane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,1-Dichloroethene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,2-Dichloropropane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,3-Dichloropropane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
2,2-Dichloropropane	ND	2.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,1-Dichloropropene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Hexachlorobutadiene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
2-Hexanone	ND	10		µg/L	1	11/22/2014 7:34:21 AM	R22714
Isopropylbenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
4-Isopropyltoluene	3.6	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
4-Methyl-2-pentanone	ND	10		µg/L	1	11/22/2014 7:34:21 AM	R22714
Methylene Chloride	ND	3.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
n-Butylbenzene	ND	3.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
n-Propylbenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
sec-Butylbenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Styrene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
tert-Butylbenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
trans-1,2-DCE	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Trichlorofluoromethane	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Vinyl chloride	ND	1.0		µg/L	1	11/22/2014 7:34:21 AM	R22714
Xylenes, Total	ND	1.5		µg/L	1	11/22/2014 7:34:21 AM	R22714
Surr: 1,2-Dichloroethane-d4	97.7	70-130		%REC	1	11/22/2014 7:34:21 AM	R22714
Surr: 4-Bromofluorobenzene	110	70-130		%REC	1	11/22/2014 7:34:21 AM	R22714
Surr: Dibromofluoromethane	104	70-130		%REC	1	11/22/2014 7:34:21 AM	R22714
Surr: Toluene-d8	100	70-130		%REC	1	11/22/2014 7:34:21 AM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-42
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 9:00:00 AM
Lab ID: 1411731-002
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	44	1.0		mg/L	1	11/19/2014 7:10:32 PM	16462
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/19/2014 7:10:32 PM	16462
Surr: DNOP	97.2	59-141		%REC	1	11/19/2014 7:10:32 PM	16462
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.50		mg/L	10	11/21/2014 12:06:22 PM	R22716
Surr: BFB	87.0	80-120		%REC	10	11/21/2014 12:06:22 PM	R22716
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Acenaphthylene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Aniline	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Anthracene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Azobenzene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Benz(a)anthracene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Benzo(a)pyrene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Benzo(b)fluoranthene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Benzo(k)fluoranthene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Benzoic acid	ND	20		µg/L	1	11/20/2014 5:07:01 PM	16481
Benzyl alcohol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Bis(2-ethylhexyl)phthalate	13	10	B	µg/L	1	11/20/2014 5:07:01 PM	16481
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Butyl benzyl phthalate	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Carbazole	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
4-Chloroaniline	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
2-Chloronaphthalene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
2-Chlorophenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Chrysene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Di-n-butyl phthalate	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Di-n-octyl phthalate	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Dibenzofuran	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
1,2-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
1,3-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-42
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 9:00:00 AM
Lab ID: 1411731-002
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,4-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Diethyl phthalate	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Dimethyl phthalate	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
2,4-Dichlorophenol	ND	20		µg/L	1	11/20/2014 5:07:01 PM	16481
2,4-Dimethylphenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/20/2014 5:07:01 PM	16481
2,4-Dinitrophenol	ND	20		µg/L	1	11/20/2014 5:07:01 PM	16481
2,4-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
2,6-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Fluoranthene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Fluorene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Hexachlorobenzene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Hexachlorobutadiene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Hexachloroethane	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Isophorone	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
1-Methylnaphthalene	72	10		µg/L	1	11/20/2014 5:07:01 PM	16481
2-Methylnaphthalene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
2-Methylphenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
3+4-Methylphenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
N-Nitrosodimethylamine	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Naphthalene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
2-Nitroaniline	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
3-Nitroaniline	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
4-Nitroaniline	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Nitrobenzene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
2-Nitrophenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
4-Nitrophenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Pentachlorophenol	ND	20		µg/L	1	11/20/2014 5:07:01 PM	16481
Phenanthrene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Phenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Pyrene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Pyridine	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-42
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 9:00:00 AM
Lab ID: 1411731-002
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/20/2014 5:07:01 PM	16481
Surr: 2-Fluorophenol	68.9	17.6-104		%REC	1	11/20/2014 5:07:01 PM	16481
Surr: Phenol-d5	53.9	17.7-89.9		%REC	1	11/20/2014 5:07:01 PM	16481
Surr: 2,4,6-Tribromophenol	1.72	16.3-122	S	%REC	1	11/20/2014 5:07:01 PM	16481
Surr: Nitrobenzene-d5	80.1	45.3-117		%REC	1	11/20/2014 5:07:01 PM	16481
Surr: 2-Fluorobiphenyl	61.3	43-113		%REC	1	11/20/2014 5:07:01 PM	16481
Surr: 4-Terphenyl-d14	78.6	47.6-122		%REC	1	11/20/2014 5:07:01 PM	16481
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	12	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Toluene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Ethylbenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,2,4-Trimethylbenzene	27	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,3,5-Trimethylbenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Naphthalene	35	20		µg/L	10	11/22/2014 8:00:58 AM	R22714
1-Methylnaphthalene	73	40		µg/L	10	11/22/2014 8:00:58 AM	R22714
2-Methylnaphthalene	58	40		µg/L	10	11/22/2014 8:00:58 AM	R22714
Acetone	ND	100		µg/L	10	11/22/2014 8:00:58 AM	R22714
Bromobenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Bromodichloromethane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Bromoform	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Bromomethane	ND	30		µg/L	10	11/22/2014 8:00:58 AM	R22714
2-Butanone	ND	100		µg/L	10	11/22/2014 8:00:58 AM	R22714
Carbon disulfide	ND	100		µg/L	10	11/22/2014 8:00:58 AM	R22714
Carbon Tetrachloride	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Chlorobenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Chloroethane	ND	20		µg/L	10	11/22/2014 8:00:58 AM	R22714
Chloroform	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Chloromethane	ND	30		µg/L	10	11/22/2014 8:00:58 AM	R22714
2-Chlorotoluene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
4-Chlorotoluene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
cis-1,2-DCE	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/22/2014 8:00:58 AM	R22714
Dibromochloromethane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Dibromomethane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,2-Dichlorobenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-42
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 9:00:00 AM
Lab ID: 1411731-002
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,3-Dichlorobenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,4-Dichlorobenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Dichlorodifluoromethane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,1-Dichloroethane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,1-Dichloroethene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,2-Dichloropropane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,3-Dichloropropane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
2,2-Dichloropropane	ND	20		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,1-Dichloropropene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Hexachlorobutadiene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
2-Hexanone	ND	100		µg/L	10	11/22/2014 8:00:58 AM	R22714
Isopropylbenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
4-Isopropyltoluene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
4-Methyl-2-pentanone	ND	100		µg/L	10	11/22/2014 8:00:58 AM	R22714
Methylene Chloride	ND	30		µg/L	10	11/22/2014 8:00:58 AM	R22714
n-Butylbenzene	ND	30		µg/L	10	11/22/2014 8:00:58 AM	R22714
n-Propylbenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
sec-Butylbenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Styrene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
tert-Butylbenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	11/22/2014 8:00:58 AM	R22714
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
trans-1,2-DCE	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,1,1-Trichloroethane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,1,2-Trichloroethane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Trichloroethene (TCE)	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Trichlorofluoromethane	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
1,2,3-Trichloropropane	ND	20		µg/L	10	11/22/2014 8:00:58 AM	R22714
Vinyl chloride	ND	10		µg/L	10	11/22/2014 8:00:58 AM	R22714
Xylenes, Total	56	15		µg/L	10	11/22/2014 8:00:58 AM	R22714
Surr: 1,2-Dichloroethane-d4	94.2	70-130		%REC	10	11/22/2014 8:00:58 AM	R22714
Surr: 4-Bromofluorobenzene	92.7	70-130		%REC	10	11/22/2014 8:00:58 AM	R22714
Surr: Dibromofluoromethane	96.0	70-130		%REC	10	11/22/2014 8:00:58 AM	R22714
Surr: Toluene-d8	101	70-130		%REC	10	11/22/2014 8:00:58 AM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-41
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 9:45:00 AM
Lab ID: 1411731-003
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/19/2014 7:31:35 PM	16462
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/19/2014 7:31:35 PM	16462
Surr: DNOP	132	59-141		%REC	1	11/19/2014 7:31:35 PM	16462
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/19/2014 7:32:53 PM	R22638
Surr: BFB	88.3	80-120		%REC	1	11/19/2014 7:32:53 PM	R22638
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Acenaphthylene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Aniline	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Anthracene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Azobenzene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Benz(a)anthracene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Benzo(a)pyrene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Benzo(b)fluoranthene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Benzo(k)fluoranthene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Benzoic acid	ND	20		µg/L	1	11/20/2014 4:11:28 PM	16481
Benzyl alcohol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Bis(2-ethylhexyl)phthalate	14	10	B	µg/L	1	11/20/2014 4:11:28 PM	16481
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Butyl benzyl phthalate	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Carbazole	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
4-Chloroaniline	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
2-Chloronaphthalene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
2-Chlorophenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Chrysene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Di-n-butyl phthalate	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Di-n-octyl phthalate	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Dibenzofuran	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
1,2-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
1,3-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-41
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 9:45:00 AM
Lab ID: 1411731-003
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,4-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Diethyl phthalate	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Dimethyl phthalate	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
2,4-Dichlorophenol	ND	20		µg/L	1	11/20/2014 4:11:28 PM	16481
2,4-Dimethylphenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/20/2014 4:11:28 PM	16481
2,4-Dinitrophenol	ND	20		µg/L	1	11/20/2014 4:11:28 PM	16481
2,4-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
2,6-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Fluoranthene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Fluorene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Hexachlorobenzene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Hexachlorobutadiene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Hexachloroethane	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Isophorone	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
1-Methylnaphthalene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
2-Methylnaphthalene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
2-Methylphenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
3+4-Methylphenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
N-Nitrosodimethylamine	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Naphthalene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
2-Nitroaniline	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
3-Nitroaniline	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
4-Nitroaniline	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Nitrobenzene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
2-Nitrophenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
4-Nitrophenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Pentachlorophenol	ND	20		µg/L	1	11/20/2014 4:11:28 PM	16481
Phenanthrene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Phenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Pyrene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Pyridine	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-41
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 9:45:00 AM
Lab ID: 1411731-003
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/20/2014 4:11:28 PM	16481
Surr: 2-Fluorophenol	73.1	17.6-104		%REC	1	11/20/2014 4:11:28 PM	16481
Surr: Phenol-d5	57.2	17.7-89.9		%REC	1	11/20/2014 4:11:28 PM	16481
Surr: 2,4,6-Tribromophenol	81.0	16.3-122		%REC	1	11/20/2014 4:11:28 PM	16481
Surr: Nitrobenzene-d5	81.4	45.3-117		%REC	1	11/20/2014 4:11:28 PM	16481
Surr: 2-Fluorobiphenyl	77.9	43-113		%REC	1	11/20/2014 4:11:28 PM	16481
Surr: 4-Terphenyl-d14	94.4	47.6-122		%REC	1	11/20/2014 4:11:28 PM	16481
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Toluene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Ethylbenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,2-Dichloroethane (EDC)	2.0	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Naphthalene	ND	2.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
2-Methylnaphthalene	ND	4.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Acetone	ND	10		µg/L	1	11/22/2014 8:27:44 AM	R22714
Bromobenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Bromodichloromethane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Bromoform	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Bromomethane	ND	3.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
2-Butanone	ND	10		µg/L	1	11/22/2014 8:27:44 AM	R22714
Carbon disulfide	ND	10		µg/L	1	11/22/2014 8:27:44 AM	R22714
Carbon Tetrachloride	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Chlorobenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Chloroethane	ND	2.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Chloroform	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Chloromethane	ND	3.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
2-Chlorotoluene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
4-Chlorotoluene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
cis-1,2-DCE	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Dibromochloromethane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Dibromomethane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-41
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 9:45:00 AM
Lab ID: 1411731-003
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,1-Dichloroethane	3.6	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,1-Dichloroethene	3.8	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,2-Dichloropropane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,3-Dichloropropane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
2,2-Dichloropropane	ND	2.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,1-Dichloropropene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Hexachlorobutadiene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
2-Hexanone	ND	10		µg/L	1	11/22/2014 8:27:44 AM	R22714
Isopropylbenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
4-Isopropyltoluene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
4-Methyl-2-pentanone	ND	10		µg/L	1	11/22/2014 8:27:44 AM	R22714
Methylene Chloride	ND	3.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
n-Butylbenzene	ND	3.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
n-Propylbenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
sec-Butylbenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Styrene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
tert-Butylbenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
trans-1,2-DCE	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Trichlorofluoromethane	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Vinyl chloride	ND	1.0		µg/L	1	11/22/2014 8:27:44 AM	R22714
Xylenes, Total	ND	1.5		µg/L	1	11/22/2014 8:27:44 AM	R22714
Surr: 1,2-Dichloroethane-d4	94.6	70-130		%REC	1	11/22/2014 8:27:44 AM	R22714
Surr: 4-Bromofluorobenzene	99.4	70-130		%REC	1	11/22/2014 8:27:44 AM	R22714
Surr: Dibromofluoromethane	90.9	70-130		%REC	1	11/22/2014 8:27:44 AM	R22714
Surr: Toluene-d8	103	70-130		%REC	1	11/22/2014 8:27:44 AM	R22714

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-39
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 11:15:00 AM
Lab ID: 1411731-004
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	15	1.0		mg/L	1	11/19/2014 7:52:48 PM	16462
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/19/2014 7:52:48 PM	16462
Surr: DNOP	107	59-141		%REC	1	11/19/2014 7:52:48 PM	16462
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	0.39	0.25		mg/L	5	11/21/2014 3:17:45 PM	R22716
Surr: BFB	109	80-120		%REC	5	11/21/2014 3:17:45 PM	R22716
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Acenaphthylene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Aniline	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Anthracene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Azobenzene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Benz(a)anthracene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Benzo(a)pyrene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Benzo(b)fluoranthene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Benzo(k)fluoranthene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Benzoic acid	ND	20		µg/L	1	11/20/2014 4:39:15 PM	16481
Benzyl alcohol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Bis(2-ethylhexyl)phthalate	12	10	B	µg/L	1	11/20/2014 4:39:15 PM	16481
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Butyl benzyl phthalate	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Carbazole	21	10		µg/L	1	11/20/2014 4:39:15 PM	16481
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
4-Chloroaniline	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
2-Chloronaphthalene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
2-Chlorophenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Chrysene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Di-n-butyl phthalate	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Di-n-octyl phthalate	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Dibenzofuran	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
1,2-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
1,3-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-39
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 11:15:00 AM
Lab ID: 1411731-004
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,4-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Diethyl phthalate	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Dimethyl phthalate	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
2,4-Dichlorophenol	ND	20		µg/L	1	11/20/2014 4:39:15 PM	16481
2,4-Dimethylphenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/20/2014 4:39:15 PM	16481
2,4-Dinitrophenol	ND	20		µg/L	1	11/20/2014 4:39:15 PM	16481
2,4-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
2,6-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Fluoranthene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Fluorene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Hexachlorobenzene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Hexachlorobutadiene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Hexachloroethane	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Isophorone	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
1-Methylnaphthalene	79	10		µg/L	1	11/20/2014 4:39:15 PM	16481
2-Methylnaphthalene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
2-Methylphenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
3+4-Methylphenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
N-Nitrosodimethylamine	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Naphthalene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
2-Nitroaniline	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
3-Nitroaniline	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
4-Nitroaniline	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Nitrobenzene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
2-Nitrophenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
4-Nitrophenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Pentachlorophenol	ND	20		µg/L	1	11/20/2014 4:39:15 PM	16481
Phenanthrene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Phenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Pyrene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Pyridine	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-39
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 11:15:00 AM
Lab ID: 1411731-004
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/20/2014 4:39:15 PM	16481
Surr: 2-Fluorophenol	69.4	17.6-104		%REC	1	11/20/2014 4:39:15 PM	16481
Surr: Phenol-d5	57.4	17.7-89.9		%REC	1	11/20/2014 4:39:15 PM	16481
Surr: 2,4,6-Tribromophenol	83.7	16.3-122		%REC	1	11/20/2014 4:39:15 PM	16481
Surr: Nitrobenzene-d5	83.3	45.3-117		%REC	1	11/20/2014 4:39:15 PM	16481
Surr: 2-Fluorobiphenyl	75.4	43-113		%REC	1	11/20/2014 4:39:15 PM	16481
Surr: 4-Terphenyl-d14	71.9	47.6-122		%REC	1	11/20/2014 4:39:15 PM	16481
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	20	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Toluene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Ethylbenzene	60	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Methyl tert-butyl ether (MTBE)	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,2,4-Trimethylbenzene	43	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,3,5-Trimethylbenzene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Naphthalene	120	10		µg/L	5	11/22/2014 8:54:27 AM	R22714
1-Methylnaphthalene	170	20		µg/L	5	11/22/2014 8:54:27 AM	R22714
2-Methylnaphthalene	130	20		µg/L	5	11/22/2014 8:54:27 AM	R22714
Acetone	ND	50		µg/L	5	11/22/2014 8:54:27 AM	R22714
Bromobenzene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Bromodichloromethane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Bromoform	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Bromomethane	ND	15		µg/L	5	11/22/2014 8:54:27 AM	R22714
2-Butanone	ND	50		µg/L	5	11/22/2014 8:54:27 AM	R22714
Carbon disulfide	ND	50		µg/L	5	11/22/2014 8:54:27 AM	R22714
Carbon Tetrachloride	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Chlorobenzene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Chloroethane	ND	10		µg/L	5	11/22/2014 8:54:27 AM	R22714
Chloroform	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Chloromethane	ND	15		µg/L	5	11/22/2014 8:54:27 AM	R22714
2-Chlorotoluene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
4-Chlorotoluene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
cis-1,2-DCE	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
cis-1,3-Dichloropropene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,2-Dibromo-3-chloropropane	ND	10		µg/L	5	11/22/2014 8:54:27 AM	R22714
Dibromochloromethane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Dibromomethane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,2-Dichlorobenzene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-39
Project: Hydrocarbon Seep
Collection Date: 11/18/2014 11:15:00 AM
Lab ID: 1411731-004
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,3-Dichlorobenzene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,4-Dichlorobenzene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Dichlorodifluoromethane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,1-Dichloroethane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,1-Dichloroethene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,2-Dichloropropane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,3-Dichloropropane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
2,2-Dichloropropane	ND	10		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,1-Dichloropropene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Hexachlorobutadiene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
2-Hexanone	ND	50		µg/L	5	11/22/2014 8:54:27 AM	R22714
Isopropylbenzene	15	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
4-Isopropyltoluene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
4-Methyl-2-pentanone	ND	50		µg/L	5	11/22/2014 8:54:27 AM	R22714
Methylene Chloride	ND	15		µg/L	5	11/22/2014 8:54:27 AM	R22714
n-Butylbenzene	ND	15		µg/L	5	11/22/2014 8:54:27 AM	R22714
n-Propylbenzene	19	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
sec-Butylbenzene	5.5	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Styrene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
tert-Butylbenzene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,1,2,2-Tetrachloroethane	ND	10		µg/L	5	11/22/2014 8:54:27 AM	R22714
Tetrachloroethene (PCE)	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
trans-1,2-DCE	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
trans-1,3-Dichloropropene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,2,3-Trichlorobenzene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,2,4-Trichlorobenzene	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,1,1-Trichloroethane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,1,2-Trichloroethane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Trichloroethene (TCE)	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Trichlorofluoromethane	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
1,2,3-Trichloropropane	ND	10		µg/L	5	11/22/2014 8:54:27 AM	R22714
Vinyl chloride	ND	5.0		µg/L	5	11/22/2014 8:54:27 AM	R22714
Xylenes, Total	ND	7.5		µg/L	5	11/22/2014 8:54:27 AM	R22714
Surr: 1,2-Dichloroethane-d4	97.3	70-130		%REC	5	11/22/2014 8:54:27 AM	R22714
Surr: 4-Bromofluorobenzene	89.3	70-130		%REC	5	11/22/2014 8:54:27 AM	R22714
Surr: Dibromofluoromethane	99.0	70-130		%REC	5	11/22/2014 8:54:27 AM	R22714
Surr: Toluene-d8	106	70-130		%REC	5	11/22/2014 8:54:27 AM	R22714

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Duplicate 01
Project: Hydrocarbon Seep
Collection Date: 11/18/2014
Lab ID: 1411731-005
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	50	1.0		mg/L	1	11/19/2014 8:35:04 PM	16462
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/19/2014 8:35:04 PM	16462
Surr: DNOP	105	59-141		%REC	1	11/19/2014 8:35:04 PM	16462
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.50		mg/L	10	11/21/2014 3:45:06 PM	R22716
Surr: BFB	89.5	80-120		%REC	10	11/21/2014 3:45:06 PM	R22716
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Acenaphthylene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Aniline	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Anthracene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Azobenzene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Benz(a)anthracene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Benzo(a)pyrene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Benzo(b)fluoranthene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Benzo(g,h,i)perylene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Benzo(k)fluoranthene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Benzoic acid	ND	20		µg/L	1	11/20/2014 6:02:10 PM	16481
Benzyl alcohol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Bis(2-chloroethyl)ether	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Bis(2-ethylhexyl)phthalate	11	10	B	µg/L	1	11/20/2014 6:02:10 PM	16481
4-Bromophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Butyl benzyl phthalate	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Carbazole	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
4-Chloro-3-methylphenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
4-Chloroaniline	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
2-Chloronaphthalene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
2-Chlorophenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Chrysene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Di-n-butyl phthalate	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Di-n-octyl phthalate	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Dibenz(a,h)anthracene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Dibenzofuran	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
1,2-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
1,3-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Duplicate 01
Project: Hydrocarbon Seep
Collection Date: 11/18/2014
Lab ID: 1411731-005
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,4-Dichlorobenzene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
3,3´-Dichlorobenzidine	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Diethyl phthalate	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Dimethyl phthalate	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
2,4-Dichlorophenol	ND	20		µg/L	1	11/20/2014 6:02:10 PM	16481
2,4-Dimethylphenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	11/20/2014 6:02:10 PM	16481
2,4-Dinitrophenol	ND	20		µg/L	1	11/20/2014 6:02:10 PM	16481
2,4-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
2,6-Dinitrotoluene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Fluoranthene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Fluorene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Hexachlorobenzene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Hexachlorobutadiene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Hexachlorocyclopentadiene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Hexachloroethane	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Isophorone	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
1-Methylnaphthalene	83	10		µg/L	1	11/20/2014 6:02:10 PM	16481
2-Methylnaphthalene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
2-Methylphenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
3+4-Methylphenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
N-Nitrosodimethylamine	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
N-Nitrosodiphenylamine	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Naphthalene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
2-Nitroaniline	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
3-Nitroaniline	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
4-Nitroaniline	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Nitrobenzene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
2-Nitrophenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
4-Nitrophenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Pentachlorophenol	ND	20		µg/L	1	11/20/2014 6:02:10 PM	16481
Phenanthrene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Phenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Pyrene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Pyridine	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
1,2,4-Trichlorobenzene	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
2,4,5-Trichlorophenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481

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Hall Environmental Analysis Laboratory, Inc.

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Lab ID: 1411731-005
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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
2,4,6-Trichlorophenol	ND	10		µg/L	1	11/20/2014 6:02:10 PM	16481
Surr: 2-Fluorophenol	45.6	17.6-104		%REC	1	11/20/2014 6:02:10 PM	16481
Surr: Phenol-d5	41.5	17.7-89.9		%REC	1	11/20/2014 6:02:10 PM	16481
Surr: 2,4,6-Tribromophenol	2.22	16.3-122	S	%REC	1	11/20/2014 6:02:10 PM	16481
Surr: Nitrobenzene-d5	55.0	45.3-117		%REC	1	11/20/2014 6:02:10 PM	16481
Surr: 2-Fluorobiphenyl	48.4	43-113		%REC	1	11/20/2014 6:02:10 PM	16481
Surr: 4-Terphenyl-d14	62.4	47.6-122		%REC	1	11/20/2014 6:02:10 PM	16481
EPA METHOD 8260B: VOLATILES						Analyst:	**cadg**
Benzene	11	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Toluene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Ethylbenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,2,4-Trimethylbenzene	27	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,3,5-Trimethylbenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Naphthalene	36	20		µg/L	10	11/22/2014 9:21:14 AM	R22714
1-Methylnaphthalene	80	40		µg/L	10	11/22/2014 9:21:14 AM	R22714
2-Methylnaphthalene	63	40		µg/L	10	11/22/2014 9:21:14 AM	R22714
Acetone	ND	100		µg/L	10	11/22/2014 9:21:14 AM	R22714
Bromobenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Bromodichloromethane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Bromoform	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Bromomethane	ND	30		µg/L	10	11/22/2014 9:21:14 AM	R22714
2-Butanone	ND	100		µg/L	10	11/22/2014 9:21:14 AM	R22714
Carbon disulfide	ND	100		µg/L	10	11/22/2014 9:21:14 AM	R22714
Carbon Tetrachloride	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Chlorobenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Chloroethane	ND	20		µg/L	10	11/22/2014 9:21:14 AM	R22714
Chloroform	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Chloromethane	ND	30		µg/L	10	11/22/2014 9:21:14 AM	R22714
2-Chlorotoluene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
4-Chlorotoluene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
cis-1,2-DCE	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/22/2014 9:21:14 AM	R22714
Dibromochloromethane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Dibromomethane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,2-Dichlorobenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Duplicate 01
Project: Hydrocarbon Seep
Collection Date: 11/18/2014
Lab ID: 1411731-005
Matrix: AQUEOUS
Received Date: 11/18/2014 4:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
1,3-Dichlorobenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,4-Dichlorobenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Dichlorodifluoromethane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,1-Dichloroethane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,1-Dichloroethene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,2-Dichloropropane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,3-Dichloropropane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
2,2-Dichloropropane	ND	20		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,1-Dichloropropene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Hexachlorobutadiene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
2-Hexanone	ND	100		µg/L	10	11/22/2014 9:21:14 AM	R22714
Isopropylbenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
4-Isopropyltoluene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
4-Methyl-2-pentanone	ND	100		µg/L	10	11/22/2014 9:21:14 AM	R22714
Methylene Chloride	ND	30		µg/L	10	11/22/2014 9:21:14 AM	R22714
n-Butylbenzene	ND	30		µg/L	10	11/22/2014 9:21:14 AM	R22714
n-Propylbenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
sec-Butylbenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Styrene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
tert-Butylbenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	11/22/2014 9:21:14 AM	R22714
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
trans-1,2-DCE	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,1,1-Trichloroethane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,1,2-Trichloroethane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Trichloroethene (TCE)	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Trichlorofluoromethane	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
1,2,3-Trichloropropane	ND	20		µg/L	10	11/22/2014 9:21:14 AM	R22714
Vinyl chloride	ND	10		µg/L	10	11/22/2014 9:21:14 AM	R22714
Xylenes, Total	54	15		µg/L	10	11/22/2014 9:21:14 AM	R22714
Surr: 1,2-Dichloroethane-d4	94.2	70-130		%REC	10	11/22/2014 9:21:14 AM	R22714
Surr: 4-Bromofluorobenzene	95.3	70-130		%REC	10	11/22/2014 9:21:14 AM	R22714
Surr: Dibromofluoromethane	91.9	70-130		%REC	10	11/22/2014 9:21:14 AM	R22714
Surr: Toluene-d8	99.7	70-130		%REC	10	11/22/2014 9:21:14 AM	R22714

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411731**
25-Nov-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **LCS-16462** SampType: **LCS** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSW** Batch ID: **16462** RunNo: **22625**
Prep Date: **11/19/2014** Analysis Date: **11/19/2014** SeqNo: **667726** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.7	1.0	5.000	0	114	69.7	142			
Surr: DNOP	0.61		0.5000		123	59	141			

Sample ID **MB-16462** SampType: **MBLK** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **PBW** Batch ID: **16462** RunNo: **22625**
Prep Date: **11/19/2014** Analysis Date: **11/19/2014** SeqNo: **668220** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.0		1.000		105	59	141			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411731**
25-Nov-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW** Batch ID: **R22638** RunNo: **22638**
Prep Date: Analysis Date: **11/19/2014** SeqNo: **668015** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	17		20.00		84.5	80	120			

Sample ID **2.5UG GRO LCS** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW** Batch ID: **R22638** RunNo: **22638**
Prep Date: Analysis Date: **11/19/2014** SeqNo: **668016** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	92.6	80	120			
Surr: BFB	18		20.00		91.0	80	120			

Sample ID **1411731-002BMS** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-42** Batch ID: **R22638** RunNo: **22638**
Prep Date: Analysis Date: **11/19/2014** SeqNo: **668024** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	2.5	25.00	0	94.6	70.4	127			
Surr: BFB	920		1000		92.2	80	120			

Sample ID **1411731-002BMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-42** Batch ID: **R22638** RunNo: **22638**
Prep Date: Analysis Date: **11/19/2014** SeqNo: **668025** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	2.5	25.00	0	93.6	70.4	127	1.02	20	
Surr: BFB	930		1000		92.6	80	120	0	0	

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW** Batch ID: **R22716** RunNo: **22716**
Prep Date: Analysis Date: **11/21/2014** SeqNo: **670112** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		92.8	80	120			

Sample ID **2.5UG GRO LCS** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW** Batch ID: **R22716** RunNo: **22716**
Prep Date: Analysis Date: **11/21/2014** SeqNo: **670113** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411731**
25-Nov-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID	**2.5UG GRO LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**
Client ID:	**LCSW**	Batch ID:	**R22716**	RunNo:	**22716**
Prep Date:		Analysis Date:	**11/21/2014**	SeqNo:	**670113** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.45	0.050	0.5000	0	89.6	80	120			
Surr: BFB	19		20.00		94.0	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411731**
25-Nov-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **5mL rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R22714**	RunNo: **22714**			
Prep Date:	Analysis Date: **11/21/2014**	SeqNo: **669903**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411731**
25-Nov-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **5mL rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22714** RunNo: **22714**
Prep Date: Analysis Date: **11/21/2014** SeqNo: **669903** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.7		10.00		96.5	70	130			
Surr: 4-Bromofluorobenzene	14		10.00		136	70	130			S
Surr: Dibromofluoromethane	9.4		10.00		94.4	70	130			
Surr: Toluene-d8	11		10.00		108	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22714** RunNo: **22714**
Prep Date: Analysis Date: **11/21/2014** SeqNo: **669905** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	70	130			
Toluene	20	1.0	20.00	0	101	80	120			
Chlorobenzene	19	1.0	20.00	0	96.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411731**
25-Nov-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **LCSW**	Batch ID: **R22714**	RunNo: **22714**			
Prep Date:	Analysis Date: **11/21/2014**	SeqNo: **669905**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	18	1.0	20.00	0	92.4	82.6	131			
Trichloroethene (TCE)	17	1.0	20.00	0	86.5	70	130			
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.5	70	130			
Surr: 4-Bromofluorobenzene	14		10.00		136	70	130			S
Surr: Dibromofluoromethane	9.3		10.00		93.3	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411731**
25-Nov-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **mb-16481**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **16481**	RunNo: **22682**			
Prep Date: **11/19/2014**	Analysis Date: **11/20/2014**	SeqNo: **668827**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	10	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411731**
25-Nov-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **mb-16481**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **16481**	RunNo: **22682**			
Prep Date: **11/19/2014**	Analysis Date: **11/20/2014**	SeqNo: **668827**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	150		200.0		72.8	17.6	104			
Surr: Phenol-d5	140		200.0		70.0	17.7	89.9			
Surr: 2,4,6-Tribromophenol	160		200.0		81.6	16.3	122			
Surr: Nitrobenzene-d5	70		100.0		69.6	45.3	117			
Surr: 2-Fluorobiphenyl	74		100.0		74.0	43	113			
Surr: 4-Terphenyl-d14	99		100.0		99.0	47.6	122			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411731**
25-Nov-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **lcs-16481** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **16481** RunNo: **22682**
Prep Date: **11/19/2014** Analysis Date: **11/20/2014** SeqNo: **668828** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	80	10	100.0	0	79.8	47.9	114			
4-Chloro-3-methylphenol	180	10	200.0	0	88.4	51.7	122			
2-Chlorophenol	150	10	200.0	0	73.0	40.7	113			
1,4-Dichlorobenzene	70	10	100.0	0	69.9	39.6	99.9			
2,4-Dinitrotoluene	70	10	100.0	0	70.1	40.8	113			
N-Nitrosodi-n-propylamine	79	10	100.0	0	79.0	51.2	111			
4-Nitrophenol	170	10	200.0	0	85.4	15.7	86.9			
Pentachlorophenol	120	20	200.0	0	60.0	21.6	104			
Phenol	160	10	200.0	0	80.1	28.6	71.7			S
Pyrene	76	10	100.0	0	75.8	54.2	128			
1,2,4-Trichlorobenzene	72	10	100.0	0	72.1	40.9	101			
Surr: 2-Fluorophenol	130		200.0		63.8	17.6	104			
Surr: Phenol-d5	130		200.0		66.5	17.7	89.9			
Surr: 2,4,6-Tribromophenol	160		200.0		82.5	16.3	122			
Surr: Nitrobenzene-d5	67		100.0		66.8	45.3	117			
Surr: 2-Fluorobiphenyl	72		100.0		72.0	43	113			
Surr: 4-Terphenyl-d14	81		100.0		81.0	47.6	122			

Sample ID **lcsd-16481** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **16481** RunNo: **22682**
Prep Date: **11/19/2014** Analysis Date: **11/20/2014** SeqNo: **668829** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	83	10	100.0	0	82.9	47.9	114	3.83	27.2	
4-Chloro-3-methylphenol	160	10	200.0	0	82.2	51.7	122	7.36	25.9	
2-Chlorophenol	140	10	200.0	0	71.6	40.7	113	1.87	22.5	
1,4-Dichlorobenzene	69	10	100.0	0	69.3	39.6	99.9	0.948	24.6	
2,4-Dinitrotoluene	71	10	100.0	0	70.8	40.8	113	0.966	25.3	
N-Nitrosodi-n-propylamine	77	10	100.0	0	77.0	51.2	111	2.61	23.6	
4-Nitrophenol	180	10	200.0	0	88.7	15.7	86.9	3.77	34.7	S
Pentachlorophenol	130	20	200.0	0	63.1	21.6	104	4.97	32.8	
Phenol	160	10	200.0	0	78.3	28.6	71.7	2.37	25.5	S
Pyrene	81	10	100.0	0	81.1	54.2	128	6.83	31.4	
1,2,4-Trichlorobenzene	70	10	100.0	0	70.0	40.9	101	2.96	25.9	
Surr: 2-Fluorophenol	120		200.0		62.4	17.6	104	0	0	
Surr: Phenol-d5	130		200.0		64.7	17.7	89.9	0	0	
Surr: 2,4,6-Tribromophenol	170		200.0		85.0	16.3	122	0	0	
Surr: Nitrobenzene-d5	66		100.0		66.0	45.3	117	0	0	
Surr: 2-Fluorobiphenyl	74		100.0		74.2	43	113	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411731**
25-Nov-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID	**lcsd-16481**	SampType:	**LCSD**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**LCSS02**	Batch ID:	**16481**	RunNo:	**22682**
Prep Date:	**11/19/2014**	Analysis Date:	**11/20/2014**	SeqNo:	**668829** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	89		100.0		89.4	47.6	122	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Western Refining Gallup** Work Order Number: **1411731** RcptNo: **1**

Received by/date: 11/18/14

Logged By: **Ashley Gallegos** **11/18/2014 4:15:00 PM**

Completed By: **Ashley Gallegos** **11/18/2014 5:10:29 PM**

Reviewed By: CS 11/19/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: WESTERN REFINING SW, INC.

Mailing Address: GALLUP REFINERY
92 GIANT CROSSING ROAD GALLUP NM 87301

Phone #: 505.722.3833

email or Fax#: 505.863.0930

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: HYDROCARBON SEEP

Project #: HYDROCARBON SEEP

Project Manager: C. JOHNSON CHERYL.JOHNSON@WNR.COM

Sampler: TRACY PAYNE

On Ice: ☒ Yes ☐ No

Sample Temperature: 0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1411131	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)				Air Bubbles (Y or N)
11/18/14	0820	GW	MKTF-43	7	HCL/NEAT	-001			✓							✓	✓				
	0900	GW	MKTF-42	7		-002			✓							✓	✓				
	0945	GW	MKTF-41	7		-003			✓							✓	✓				
	1115	GW	MKTF-39	7		-004			✓							✓	✓				
	—	GW	DUPLICATE 01	7		-005			✓							✓	✓				

Date	Time	Relinquished by:	Received by:	Date	Time
11.18.14	1220			11-18-14	2:00
11-18-14	1615			11/18/14	1615

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 04, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: Hydrocarbon Seep OrderNo.: 1411984

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 7 sample(s) on 11/22/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-44
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 8:30:00 AM
Lab ID: 1411984-001
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**JME**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/25/2014 3:55:34 PM	16539
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/25/2014 3:55:34 PM	16539
Surr: DNOP	110	59-141		%REC	1	11/25/2014 3:55:34 PM	16539
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/26/2014 3:25:31 PM	R22836
Surr: BFB	89.8	80-120		%REC	1	11/26/2014 3:25:31 PM	R22836
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
Acenaphthene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Acenaphthylene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Aniline	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Anthracene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Azobenzene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Benz(a)anthracene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Benzo(a)pyrene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Benzo(b)fluoranthene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Benzo(g,h,i)perylene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Benzo(k)fluoranthene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Benzoic acid	ND	20		µg/L	1	12/2/2014 4:38:40 PM	16584
Benzyl alcohol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Bis(2-chloroethyl)ether	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
4-Bromophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Butyl benzyl phthalate	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Carbazole	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
4-Chloro-3-methylphenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
4-Chloroaniline	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
2-Chloronaphthalene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
2-Chlorophenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Chrysene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Di-n-butyl phthalate	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Di-n-octyl phthalate	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Dibenz(a,h)anthracene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Dibenzofuran	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
1,2-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
1,3-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-44
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 8:30:00 AM
Lab ID: 1411984-001
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
1,4-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
3,3´-Dichlorobenzidine	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Diethyl phthalate	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Dimethyl phthalate	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
2,4-Dichlorophenol	ND	20		µg/L	1	12/2/2014 4:38:40 PM	16584
2,4-Dimethylphenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	12/2/2014 4:38:40 PM	16584
2,4-Dinitrophenol	ND	20		µg/L	1	12/2/2014 4:38:40 PM	16584
2,4-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
2,6-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Fluoranthene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Fluorene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Hexachlorobenzene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Hexachlorobutadiene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Hexachlorocyclopentadiene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Hexachloroethane	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Isophorone	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
1-Methylnaphthalene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
2-Methylnaphthalene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
2-Methylphenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
3+4-Methylphenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
N-Nitrosodimethylamine	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
N-Nitrosodiphenylamine	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Naphthalene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
2-Nitroaniline	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
3-Nitroaniline	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
4-Nitroaniline	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Nitrobenzene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
2-Nitrophenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
4-Nitrophenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Pentachlorophenol	ND	20		µg/L	1	12/2/2014 4:38:40 PM	16584
Phenanthrene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Phenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Pyrene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Pyridine	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
1,2,4-Trichlorobenzene	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
2,4,5-Trichlorophenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-44
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 8:30:00 AM
Lab ID: 1411984-001
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
2,4,6-Trichlorophenol	ND	10		µg/L	1	12/2/2014 4:38:40 PM	16584
Surr: 2-Fluorophenol	75.3	17.6-104		%REC	1	12/2/2014 4:38:40 PM	16584
Surr: Phenol-d5	64.5	17.7-89.9		%REC	1	12/2/2014 4:38:40 PM	16584
Surr: 2,4,6-Tribromophenol	91.5	16.3-122		%REC	1	12/2/2014 4:38:40 PM	16584
Surr: Nitrobenzene-d5	84.9	45.3-117		%REC	1	12/2/2014 4:38:40 PM	16584
Surr: 2-Fluorobiphenyl	95.8	43-113		%REC	1	12/2/2014 4:38:40 PM	16584
Surr: 4-Terphenyl-d14	94.3	47.6-122		%REC	1	12/2/2014 4:38:40 PM	16584
EPA METHOD 8260B: VOLATILES						Analyst:	**DJF**
Benzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Toluene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Ethylbenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Methyl tert-butyl ether (MTBE)	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,2,4-Trimethylbenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,3,5-Trimethylbenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,2-Dichloroethane (EDC)	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,2-Dibromoethane (EDB)	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Naphthalene	ND	4.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1-Methylnaphthalene	ND	8.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
2-Methylnaphthalene	ND	8.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Acetone	ND	20		µg/L	2	11/25/2014 3:56:09 PM	R22805
Bromobenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Bromodichloromethane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Bromoform	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Bromomethane	ND	6.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
2-Butanone	ND	20		µg/L	2	11/25/2014 3:56:09 PM	R22805
Carbon disulfide	ND	20		µg/L	2	11/25/2014 3:56:09 PM	R22805
Carbon Tetrachloride	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Chlorobenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Chloroethane	ND	4.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Chloroform	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Chloromethane	ND	6.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
2-Chlorotoluene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
4-Chlorotoluene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
cis-1,2-DCE	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
cis-1,3-Dichloropropene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,2-Dibromo-3-chloropropane	ND	4.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Dibromochloromethane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Dibromomethane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,2-Dichlorobenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-44
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 8:30:00 AM
Lab ID: 1411984-001
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,3-Dichlorobenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,4-Dichlorobenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Dichlorodifluoromethane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,1-Dichloroethane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,1-Dichloroethene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,2-Dichloropropane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,3-Dichloropropane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
2,2-Dichloropropane	ND	4.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,1-Dichloropropene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Hexachlorobutadiene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
2-Hexanone	ND	20		µg/L	2	11/25/2014 3:56:09 PM	R22805
Isopropylbenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
4-Isopropyltoluene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
4-Methyl-2-pentanone	ND	20		µg/L	2	11/25/2014 3:56:09 PM	R22805
Methylene Chloride	ND	6.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
n-Butylbenzene	ND	6.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
n-Propylbenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
sec-Butylbenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Styrene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
tert-Butylbenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,1,2,2-Tetrachloroethane	ND	4.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Tetrachloroethene (PCE)	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
trans-1,2-DCE	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
trans-1,3-Dichloropropene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,2,3-Trichlorobenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,2,4-Trichlorobenzene	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,1,1-Trichloroethane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,1,2-Trichloroethane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Trichloroethene (TCE)	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Trichlorofluoromethane	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
1,2,3-Trichloropropane	ND	4.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Vinyl chloride	ND	2.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Xylenes, Total	ND	3.0		µg/L	2	11/25/2014 3:56:09 PM	R22805
Surr: 1,2-Dichloroethane-d4	86.5	70-130		%REC	2	11/25/2014 3:56:09 PM	R22805
Surr: 4-Bromofluorobenzene	91.3	70-130		%REC	2	11/25/2014 3:56:09 PM	R22805
Surr: Dibromofluoromethane	95.8	70-130		%REC	2	11/25/2014 3:56:09 PM	R22805
Surr: Toluene-d8	89.7	70-130		%REC	2	11/25/2014 3:56:09 PM	R22805

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-40
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 9:30:00 AM
Lab ID: 1411984-002
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**JME**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/25/2014 4:25:45 PM	16539
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/25/2014 4:25:45 PM	16539
Surr: DNOP	110	59-141		%REC	1	11/25/2014 4:25:45 PM	16539
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/26/2014 3:52:49 PM	R22836
Surr: BFB	96.7	80-120		%REC	1	11/26/2014 3:52:49 PM	R22836
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
Acenaphthene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Acenaphthylene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Aniline	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Anthracene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Azobenzene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Benz(a)anthracene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Benzo(a)pyrene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Benzo(b)fluoranthene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Benzo(g,h,i)perylene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Benzo(k)fluoranthene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Benzoic acid	ND	20		µg/L	1	12/2/2014 5:06:02 PM	16584
Benzyl alcohol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Bis(2-chloroethyl)ether	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
4-Bromophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Butyl benzyl phthalate	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Carbazole	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
4-Chloro-3-methylphenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
4-Chloroaniline	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
2-Chloronaphthalene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
2-Chlorophenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Chrysene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Di-n-butyl phthalate	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Di-n-octyl phthalate	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Dibenz(a,h)anthracene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Dibenzofuran	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
1,2-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
1,3-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-40
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 9:30:00 AM
Lab ID: 1411984-002
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
1,4-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
3,3´-Dichlorobenzidine	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Diethyl phthalate	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Dimethyl phthalate	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
2,4-Dichlorophenol	ND	20		µg/L	1	12/2/2014 5:06:02 PM	16584
2,4-Dimethylphenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	12/2/2014 5:06:02 PM	16584
2,4-Dinitrophenol	ND	20		µg/L	1	12/2/2014 5:06:02 PM	16584
2,4-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
2,6-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Fluoranthene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Fluorene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Hexachlorobenzene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Hexachlorobutadiene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Hexachlorocyclopentadiene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Hexachloroethane	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Isophorone	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
1-Methylnaphthalene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
2-Methylnaphthalene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
2-Methylphenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
3+4-Methylphenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
N-Nitrosodimethylamine	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
N-Nitrosodiphenylamine	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Naphthalene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
2-Nitroaniline	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
3-Nitroaniline	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
4-Nitroaniline	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Nitrobenzene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
2-Nitrophenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
4-Nitrophenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Pentachlorophenol	ND	20		µg/L	1	12/2/2014 5:06:02 PM	16584
Phenanthrene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Phenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Pyrene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Pyridine	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
1,2,4-Trichlorobenzene	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
2,4,5-Trichlorophenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

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Collection Date: 11/21/2014 9:30:00 AM
Lab ID: 1411984-002
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
2,4,6-Trichlorophenol	ND	10		µg/L	1	12/2/2014 5:06:02 PM	16584
Surr: 2-Fluorophenol	75.4	17.6-104		%REC	1	12/2/2014 5:06:02 PM	16584
Surr: Phenol-d5	65.5	17.7-89.9		%REC	1	12/2/2014 5:06:02 PM	16584
Surr: 2,4,6-Tribromophenol	79.3	16.3-122		%REC	1	12/2/2014 5:06:02 PM	16584
Surr: Nitrobenzene-d5	86.2	45.3-117		%REC	1	12/2/2014 5:06:02 PM	16584
Surr: 2-Fluorobiphenyl	90.6	43-113		%REC	1	12/2/2014 5:06:02 PM	16584
Surr: 4-Terphenyl-d14	97.1	47.6-122		%REC	1	12/2/2014 5:06:02 PM	16584
EPA METHOD 8260B: VOLATILES						Analyst:	**DJF**
Benzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Toluene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Ethylbenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Naphthalene	ND	2.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1-Methylnaphthalene	ND	4.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
2-Methylnaphthalene	ND	4.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Acetone	ND	10		µg/L	1	11/25/2014 4:23:31 PM	R22805
Bromobenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Bromodichloromethane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Bromoform	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Bromomethane	ND	3.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
2-Butanone	ND	10		µg/L	1	11/25/2014 4:23:31 PM	R22805
Carbon disulfide	ND	10		µg/L	1	11/25/2014 4:23:31 PM	R22805
Carbon Tetrachloride	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Chlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Chloroethane	ND	2.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Chloroform	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Chloromethane	ND	3.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
2-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
4-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
cis-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Dibromochloromethane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Dibromomethane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-40
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 9:30:00 AM
Lab ID: 1411984-002
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,1-Dichloroethane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,1-Dichloroethene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,2-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,3-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
2,2-Dichloropropane	ND	2.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,1-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Hexachlorobutadiene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
2-Hexanone	ND	10		µg/L	1	11/25/2014 4:23:31 PM	R22805
Isopropylbenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
4-Isopropyltoluene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
4-Methyl-2-pentanone	ND	10		µg/L	1	11/25/2014 4:23:31 PM	R22805
Methylene Chloride	ND	3.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
n-Butylbenzene	ND	3.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
n-Propylbenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
sec-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Styrene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
tert-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
trans-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Trichlorofluoromethane	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Vinyl chloride	ND	1.0		µg/L	1	11/25/2014 4:23:31 PM	R22805
Xylenes, Total	ND	1.5		µg/L	1	11/25/2014 4:23:31 PM	R22805
Surr: 1,2-Dichloroethane-d4	87.3	70-130		%REC	1	11/25/2014 4:23:31 PM	R22805
Surr: 4-Bromofluorobenzene	88.4	70-130		%REC	1	11/25/2014 4:23:31 PM	R22805
Surr: Dibromofluoromethane	99.3	70-130		%REC	1	11/25/2014 4:23:31 PM	R22805
Surr: Toluene-d8	91.3	70-130		%REC	1	11/25/2014 4:23:31 PM	R22805

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-38
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 10:40:00 AM
Lab ID: 1411984-003
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**JME**
Diesel Range Organics (DRO)	3.8	1.0		mg/L	1	11/25/2014 4:56:24 PM	16539
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/25/2014 4:56:24 PM	16539
Surr: DNOP	109	59-141		%REC	1	11/25/2014 4:56:24 PM	16539
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	0.12	0.050		mg/L	1	11/26/2014 4:20:16 PM	R22836
Surr: BFB	91.1	80-120		%REC	1	11/26/2014 4:20:16 PM	R22836
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
Acenaphthene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Acenaphthylene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Aniline	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Anthracene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Azobenzene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Benz(a)anthracene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Benzo(a)pyrene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Benzo(b)fluoranthene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Benzo(g,h,i)perylene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Benzo(k)fluoranthene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Benzoic acid	ND	20		µg/L	1	12/2/2014 5:33:35 PM	16584
Benzyl alcohol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Bis(2-chloroethyl)ether	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
4-Bromophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Butyl benzyl phthalate	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Carbazole	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
4-Chloro-3-methylphenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
4-Chloroaniline	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
2-Chloronaphthalene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
2-Chlorophenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Chrysene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Di-n-butyl phthalate	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Di-n-octyl phthalate	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Dibenz(a,h)anthracene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Dibenzofuran	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
1,2-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
1,3-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-38
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 10:40:00 AM
Lab ID: 1411984-003
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
1,4-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
3,3´-Dichlorobenzidine	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Diethyl phthalate	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Dimethyl phthalate	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
2,4-Dichlorophenol	ND	20		µg/L	1	12/2/2014 5:33:35 PM	16584
2,4-Dimethylphenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	12/2/2014 5:33:35 PM	16584
2,4-Dinitrophenol	ND	20		µg/L	1	12/2/2014 5:33:35 PM	16584
2,4-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
2,6-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Fluoranthene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Fluorene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Hexachlorobenzene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Hexachlorobutadiene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Hexachlorocyclopentadiene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Hexachloroethane	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Isophorone	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
1-Methylnaphthalene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
2-Methylnaphthalene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
2-Methylphenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
3+4-Methylphenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
N-Nitrosodimethylamine	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
N-Nitrosodiphenylamine	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Naphthalene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
2-Nitroaniline	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
3-Nitroaniline	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
4-Nitroaniline	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Nitrobenzene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
2-Nitrophenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
4-Nitrophenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Pentachlorophenol	ND	20		µg/L	1	12/2/2014 5:33:35 PM	16584
Phenanthrene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Phenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Pyrene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Pyridine	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
1,2,4-Trichlorobenzene	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
2,4,5-Trichlorophenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-38
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 10:40:00 AM
Lab ID: 1411984-003
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
2,4,6-Trichlorophenol	ND	10		µg/L	1	12/2/2014 5:33:35 PM	16584
Surr: 2-Fluorophenol	79.5	17.6-104		%REC	1	12/2/2014 5:33:35 PM	16584
Surr: Phenol-d5	63.8	17.7-89.9		%REC	1	12/2/2014 5:33:35 PM	16584
Surr: 2,4,6-Tribromophenol	95.2	16.3-122		%REC	1	12/2/2014 5:33:35 PM	16584
Surr: Nitrobenzene-d5	83.4	45.3-117		%REC	1	12/2/2014 5:33:35 PM	16584
Surr: 2-Fluorobiphenyl	89.8	43-113		%REC	1	12/2/2014 5:33:35 PM	16584
Surr: 4-Terphenyl-d14	98.4	47.6-122		%REC	1	12/2/2014 5:33:35 PM	16584
EPA METHOD 8260B: VOLATILES						Analyst:	**DJF**
Benzene	2.8	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Toluene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Ethylbenzene	2.9	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Methyl tert-butyl ether (MTBE)	7.4	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,2,4-Trimethylbenzene	4.6	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,3,5-Trimethylbenzene	1.5	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Naphthalene	5.5	2.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1-Methylnaphthalene	8.8	4.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
2-Methylnaphthalene	9.8	4.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Acetone	ND	10		µg/L	1	11/25/2014 4:51:02 PM	R22805
Bromobenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Bromodichloromethane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Bromoform	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Bromomethane	ND	3.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
2-Butanone	ND	10		µg/L	1	11/25/2014 4:51:02 PM	R22805
Carbon disulfide	ND	10		µg/L	1	11/25/2014 4:51:02 PM	R22805
Carbon Tetrachloride	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Chlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Chloroethane	ND	2.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Chloroform	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Chloromethane	ND	3.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
2-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
4-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
cis-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Dibromochloromethane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Dibromomethane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-38
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 10:40:00 AM
Lab ID: 1411984-003
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,1-Dichloroethane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,1-Dichloroethene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,2-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,3-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
2,2-Dichloropropane	ND	2.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,1-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Hexachlorobutadiene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
2-Hexanone	ND	10		µg/L	1	11/25/2014 4:51:02 PM	R22805
Isopropylbenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
4-Isopropyltoluene	1.4	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
4-Methyl-2-pentanone	ND	10		µg/L	1	11/25/2014 4:51:02 PM	R22805
Methylene Chloride	ND	3.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
n-Butylbenzene	ND	3.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
n-Propylbenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
sec-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Styrene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
tert-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
trans-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Trichloroethene (TCE)	1.1	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Trichlorofluoromethane	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Vinyl chloride	ND	1.0		µg/L	1	11/25/2014 4:51:02 PM	R22805
Xylenes, Total	3.1	1.5		µg/L	1	11/25/2014 4:51:02 PM	R22805
Surr: 1,2-Dichloroethane-d4	78.5	70-130		%REC	1	11/25/2014 4:51:02 PM	R22805
Surr: 4-Bromofluorobenzene	87.7	70-130		%REC	1	11/25/2014 4:51:02 PM	R22805
Surr: Dibromofluoromethane	89.5	70-130		%REC	1	11/25/2014 4:51:02 PM	R22805
Surr: Toluene-d8	91.0	70-130		%REC	1	11/25/2014 4:51:02 PM	R22805

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-37
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 11:55:00 AM
Lab ID: 1411984-004
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**JME**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	11/25/2014 5:26:53 PM	16539
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/25/2014 5:26:53 PM	16539
Surr: DNOP	103	59-141		%REC	1	11/25/2014 5:26:53 PM	16539
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	8.7	0.50		mg/L	10	11/26/2014 5:14:34 PM	R22836
Surr: BFB	131	80-120	S	%REC	10	11/26/2014 5:14:34 PM	R22836
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
Acenaphthene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Acenaphthylene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Aniline	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Anthracene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Azobenzene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Benz(a)anthracene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Benzo(a)pyrene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Benzo(b)fluoranthene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Benzo(g,h,i)perylene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Benzo(k)fluoranthene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Benzoic acid	ND	20		µg/L	1	12/2/2014 6:01:08 PM	16584
Benzyl alcohol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Bis(2-chloroethyl)ether	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
4-Bromophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Butyl benzyl phthalate	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Carbazole	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
4-Chloro-3-methylphenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
4-Chloroaniline	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
2-Chloronaphthalene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
2-Chlorophenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Chrysene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Di-n-butyl phthalate	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Di-n-octyl phthalate	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Dibenz(a,h)anthracene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Dibenzofuran	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
1,2-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
1,3-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-37
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 11:55:00 AM
Lab ID: 1411984-004
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
1,4-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
3,3´-Dichlorobenzidine	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Diethyl phthalate	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Dimethyl phthalate	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
2,4-Dichlorophenol	ND	20		µg/L	1	12/2/2014 6:01:08 PM	16584
2,4-Dimethylphenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	12/2/2014 6:01:08 PM	16584
2,4-Dinitrophenol	ND	20		µg/L	1	12/2/2014 6:01:08 PM	16584
2,4-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
2,6-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Fluoranthene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Fluorene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Hexachlorobenzene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Hexachlorobutadiene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Hexachlorocyclopentadiene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Hexachloroethane	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Isophorone	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
1-Methylnaphthalene	50	10		µg/L	1	12/2/2014 6:01:08 PM	16584
2-Methylnaphthalene	56	10		µg/L	1	12/2/2014 6:01:08 PM	16584
2-Methylphenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
3+4-Methylphenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
N-Nitrosodimethylamine	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
N-Nitrosodiphenylamine	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Naphthalene	270	20		µg/L	2	12/3/2014 9:31:07 AM	16584
2-Nitroaniline	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
3-Nitroaniline	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
4-Nitroaniline	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Nitrobenzene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
2-Nitrophenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
4-Nitrophenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Pentachlorophenol	ND	20		µg/L	1	12/2/2014 6:01:08 PM	16584
Phenanthrene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Phenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Pyrene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Pyridine	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
1,2,4-Trichlorobenzene	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
2,4,5-Trichlorophenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-37
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 11:55:00 AM
Lab ID: 1411984-004
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
2,4,6-Trichlorophenol	ND	10		µg/L	1	12/2/2014 6:01:08 PM	16584
Surr: 2-Fluorophenol	86.3	17.6-104		%REC	1	12/2/2014 6:01:08 PM	16584
Surr: Phenol-d5	59.5	17.7-89.9		%REC	1	12/2/2014 6:01:08 PM	16584
Surr: 2,4,6-Tribromophenol	102	16.3-122		%REC	1	12/2/2014 6:01:08 PM	16584
Surr: Nitrobenzene-d5	86.4	45.3-117		%REC	1	12/2/2014 6:01:08 PM	16584
Surr: 2-Fluorobiphenyl	98.0	43-113		%REC	1	12/2/2014 6:01:08 PM	16584
Surr: 4-Terphenyl-d14	108	47.6-122		%REC	1	12/2/2014 6:01:08 PM	16584
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	140	20		µg/L	20	11/26/2014 11:21:16 AM	R22841
Toluene	200	20		µg/L	20	11/26/2014 11:21:16 AM	R22841
Ethylbenzene	9.3	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Methyl tert-butyl ether (MTBE)	27	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,2,4-Trimethylbenzene	510	20		µg/L	20	11/26/2014 11:21:16 AM	R22841
1,3,5-Trimethylbenzene	140	20		µg/L	20	11/26/2014 11:21:16 AM	R22841
1,2-Dichloroethane (EDC)	17	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,2-Dibromoethane (EDB)	1.5	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Naphthalene	350	40		µg/L	20	11/26/2014 11:21:16 AM	R22841
1-Methylnaphthalene	47	4.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
2-Methylnaphthalene	84	4.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Acetone	ND	10		µg/L	1	11/25/2014 5:18:29 PM	R22805
Bromobenzene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Bromodichloromethane	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Bromoform	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Bromomethane	ND	3.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
2-Butanone	ND	10		µg/L	1	11/25/2014 5:18:29 PM	R22805
Carbon disulfide	ND	10		µg/L	1	11/25/2014 5:18:29 PM	R22805
Carbon Tetrachloride	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Chlorobenzene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Chloroethane	ND	2.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Chloroform	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Chloromethane	ND	3.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
2-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
4-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
cis-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Dibromochloromethane	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Dibromomethane	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-37
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 11:55:00 AM
Lab ID: 1411984-004
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,1-Dichloroethane	34	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,1-Dichloroethene	210	20		µg/L	20	11/26/2014 11:21:16 AM	R22841
1,2-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,3-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
2,2-Dichloropropane	ND	2.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,1-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Hexachlorobutadiene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
2-Hexanone	ND	10		µg/L	1	11/25/2014 5:18:29 PM	R22805
Isopropylbenzene	78	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
4-Isopropyltoluene	4.8	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
4-Methyl-2-pentanone	ND	10		µg/L	1	11/25/2014 5:18:29 PM	R22805
Methylene Chloride	ND	3.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
n-Butylbenzene	26	3.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
n-Propylbenzene	82	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
sec-Butylbenzene	11	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Styrene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
tert-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
trans-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,1,2-Trichloroethane	1.7	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Trichloroethene (TCE)	300	20		µg/L	20	11/26/2014 11:21:16 AM	R22841
Trichlorofluoromethane	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Vinyl chloride	ND	1.0		µg/L	1	11/25/2014 5:18:29 PM	R22805
Xylenes, Total	1300	30		µg/L	20	11/26/2014 11:21:16 AM	R22841
Surr: 1,2-Dichloroethane-d4	98.1	70-130		%REC	1	11/25/2014 5:18:29 PM	R22805
Surr: 4-Bromofluorobenzene	92.2	70-130		%REC	1	11/25/2014 5:18:29 PM	R22805
Surr: Dibromofluoromethane	83.3	70-130		%REC	1	11/25/2014 5:18:29 PM	R22805
Surr: Toluene-d8	90.9	70-130		%REC	1	11/25/2014 5:18:29 PM	R22805

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-35
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 12:40:00 PM
Lab ID: 1411984-005
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**JME**
Diesel Range Organics (DRO)	3.3	1.0		mg/L	1	11/25/2014 5:57:22 PM	16539
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/25/2014 5:57:22 PM	16539
Surr: DNOP	104	59-141		%REC	1	11/25/2014 5:57:22 PM	16539
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	1.6	0.25		mg/L	5	11/26/2014 6:36:38 PM	R22836
Surr: BFB	91.3	80-120		%REC	5	11/26/2014 6:36:38 PM	R22836
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
Acenaphthene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Acenaphthylene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Aniline	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Anthracene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Azobenzene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Benz(a)anthracene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Benzo(a)pyrene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Benzo(b)fluoranthene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Benzo(g,h,i)perylene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Benzo(k)fluoranthene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Benzoic acid	ND	20		µg/L	1	12/2/2014 6:28:36 PM	16584
Benzyl alcohol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Bis(2-chloroethyl)ether	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
4-Bromophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Butyl benzyl phthalate	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Carbazole	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
4-Chloro-3-methylphenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
4-Chloroaniline	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
2-Chloronaphthalene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
2-Chlorophenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Chrysene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Di-n-butyl phthalate	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Di-n-octyl phthalate	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Dibenz(a,h)anthracene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Dibenzofuran	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
1,2-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
1,3-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-35
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 12:40:00 PM
Lab ID: 1411984-005
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
1,4-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
3,3´-Dichlorobenzidine	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Diethyl phthalate	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Dimethyl phthalate	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
2,4-Dichlorophenol	ND	20		µg/L	1	12/2/2014 6:28:36 PM	16584
2,4-Dimethylphenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	12/2/2014 6:28:36 PM	16584
2,4-Dinitrophenol	ND	20		µg/L	1	12/2/2014 6:28:36 PM	16584
2,4-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
2,6-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Fluoranthene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Fluorene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Hexachlorobenzene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Hexachlorobutadiene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Hexachlorocyclopentadiene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Hexachloroethane	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Isophorone	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
1-Methylnaphthalene	34	10		µg/L	1	12/2/2014 6:28:36 PM	16584
2-Methylnaphthalene	45	10		µg/L	1	12/2/2014 6:28:36 PM	16584
2-Methylphenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
3+4-Methylphenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
N-Nitrosodimethylamine	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
N-Nitrosodiphenylamine	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Naphthalene	36	10		µg/L	1	12/2/2014 6:28:36 PM	16584
2-Nitroaniline	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
3-Nitroaniline	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
4-Nitroaniline	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Nitrobenzene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
2-Nitrophenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
4-Nitrophenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Pentachlorophenol	ND	20		µg/L	1	12/2/2014 6:28:36 PM	16584
Phenanthrene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Phenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Pyrene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Pyridine	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
1,2,4-Trichlorobenzene	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
2,4,5-Trichlorophenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-35
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 12:40:00 PM
Lab ID: 1411984-005
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
2,4,6-Trichlorophenol	ND	10		µg/L	1	12/2/2014 6:28:36 PM	16584
Surr: 2-Fluorophenol	72.7	17.6-104		%REC	1	12/2/2014 6:28:36 PM	16584
Surr: Phenol-d5	59.1	17.7-89.9		%REC	1	12/2/2014 6:28:36 PM	16584
Surr: 2,4,6-Tribromophenol	96.2	16.3-122		%REC	1	12/2/2014 6:28:36 PM	16584
Surr: Nitrobenzene-d5	83.0	45.3-117		%REC	1	12/2/2014 6:28:36 PM	16584
Surr: 2-Fluorobiphenyl	99.1	43-113		%REC	1	12/2/2014 6:28:36 PM	16584
Surr: 4-Terphenyl-d14	100	47.6-122		%REC	1	12/2/2014 6:28:36 PM	16584
EPA METHOD 8260B: VOLATILES						Analyst:	**DJF**
Benzene	39	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Toluene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Ethylbenzene	52	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Methyl tert-butyl ether (MTBE)	66	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,2,4-Trimethylbenzene	120	10		µg/L	10	11/26/2014 11:48:52 AM	R22841
1,3,5-Trimethylbenzene	50	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Naphthalene	40	2.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1-Methylnaphthalene	38	4.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
2-Methylnaphthalene	59	4.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Acetone	ND	10		µg/L	1	11/25/2014 6:13:36 PM	R22805
Bromobenzene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Bromodichloromethane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Bromoform	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Bromomethane	ND	3.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
2-Butanone	ND	10		µg/L	1	11/25/2014 6:13:36 PM	R22805
Carbon disulfide	ND	10		µg/L	1	11/25/2014 6:13:36 PM	R22805
Carbon Tetrachloride	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Chlorobenzene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Chloroethane	ND	2.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Chloroform	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Chloromethane	ND	3.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
2-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
4-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
cis-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Dibromochloromethane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Dibromomethane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-35
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 12:40:00 PM
Lab ID: 1411984-005
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,1-Dichloroethane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,1-Dichloroethene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,2-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,3-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
2,2-Dichloropropane	ND	2.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,1-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Hexachlorobutadiene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
2-Hexanone	ND	10		µg/L	1	11/25/2014 6:13:36 PM	R22805
Isopropylbenzene	5.1	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
4-Isopropyltoluene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
4-Methyl-2-pentanone	ND	10		µg/L	1	11/25/2014 6:13:36 PM	R22805
Methylene Chloride	ND	3.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
n-Butylbenzene	6.1	3.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
n-Propylbenzene	28	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
sec-Butylbenzene	2.7	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Styrene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
tert-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
trans-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Trichlorofluoromethane	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Vinyl chloride	ND	1.0		µg/L	1	11/25/2014 6:13:36 PM	R22805
Xylenes, Total	73	1.5		µg/L	1	11/25/2014 6:13:36 PM	R22805
Surr: 1,2-Dichloroethane-d4	77.7	70-130		%REC	1	11/25/2014 6:13:36 PM	R22805
Surr: 4-Bromofluorobenzene	84.2	70-130		%REC	1	11/25/2014 6:13:36 PM	R22805
Surr: Dibromofluoromethane	86.9	70-130		%REC	1	11/25/2014 6:13:36 PM	R22805
Surr: Toluene-d8	88.8	70-130		%REC	1	11/25/2014 6:13:36 PM	R22805

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-36
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 1:30:00 PM
Lab ID: 1411984-006
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**JME**
Diesel Range Organics (DRO)	6.8	1.0		mg/L	1	11/25/2014 6:27:26 PM	16539
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	11/25/2014 6:27:26 PM	16539
Surr: DNOP	92.2	59-141		%REC	1	11/25/2014 6:27:26 PM	16539
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	25	5.0		mg/L	100	11/26/2014 7:03:58 PM	R22836
Surr: BFB	91.6	80-120		%REC	100	11/26/2014 7:03:58 PM	R22836
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
Acenaphthene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Acenaphthylene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Aniline	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Anthracene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Azobenzene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Benz(a)anthracene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Benzo(a)pyrene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Benzo(b)fluoranthene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Benzo(g,h,i)perylene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Benzo(k)fluoranthene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Benzoic acid	ND	20		µg/L	1	12/2/2014 6:56:01 PM	16584
Benzyl alcohol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Bis(2-chloroethyl)ether	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
4-Bromophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Butyl benzyl phthalate	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Carbazole	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
4-Chloro-3-methylphenol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
4-Chloroaniline	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
2-Chloronaphthalene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
2-Chlorophenol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Chrysene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Di-n-butyl phthalate	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Di-n-octyl phthalate	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Dibenz(a,h)anthracene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Dibenzofuran	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
1,2-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
1,3-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-36
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 1:30:00 PM
Lab ID: 1411984-006
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
1,4-Dichlorobenzene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
3,3´-Dichlorobenzidine	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Diethyl phthalate	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Dimethyl phthalate	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
2,4-Dichlorophenol	ND	20		µg/L	1	12/2/2014 6:56:01 PM	16584
2,4-Dimethylphenol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	12/2/2014 6:56:01 PM	16584
2,4-Dinitrophenol	ND	20		µg/L	1	12/2/2014 6:56:01 PM	16584
2,4-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
2,6-Dinitrotoluene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Fluoranthene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Fluorene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Hexachlorobenzene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Hexachlorobutadiene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Hexachlorocyclopentadiene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Hexachloroethane	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Isophorone	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
1-Methylnaphthalene	160	10		µg/L	1	12/2/2014 6:56:01 PM	16584
2-Methylnaphthalene	230	10		µg/L	1	12/2/2014 6:56:01 PM	16584
2-Methylphenol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
3+4-Methylphenol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
N-Nitrosodimethylamine	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
N-Nitrosodiphenylamine	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Naphthalene	280	20		µg/L	2	12/3/2014 9:58:32 AM	16584
2-Nitroaniline	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
3-Nitroaniline	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
4-Nitroaniline	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Nitrobenzene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
2-Nitrophenol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
4-Nitrophenol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Pentachlorophenol	ND	20		µg/L	1	12/2/2014 6:56:01 PM	16584
Phenanthrene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Phenol	15	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Pyrene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Pyridine	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
1,2,4-Trichlorobenzene	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
2,4,5-Trichlorophenol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-36
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 1:30:00 PM
Lab ID: 1411984-006
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
2,4,6-Trichlorophenol	ND	10		µg/L	1	12/2/2014 6:56:01 PM	16584
Surr: 2-Fluorophenol	52.4	17.6-104		%REC	1	12/2/2014 6:56:01 PM	16584
Surr: Phenol-d5	50.2	17.7-89.9		%REC	1	12/2/2014 6:56:01 PM	16584
Surr: 2,4,6-Tribromophenol	73.8	16.3-122		%REC	1	12/2/2014 6:56:01 PM	16584
Surr: Nitrobenzene-d5	64.7	45.3-117		%REC	1	12/2/2014 6:56:01 PM	16584
Surr: 2-Fluorobiphenyl	68.9	43-113		%REC	1	12/2/2014 6:56:01 PM	16584
Surr: 4-Terphenyl-d14	75.2	47.6-122		%REC	1	12/2/2014 6:56:01 PM	16584
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	8400	200		µg/L	200	11/26/2014 12:16:34 PM	R22841
Toluene	32	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Ethylbenzene	1500	200		µg/L	200	11/26/2014 12:16:34 PM	R22841
Methyl tert-butyl ether (MTBE)	7200	200		µg/L	200	11/26/2014 12:16:34 PM	R22841
1,2,4-Trimethylbenzene	270	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,3,5-Trimethylbenzene	62	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Naphthalene	590	20		µg/L	10	11/25/2014 7:08:09 PM	R22805
1-Methylnaphthalene	340	40		µg/L	10	11/25/2014 7:08:09 PM	R22805
2-Methylnaphthalene	530	40		µg/L	10	11/25/2014 7:08:09 PM	R22805
Acetone	ND	100		µg/L	10	11/25/2014 7:08:09 PM	R22805
Bromobenzene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Bromodichloromethane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Bromoform	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Bromomethane	ND	30		µg/L	10	11/25/2014 7:08:09 PM	R22805
2-Butanone	ND	100		µg/L	10	11/25/2014 7:08:09 PM	R22805
Carbon disulfide	ND	100		µg/L	10	11/25/2014 7:08:09 PM	R22805
Carbon Tetrachloride	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Chlorobenzene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Chloroethane	ND	20		µg/L	10	11/25/2014 7:08:09 PM	R22805
Chloroform	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Chloromethane	ND	30		µg/L	10	11/25/2014 7:08:09 PM	R22805
2-Chlorotoluene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
4-Chlorotoluene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
cis-1,2-DCE	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
cis-1,3-Dichloropropene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	11/25/2014 7:08:09 PM	R22805
Dibromochloromethane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Dibromomethane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,2-Dichlorobenzene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-36
Project: Hydrocarbon Seep
Collection Date: 11/21/2014 1:30:00 PM
Lab ID: 1411984-006
Matrix: AQUEOUS
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,3-Dichlorobenzene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,4-Dichlorobenzene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Dichlorodifluoromethane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,1-Dichloroethane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,1-Dichloroethene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,2-Dichloropropane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,3-Dichloropropane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
2,2-Dichloropropane	ND	20		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,1-Dichloropropene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Hexachlorobutadiene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
2-Hexanone	ND	100		µg/L	10	11/25/2014 7:08:09 PM	R22805
Isopropylbenzene	41	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
4-Isopropyltoluene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
4-Methyl-2-pentanone	ND	100		µg/L	10	11/25/2014 7:08:09 PM	R22805
Methylene Chloride	ND	30		µg/L	10	11/25/2014 7:08:09 PM	R22805
n-Butylbenzene	ND	30		µg/L	10	11/25/2014 7:08:09 PM	R22805
n-Propylbenzene	99	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
sec-Butylbenzene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Styrene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
tert-Butylbenzene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	11/25/2014 7:08:09 PM	R22805
Tetrachloroethene (PCE)	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
trans-1,2-DCE	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
trans-1,3-Dichloropropene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,2,3-Trichlorobenzene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,2,4-Trichlorobenzene	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,1,1-Trichloroethane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,1,2-Trichloroethane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Trichloroethene (TCE)	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Trichlorofluoromethane	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
1,2,3-Trichloropropane	ND	20		µg/L	10	11/25/2014 7:08:09 PM	R22805
Vinyl chloride	ND	10		µg/L	10	11/25/2014 7:08:09 PM	R22805
Xylenes, Total	560	15		µg/L	10	11/25/2014 7:08:09 PM	R22805
Surr: 1,2-Dichloroethane-d4	84.3	70-130		%REC	10	11/25/2014 7:08:09 PM	R22805
Surr: 4-Bromofluorobenzene	87.9	70-130		%REC	10	11/25/2014 7:08:09 PM	R22805
Surr: Dibromofluoromethane	93.1	70-130		%REC	10	11/25/2014 7:08:09 PM	R22805
Surr: Toluene-d8	89.0	70-130		%REC	10	11/25/2014 7:08:09 PM	R22805

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Trip Blank
Project: Hydrocarbon Seep
Collection Date:
Lab ID: 1411984-007
Matrix: TRIP BLANK
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	11/26/2014 7:31:15 PM	R22836
Surr: BFB	89.8	80-120		%REC	1	11/26/2014 7:31:15 PM	R22836
EPA METHOD 8260B: VOLATILES						Analyst:	**DJF**
Benzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Toluene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Ethylbenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Naphthalene	ND	2.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1-Methylnaphthalene	ND	4.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
2-Methylnaphthalene	ND	4.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Acetone	ND	10		µg/L	1	11/25/2014 7:35:39 PM	R22805
Bromobenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Bromodichloromethane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Bromoform	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Bromomethane	ND	3.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
2-Butanone	ND	10		µg/L	1	11/25/2014 7:35:39 PM	R22805
Carbon disulfide	ND	10		µg/L	1	11/25/2014 7:35:39 PM	R22805
Carbon Tetrachloride	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Chlorobenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Chloroethane	ND	2.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Chloroform	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Chloromethane	ND	3.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
2-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
4-Chlorotoluene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
cis-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Dibromochloromethane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Dibromomethane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,1-Dichloroethane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,1-Dichloroethene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: Trip Blank
Project: Hydrocarbon Seep
Collection Date:
Lab ID: 1411984-007
Matrix: TRIP BLANK
Received Date: 11/22/2014 8:37:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,2-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,3-Dichloropropane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
2,2-Dichloropropane	ND	2.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,1-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Hexachlorobutadiene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
2-Hexanone	ND	10		µg/L	1	11/25/2014 7:35:39 PM	R22805
Isopropylbenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
4-Isopropyltoluene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
4-Methyl-2-pentanone	ND	10		µg/L	1	11/25/2014 7:35:39 PM	R22805
Methylene Chloride	ND	3.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
n-Butylbenzene	ND	3.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
n-Propylbenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
sec-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Styrene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
tert-Butylbenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
trans-1,2-DCE	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Trichlorofluoromethane	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Vinyl chloride	ND	1.0		µg/L	1	11/25/2014 7:35:39 PM	R22805
Xylenes, Total	ND	1.5		µg/L	1	11/25/2014 7:35:39 PM	R22805
Surr: 1,2-Dichloroethane-d4	82.3	70-130		%REC	1	11/25/2014 7:35:39 PM	R22805
Surr: 4-Bromofluorobenzene	85.7	70-130		%REC	1	11/25/2014 7:35:39 PM	R22805
Surr: Dibromofluoromethane	95.6	70-130		%REC	1	11/25/2014 7:35:39 PM	R22805
Surr: Toluene-d8	92.6	70-130		%REC	1	11/25/2014 7:35:39 PM	R22805

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411984**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID	**MB-16539**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Diesel Range**					
Client ID:	**PBW**	Batch ID:	**16539**	RunNo:	**22772**					
Prep Date:	**11/24/2014**	Analysis Date:	**11/25/2014**	SeqNo:	**672635**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.0		1.000		101	59	141			

Sample ID	**LCS-16539**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Diesel Range**					
Client ID:	**LCSW**	Batch ID:	**16539**	RunNo:	**22764**					
Prep Date:	**11/24/2014**	Analysis Date:	**11/25/2014**	SeqNo:	**672636**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.9	1.0	5.000	0	117	69.7	142			
Surr: DNOP	0.62		0.5000		123	59	141			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411984**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW** Batch ID: **R22836** RunNo: **22836**
Prep Date: Analysis Date: **11/26/2014** SeqNo: **673913** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	17		20.00		86.5	80	120			

Sample ID **2.5UG GRO LCS** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW** Batch ID: **R22836** RunNo: **22836**
Prep Date: Analysis Date: **11/26/2014** SeqNo: **673914** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.45	0.050	0.5000	0	89.8	80	120			
Surr: BFB	18		20.00		92.4	80	120			

Sample ID **1411984-004BMS** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-37** Batch ID: **R22836** RunNo: **22836**
Prep Date: Analysis Date: **11/26/2014** SeqNo: **673928** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	14	0.50	5.000	8.746	103	70.4	127			
Surr: BFB	280		200.0		141	80	120			S

Sample ID **1411984-004BMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **MKTF-37** Batch ID: **R22836** RunNo: **22836**
Prep Date: Analysis Date: **11/26/2014** SeqNo: **673929** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	14	0.50	5.000	8.746	98.4	70.4	127	1.71	20	
Surr: BFB	280		200.0		140	80	120	0	0	S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411984**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **5ml rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R22805**	RunNo: **22805**			
Prep Date:	Analysis Date: **11/25/2014**	SeqNo: **672998**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411984**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **5ml rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R22805**	RunNo: **22805**
Prep Date:	Analysis Date: **11/25/2014**	SeqNo: **672998** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.8		10.00		88.3	70	130			
Surr: 4-Bromofluorobenzene	8.8		10.00		87.9	70	130			
Surr: Dibromofluoromethane	9.4		10.00		94.4	70	130			
Surr: Toluene-d8	9.0		10.00		89.7	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R22805**	RunNo: **22805**
Prep Date:	Analysis Date: **11/25/2014**	SeqNo: **673000** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	22	1.0	20.00	0	108	80	120			
Chlorobenzene	22	1.0	20.00	0	109	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411984**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22805** RunNo: **22805**
Prep Date: Analysis Date: **11/25/2014** SeqNo: **673000** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	23	1.0	20.00	0	113	82.6	131			
Trichloroethene (TCE)	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	8.6		10.00		86.5	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		86.8	70	130			
Surr: Dibromofluoromethane	8.1		10.00		80.6	70	130			
Surr: Toluene-d8	8.8		10.00		88.5	70	130			

Sample ID **5ml rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R22841** RunNo: **22841**
Prep Date: Analysis Date: **11/26/2014** SeqNo: **674028** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Naphthalene	ND	2.0								
1,1-Dichloroethene	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.6		10.00		86.5	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		92.7	70	130			
Surr: Dibromofluoromethane	9.5		10.00		95.1	70	130			
Surr: Toluene-d8	9.3		10.00		93.4	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R22841** RunNo: **22841**
Prep Date: Analysis Date: **11/26/2014** SeqNo: **674030** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	70	130			
Toluene	22	1.0	20.00	0	108	80	120			
1,1-Dichloroethene	22	1.0	20.00	0	110	82.6	131			
Trichloroethene (TCE)	20	1.0	20.00	0	99.1	70	130			
Surr: 1,2-Dichloroethane-d4	8.5		10.00		84.7	70	130			
Surr: 4-Bromofluorobenzene	9.0		10.00		90.3	70	130			
Surr: Dibromofluoromethane	9.3		10.00		93.5	70	130			
Surr: Toluene-d8	9.2		10.00		91.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411984**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **mb-16584**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **16584**	RunNo: **22880**			
Prep Date: **11/26/2014**	Analysis Date: **12/2/2014**	SeqNo: **675850**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411984**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **mb-16584**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **16584**	RunNo: **22880**			
Prep Date: **11/26/2014**	Analysis Date: **12/2/2014**	SeqNo: **675850**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	160		200.0		80.0	17.6	104			
Surr: Phenol-d5	160		200.0		81.3	17.7	89.9			
Surr: 2,4,6-Tribromophenol	160		200.0		78.0	16.3	122			
Surr: Nitrobenzene-d5	77		100.0		76.6	45.3	117			
Surr: 2-Fluorobiphenyl	80		100.0		80.2	43	113			
Surr: 4-Terphenyl-d14	89		100.0		89.1	47.6	122			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411984**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID **lcs-16584** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **16584** RunNo: **22880**
Prep Date: **11/26/2014** Analysis Date: **12/2/2014** SeqNo: **675851** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	74	10	100.0	0	73.5	47.9	114			
4-Chloro-3-methylphenol	160	10	200.0	0	82.2	51.7	122			
2-Chlorophenol	150	10	200.0	0	73.6	40.7	113			
1,4-Dichlorobenzene	72	10	100.0	0	72.5	39.6	99.9			
2,4-Dinitrotoluene	60	10	100.0	0	60.0	40.8	113			
N-Nitrosodi-n-propylamine	83	10	100.0	0	83.2	51.2	111			
4-Nitrophenol	150	10	200.0	0	73.4	15.7	86.9			
Pentachlorophenol	130	20	200.0	0	65.7	21.6	104			
Phenol	170	10	200.0	0	83.2	28.6	71.7			S
Pyrene	74	10	100.0	0	73.7	54.2	128			
1,2,4-Trichlorobenzene	68	10	100.0	0	67.6	40.9	101			
Surr: 2-Fluorophenol	150		200.0		75.4	17.6	104			
Surr: Phenol-d5	160		200.0		78.8	17.7	89.9			
Surr: 2,4,6-Tribromophenol	150		200.0		75.4	16.3	122			
Surr: Nitrobenzene-d5	70		100.0		70.3	45.3	117			
Surr: 2-Fluorobiphenyl	72		100.0		71.9	43	113			
Surr: 4-Terphenyl-d14	86		100.0		85.6	47.6	122			

Sample ID **lcsd-16584** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **16584** RunNo: **22880**
Prep Date: **11/26/2014** Analysis Date: **12/2/2014** SeqNo: **675852** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	74	10	100.0	0	73.7	47.9	114	0.163	27.2	
4-Chloro-3-methylphenol	160	10	200.0	0	80.6	51.7	122	1.93	25.9	
2-Chlorophenol	150	10	200.0	0	73.0	40.7	113	0.819	22.5	
1,4-Dichlorobenzene	69	10	100.0	0	68.7	39.6	99.9	5.30	24.6	
2,4-Dinitrotoluene	72	10	100.0	0	71.9	40.8	113	18.0	25.3	
N-Nitrosodi-n-propylamine	78	10	100.0	0	77.7	51.2	111	6.74	23.6	
4-Nitrophenol	170	10	200.0	0	85.8	15.7	86.9	15.7	34.7	
Pentachlorophenol	160	20	200.0	0	78.8	21.6	104	18.1	32.8	
Phenol	160	10	200.0	0	80.6	28.6	71.7	3.21	25.5	S
Pyrene	73	10	100.0	0	73.5	54.2	128	0.326	31.4	
1,2,4-Trichlorobenzene	62	10	100.0	0	61.6	40.9	101	9.35	25.9	
Surr: 2-Fluorophenol	130		200.0		67.0	17.6	104	0	0	
Surr: Phenol-d5	140		200.0		70.0	17.7	89.9	0	0	
Surr: 2,4,6-Tribromophenol	160		200.0		79.8	16.3	122	0	0	
Surr: Nitrobenzene-d5	64		100.0		64.2	45.3	117	0	0	
Surr: 2-Fluorobiphenyl	67		100.0		67.1	43	113	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411984**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Hydrocarbon Seep

Sample ID	**lcsd-16584**	SampType:	**LCSD**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**LCSS02**	Batch ID:	**16584**	RunNo:	**22880**
Prep Date:	**11/26/2014**	Analysis Date:	**12/2/2014**	SeqNo:	**675852** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	85		100.0		85.5	47.6	122	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Western Refining Gallup** Work Order Number: **1411984** RcptNo: **1**

Received by/date: 11/22/14

Logged By: **Lindsay Mangin** **11/22/2014 8:37:00 AM**

Completed By: **Lindsay Mangin** **11/22/2014 10:09:42 AM**

Reviewed By: AT 11/24/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: (<2 or >12 unless noted)
Adjusted?
Checked by:

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes			

Chain-of-Custody Record

Client: WNR - GALLUP REFINERY

Mailing Address: ROUTE 3 BOX 7
GALLUP NM 87301

Phone #: 505-722-0231

email or Fax#: CHERYL.JOHNSON@WNR.COM

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____
☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: HYDROCARBON SEEP

Project #:

Project Manager: CHERYL JOHNSON

Sampler: TRACY PAYNE

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.8

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1411984	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)				Air Bubbles (Y or N)
11/21/14	0830	GW	MKTF-44	7	HCL/NEAT	-001			✓							✓	✓				
	0930	GW	MKTF-40			-002			✓							✓	✓				
	1040	GW	MKTF-38			-003			✓							✓	✓				
	1155	GW	MKTF-37			-004			✓							✓	✓				
	1240	GW	MKTF-35			-005			✓							✓	✓				
	1330	GW	MKTF-36			-006			✓							✓	✓				
	—	W	TRIP BLANK	3	HCL	-007			✓							✓					

Date:	Time:	Relinquished by:	Received by:	Date	Time
11/22/14	0837	[illegible]	[illegible]	11/22/14	0837
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 07, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: 2014 Annual GW OrderNo.: 1409A34

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 9 sample(s) on 9/19/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1409A34**
Date Reported: **10/7/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: RW-6
Project: 2014 Annual GW
Collection Date: 9/18/2014 10:50:00 AM
Lab ID: 1409A34-001
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	10	1.0		mg/L	1	9/23/2014 8:18:40 AM	15424
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/23/2014 8:18:40 AM	15424
Surr: DNOP	121	59-141		%REC	1	9/23/2014 8:18:40 AM	15424
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	13	2.5		mg/L	50	9/25/2014 1:31:27 AM	R21431
Surr: BFB	95.0	70.9-130		%REC	50	9/25/2014 1:31:27 AM	R21431
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	3.2	0.020	*	mg/L	10	9/25/2014 5:17:13 PM	R21450
Cadmium	ND	0.0020		mg/L	1	9/25/2014 3:31:41 PM	R21450
Chromium	ND	0.0060		mg/L	1	9/25/2014 3:31:41 PM	R21450
Copper	ND	0.0060		mg/L	1	9/25/2014 3:31:41 PM	R21450
Iron	6.5	0.20	*	mg/L	10	9/25/2014 5:17:13 PM	R21450
Manganese	0.75	0.0020	*	mg/L	1	9/25/2014 3:31:41 PM	R21450
Silver	ND	0.0050		mg/L	1	9/25/2014 3:31:41 PM	R21450
Zinc	0.024	0.010		mg/L	1	9/25/2014 3:31:41 PM	R21450
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	3.3	0.010	*	mg/L	5	9/25/2014 6:09:04 PM	15445
Cadmium	ND	0.0020		mg/L	1	9/25/2014 3:04:15 PM	15445
Chromium	ND	0.0060		mg/L	1	9/25/2014 3:04:15 PM	15445
Copper	ND	0.0060		mg/L	1	9/25/2014 3:04:15 PM	15445
Iron	6.8	0.20	*	mg/L	10	9/25/2014 6:22:36 PM	15445
Manganese	0.79	0.010	*	mg/L	5	9/25/2014 6:09:04 PM	15445
Silver	ND	0.0050		mg/L	1	9/25/2014 3:04:15 PM	15445
Zinc	ND	0.010		mg/L	1	9/25/2014 3:04:15 PM	15445
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.014	0.0050	*	mg/L	5	10/2/2014 4:58:06 PM	R21629
Lead	0.0049	0.0010		mg/L	1	9/30/2014 2:04:42 PM	R21559
Selenium	ND	0.0050		mg/L	5	10/2/2014 4:58:06 PM	R21629
Uranium	ND	0.0010		mg/L	1	9/30/2014 2:04:42 PM	R21559
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.014	0.0010	*	mg/L	1	10/2/2014 2:02:02 PM	15445
Lead	0.0067	0.0010		mg/L	1	10/2/2014 2:02:02 PM	15445
Selenium	0.0015	0.0010		mg/L	1	10/2/2014 2:02:02 PM	15445
Uranium	ND	0.0010		mg/L	1	10/2/2014 2:02:02 PM	15445
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/26/2014 3:15:30 PM	15531

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: RW-6
Project: 2014 Annual GW
Collection Date: 9/18/2014 10:50:00 AM
Lab ID: 1409A34-001
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
Acenaphthene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Acenaphthylene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Aniline	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Anthracene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Azobenzene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Benz(a)anthracene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Benzo(a)pyrene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Benzo(b)fluoranthene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Benzo(k)fluoranthene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Benzoic acid	ND	20		µg/L	1	9/24/2014 6:28:56 PM	15440
Benzyl alcohol	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Butyl benzyl phthalate	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Carbazole	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
4-Chloroaniline	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
2-Chloronaphthalene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
2-Chlorophenol	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Chrysene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Di-n-butyl phthalate	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Di-n-octyl phthalate	ND	20		µg/L	1	9/24/2014 6:28:56 PM	15440
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Dibenzofuran	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
1,2-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
1,3-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
1,4-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Diethyl phthalate	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Dimethyl phthalate	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
2,4-Dichlorophenol	ND	20		µg/L	1	9/24/2014 6:28:56 PM	15440
2,4-Dimethylphenol	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/24/2014 6:28:56 PM	15440
2,4-Dinitrophenol	ND	20		µg/L	1	9/24/2014 6:28:56 PM	15440

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: RW-6
Project: 2014 Annual GW
Collection Date: 9/18/2014 10:50:00 AM
Lab ID: 1409A34-001
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
2,4-Dinitrotoluene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
2,6-Dinitrotoluene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Fluoranthene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Fluorene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Hexachlorobenzene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Hexachlorobutadiene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Hexachloroethane	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Isophorone	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
1-Methylnaphthalene	170	10		µg/L	1	9/24/2014 6:28:56 PM	15440
2-Methylnaphthalene	190	50		µg/L	5	9/25/2014 2:30:16 PM	15440
2-Methylphenol	ND	20		µg/L	1	9/24/2014 6:28:56 PM	15440
3+4-Methylphenol	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
N-Nitrosodimethylamine	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Naphthalene	350	50		µg/L	5	9/25/2014 2:30:16 PM	15440
2-Nitroaniline	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
3-Nitroaniline	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
4-Nitroaniline	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Nitrobenzene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
2-Nitrophenol	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
4-Nitrophenol	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Pentachlorophenol	ND	20		µg/L	1	9/24/2014 6:28:56 PM	15440
Phenanthrene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Phenol	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Pyrene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Pyridine	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/24/2014 6:28:56 PM	15440
Surr: 2-Fluorophenol	83.3	12.1-85.8		%REC	1	9/24/2014 6:28:56 PM	15440
Surr: Phenol-d5	58.1	17.7-65.8		%REC	1	9/24/2014 6:28:56 PM	15440
Surr: 2,4,6-Tribromophenol	90.4	26-138		%REC	1	9/24/2014 6:28:56 PM	15440
Surr: Nitrobenzene-d5	88.1	47.5-119		%REC	1	9/24/2014 6:28:56 PM	15440
Surr: 2-Fluorobiphenyl	95.9	48.1-106		%REC	1	9/24/2014 6:28:56 PM	15440
Surr: 4-Terphenyl-d14	104	44-113		%REC	1	9/24/2014 6:28:56 PM	15440
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: RW-6
Project: 2014 Annual GW
Collection Date: 9/18/2014 10:50:00 AM
Lab ID: 1409A34-001
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	470	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Toluene	230	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Ethylbenzene	450	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Methyl tert-butyl ether (MTBE)	46	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,2,4-Trimethylbenzene	170	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,3,5-Trimethylbenzene	170	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Naphthalene	570	20		µg/L	10	9/29/2014 3:10:55 PM	R21507
1-Methylnaphthalene	190	40		µg/L	10	9/29/2014 3:10:55 PM	R21507
2-Methylnaphthalene	280	40		µg/L	10	9/29/2014 3:10:55 PM	R21507
Acetone	ND	100		µg/L	10	9/29/2014 3:10:55 PM	R21507
Bromobenzene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Bromodichloromethane	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Bromoform	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Bromomethane	ND	30		µg/L	10	9/29/2014 3:10:55 PM	R21507
2-Butanone	ND	100		µg/L	10	9/29/2014 3:10:55 PM	R21507
Carbon disulfide	ND	100		µg/L	10	9/29/2014 3:10:55 PM	R21507
Carbon Tetrachloride	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Chlorobenzene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Chloroethane	ND	20		µg/L	10	9/29/2014 3:10:55 PM	R21507
Chloroform	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Chloromethane	ND	30		µg/L	10	9/29/2014 3:10:55 PM	R21507
2-Chlorotoluene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
4-Chlorotoluene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
cis-1,2-DCE	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
cis-1,3-Dichloropropene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	9/29/2014 3:10:55 PM	R21507
Dibromochloromethane	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Dibromomethane	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,2-Dichlorobenzene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,3-Dichlorobenzene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,4-Dichlorobenzene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Dichlorodifluoromethane	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,1-Dichloroethane	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,1-Dichloroethene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,2-Dichloropropane	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,3-Dichloropropane	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
2,2-Dichloropropane	ND	20		µg/L	10	9/29/2014 3:10:55 PM	R21507

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: RW-6
Project: 2014 Annual GW
Collection Date: 9/18/2014 10:50:00 AM
Lab ID: 1409A34-001
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Hexachlorobutadiene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
2-Hexanone	ND	100		µg/L	10	9/29/2014 3:10:55 PM	R21507
Isopropylbenzene	45	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
4-Isopropyltoluene	11	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
4-Methyl-2-pentanone	ND	100		µg/L	10	9/29/2014 3:10:55 PM	R21507
Methylene Chloride	ND	30		µg/L	10	9/29/2014 3:10:55 PM	R21507
n-Butylbenzene	ND	30		µg/L	10	9/29/2014 3:10:55 PM	R21507
n-Propylbenzene	110	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
sec-Butylbenzene	11	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Styrene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
tert-Butylbenzene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	9/29/2014 3:10:55 PM	R21507
Tetrachloroethene (PCE)	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
trans-1,2-DCE	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
trans-1,3-Dichloropropene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,2,3-Trichlorobenzene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,2,4-Trichlorobenzene	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,1,1-Trichloroethane	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,1,2-Trichloroethane	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Trichloroethene (TCE)	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Trichlorofluoromethane	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
1,2,3-Trichloropropane	ND	20		µg/L	10	9/29/2014 3:10:55 PM	R21507
Vinyl chloride	ND	10		µg/L	10	9/29/2014 3:10:55 PM	R21507
Xylenes, Total	1300	15		µg/L	10	9/29/2014 3:10:55 PM	R21507
Surr: 1,2-Dichloroethane-d4	90.8	70-130		%REC	10	9/29/2014 3:10:55 PM	R21507
Surr: 4-Bromofluorobenzene	96.6	70-130		%REC	10	9/29/2014 3:10:55 PM	R21507
Surr: Dibromofluoromethane	90.2	70-130		%REC	10	9/29/2014 3:10:55 PM	R21507
Surr: Toluene-d8	92.1	70-130		%REC	10	9/29/2014 3:10:55 PM	R21507

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: RW-5
Project: 2014 Annual GW
Collection Date: 9/18/2014 11:40:00 AM
Lab ID: 1409A34-002
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	2.2	1.0		mg/L	1	9/23/2014 8:48:40 AM	15424
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/23/2014 8:48:40 AM	15424
Surr: DNOP	115	59-141		%REC	1	9/23/2014 8:48:40 AM	15424
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	3.5	0.50		mg/L	10	9/25/2014 1:59:53 AM	R21431
Surr: BFB	95.7	70.9-130		%REC	10	9/25/2014 1:59:53 AM	R21431
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	1.9	0.010		mg/L	5	9/25/2014 5:19:02 PM	R21450
Cadmium	ND	0.0020		mg/L	1	9/25/2014 3:33:22 PM	R21450
Chromium	ND	0.0060		mg/L	1	9/25/2014 3:33:22 PM	R21450
Copper	ND	0.0060		mg/L	1	9/25/2014 3:33:22 PM	R21450
Iron	2.6	0.10	*	mg/L	5	9/25/2014 5:19:02 PM	R21450
Manganese	0.50	0.0020	*	mg/L	1	9/25/2014 3:33:22 PM	R21450
Silver	ND	0.0050		mg/L	1	9/25/2014 3:33:22 PM	R21450
Zinc	0.049	0.010		mg/L	1	9/25/2014 3:33:22 PM	R21450
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	2.0	0.010		mg/L	5	9/25/2014 6:24:26 PM	15445
Cadmium	ND	0.0020		mg/L	1	9/25/2014 3:09:35 PM	15445
Chromium	ND	0.0060		mg/L	1	9/25/2014 3:09:35 PM	15445
Copper	ND	0.0060		mg/L	1	9/25/2014 3:09:35 PM	15445
Iron	2.8	0.10	*	mg/L	5	9/25/2014 6:24:26 PM	15445
Manganese	0.50	0.0020	*	mg/L	1	9/25/2014 3:09:35 PM	15445
Silver	ND	0.0050		mg/L	1	9/25/2014 3:09:35 PM	15445
Zinc	ND	0.010		mg/L	1	9/25/2014 3:09:35 PM	15445
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0020	0.0010		mg/L	1	10/2/2014 5:07:24 PM	R21629
Lead	ND	0.0010		mg/L	1	9/30/2014 2:14:01 PM	R21559
Selenium	ND	0.0010		mg/L	1	10/2/2014 5:07:24 PM	R21629
Uranium	ND	0.0010		mg/L	1	9/30/2014 2:14:01 PM	R21559
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0019	0.0010		mg/L	1	10/2/2014 2:05:08 PM	15445
Lead	ND	0.0010		mg/L	1	10/2/2014 2:05:08 PM	15445
Selenium	ND	0.0010		mg/L	1	10/2/2014 2:05:08 PM	15445
Uranium	ND	0.0010		mg/L	1	10/2/2014 2:05:08 PM	15445
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/26/2014 3:17:20 PM	15531

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: RW-5
Project: 2014 Annual GW
Collection Date: 9/18/2014 11:40:00 AM
Lab ID: 1409A34-002
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
Acenaphthene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Acenaphthylene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Aniline	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Anthracene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Azobenzene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Benz(a)anthracene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Benzo(a)pyrene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Benzo(b)fluoranthene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Benzo(k)fluoranthene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Benzoic acid	ND	20		µg/L	1	9/24/2014 6:57:53 PM	15440
Benzyl alcohol	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Butyl benzyl phthalate	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Carbazole	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
4-Chloroaniline	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
2-Chloronaphthalene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
2-Chlorophenol	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Chrysene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Di-n-butyl phthalate	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Di-n-octyl phthalate	ND	20		µg/L	1	9/24/2014 6:57:53 PM	15440
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Dibenzofuran	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
1,2-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
1,3-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
1,4-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Diethyl phthalate	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Dimethyl phthalate	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
2,4-Dichlorophenol	ND	20		µg/L	1	9/24/2014 6:57:53 PM	15440
2,4-Dimethylphenol	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/24/2014 6:57:53 PM	15440
2,4-Dinitrophenol	ND	20		µg/L	1	9/24/2014 6:57:53 PM	15440

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: RW-5
Project: 2014 Annual GW
Collection Date: 9/18/2014 11:40:00 AM
Lab ID: 1409A34-002
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
2,4-Dinitrotoluene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
2,6-Dinitrotoluene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Fluoranthene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Fluorene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Hexachlorobenzene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Hexachlorobutadiene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Hexachloroethane	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Isophorone	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
1-Methylnaphthalene	39	10		µg/L	1	9/24/2014 6:57:53 PM	15440
2-Methylnaphthalene	44	10		µg/L	1	9/24/2014 6:57:53 PM	15440
2-Methylphenol	ND	20		µg/L	1	9/24/2014 6:57:53 PM	15440
3+4-Methylphenol	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
N-Nitrosodimethylamine	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Naphthalene	39	10		µg/L	1	9/24/2014 6:57:53 PM	15440
2-Nitroaniline	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
3-Nitroaniline	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
4-Nitroaniline	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Nitrobenzene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
2-Nitrophenol	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
4-Nitrophenol	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Pentachlorophenol	ND	20		µg/L	1	9/24/2014 6:57:53 PM	15440
Phenanthrene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Phenol	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Pyrene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Pyridine	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/24/2014 6:57:53 PM	15440
Surr: 2-Fluorophenol	48.9	12.1-85.8		%REC	1	9/24/2014 6:57:53 PM	15440
Surr: Phenol-d5	40.2	17.7-65.8		%REC	1	9/24/2014 6:57:53 PM	15440
Surr: 2,4,6-Tribromophenol	52.2	26-138		%REC	1	9/24/2014 6:57:53 PM	15440
Surr: Nitrobenzene-d5	61.5	47.5-119		%REC	1	9/24/2014 6:57:53 PM	15440
Surr: 2-Fluorobiphenyl	64.2	48.1-106		%REC	1	9/24/2014 6:57:53 PM	15440
Surr: 4-Terphenyl-d14	69.6	44-113		%REC	1	9/24/2014 6:57:53 PM	15440
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: RW-5
Project: 2014 Annual GW
Collection Date: 9/18/2014 11:40:00 AM
Lab ID: 1409A34-002
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	350	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Toluene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Ethylbenzene	110	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,2,4-Trimethylbenzene	45	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,3,5-Trimethylbenzene	11	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Naphthalene	100	20		µg/L	10	9/29/2014 4:39:43 PM	R21507
1-Methylnaphthalene	84	40		µg/L	10	9/29/2014 4:39:43 PM	R21507
2-Methylnaphthalene	110	40		µg/L	10	9/29/2014 4:39:43 PM	R21507
Acetone	ND	100		µg/L	10	9/29/2014 4:39:43 PM	R21507
Bromobenzene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Bromodichloromethane	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Bromoform	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Bromomethane	ND	30		µg/L	10	9/29/2014 4:39:43 PM	R21507
2-Butanone	ND	100		µg/L	10	9/29/2014 4:39:43 PM	R21507
Carbon disulfide	ND	100		µg/L	10	9/29/2014 4:39:43 PM	R21507
Carbon Tetrachloride	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Chlorobenzene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Chloroethane	ND	20		µg/L	10	9/29/2014 4:39:43 PM	R21507
Chloroform	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Chloromethane	ND	30		µg/L	10	9/29/2014 4:39:43 PM	R21507
2-Chlorotoluene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
4-Chlorotoluene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
cis-1,2-DCE	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
cis-1,3-Dichloropropene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	9/29/2014 4:39:43 PM	R21507
Dibromochloromethane	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Dibromomethane	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,2-Dichlorobenzene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,3-Dichlorobenzene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,4-Dichlorobenzene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Dichlorodifluoromethane	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,1-Dichloroethane	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,1-Dichloroethene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,2-Dichloropropane	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,3-Dichloropropane	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
2,2-Dichloropropane	ND	20		µg/L	10	9/29/2014 4:39:43 PM	R21507

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: RW-5
Project: 2014 Annual GW
Collection Date: 9/18/2014 11:40:00 AM
Lab ID: 1409A34-002
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Hexachlorobutadiene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
2-Hexanone	ND	100		µg/L	10	9/29/2014 4:39:43 PM	R21507
Isopropylbenzene	12	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
4-Isopropyltoluene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
4-Methyl-2-pentanone	ND	100		µg/L	10	9/29/2014 4:39:43 PM	R21507
Methylene Chloride	ND	30		µg/L	10	9/29/2014 4:39:43 PM	R21507
n-Butylbenzene	ND	30		µg/L	10	9/29/2014 4:39:43 PM	R21507
n-Propylbenzene	39	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
sec-Butylbenzene	10	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Styrene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
tert-Butylbenzene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	9/29/2014 4:39:43 PM	R21507
Tetrachloroethene (PCE)	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
trans-1,2-DCE	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
trans-1,3-Dichloropropene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,2,3-Trichlorobenzene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,2,4-Trichlorobenzene	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,1,1-Trichloroethane	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,1,2-Trichloroethane	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Trichloroethene (TCE)	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Trichlorofluoromethane	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
1,2,3-Trichloropropane	ND	20		µg/L	10	9/29/2014 4:39:43 PM	R21507
Vinyl chloride	ND	10		µg/L	10	9/29/2014 4:39:43 PM	R21507
Xylenes, Total	56	15		µg/L	10	9/29/2014 4:39:43 PM	R21507
Surr: 1,2-Dichloroethane-d4	91.6	70-130		%REC	10	9/29/2014 4:39:43 PM	R21507
Surr: 4-Bromofluorobenzene	96.1	70-130		%REC	10	9/29/2014 4:39:43 PM	R21507
Surr: Dibromofluoromethane	90.1	70-130		%REC	10	9/29/2014 4:39:43 PM	R21507
Surr: Toluene-d8	96.0	70-130		%REC	10	9/29/2014 4:39:43 PM	R21507

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: RW-2
Project: 2014 Annual GW
Collection Date: 9/18/2014 12:15:00 PM
Lab ID: 1409A34-003
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	7.8	1.0		mg/L	1	9/23/2014 9:18:39 AM	15424
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/23/2014 9:18:39 AM	15424
Surr: DNOP	101	59-141		%REC	1	9/23/2014 9:18:39 AM	15424
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	120	10		mg/L	200	9/25/2014 2:28:34 AM	R21431
Surr: BFB	88.3	70.9-130		%REC	200	9/25/2014 2:28:34 AM	R21431
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	3.8	0.020	*	mg/L	10	9/25/2014 5:28:09 PM	R21450
Cadmium	ND	0.0020		mg/L	1	9/25/2014 3:35:03 PM	R21450
Chromium	ND	0.0060		mg/L	1	9/25/2014 3:35:03 PM	R21450
Copper	ND	0.0060		mg/L	1	9/25/2014 3:35:03 PM	R21450
Iron	13	1.0	*	mg/L	50	9/25/2014 5:29:47 PM	R21450
Manganese	2.4	0.020	*	mg/L	10	9/25/2014 5:28:09 PM	R21450
Silver	ND	0.0050		mg/L	1	9/25/2014 3:35:03 PM	R21450
Zinc	0.023	0.010		mg/L	1	9/25/2014 3:35:03 PM	R21450
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	4.1	0.020	*	mg/L	10	9/25/2014 6:26:18 PM	15445
Cadmium	ND	0.0020		mg/L	1	9/25/2014 3:18:46 PM	15445
Chromium	ND	0.0060		mg/L	1	9/25/2014 3:18:46 PM	15445
Copper	ND	0.0060		mg/L	1	9/25/2014 3:18:46 PM	15445
Iron	15	1.0	*	mg/L	50	9/25/2014 6:27:57 PM	15445
Manganese	2.6	0.020	*	mg/L	10	9/25/2014 6:26:18 PM	15445
Silver	ND	0.0050		mg/L	1	9/25/2014 3:18:46 PM	15445
Zinc	0.016	0.010		mg/L	1	9/25/2014 3:18:46 PM	15445
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	10/2/2014 5:10:30 PM	R21629
Lead	ND	0.0010		mg/L	1	9/30/2014 2:17:07 PM	R21559
Selenium	ND	0.010		mg/L	10	10/2/2014 5:10:30 PM	R21629
Uranium	ND	0.0010		mg/L	1	9/30/2014 2:17:07 PM	R21559
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0086	0.0050		mg/L	5	10/2/2014 3:08:52 PM	15445
Lead	0.0043	0.0010		mg/L	1	10/2/2014 2:14:26 PM	15445
Selenium	0.0057	0.0050		mg/L	5	10/2/2014 3:08:52 PM	15445
Uranium	ND	0.0010		mg/L	1	10/2/2014 2:14:26 PM	15445
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/26/2014 3:22:54 PM	15531

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: RW-2
Project: 2014 Annual GW
Collection Date: 9/18/2014 12:15:00 PM
Lab ID: 1409A34-003
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
Acenaphthene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Acenaphthylene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Aniline	140	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Anthracene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Azobenzene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Benz(a)anthracene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Benzo(a)pyrene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Benzo(b)fluoranthene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Benzo(k)fluoranthene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Benzoic acid	ND	20		µg/L	1	9/24/2014 7:26:45 PM	15440
Benzyl alcohol	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Butyl benzyl phthalate	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Carbazole	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
4-Chloroaniline	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
2-Chloronaphthalene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
2-Chlorophenol	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Chrysene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Di-n-butyl phthalate	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Di-n-octyl phthalate	ND	20		µg/L	1	9/24/2014 7:26:45 PM	15440
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Dibenzofuran	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
1,2-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
1,3-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
1,4-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Diethyl phthalate	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Dimethyl phthalate	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
2,4-Dichlorophenol	ND	20		µg/L	1	9/24/2014 7:26:45 PM	15440
2,4-Dimethylphenol	84	10		µg/L	1	9/24/2014 7:26:45 PM	15440
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/24/2014 7:26:45 PM	15440
2,4-Dinitrophenol	ND	20		µg/L	1	9/24/2014 7:26:45 PM	15440

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: RW-2
Project: 2014 Annual GW
Collection Date: 9/18/2014 12:15:00 PM
Lab ID: 1409A34-003
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
2,4-Dinitrotoluene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
2,6-Dinitrotoluene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Fluoranthene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Fluorene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Hexachlorobenzene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Hexachlorobutadiene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Hexachloroethane	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Isophorone	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
1-Methylnaphthalene	68	10		µg/L	1	9/24/2014 7:26:45 PM	15440
2-Methylnaphthalene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
2-Methylphenol	32	20		µg/L	1	9/24/2014 7:26:45 PM	15440
3+4-Methylphenol	22	10		µg/L	1	9/24/2014 7:26:45 PM	15440
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
N-Nitrosodimethylamine	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Naphthalene	65	10		µg/L	1	9/24/2014 7:26:45 PM	15440
2-Nitroaniline	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
3-Nitroaniline	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
4-Nitroaniline	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Nitrobenzene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
2-Nitrophenol	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
4-Nitrophenol	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Pentachlorophenol	ND	20		µg/L	1	9/24/2014 7:26:45 PM	15440
Phenanthrene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Phenol	61	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Pyrene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Pyridine	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/24/2014 7:26:45 PM	15440
Surr: 2-Fluorophenol	80.3	12.1-85.8		%REC	1	9/24/2014 7:26:45 PM	15440
Surr: Phenol-d5	75.8	17.7-65.8	S	%REC	1	9/24/2014 7:26:45 PM	15440
Surr: 2,4,6-Tribromophenol	96.0	26-138		%REC	1	9/24/2014 7:26:45 PM	15440
Surr: Nitrobenzene-d5	102	47.5-119		%REC	1	9/24/2014 7:26:45 PM	15440
Surr: 2-Fluorobiphenyl	94.6	48.1-106		%REC	1	9/24/2014 7:26:45 PM	15440
Surr: 4-Terphenyl-d14	107	44-113		%REC	1	9/24/2014 7:26:45 PM	15440
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: RW-2
Project: 2014 Annual GW
Collection Date: 9/18/2014 12:15:00 PM
Lab ID: 1409A34-003
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	40000	1000		µg/L	1E	9/29/2014 5:09:16 PM	R21507
Toluene	4500	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Ethylbenzene	860	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Methyl tert-butyl ether (MTBE)	1900	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,2,4-Trimethylbenzene	150	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,3,5-Trimethylbenzene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,2-Dichloroethane (EDC)	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,2-Dibromoethane (EDB)	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Naphthalene	ND	200		µg/L	100	9/29/2014 5:38:48 PM	R21507
1-Methylnaphthalene	ND	400		µg/L	100	9/29/2014 5:38:48 PM	R21507
2-Methylnaphthalene	ND	400		µg/L	100	9/29/2014 5:38:48 PM	R21507
Acetone	ND	1000		µg/L	100	9/29/2014 5:38:48 PM	R21507
Bromobenzene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Bromodichloromethane	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Bromoform	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Bromomethane	ND	300		µg/L	100	9/29/2014 5:38:48 PM	R21507
2-Butanone	ND	1000		µg/L	100	9/29/2014 5:38:48 PM	R21507
Carbon disulfide	ND	1000		µg/L	100	9/29/2014 5:38:48 PM	R21507
Carbon Tetrachloride	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Chlorobenzene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Chloroethane	ND	200		µg/L	100	9/29/2014 5:38:48 PM	R21507
Chloroform	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Chloromethane	ND	300		µg/L	100	9/29/2014 5:38:48 PM	R21507
2-Chlorotoluene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
4-Chlorotoluene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
cis-1,2-DCE	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
cis-1,3-Dichloropropene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,2-Dibromo-3-chloropropane	ND	200		µg/L	100	9/29/2014 5:38:48 PM	R21507
Dibromochloromethane	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Dibromomethane	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,2-Dichlorobenzene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,3-Dichlorobenzene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,4-Dichlorobenzene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Dichlorodifluoromethane	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,1-Dichloroethane	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,1-Dichloroethene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,2-Dichloropropane	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,3-Dichloropropane	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
2,2-Dichloropropane	ND	200		µg/L	100	9/29/2014 5:38:48 PM	R21507

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: RW-2
Project: 2014 Annual GW
Collection Date: 9/18/2014 12:15:00 PM
Lab ID: 1409A34-003
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Hexachlorobutadiene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
2-Hexanone	ND	1000		µg/L	100	9/29/2014 5:38:48 PM	R21507
Isopropylbenzene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
4-Isopropyltoluene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
4-Methyl-2-pentanone	ND	1000		µg/L	100	9/29/2014 5:38:48 PM	R21507
Methylene Chloride	ND	300		µg/L	100	9/29/2014 5:38:48 PM	R21507
n-Butylbenzene	ND	300		µg/L	100	9/29/2014 5:38:48 PM	R21507
n-Propylbenzene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
sec-Butylbenzene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Styrene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
tert-Butylbenzene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,1,1,2-Tetrachloroethane	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,1,2,2-Tetrachloroethane	ND	200		µg/L	100	9/29/2014 5:38:48 PM	R21507
Tetrachloroethene (PCE)	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
trans-1,2-DCE	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
trans-1,3-Dichloropropene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,2,3-Trichlorobenzene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,2,4-Trichlorobenzene	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,1,1-Trichloroethane	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,1,2-Trichloroethane	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Trichloroethene (TCE)	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Trichlorofluoromethane	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
1,2,3-Trichloropropane	ND	200		µg/L	100	9/29/2014 5:38:48 PM	R21507
Vinyl chloride	ND	100		µg/L	100	9/29/2014 5:38:48 PM	R21507
Xylenes, Total	2500	150		µg/L	100	9/29/2014 5:38:48 PM	R21507
Surr: 1,2-Dichloroethane-d4	90.4	70-130		%REC	100	9/29/2014 5:38:48 PM	R21507
Surr: 4-Bromofluorobenzene	96.4	70-130		%REC	100	9/29/2014 5:38:48 PM	R21507
Surr: Dibromofluoromethane	88.6	70-130		%REC	100	9/29/2014 5:38:48 PM	R21507
Surr: Toluene-d8	91.6	70-130		%REC	100	9/29/2014 5:38:48 PM	R21507

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: RW-1
Project: 2014 Annual GW
Collection Date: 9/18/2014 3:00:00 PM
Lab ID: 1409A34-004
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	18	1.0		mg/L	1	9/23/2014 9:48:27 AM	15424
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/23/2014 9:48:27 AM	15424
Surr: DNOP	112	59-141		%REC	1	9/23/2014 9:48:27 AM	15424
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	150	25		mg/L	500	9/25/2014 5:01:55 PM	R21468
Surr: BFB	94.1	70.9-130		%REC	500	9/25/2014 5:01:55 PM	R21468
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	3.6	0.020	*	mg/L	10	9/25/2014 5:31:42 PM	R21450
Cadmium	ND	0.0020		mg/L	1	9/25/2014 3:43:55 PM	R21450
Chromium	ND	0.0060		mg/L	1	9/25/2014 3:43:55 PM	R21450
Copper	ND	0.0060		mg/L	1	9/25/2014 3:43:55 PM	R21450
Iron	9.6	0.20	*	mg/L	10	9/25/2014 5:31:42 PM	R21450
Manganese	3.3	0.020	*	mg/L	10	9/25/2014 5:31:42 PM	R21450
Silver	ND	0.0050		mg/L	1	9/25/2014 3:43:55 PM	R21450
Zinc	0.067	0.010		mg/L	1	9/25/2014 3:43:55 PM	R21450
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	3.5	0.020	*	mg/L	10	9/25/2014 6:29:53 PM	15445
Cadmium	ND	0.0020		mg/L	1	9/25/2014 3:20:32 PM	15445
Chromium	ND	0.0060		mg/L	1	9/25/2014 3:20:32 PM	15445
Copper	ND	0.0060		mg/L	1	9/25/2014 3:20:32 PM	15445
Iron	9.6	0.20	*	mg/L	10	9/25/2014 6:29:53 PM	15445
Manganese	3.2	0.020	*	mg/L	10	9/25/2014 6:29:53 PM	15445
Silver	ND	0.0050		mg/L	1	9/25/2014 3:20:32 PM	15445
Zinc	ND	0.010		mg/L	1	9/25/2014 3:20:32 PM	15445
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	10/2/2014 5:19:49 PM	R21629
Lead	ND	0.0010		mg/L	1	9/30/2014 2:20:13 PM	R21559
Selenium	ND	0.010		mg/L	10	10/2/2014 5:19:49 PM	R21629
Uranium	0.0014	0.0010		mg/L	1	9/30/2014 2:20:13 PM	R21559
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.011	0.0050	*	mg/L	5	10/2/2014 3:11:59 PM	15445
Lead	ND	0.0010		mg/L	1	10/2/2014 2:17:32 PM	15445
Selenium	0.0086	0.0050		mg/L	5	10/2/2014 3:11:59 PM	15445
Uranium	0.0015	0.0010		mg/L	1	10/2/2014 2:17:32 PM	15445
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/26/2014 3:24:46 PM	15531

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: RW-1
Project: 2014 Annual GW
Collection Date: 9/18/2014 3:00:00 PM
Lab ID: 1409A34-004
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
Acenaphthene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Acenaphthylene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Aniline	21	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Anthracene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Azobenzene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Benz(a)anthracene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Benzo(a)pyrene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Benzo(b)fluoranthene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Benzo(k)fluoranthene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Benzoic acid	ND	20		µg/L	1	9/24/2014 7:55:51 PM	15440
Benzyl alcohol	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Butyl benzyl phthalate	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Carbazole	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
4-Chloroaniline	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
2-Chloronaphthalene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
2-Chlorophenol	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Chrysene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Di-n-butyl phthalate	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Di-n-octyl phthalate	ND	20		µg/L	1	9/24/2014 7:55:51 PM	15440
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Dibenzofuran	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
1,2-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
1,3-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
1,4-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Diethyl phthalate	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Dimethyl phthalate	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
2,4-Dichlorophenol	ND	20		µg/L	1	9/24/2014 7:55:51 PM	15440
2,4-Dimethylphenol	37	10		µg/L	1	9/24/2014 7:55:51 PM	15440
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/24/2014 7:55:51 PM	15440
2,4-Dinitrophenol	ND	20		µg/L	1	9/24/2014 7:55:51 PM	15440

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: RW-1
Project: 2014 Annual GW
Collection Date: 9/18/2014 3:00:00 PM
Lab ID: 1409A34-004
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
2,4-Dinitrotoluene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
2,6-Dinitrotoluene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Fluoranthene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Fluorene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Hexachlorobenzene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Hexachlorobutadiene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Hexachloroethane	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Isophorone	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
1-Methylnaphthalene	71	10		µg/L	1	9/24/2014 7:55:51 PM	15440
2-Methylnaphthalene	61	10		µg/L	1	9/24/2014 7:55:51 PM	15440
2-Methylphenol	50	20		µg/L	1	9/24/2014 7:55:51 PM	15440
3+4-Methylphenol	62	10		µg/L	1	9/24/2014 7:55:51 PM	15440
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
N-Nitrosodimethylamine	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Naphthalene	130	10		µg/L	1	9/24/2014 7:55:51 PM	15440
2-Nitroaniline	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
3-Nitroaniline	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
4-Nitroaniline	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Nitrobenzene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
2-Nitrophenol	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
4-Nitrophenol	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Pentachlorophenol	ND	20		µg/L	1	9/24/2014 7:55:51 PM	15440
Phenanthrene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Phenol	44	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Pyrene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Pyridine	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/24/2014 7:55:51 PM	15440
Surr: 2-Fluorophenol	57.8	12.1-85.8		%REC	1	9/24/2014 7:55:51 PM	15440
Surr: Phenol-d5	73.0	17.7-65.8	S	%REC	1	9/24/2014 7:55:51 PM	15440
Surr: 2,4,6-Tribromophenol	87.8	26-138		%REC	1	9/24/2014 7:55:51 PM	15440
Surr: Nitrobenzene-d5	83.3	47.5-119		%REC	1	9/24/2014 7:55:51 PM	15440
Surr: 2-Fluorobiphenyl	94.4	48.1-106		%REC	1	9/24/2014 7:55:51 PM	15440
Surr: 4-Terphenyl-d14	96.9	44-113		%REC	1	9/24/2014 7:55:51 PM	15440
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: RW-1
Project: 2014 Annual GW
Collection Date: 9/18/2014 3:00:00 PM
Lab ID: 1409A34-004
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	37000	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Toluene	35000	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Ethylbenzene	1800	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Methyl tert-butyl ether (MTBE)	1200	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,2,4-Trimethylbenzene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,3,5-Trimethylbenzene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,2-Dichloroethane (EDC)	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,2-Dibromoethane (EDB)	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Naphthalene	ND	2000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1-Methylnaphthalene	ND	4000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
2-Methylnaphthalene	ND	4000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Acetone	ND	10000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Bromobenzene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Bromodichloromethane	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Bromoform	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Bromomethane	ND	3000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
2-Butanone	ND	10000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Carbon disulfide	ND	10000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Carbon Tetrachloride	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Chlorobenzene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Chloroethane	ND	2000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Chloroform	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Chloromethane	ND	3000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
2-Chlorotoluene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
4-Chlorotoluene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
cis-1,2-DCE	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
cis-1,3-Dichloropropene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,2-Dibromo-3-chloropropane	ND	2000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Dibromochloromethane	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Dibromomethane	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,2-Dichlorobenzene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,3-Dichlorobenzene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,4-Dichlorobenzene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Dichlorodifluoromethane	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,1-Dichloroethane	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,1-Dichloroethene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,2-Dichloropropane	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,3-Dichloropropane	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
2,2-Dichloropropane	ND	2000		µg/L	1E	9/29/2014 6:38:01 PM	R21507

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: RW-1
Project: 2014 Annual GW
Collection Date: 9/18/2014 3:00:00 PM
Lab ID: 1409A34-004
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Hexachlorobutadiene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
2-Hexanone	ND	10000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Isopropylbenzene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
4-Isopropyltoluene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
4-Methyl-2-pentanone	ND	10000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Methylene Chloride	ND	3000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
n-Butylbenzene	ND	3000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
n-Propylbenzene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
sec-Butylbenzene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Styrene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
tert-Butylbenzene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,1,1,2-Tetrachloroethane	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,1,2,2-Tetrachloroethane	ND	2000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Tetrachloroethene (PCE)	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
trans-1,2-DCE	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
trans-1,3-Dichloropropene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,2,3-Trichlorobenzene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,2,4-Trichlorobenzene	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,1,1-Trichloroethane	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,1,2-Trichloroethane	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Trichloroethene (TCE)	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Trichlorofluoromethane	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
1,2,3-Trichloropropane	ND	2000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Vinyl chloride	ND	1000		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Xylenes, Total	10000	1500		µg/L	1E	9/29/2014 6:38:01 PM	R21507
Surr: 1,2-Dichloroethane-d4	91.1	70-130		%REC	1E	9/29/2014 6:38:01 PM	R21507
Surr: 4-Bromofluorobenzene	99.2	70-130		%REC	1E	9/29/2014 6:38:01 PM	R21507
Surr: Dibromofluoromethane	90.8	70-130		%REC	1E	9/29/2014 6:38:01 PM	R21507
Surr: Toluene-d8	90.1	70-130		%REC	1E	9/29/2014 6:38:01 PM	R21507

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409A34-005
Matrix: TRIP BLANK
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/25/2014 6:32:24 PM	R21468
Surr: BFB	83.9	70.9-130		%REC	1	9/25/2014 6:32:24 PM	R21468
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Toluene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Ethylbenzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Naphthalene	ND	2.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
2-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Acetone	ND	10		µg/L	1	9/29/2014 7:07:41 PM	R21507
Bromobenzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Bromodichloromethane	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Bromoform	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Bromomethane	ND	3.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
2-Butanone	ND	10		µg/L	1	9/29/2014 7:07:41 PM	R21507
Carbon disulfide	ND	10		µg/L	1	9/29/2014 7:07:41 PM	R21507
Carbon Tetrachloride	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Chlorobenzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Chloroethane	ND	2.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Chloroform	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Chloromethane	ND	3.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
2-Chlorotoluene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
4-Chlorotoluene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
cis-1,2-DCE	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Dibromochloromethane	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Dibromomethane	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,1-Dichloroethane	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,1-Dichloroethene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409A34-005
Matrix: TRIP BLANK
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dichloropropane	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,3-Dichloropropane	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
2,2-Dichloropropane	ND	2.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,1-Dichloropropene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Hexachlorobutadiene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
2-Hexanone	ND	10		µg/L	1	9/29/2014 7:07:41 PM	R21507
Isopropylbenzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
4-Isopropyltoluene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
4-Methyl-2-pentanone	ND	10		µg/L	1	9/29/2014 7:07:41 PM	R21507
Methylene Chloride	ND	3.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
n-Butylbenzene	ND	3.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
n-Propylbenzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
sec-Butylbenzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Styrene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
tert-Butylbenzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
trans-1,2-DCE	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Trichlorofluoromethane	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Vinyl chloride	ND	1.0		µg/L	1	9/29/2014 7:07:41 PM	R21507
Xylenes, Total	ND	1.5		µg/L	1	9/29/2014 7:07:41 PM	R21507
Surr: 1,2-Dichloroethane-d4	91.5	70-130		%REC	1	9/29/2014 7:07:41 PM	R21507
Surr: 4-Bromofluorobenzene	100	70-130		%REC	1	9/29/2014 7:07:41 PM	R21507
Surr: Dibromofluoromethane	92.2	70-130		%REC	1	9/29/2014 7:07:41 PM	R21507
Surr: Toluene-d8	92.2	70-130		%REC	1	9/29/2014 7:07:41 PM	R21507

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group 8-9/18/14
Project: 2014 Annual GW
Collection Date: 9/18/2014 12:35:00 PM
Lab ID: 1409A34-006
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Toluene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Ethylbenzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Naphthalene	ND	2.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
2-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Acetone	ND	10		µg/L	1	9/29/2014 7:37:14 PM	R21507
Bromobenzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Bromodichloromethane	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Bromoform	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Bromomethane	ND	3.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
2-Butanone	ND	10		µg/L	1	9/29/2014 7:37:14 PM	R21507
Carbon disulfide	ND	10		µg/L	1	9/29/2014 7:37:14 PM	R21507
Carbon Tetrachloride	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Chlorobenzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Chloroethane	ND	2.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Chloroform	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Chloromethane	ND	3.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
2-Chlorotoluene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
4-Chlorotoluene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
cis-1,2-DCE	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Dibromochloromethane	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Dibromomethane	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,1-Dichloroethane	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,1-Dichloroethene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,2-Dichloropropane	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,3-Dichloropropane	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
2,2-Dichloropropane	ND	2.0		µg/L	1	9/29/2014 7:37:14 PM	R21507

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group 8-9/18/14
Project: 2014 Annual GW
Collection Date: 9/18/2014 12:35:00 PM
Lab ID: 1409A34-006
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Hexachlorobutadiene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
2-Hexanone	ND	10		µg/L	1	9/29/2014 7:37:14 PM	R21507
Isopropylbenzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
4-Isopropyltoluene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
4-Methyl-2-pentanone	ND	10		µg/L	1	9/29/2014 7:37:14 PM	R21507
Methylene Chloride	ND	3.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
n-Butylbenzene	ND	3.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
n-Propylbenzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
sec-Butylbenzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Styrene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
tert-Butylbenzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
trans-1,2-DCE	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Trichlorofluoromethane	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Vinyl chloride	ND	1.0		µg/L	1	9/29/2014 7:37:14 PM	R21507
Xylenes, Total	ND	1.5		µg/L	1	9/29/2014 7:37:14 PM	R21507
Surr: 1,2-Dichloroethane-d4	91.8	70-130		%REC	1	9/29/2014 7:37:14 PM	R21507
Surr: 4-Bromofluorobenzene	95.3	70-130		%REC	1	9/29/2014 7:37:14 PM	R21507
Surr: Dibromofluoromethane	90.7	70-130		%REC	1	9/29/2014 7:37:14 PM	R21507
Surr: Toluene-d8	91.7	70-130		%REC	1	9/29/2014 7:37:14 PM	R21507

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-30
Project: 2014 Annual GW
Collection Date: 9/17/2014 6:30:00 PM
Lab ID: 1409A34-007
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/23/2014 2:03:02 PM	15424
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/23/2014 2:03:02 PM	15424
Surr: DNOP	104	59-141		%REC	1	9/23/2014 2:03:02 PM	15424
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	1.3	0.25		mg/L	5	9/25/2014 7:02:37 PM	R21468
Surr: BFB	91.3	70.9-130		%REC	5	9/25/2014 7:02:37 PM	R21468
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	0.20	0.10		mg/L	1	9/22/2014 9:56:05 PM	R21368
Chloride	180	10		mg/L	20	9/22/2014 10:08:30 PM	R21368
Bromide	0.63	0.10		mg/L	1	9/22/2014 9:56:05 PM	R21368
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/22/2014 9:56:05 PM	R21368
Sulfate	45	10		mg/L	20	9/22/2014 10:08:30 PM	R21368
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/23/2014 1:51:54 AM	R21368
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.086	0.0020		mg/L	1	9/25/2014 3:45:34 PM	R21450
Cadmium	ND	0.0020		mg/L	1	9/25/2014 3:45:34 PM	R21450
Calcium	68	1.0		mg/L	1	9/25/2014 3:45:34 PM	R21450
Chromium	ND	0.0060		mg/L	1	9/25/2014 3:45:34 PM	R21450
Copper	ND	0.0060		mg/L	1	9/25/2014 3:45:34 PM	R21450
Iron	0.067	0.020		mg/L	1	9/25/2014 3:45:34 PM	R21450
Magnesium	15	1.0		mg/L	1	9/25/2014 3:45:34 PM	R21450
Manganese	0.033	0.0020		mg/L	1	9/25/2014 3:45:34 PM	R21450
Potassium	1.2	1.0		mg/L	1	9/25/2014 3:45:34 PM	R21450
Silver	ND	0.0050		mg/L	1	9/25/2014 3:45:34 PM	R21450
Sodium	390	10		mg/L	10	9/25/2014 5:33:22 PM	R21450
Zinc	0.012	0.010		mg/L	1	9/25/2014 3:45:34 PM	R21450
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.087	0.0020		mg/L	1	9/25/2014 3:22:12 PM	15445
Cadmium	ND	0.0020		mg/L	1	9/25/2014 3:22:12 PM	15445
Chromium	ND	0.0060		mg/L	1	9/25/2014 3:22:12 PM	15445
Copper	ND	0.0060		mg/L	1	9/25/2014 3:22:12 PM	15445
Iron	0.076	0.020		mg/L	1	9/25/2014 3:22:12 PM	15445
Manganese	0.031	0.0020		mg/L	1	9/25/2014 3:22:12 PM	15445
Silver	ND	0.0050		mg/L	1	9/25/2014 3:22:12 PM	15445
Zinc	ND	0.010		mg/L	1	9/25/2014 3:22:12 PM	15445
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	10/2/2014 5:22:55 PM	R21629

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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-30
Project: 2014 Annual GW
Collection Date: 9/17/2014 6:30:00 PM
Lab ID: 1409A34-007
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.0050		mg/L	5	10/2/2014 5:22:55 PM	R21629
Selenium	ND	0.0050		mg/L	5	10/2/2014 5:22:55 PM	R21629
Uranium	0.049	0.0050	*	mg/L	5	10/2/2014 5:22:55 PM	R21629
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0015	0.0010		mg/L	1	10/2/2014 2:20:38 PM	15445
Lead	ND	0.0010		mg/L	1	10/2/2014 2:20:38 PM	15445
Selenium	0.0034	0.0010		mg/L	1	10/2/2014 2:20:38 PM	15445
Uranium	0.051	0.0050	*	mg/L	5	10/2/2014 3:15:05 PM	15445
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/26/2014 3:26:31 PM	15531
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
Acenaphthene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Acenaphthylene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Aniline	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Anthracene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Azobenzene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Benz(a)anthracene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Benzo(a)pyrene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Benzo(b)fluoranthene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Benzo(k)fluoranthene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Benzoic acid	ND	20		µg/L	1	9/24/2014 8:24:50 PM	15440
Benzyl alcohol	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Butyl benzyl phthalate	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Carbazole	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
4-Chloroaniline	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
2-Chloronaphthalene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
2-Chlorophenol	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Chrysene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Di-n-butyl phthalate	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Di-n-octyl phthalate	ND	20		µg/L	1	9/24/2014 8:24:50 PM	15440

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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Dibenzofuran	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
1,2-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
1,3-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
1,4-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Diethyl phthalate	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Dimethyl phthalate	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
2,4-Dichlorophenol	ND	20		µg/L	1	9/24/2014 8:24:50 PM	15440
2,4-Dimethylphenol	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/24/2014 8:24:50 PM	15440
2,4-Dinitrophenol	ND	20		µg/L	1	9/24/2014 8:24:50 PM	15440
2,4-Dinitrotoluene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
2,6-Dinitrotoluene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Fluoranthene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Fluorene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Hexachlorobenzene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Hexachlorobutadiene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Hexachloroethane	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Isophorone	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
1-Methylnaphthalene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
2-Methylnaphthalene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
2-Methylphenol	ND	20		µg/L	1	9/24/2014 8:24:50 PM	15440
3+4-Methylphenol	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
N-Nitrosodimethylamine	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Naphthalene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
2-Nitroaniline	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
3-Nitroaniline	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
4-Nitroaniline	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Nitrobenzene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
2-Nitrophenol	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
4-Nitrophenol	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Pentachlorophenol	ND	20		µg/L	1	9/24/2014 8:24:50 PM	15440
Phenanthrene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Phenol	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440

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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**JDC**
Pyrene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Pyridine	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/24/2014 8:24:50 PM	15440
Surr: 2-Fluorophenol	70.6	12.1-85.8		%REC	1	9/24/2014 8:24:50 PM	15440
Surr: Phenol-d5	63.4	17.7-65.8		%REC	1	9/24/2014 8:24:50 PM	15440
Surr: 2,4,6-Tribromophenol	71.5	26-138		%REC	1	9/24/2014 8:24:50 PM	15440
Surr: Nitrobenzene-d5	87.6	47.5-119		%REC	1	9/24/2014 8:24:50 PM	15440
Surr: 2-Fluorobiphenyl	84.1	48.1-106		%REC	1	9/24/2014 8:24:50 PM	15440
Surr: 4-Terphenyl-d14	90.2	44-113		%REC	1	9/24/2014 8:24:50 PM	15440
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Toluene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Ethylbenzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Methyl tert-butyl ether (MTBE)	2800	50		µg/L	50	9/29/2014 8:06:49 PM	R21507
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Naphthalene	ND	2.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
2-Methylnaphthalene	ND	4.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Acetone	ND	10		µg/L	1	9/29/2014 8:36:23 PM	R21507
Bromobenzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Bromodichloromethane	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Bromoform	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Bromomethane	ND	3.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
2-Butanone	ND	10		µg/L	1	9/29/2014 8:36:23 PM	R21507
Carbon disulfide	ND	10		µg/L	1	9/29/2014 8:36:23 PM	R21507
Carbon Tetrachloride	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Chlorobenzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Chloroethane	ND	2.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Chloroform	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Chloromethane	ND	3.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
2-Chlorotoluene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
4-Chlorotoluene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
cis-1,2-DCE	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507

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Matrix: AQUEOUS
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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Dibromochloromethane	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Dibromomethane	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,1-Dichloroethane	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,1-Dichloroethene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,2-Dichloropropane	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,3-Dichloropropane	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
2,2-Dichloropropane	ND	2.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,1-Dichloropropene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Hexachlorobutadiene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
2-Hexanone	ND	10		µg/L	1	9/29/2014 8:36:23 PM	R21507
Isopropylbenzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
4-Isopropyltoluene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
4-Methyl-2-pentanone	ND	10		µg/L	1	9/29/2014 8:36:23 PM	R21507
Methylene Chloride	ND	3.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
n-Butylbenzene	ND	3.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
n-Propylbenzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
sec-Butylbenzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Styrene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
tert-Butylbenzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
trans-1,2-DCE	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Trichlorofluoromethane	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Vinyl chloride	ND	1.0		µg/L	1	9/29/2014 8:36:23 PM	R21507
Xylenes, Total	ND	1.5		µg/L	1	9/29/2014 8:36:23 PM	R21507
Surr: 1,2-Dichloroethane-d4	94.6	70-130		%REC	1	9/29/2014 8:36:23 PM	R21507

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CLIENT: Western Refining Southwest, Gallup
Client Sample ID: OW-30
Project: 2014 Annual GW
Collection Date: 9/17/2014 6:30:00 PM
Lab ID: 1409A34-007
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Surr: 4-Bromofluorobenzene	99.9	70-130		%REC	1	9/29/2014 8:36:23 PM	R21507
Surr: Dibromofluoromethane	95.1	70-130		%REC	1	9/29/2014 8:36:23 PM	R21507
Surr: Toluene-d8	91.5	70-130		%REC	1	9/29/2014 8:36:23 PM	R21507

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-2A
Project: 2014 Annual GW
Collection Date: 9/17/2014 10:05:00 AM
Lab ID: 1409A34-008
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
Acenaphthene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Acenaphthylene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Aniline	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Anthracene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Azobenzene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Benz(a)anthracene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Benzo(a)pyrene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Benzo(b)fluoranthene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Benzo(k)fluoranthene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Benzoic acid	ND	20		µg/L	1	9/24/2014 8:53:46 PM	15440
Benzyl alcohol	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Butyl benzyl phthalate	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Carbazole	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
4-Chloroaniline	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
2-Chloronaphthalene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
2-Chlorophenol	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Chrysene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Di-n-butyl phthalate	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Di-n-octyl phthalate	ND	20		µg/L	1	9/24/2014 8:53:46 PM	15440
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Dibenzofuran	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
1,2-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
1,3-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
1,4-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Diethyl phthalate	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Dimethyl phthalate	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
2,4-Dichlorophenol	ND	20		µg/L	1	9/24/2014 8:53:46 PM	15440
2,4-Dimethylphenol	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/24/2014 8:53:46 PM	15440
2,4-Dinitrophenol	ND	20		µg/L	1	9/24/2014 8:53:46 PM	15440

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-2A
Project: 2014 Annual GW
Collection Date: 9/17/2014 10:05:00 AM
Lab ID: 1409A34-008
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
2,4-Dinitrotoluene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
2,6-Dinitrotoluene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Fluoranthene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Fluorene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Hexachlorobenzene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Hexachlorobutadiene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Hexachloroethane	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Isophorone	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
1-Methylnaphthalene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
2-Methylnaphthalene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
2-Methylphenol	ND	20		µg/L	1	9/24/2014 8:53:46 PM	15440
3+4-Methylphenol	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
N-Nitrosodimethylamine	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Naphthalene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
2-Nitroaniline	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
3-Nitroaniline	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
4-Nitroaniline	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Nitrobenzene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
2-Nitrophenol	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
4-Nitrophenol	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Pentachlorophenol	ND	20		µg/L	1	9/24/2014 8:53:46 PM	15440
Phenanthrene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Phenol	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Pyrene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Pyridine	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/24/2014 8:53:46 PM	15440
Surr: 2-Fluorophenol	73.2	12.1-85.8		%REC	1	9/24/2014 8:53:46 PM	15440
Surr: Phenol-d5	65.9	17.7-65.8	S	%REC	1	9/24/2014 8:53:46 PM	15440
Surr: 2,4,6-Tribromophenol	73.2	26-138		%REC	1	9/24/2014 8:53:46 PM	15440
Surr: Nitrobenzene-d5	94.3	47.5-119		%REC	1	9/24/2014 8:53:46 PM	15440
Surr: 2-Fluorobiphenyl	90.1	48.1-106		%REC	1	9/24/2014 8:53:46 PM	15440
Surr: 4-Terphenyl-d14	92.5	44-113		%REC	1	9/24/2014 8:53:46 PM	15440

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-2B
Project: 2014 Annual GW
Collection Date: 9/17/2014 10:00:00 AM
Lab ID: 1409A34-009
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
Acenaphthene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Acenaphthylene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Aniline	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Anthracene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Azobenzene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Benz(a)anthracene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Benzo(a)pyrene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Benzo(b)fluoranthene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Benzo(k)fluoranthene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Benzoic acid	ND	20		µg/L	1	9/24/2014 9:22:52 PM	15440
Benzyl alcohol	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Butyl benzyl phthalate	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Carbazole	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
4-Chloroaniline	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
2-Chloronaphthalene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
2-Chlorophenol	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Chrysene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Di-n-butyl phthalate	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Di-n-octyl phthalate	ND	20		µg/L	1	9/24/2014 9:22:52 PM	15440
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Dibenzofuran	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
1,2-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
1,3-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
1,4-Dichlorobenzene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Diethyl phthalate	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Dimethyl phthalate	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
2,4-Dichlorophenol	ND	20		µg/L	1	9/24/2014 9:22:52 PM	15440
2,4-Dimethylphenol	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/24/2014 9:22:52 PM	15440
2,4-Dinitrophenol	ND	20		µg/L	1	9/24/2014 9:22:52 PM	15440

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW-2B
Project: 2014 Annual GW
Collection Date: 9/17/2014 10:00:00 AM
Lab ID: 1409A34-009
Matrix: AQUEOUS
Received Date: 9/19/2014 12:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **JDC**	
2,4-Dinitrotoluene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
2,6-Dinitrotoluene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Fluoranthene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Fluorene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Hexachlorobenzene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Hexachlorobutadiene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Hexachloroethane	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Isophorone	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
1-Methylnaphthalene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
2-Methylnaphthalene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
2-Methylphenol	ND	20		µg/L	1	9/24/2014 9:22:52 PM	15440
3+4-Methylphenol	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
N-Nitrosodimethylamine	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Naphthalene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
2-Nitroaniline	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
3-Nitroaniline	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
4-Nitroaniline	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Nitrobenzene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
2-Nitrophenol	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
4-Nitrophenol	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Pentachlorophenol	ND	20		µg/L	1	9/24/2014 9:22:52 PM	15440
Phenanthrene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Phenol	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Pyrene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Pyridine	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/24/2014 9:22:52 PM	15440
Surr: 2-Fluorophenol	63.8	12.1-85.8		%REC	1	9/24/2014 9:22:52 PM	15440
Surr: Phenol-d5	56.9	17.7-65.8		%REC	1	9/24/2014 9:22:52 PM	15440
Surr: 2,4,6-Tribromophenol	64.5	26-138		%REC	1	9/24/2014 9:22:52 PM	15440
Surr: Nitrobenzene-d5	77.2	47.5-119		%REC	1	9/24/2014 9:22:52 PM	15440
Surr: 2-Fluorobiphenyl	73.2	48.1-106		%REC	1	9/24/2014 9:22:52 PM	15440
Surr: 4-Terphenyl-d14	82.1	44-113		%REC	1	9/24/2014 9:22:52 PM	15440

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A34**
07-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**	
Client ID: **PBW**	Batch ID: **R21450**	RunNo: **21450**	
Prep Date:	Analysis Date: **9/25/2014**	SeqNo: **626978**	Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**	
Client ID: **LCSW**	Batch ID: **R21450**	RunNo: **21450**	
Prep Date:	Analysis Date: **9/25/2014**	SeqNo: **626979**	Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	95.6	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.6	85	115			
Calcium	49	1.0	50.00	0	98.4	85	115			
Chromium	0.47	0.0060	0.5000	0	93.1	85	115			
Copper	0.48	0.0060	0.5000	0	96.1	85	115			
Iron	0.49	0.020	0.5000	0	98.6	85	115			
Magnesium	49	1.0	50.00	0	98.5	85	115			
Manganese	0.48	0.0020	0.5000	0	96.5	85	115			
Potassium	49	1.0	50.00	0	97.2	85	115			
Silver	0.10	0.0050	0.1000	0	101	85	115			
Sodium	49	1.0	50.00	0	98.5	85	115			
Zinc	0.49	0.010	0.5000	0	97.1	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A34**
07-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB-15445** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **15445** RunNo: **21391**
Prep Date: **9/23/2014** Analysis Date: **9/23/2014** SeqNo: **624989** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-15445** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **15445** RunNo: **21391**
Prep Date: **9/23/2014** Analysis Date: **9/23/2014** SeqNo: **624990** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.4	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.0	85	115			
Chromium	0.49	0.0060	0.5000	0	97.7	85	115			
Copper	0.49	0.0060	0.5000	0	98.3	85	115			
Iron	0.49	0.020	0.5000	0	97.3	85	115			
Manganese	0.50	0.0020	0.5000	0	99.8	85	115			
Silver	0.10	0.0050	0.1000	0	101	85	115			
Zinc	0.50	0.010	0.5000	0	101	85	115			

Sample ID **1409A34-001EMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **RW-6** Batch ID: **15445** RunNo: **21450**
Prep Date: **9/23/2014** Analysis Date: **9/25/2014** SeqNo: **627835** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.50	0.0020	0.5000	0	100	70	130			
Chromium	0.49	0.0060	0.5000	0	98.3	70	130			
Copper	0.52	0.0060	0.5000	0	103	70	130			
Silver	0.10	0.0050	0.1000	0	104	70	130			
Zinc	0.51	0.010	0.5000	0.005540	102	70	130			

Sample ID **1409A34-001EMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **RW-6** Batch ID: **15445** RunNo: **21450**
Prep Date: **9/23/2014** Analysis Date: **9/25/2014** SeqNo: **627836** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.50	0.0020	0.5000	0	101	70	130	0.479	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A34**
07-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **1409A34-001EMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **RW-6** Batch ID: **15445** RunNo: **21450**
Prep Date: **9/23/2014** Analysis Date: **9/25/2014** SeqNo: **627836** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.50	0.0060	0.5000	0	99.3	70	130	0.945	20	
Copper	0.52	0.0060	0.5000	0	104	70	130	0.350	20	
Silver	0.11	0.0050	0.1000	0	106	70	130	1.91	20	
Zinc	0.52	0.010	0.5000	0.005540	103	70	130	1.01	20	

Sample ID **1409A34-001EMS** SampType: **MS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **RW-6** Batch ID: **15445** RunNo: **21450**
Prep Date: **9/23/2014** Analysis Date: **9/25/2014** SeqNo: **627924** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	3.7	0.010	0.5000	3.269	87.2	70	130			
Manganese	1.3	0.010	0.5000	0.7888	102	70	130			

Sample ID **1409A34-001EMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **RW-6** Batch ID: **15445** RunNo: **21450**
Prep Date: **9/23/2014** Analysis Date: **9/25/2014** SeqNo: **627928** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	3.8	0.010	0.5000	3.269	97.3	70	130	1.36	20	
Manganese	1.3	0.010	0.5000	0.7888	105	70	130	1.35	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A34**
07-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **1409A34-001FMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **RW-6** Batch ID: **R21559** RunNo: **21559**
Prep Date: Analysis Date: **9/30/2014** SeqNo: **631525** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.029	0.0010	0.02500	0.004883	95.2	70	130			
Uranium	0.027	0.0010	0.02500	.00009143	106	70	130			

Sample ID **1409A34-001FMSD** SampType: **MSD** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **RW-6** Batch ID: **R21559** RunNo: **21559**
Prep Date: Analysis Date: **9/30/2014** SeqNo: **631526** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.029	0.0010	0.02500	0.004883	96.2	70	130	0.883	20	
Uranium	0.027	0.0010	0.02500	.00009143	106	70	130	0.526	20	

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21559** RunNo: **21559**
Prep Date: Analysis Date: **9/30/2014** SeqNo: **631540** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.023	0.0010	0.02500	0	92.9	85	115			
Uranium	0.024	0.0010	0.02500	0	94.8	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21559** RunNo: **21559**
Prep Date: Analysis Date: **9/30/2014** SeqNo: **631542** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21559** RunNo: **21559**
Prep Date: Analysis Date: **9/30/2014** SeqNo: **631545** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.023	0.0010	0.02500	0	90.3	85	115			
Uranium	0.023	0.0010	0.02500	0	92.2	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21559** RunNo: **21559**
Prep Date: Analysis Date: **9/30/2014** SeqNo: **631546** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A34**
07-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21559** RunNo: **21559**
Prep Date: Analysis Date: **9/30/2014** SeqNo: **631546** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **1409A34-001FMS** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **RW-6** Batch ID: **R21629** RunNo: **21629**
Prep Date: Analysis Date: **10/2/2014** SeqNo: **634376** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.13	0.0050	0.1250	0.01364	95.3	70	130			
Selenium	0.12	0.0050	0.1250	0.001913	96.2	70	130			

Sample ID **1409A34-001FMSD** SampType: **MSD** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **RW-6** Batch ID: **R21629** RunNo: **21629**
Prep Date: Analysis Date: **10/2/2014** SeqNo: **634377** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.13	0.0050	0.1250	0.01364	95.7	70	130	0.354	20	
Selenium	0.12	0.0050	0.1250	0.001913	94.1	70	130	2.16	20	

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21629** RunNo: **21629**
Prep Date: Analysis Date: **10/2/2014** SeqNo: **634388** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	91.7	85	115			
Lead	0.024	0.0010	0.02500	0	94.8	85	115			
Selenium	0.022	0.0010	0.02500	0	89.3	85	115			
Uranium	0.024	0.0010	0.02500	0	94.5	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21629** RunNo: **21629**
Prep Date: Analysis Date: **10/2/2014** SeqNo: **634389** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.9	85	115			
Lead	0.024	0.0010	0.02500	0	95.2	85	115			
Selenium	0.023	0.0010	0.02500	0	92.8	85	115			
Uranium	0.024	0.0010	0.02500	0	96.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A34**
07-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**								
Client ID: **PBW**	Batch ID: **R21629**	RunNo: **21629**								
Prep Date:	Analysis Date: **10/2/2014**	SeqNo: **634390**	Units: **mg/L**							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**								
Client ID: **PBW**	Batch ID: **R21629**	RunNo: **21629**								
Prep Date:	Analysis Date: **10/2/2014**	SeqNo: **634391**	Units: **mg/L**							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A34**
07-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **1409A34-007FLLMS** SampType: **MSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **OW-30** Batch ID: **15445** RunNo: **21619**
Prep Date: **9/23/2014** Analysis Date: **10/2/2014** SeqNo: **634146** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.028	0.0050	0.02500	0	111	70	130			
Uranium	0.081	0.0050	0.02500	0.05121	118	70	130			

Sample ID **1409A34-007FLLMS** SampType: **MSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **OW-30** Batch ID: **15445** RunNo: **21619**
Prep Date: **9/23/2014** Analysis Date: **10/2/2014** SeqNo: **634147** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.027	0.0010	0.02500	0.001494	103	70	130			
Lead	0.028	0.0010	0.02500	0	112	70	130			
Selenium	0.028	0.0010	0.02500	0.003369	97.2	70	130			

Sample ID **1409A34-007FLLMS** SampType: **MSDLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **OW-30** Batch ID: **15445** RunNo: **21619**
Prep Date: **9/23/2014** Analysis Date: **10/2/2014** SeqNo: **634148** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.027	0.0050	0.02500	0	108	70	130	3.07	20	
Uranium	0.080	0.0050	0.02500	0.05121	115	70	130	0.918	20	

Sample ID **1409A34-007FLLMS** SampType: **MSDLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **OW-30** Batch ID: **15445** RunNo: **21619**
Prep Date: **9/23/2014** Analysis Date: **10/2/2014** SeqNo: **634149** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.027	0.0010	0.02500	0.001494	101	70	130	1.76	20	
Lead	0.027	0.0010	0.02500	0	109	70	130	2.24	20	
Selenium	0.027	0.0010	0.02500	0.003369	96.5	70	130	0.664	20	

Sample ID **LLLCS-15445** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **15445** RunNo: **21619**
Prep Date: **9/23/2014** Analysis Date: **10/2/2014** SeqNo: **634155** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	101	85	115			
Lead	0.027	0.0010	0.02500	0	107	85	115			
Selenium	0.026	0.0010	0.02500	0	104	85	115			
Uranium	0.027	0.0010	0.02500	0	106	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A34**
07-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**MB-15445**	SampType:	**MBLK**	TestCode:	**200.8 ICPMS Metals:Total**
Client ID:	**PBW**	Batch ID:	**15445**	RunNo:	**21619**
Prep Date:	**9/23/2014**	Analysis Date:	**10/2/2014**	SeqNo:	**634158** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A34**
07-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**MB-15531**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**
Client ID:	**PBW**	Batch ID:	**15531**	RunNo:	**21492**
Prep Date:	**9/26/2014**	Analysis Date:	**9/26/2014**	SeqNo:	**628445** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-15531**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**
Client ID:	**LCSW**	Batch ID:	**15531**	RunNo:	**21492**
Prep Date:	**9/26/2014**	Analysis Date:	**9/26/2014**	SeqNo:	**628446** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0056	0.00020	0.005000	0	111	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A34**
07-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R21368** RunNo: **21368**
Prep Date: Analysis Date: **9/22/2014** SeqNo: **623985** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R21368** RunNo: **21368**
Prep Date: Analysis Date: **9/22/2014** SeqNo: **623986** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.8	90	110			
Bromide	2.4	0.10	2.500	0	97.6	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	94.1	90	110			
Sulfate	9.7	0.50	10.00	0	97.1	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	98.5	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R21368** RunNo: **21368**
Prep Date: Analysis Date: **9/22/2014** SeqNo: **624032** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R21368** RunNo: **21368**
Prep Date: Analysis Date: **9/22/2014** SeqNo: **624033** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	96.4	90	110			
Chloride	4.6	0.50	5.000	0	91.7	90	110			
Bromide	2.4	0.10	2.500	0	94.4	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	93.4	90	110			
Sulfate	9.4	0.50	10.00	0	93.8	90	110			
Nitrate+Nitrite as N	3.3	0.20	3.500	0	95.6	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A34**
07-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**MB-15424**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Diesel Range**					
Client ID:	**PBW**	Batch ID:	**15424**	RunNo:	**21369**					
Prep Date:	**9/22/2014**	Analysis Date:	**9/23/2014**	SeqNo:	**624234**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.94		1.000		93.9	59	141			

Sample ID	**LCS-15424**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Diesel Range**					
Client ID:	**LCSW**	Batch ID:	**15424**	RunNo:	**21369**					
Prep Date:	**9/22/2014**	Analysis Date:	**9/23/2014**	SeqNo:	**624235**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	6.5	1.0	5.000	0	130	69.7	142			
Surr: DNOP	0.55		0.5000		110	59	141			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A34**
07-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW** Batch ID: **R21431** RunNo: **21431**
Prep Date: Analysis Date: **9/24/2014** SeqNo: **626176** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		89.2	70.9	130			

Sample ID **2.5UG GRO LCS** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW** Batch ID: **R21431** RunNo: **21431**
Prep Date: Analysis Date: **9/24/2014** SeqNo: **626182** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.52	0.050	0.5000	0	104	80	120			
Surr: BFB	19		20.00		95.6	70.9	130			

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW** Batch ID: **R21468** RunNo: **21468**
Prep Date: Analysis Date: **9/25/2014** SeqNo: **627652** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	17		20.00		82.8	70.9	130			

Sample ID **2.5UG GRO LCS** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW** Batch ID: **R21468** RunNo: **21468**
Prep Date: Analysis Date: **9/25/2014** SeqNo: **627653** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.46	0.050	0.5000	0	91.4	80	120			
Surr: BFB	19		20.00		94.7	70.9	130			

Sample ID **1409A34-004BMS** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **RW-1** Batch ID: **R21468** RunNo: **21468**
Prep Date: Analysis Date: **9/25/2014** SeqNo: **627667** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	390	25	250.0	152.9	95.4	70.4	127			
Surr: BFB	9900		10000		99.2	70.9	130			

Sample ID **1409A34-004BMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **RW-1** Batch ID: **R21468** RunNo: **21468**
Prep Date: Analysis Date: **9/25/2014** SeqNo: **627668** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A34**
07-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **1409A34-004BMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **RW-1** Batch ID: **R21468** RunNo: **21468**
Prep Date: Analysis Date: **9/25/2014** SeqNo: **627668** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	390	25	250.0	152.9	93.6	70.4	127	1.16	20	
Surr: BFB	9800		10000		97.8	70.9	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A34**
07-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R21507**	RunNo: **21507**	
Prep Date:	Analysis Date: **9/29/2014**	SeqNo: **629602**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A34**
07-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R21507**	RunNo: **21507**
Prep Date:	Analysis Date: **9/29/2014**	SeqNo: **629602** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.5		10.00		94.7	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	9.3		10.00		92.9	70	130			
Surr: Toluene-d8	9.2		10.00		92.4	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R21507**	RunNo: **21507**
Prep Date:	Analysis Date: **9/29/2014**	SeqNo: **629604** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.5	70	130			
Toluene	19	1.0	20.00	0	96.4	80	120			
Chlorobenzene	18	1.0	20.00	0	91.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A34**
07-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R21507** RunNo: **21507**
Prep Date: Analysis Date: **9/29/2014** SeqNo: **629604** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22	1.0	20.00	0	112	82.6	131			
Trichloroethene (TCE)	18	1.0	20.00	0	90.2	70	130			
Surr: 1,2-Dichloroethane-d4	8.7		10.00		86.5	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		99.8	70	130			
Surr: Dibromofluoromethane	9.0		10.00		90.1	70	130			
Surr: Toluene-d8	9.6		10.00		95.6	70	130			

Sample ID **1409A34-001a ms** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **RW-6** Batch ID: **R21507** RunNo: **21507**
Prep Date: Analysis Date: **9/29/2014** SeqNo: **629613** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	740	10	200.0	466.1	139	70	130			S
Toluene	440	10	200.0	234.3	104	70	130			
Chlorobenzene	190	10	200.0	0	95.3	70	130			
1,1-Dichloroethene	230	10	200.0	0	113	70	130			
Trichloroethene (TCE)	190	10	200.0	2.020	92.2	70	130			
Surr: 1,2-Dichloroethane-d4	92		100.0		92.2	70	130			
Surr: 4-Bromofluorobenzene	100		100.0		100	70	130			
Surr: Dibromofluoromethane	95		100.0		95.3	70	130			
Surr: Toluene-d8	97		100.0		96.6	70	130			

Sample ID **1409A34-001a msd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **RW-6** Batch ID: **R21507** RunNo: **21507**
Prep Date: Analysis Date: **9/29/2014** SeqNo: **629614** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	670	10	200.0	466.1	99.5	70	130	11.3	20	
Toluene	430	10	200.0	234.3	99.6	70	130	1.87	20	
Chlorobenzene	190	10	200.0	0	94.8	70	130	0.515	20	
1,1-Dichloroethene	210	10	200.0	0	105	70	130	7.62	20	
Trichloroethene (TCE)	180	10	200.0	2.020	87.0	70	130	5.68	20	
Surr: 1,2-Dichloroethane-d4	92		100.0		92.4	70	130	0	0	
Surr: 4-Bromofluorobenzene	100		100.0		100	70	130	0	0	
Surr: Dibromofluoromethane	91		100.0		91.1	70	130	0	0	
Surr: Toluene-d8	97		100.0		96.9	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A34**
07-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15440**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **15440**	RunNo: **21434**			
Prep Date: **9/23/2014**	Analysis Date: **9/24/2014**	SeqNo: **626587**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A34**
07-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15440**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **15440**	RunNo: **21434**			
Prep Date: **9/23/2014**	Analysis Date: **9/24/2014**	SeqNo: **626587**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	160		200.0		78.4	12.1	85.8			
Surr: Phenol-d5	140		200.0		67.7	17.7	65.8			S
Surr: 2,4,6-Tribromophenol	150		200.0		75.5	26	138			
Surr: Nitrobenzene-d5	87		100.0		87.5	47.5	119			
Surr: 2-Fluorobiphenyl	84		100.0		83.6	48.1	106			
Surr: 4-Terphenyl-d14	88		100.0		87.9	44	113			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409A34**
07-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **lcs-15440** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **15440** RunNo: **21434**
Prep Date: **9/23/2014** Analysis Date: **9/24/2014** SeqNo: **626588** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	83	10	100.0	0	83.1	47.9	114			
4-Chloro-3-methylphenol	180	10	200.0	0	88.5	51.7	122			
2-Chlorophenol	170	10	200.0	0	85.6	40.7	113			
1,4-Dichlorobenzene	69	10	100.0	0	69.4	39.6	99.9			
2,4-Dinitrotoluene	79	10	100.0	0	78.9	40.8	113			
N-Nitrosodi-n-propylamine	79	10	100.0	0	78.8	51.2	111			
4-Nitrophenol	140	10	200.0	0	71.5	15.7	86.9			
Pentachlorophenol	120	20	200.0	0	60.9	21.6	104			
Phenol	150	10	200.0	0	73.2	28.6	71.7			S
Pyrene	84	10	100.0	0	84.3	54.2	128			
1,2,4-Trichlorobenzene	73	10	100.0	0	73.1	40.9	101			
Surr: 2-Fluorophenol	150		200.0		74.6	12.1	85.8			
Surr: Phenol-d5	130		200.0		67.4	17.7	65.8			S
Surr: 2,4,6-Tribromophenol	150		200.0		73.1	26	138			
Surr: Nitrobenzene-d5	86		100.0		86.1	47.5	119			
Surr: 2-Fluorobiphenyl	81		100.0		80.9	48.1	106			
Surr: 4-Terphenyl-d14	82		100.0		82.2	44	113			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Western Refining Gallup** Work Order Number: **1409A34** RcptNo: **1**

Received by/date: AT 09/19/14

Logged By: **Ashley Gallegos** **9/19/2014 12:45:00 PM** AG

Completed By: **Ashley Gallegos** **9/22/2014 10:49:04 AM** AG

Reviewed By: KMS/MG 09/22/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☑ No ☑ MG 09/22/14 NA ☐
   See Remarks
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 11
(<2 or >12 unless noted)
Adjusted? Yes
Checked by: MG

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks: For Metals Analysis! Added 1mL HNO_3 to -004E for acceptable pH. Held in login for 24 hours. mg 09/22/14

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

2 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard ☐ Rush

Project Name: 2014 ~~AS~~ 09/22/14 ~~2041~~ ANNUAL GW

Project #: RW-1,-2,-5,-6

Project Manager: C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: X Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1409A34	8260 + MTBE	8015B extended	8270 + phenols	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	Major Cations/Anions							Air Bubbles (Y or N)
~~9/18/14~~																			
9/18/14	1050	H_2O	RW-6			-001	X	X	X	X	X								
9/18/14	1140	H_2O	RW-5			-002	X	X	X	X	X								
9/18/14	1215	H_2O	RW-2			-003	X	X	X	X	X								
9/18/14	1500	H_2O	RW-1			-004	X	X	X	X	X	per		CJ					
																	09/22/14		
			Trip Blank AS 09/22/14			-005	X	X											
9/18/14	1235	H_2O	FB-Group8-9/18/14			-006	X												
9/17/14	1830	H_2O	OW-30			-007	X	X	X	X	X	X							
9/17/14	1005	H_2O	BW-2A			-008			X										
9/17/14	1000	H_2O	BW-2B			-009			X										

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/19/14	1245			09/19/14	1245
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 06, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: 2014 Annual GW OrderNo.: 1409800

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 9/16/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1409800**
Date Reported: **10/6/2014**

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: SMW-2
Project: 2014 Annual GW
Collection Date: 9/11/2014 3:10:00 PM
Lab ID: 1409800-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/18/2014 12:01:37 PM	15312
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/18/2014 12:01:37 PM	15312
Surr: DNOP	99.8	59-141		%REC	1	9/18/2014 12:01:37 PM	15312
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**DJF**
Gasoline Range Organics (GRO)	0.23	0.050		mg/L	1	9/17/2014 5:30:13 PM	R21267
Surr: BFB	1130	70.9-130	S	%REC	1	9/17/2014 5:30:13 PM	R21267
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	ND	2.0		mg/L	20	9/17/2014 7:58:35 PM	R21283
Chloride	2500	100		mg/L	200	9/19/2014 5:34:16 AM	R21321
Bromide	2.9	2.0		mg/L	20	9/17/2014 7:58:35 PM	R21283
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/17/2014 7:46:11 PM	R21283
Sulfate	1400	100		mg/L	200	9/19/2014 5:34:16 AM	R21321
Nitrate+Nitrite as N	ND	2.0		mg/L	10	9/19/2014 3:37:53 AM	R21310
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.015	0.0020		mg/L	1	9/18/2014 1:33:28 PM	R21290
Cadmium	ND	0.0020		mg/L	1	9/18/2014 1:33:28 PM	R21290
Calcium	280	10		mg/L	10	9/19/2014 3:58:41 PM	R21336
Chromium	ND	0.0060		mg/L	1	9/18/2014 1:33:28 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 1:33:28 PM	R21290
Iron	0.049	0.020		mg/L	1	9/18/2014 1:33:28 PM	R21290
Magnesium	84	1.0		mg/L	1	9/18/2014 1:33:28 PM	R21290
Manganese	0.27	0.0020	*	mg/L	1	9/19/2014 3:56:50 PM	R21336
Potassium	3.7	1.0		mg/L	1	9/18/2014 1:33:28 PM	R21290
Silver	ND	0.0050		mg/L	1	9/19/2014 3:56:50 PM	R21336
Sodium	2100	100		mg/L	100	9/19/2014 4:00:31 PM	R21336
Zinc	ND	0.010		mg/L	1	9/19/2014 3:56:50 PM	R21336
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.013	0.0020		mg/L	1	9/18/2014 4:26:29 PM	15343
Cadmium	ND	0.0020		mg/L	1	9/18/2014 4:26:29 PM	15343
Chromium	ND	0.0060		mg/L	1	9/18/2014 4:26:29 PM	15343
Copper	ND	0.0060		mg/L	1	9/18/2014 4:26:29 PM	15343
Iron	0.052	0.020		mg/L	1	9/18/2014 4:26:29 PM	15343
Manganese	0.28	0.0020	*	mg/L	1	9/18/2014 4:26:29 PM	15343
Silver	ND	0.0050		mg/L	1	9/18/2014 4:26:29 PM	15343
Zinc	ND	0.010		mg/L	1	9/18/2014 4:26:29 PM	15343
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	9/26/2014 2:07:59 PM	R21493

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: SMW-2
Project: 2014 Annual GW
Collection Date: 9/11/2014 3:10:00 PM
Lab ID: 1409800-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.020		mg/L	20	9/29/2014 4:19:00 PM	R21527
Selenium	0.021	0.010		mg/L	10	9/26/2014 2:07:59 PM	R21493
Uranium	0.11	0.020	*	mg/L	20	9/29/2014 4:19:00 PM	R21527
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	9/29/2014 12:52:43 PM	15343
Lead	ND	0.0010		mg/L	1	9/23/2014 5:32:47 PM	15343
Selenium	0.019	0.010		mg/L	10	9/29/2014 12:52:43 PM	15343
Uranium	0.11	0.010	*	mg/L	10	9/29/2014 12:52:43 PM	15343
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/24/2014 10:37:15 AM	15449
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Acenaphthylene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Aniline	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Anthracene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Azobenzene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Benz(a)anthracene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Benzo(a)pyrene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Benzo(b)fluoranthene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Benzo(g,h,i)perylene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Benzo(k)fluoranthene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Benzoic acid	ND	22		µg/L	1	9/19/2014 7:55:50 PM	15398
Benzyl alcohol	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Bis(2-chloroethoxy)methane	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Bis(2-chloroethyl)ether	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Bis(2-chloroisopropyl)ether	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Bis(2-ethylhexyl)phthalate	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
4-Bromophenyl phenyl ether	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Butyl benzyl phthalate	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Carbazole	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
4-Chloro-3-methylphenol	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
4-Chloroaniline	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
2-Chloronaphthalene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
2-Chlorophenol	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
4-Chlorophenyl phenyl ether	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Chrysene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Di-n-butyl phthalate	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Di-n-octyl phthalate	ND	22		µg/L	1	9/19/2014 7:55:50 PM	15398

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: SMW-2
Project: 2014 Annual GW
Collection Date: 9/11/2014 3:10:00 PM
Lab ID: 1409800-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Dibenzofuran	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
1,2-Dichlorobenzene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
1,3-Dichlorobenzene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
1,4-Dichlorobenzene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
3,3´-Dichlorobenzidine	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Diethyl phthalate	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Dimethyl phthalate	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
2,4-Dichlorophenol	ND	22		µg/L	1	9/19/2014 7:55:50 PM	15398
2,4-Dimethylphenol	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
4,6-Dinitro-2-methylphenol	ND	22		µg/L	1	9/19/2014 7:55:50 PM	15398
2,4-Dinitrophenol	ND	22		µg/L	1	9/19/2014 7:55:50 PM	15398
2,4-Dinitrotoluene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
2,6-Dinitrotoluene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Fluoranthene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Fluorene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Hexachlorobenzene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Hexachlorobutadiene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Hexachlorocyclopentadiene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Hexachloroethane	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Indeno(1,2,3-cd)pyrene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Isophorone	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
1-Methylnaphthalene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
2-Methylnaphthalene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
2-Methylphenol	ND	22		µg/L	1	9/19/2014 7:55:50 PM	15398
3+4-Methylphenol	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
N-Nitrosodi-n-propylamine	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
N-Nitrosodimethylamine	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
N-Nitrosodiphenylamine	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Naphthalene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
2-Nitroaniline	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
3-Nitroaniline	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
4-Nitroaniline	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Nitrobenzene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
2-Nitrophenol	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
4-Nitrophenol	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Pentachlorophenol	ND	22		µg/L	1	9/19/2014 7:55:50 PM	15398
Phenanthrene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Phenol	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: SMW-2
Project: 2014 Annual GW
Collection Date: 9/11/2014 3:10:00 PM
Lab ID: 1409800-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyrene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Pyridine	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
1,2,4-Trichlorobenzene	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
2,4,5-Trichlorophenol	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
2,4,6-Trichlorophenol	ND	11		µg/L	1	9/19/2014 7:55:50 PM	15398
Surr: 2-Fluorophenol	63.6	12.1-85.8		%REC	1	9/19/2014 7:55:50 PM	15398
Surr: Phenol-d5	54.6	17.7-65.8		%REC	1	9/19/2014 7:55:50 PM	15398
Surr: 2,4,6-Tribromophenol	84.4	26-138		%REC	1	9/19/2014 7:55:50 PM	15398
Surr: Nitrobenzene-d5	80.1	47.5-119		%REC	1	9/19/2014 7:55:50 PM	15398
Surr: 2-Fluorobiphenyl	77.6	48.1-106		%REC	1	9/19/2014 7:55:50 PM	15398
Surr: 4-Terphenyl-d14	91.4	44-113		%REC	1	9/19/2014 7:55:50 PM	15398
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Toluene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Ethylbenzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Methyl tert-butyl ether (MTBE)	12	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Naphthalene	ND	2.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
2-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Acetone	ND	10		µg/L	1	9/19/2014 2:23:26 PM	R21319
Bromobenzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Bromodichloromethane	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Bromoform	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Bromomethane	ND	3.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
2-Butanone	ND	10		µg/L	1	9/19/2014 2:23:26 PM	R21319
Carbon disulfide	ND	10		µg/L	1	9/19/2014 2:23:26 PM	R21319
Carbon Tetrachloride	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Chlorobenzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Chloroethane	ND	2.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Chloroform	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Chloromethane	ND	3.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
2-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
4-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
cis-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: SMW-2
Project: 2014 Annual GW
Collection Date: 9/11/2014 3:10:00 PM
Lab ID: 1409800-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Dibromochloromethane	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Dibromomethane	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,1-Dichloroethane	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,1-Dichloroethene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,2-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,3-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
2,2-Dichloropropane	ND	2.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,1-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Hexachlorobutadiene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
2-Hexanone	ND	10		µg/L	1	9/19/2014 2:23:26 PM	R21319
Isopropylbenzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
4-Isopropyltoluene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
4-Methyl-2-pentanone	ND	10		µg/L	1	9/19/2014 2:23:26 PM	R21319
Methylene Chloride	ND	3.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
n-Butylbenzene	ND	3.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
n-Propylbenzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
sec-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Styrene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
tert-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
trans-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Trichlorofluoromethane	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Vinyl chloride	ND	1.0		µg/L	1	9/19/2014 2:23:26 PM	R21319
Xylenes, Total	ND	1.5		µg/L	1	9/19/2014 2:23:26 PM	R21319
Surr: 1,2-Dichloroethane-d4	93.5	70-130		%REC	1	9/19/2014 2:23:26 PM	R21319

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: SMW-2
Project: 2014 Annual GW
Collection Date: 9/11/2014 3:10:00 PM
Lab ID: 1409800-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Surr: 4-Bromofluorobenzene	101	70-130		%REC	1	9/19/2014 2:23:26 PM	R21319
Surr: Dibromofluoromethane	94.1	70-130		%REC	1	9/19/2014 2:23:26 PM	R21319
Surr: Toluene-d8	68.1	70-130	S	%REC	1	9/19/2014 2:23:26 PM	R21319

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: SMW-4
Project: 2014 Annual GW
Collection Date: 9/11/2014 4:40:00 PM
Lab ID: 1409800-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	9/18/2014 12:23:30 PM	15312
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/18/2014 12:23:30 PM	15312
Surr: DNOP	104	59-141		%REC	1	9/18/2014 12:23:30 PM	15312
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**DJF**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/17/2014 6:00:24 PM	R21267
Surr: BFB	95.3	70.9-130		%REC	1	9/17/2014 6:00:24 PM	R21267
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	1.1	0.10		mg/L	1	9/17/2014 8:11:00 PM	R21283
Chloride	53	10		mg/L	20	9/17/2014 8:23:24 PM	R21283
Bromide	0.19	0.10		mg/L	1	9/17/2014 8:11:00 PM	R21283
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	9/17/2014 8:11:00 PM	R21283
Sulfate	150	10		mg/L	20	9/17/2014 8:23:24 PM	R21283
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/18/2014 3:50:18 AM	R21283
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.021	0.0020		mg/L	1	9/18/2014 1:35:30 PM	R21290
Cadmium	ND	0.0020		mg/L	1	9/18/2014 1:35:30 PM	R21290
Calcium	4.5	1.0		mg/L	1	9/18/2014 1:35:30 PM	R21290
Chromium	ND	0.0060		mg/L	1	9/18/2014 1:35:30 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 1:35:30 PM	R21290
Iron	0.041	0.020		mg/L	1	9/18/2014 1:35:30 PM	R21290
Magnesium	1.2	1.0		mg/L	1	9/18/2014 1:35:30 PM	R21290
Manganese	0.0033	0.0020		mg/L	1	9/19/2014 4:02:18 PM	R21336
Potassium	1.4	1.0		mg/L	1	9/18/2014 1:35:30 PM	R21290
Silver	ND	0.0050		mg/L	1	9/19/2014 4:02:18 PM	R21336
Sodium	300	10		mg/L	10	9/19/2014 4:04:16 PM	R21336
Zinc	ND	0.010		mg/L	1	9/19/2014 4:02:18 PM	R21336
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.024	0.0020		mg/L	1	9/18/2014 4:28:20 PM	15343
Cadmium	ND	0.0020		mg/L	1	9/18/2014 4:28:20 PM	15343
Chromium	ND	0.0060		mg/L	1	9/18/2014 4:28:20 PM	15343
Copper	ND	0.0060		mg/L	1	9/18/2014 4:28:20 PM	15343
Iron	0.35	0.020	*	mg/L	1	9/18/2014 4:28:20 PM	15343
Manganese	0.012	0.0020		mg/L	1	9/18/2014 4:28:20 PM	15343
Silver	ND	0.0050		mg/L	1	9/18/2014 4:28:20 PM	15343
Zinc	ND	0.010		mg/L	1	9/18/2014 4:28:20 PM	15343
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0033	0.0010		mg/L	1	9/26/2014 11:01:10 AM	R21493

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: SMW-4
Project: 2014 Annual GW
Collection Date: 9/11/2014 4:40:00 PM
Lab ID: 1409800-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Lead	ND	0.010		mg/L	10	9/29/2014 4:22:06 PM	R21527
Selenium	0.0013	0.0010		mg/L	1	9/26/2014 11:01:10 AM	R21493
Uranium	0.033	0.010	*	mg/L	10	9/29/2014 4:22:06 PM	R21527
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0034	0.0010		mg/L	1	9/23/2014 5:35:53 PM	15343
Lead	ND	0.0010		mg/L	1	9/23/2014 5:35:53 PM	15343
Selenium	0.0013	0.0010		mg/L	1	9/23/2014 5:35:53 PM	15343
Uranium	0.037	0.0010	*	mg/L	1	9/23/2014 5:35:53 PM	15343
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/24/2014 10:39:06 AM	15449
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Acenaphthylene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Aniline	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Anthracene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Azobenzene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Benz(a)anthracene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Benzo(a)pyrene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Benzo(b)fluoranthene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Benzo(k)fluoranthene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Benzoic acid	ND	20		µg/L	1	9/18/2014 6:27:13 PM	15342
Benzyl alcohol	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Butyl benzyl phthalate	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Carbazole	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
4-Chloroaniline	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
2-Chloronaphthalene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
2-Chlorophenol	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Chrysene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Di-n-butyl phthalate	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Di-n-octyl phthalate	ND	20		µg/L	1	9/18/2014 6:27:13 PM	15342

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: SMW-4
Project: 2014 Annual GW
Collection Date: 9/11/2014 4:40:00 PM
Lab ID: 1409800-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Dibenzofuran	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
1,2-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
1,3-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
1,4-Dichlorobenzene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Diethyl phthalate	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Dimethyl phthalate	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
2,4-Dichlorophenol	ND	20		µg/L	1	9/18/2014 6:27:13 PM	15342
2,4-Dimethylphenol	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/18/2014 6:27:13 PM	15342
2,4-Dinitrophenol	ND	20		µg/L	1	9/18/2014 6:27:13 PM	15342
2,4-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
2,6-Dinitrotoluene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Fluoranthene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Fluorene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Hexachlorobenzene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Hexachlorobutadiene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Hexachloroethane	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Isophorone	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
1-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
2-Methylnaphthalene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
2-Methylphenol	ND	20		µg/L	1	9/18/2014 6:27:13 PM	15342
3+4-Methylphenol	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
N-Nitrosodimethylamine	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Naphthalene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
2-Nitroaniline	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
3-Nitroaniline	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
4-Nitroaniline	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Nitrobenzene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
2-Nitrophenol	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
4-Nitrophenol	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Pentachlorophenol	ND	20		µg/L	1	9/18/2014 6:27:13 PM	15342
Phenanthrene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Phenol	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342

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Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: SMW-4
Project: 2014 Annual GW
Collection Date: 9/11/2014 4:40:00 PM
Lab ID: 1409800-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Pyrene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Pyridine	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/18/2014 6:27:13 PM	15342
Surr: 2-Fluorophenol	71.8	12.1-85.8		%REC	1	9/18/2014 6:27:13 PM	15342
Surr: Phenol-d5	59.8	17.7-65.8		%REC	1	9/18/2014 6:27:13 PM	15342
Surr: 2,4,6-Tribromophenol	71.8	26-138		%REC	1	9/18/2014 6:27:13 PM	15342
Surr: Nitrobenzene-d5	85.5	47.5-119		%REC	1	9/18/2014 6:27:13 PM	15342
Surr: 2-Fluorobiphenyl	85.2	48.1-106		%REC	1	9/18/2014 6:27:13 PM	15342
Surr: 4-Terphenyl-d14	87.2	44-113		%REC	1	9/18/2014 6:27:13 PM	15342
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Toluene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Ethylbenzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Naphthalene	ND	2.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
2-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Acetone	ND	10		µg/L	1	9/19/2014 2:53:12 PM	R21319
Bromobenzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Bromodichloromethane	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Bromoform	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Bromomethane	ND	3.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
2-Butanone	ND	10		µg/L	1	9/19/2014 2:53:12 PM	R21319
Carbon disulfide	ND	10		µg/L	1	9/19/2014 2:53:12 PM	R21319
Carbon Tetrachloride	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Chlorobenzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Chloroethane	ND	2.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Chloroform	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Chloromethane	ND	3.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
2-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
4-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
cis-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: SMW-4
Project: 2014 Annual GW
Collection Date: 9/11/2014 4:40:00 PM
Lab ID: 1409800-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Dibromochloromethane	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Dibromomethane	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,1-Dichloroethane	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,1-Dichloroethene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,2-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,3-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
2,2-Dichloropropane	ND	2.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,1-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Hexachlorobutadiene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
2-Hexanone	ND	10		µg/L	1	9/19/2014 2:53:12 PM	R21319
Isopropylbenzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
4-Isopropyltoluene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
4-Methyl-2-pentanone	ND	10		µg/L	1	9/19/2014 2:53:12 PM	R21319
Methylene Chloride	ND	3.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
n-Butylbenzene	ND	3.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
n-Propylbenzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
sec-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Styrene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
tert-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
trans-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Trichlorofluoromethane	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Vinyl chloride	ND	1.0		µg/L	1	9/19/2014 2:53:12 PM	R21319
Xylenes, Total	ND	1.5		µg/L	1	9/19/2014 2:53:12 PM	R21319
Surr: 1,2-Dichloroethane-d4	102	70-130		%REC	1	9/19/2014 2:53:12 PM	R21319

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: SMW-4
Project: 2014 Annual GW
Collection Date: 9/11/2014 4:40:00 PM
Lab ID: 1409800-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Surr: 4-Bromofluorobenzene	99.7	70-130		%REC	1	9/19/2014 2:53:12 PM	R21319
Surr: Dibromofluoromethane	104	70-130		%REC	1	9/19/2014 2:53:12 PM	R21319
Surr: Toluene-d8	88.0	70-130		%REC	1	9/19/2014 2:53:12 PM	R21319

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group 11-9/11/14
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409800-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Toluene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Ethylbenzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Naphthalene	ND	2.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
2-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Acetone	ND	10		µg/L	1	9/19/2014 3:22:55 PM	R21319
Bromobenzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Bromodichloromethane	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Bromoform	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Bromomethane	ND	3.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
2-Butanone	ND	10		µg/L	1	9/19/2014 3:22:55 PM	R21319
Carbon disulfide	ND	10		µg/L	1	9/19/2014 3:22:55 PM	R21319
Carbon Tetrachloride	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Chlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Chloroethane	ND	2.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Chloroform	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Chloromethane	ND	3.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
2-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
4-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
cis-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Dibromochloromethane	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Dibromomethane	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,1-Dichloroethane	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,1-Dichloroethene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,2-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,3-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
2,2-Dichloropropane	ND	2.0		µg/L	1	9/19/2014 3:22:55 PM	R21319

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group 11-9/11/14
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409800-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Hexachlorobutadiene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
2-Hexanone	ND	10		µg/L	1	9/19/2014 3:22:55 PM	R21319
Isopropylbenzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
4-Isopropyltoluene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
4-Methyl-2-pentanone	ND	10		µg/L	1	9/19/2014 3:22:55 PM	R21319
Methylene Chloride	ND	3.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
n-Butylbenzene	ND	3.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
n-Propylbenzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
sec-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Styrene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
tert-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
trans-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Trichlorofluoromethane	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Vinyl chloride	ND	1.0		µg/L	1	9/19/2014 3:22:55 PM	R21319
Xylenes, Total	ND	1.5		µg/L	1	9/19/2014 3:22:55 PM	R21319
Surr: 1,2-Dichloroethane-d4	103	70-130		%REC	1	9/19/2014 3:22:55 PM	R21319
Surr: 4-Bromofluorobenzene	102	70-130		%REC	1	9/19/2014 3:22:55 PM	R21319
Surr: Dibromofluoromethane	106	70-130		%REC	1	9/19/2014 3:22:55 PM	R21319
Surr: Toluene-d8	86.1	70-130		%REC	1	9/19/2014 3:22:55 PM	R21319

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409800-004
Matrix: TRIP BLANK
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**DJF**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/17/2014 6:30:35 PM	R21267
Surr: BFB	94.6	70.9-130		%REC	1	9/17/2014 6:30:35 PM	R21267
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Toluene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Ethylbenzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Naphthalene	ND	2.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
2-Methylnaphthalene	ND	4.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Acetone	ND	10		µg/L	1	9/19/2014 3:52:39 PM	R21319
Bromobenzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Bromodichloromethane	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Bromoform	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Bromomethane	ND	3.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
2-Butanone	ND	10		µg/L	1	9/19/2014 3:52:39 PM	R21319
Carbon disulfide	ND	10		µg/L	1	9/19/2014 3:52:39 PM	R21319
Carbon Tetrachloride	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Chlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Chloroethane	ND	2.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Chloroform	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Chloromethane	ND	3.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
2-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
4-Chlorotoluene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
cis-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Dibromochloromethane	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Dibromomethane	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,1-Dichloroethane	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,1-Dichloroethene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409800-004
Matrix: TRIP BLANK
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,2-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,3-Dichloropropane	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
2,2-Dichloropropane	ND	2.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,1-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Hexachlorobutadiene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
2-Hexanone	ND	10		µg/L	1	9/19/2014 3:52:39 PM	R21319
Isopropylbenzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
4-Isopropyltoluene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
4-Methyl-2-pentanone	ND	10		µg/L	1	9/19/2014 3:52:39 PM	R21319
Methylene Chloride	ND	3.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
n-Butylbenzene	ND	3.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
n-Propylbenzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
sec-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Styrene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
tert-Butylbenzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
trans-1,2-DCE	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Trichlorofluoromethane	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Vinyl chloride	ND	1.0		µg/L	1	9/19/2014 3:52:39 PM	R21319
Xylenes, Total	ND	1.5		µg/L	1	9/19/2014 3:52:39 PM	R21319
Surr: 1,2-Dichloroethane-d4	96.7	70-130		%REC	1	9/19/2014 3:52:39 PM	R21319
Surr: 4-Bromofluorobenzene	108	70-130		%REC	1	9/19/2014 3:52:39 PM	R21319
Surr: Dibromofluoromethane	100	70-130		%REC	1	9/19/2014 3:52:39 PM	R21319
Surr: Toluene-d8	87.1	70-130		%REC	1	9/19/2014 3:52:39 PM	R21319

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	140918049
Address:	4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109	**Project Name:**	1409800
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	140918049-001	**Sampling Date**	9/11/2014	**Date/Time Received**	9/18/2014	12:15 PM
Client Sample ID	1409800-001H / SMW-2	**Sampling Time**	3:10 PM			
Matrix	Water					
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	0.0456	mg/L	0.01	9/22/2014	ETL	EPA 335.4	

Sample Number	140918049-002	**Sampling Date**	9/11/2014	**Date/Time Received**	9/18/2014	12:15 PM
Client Sample ID	1409800-002H / SMW-4	**Sampling Time**	4:40 PM			
Matrix	Water					
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/L	0.01	9/22/2014	ETL	EPA 335.4	

Authorized Signature

John Coddington, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Anatek Labs, Inc.

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 140918049
Project Name: 1409800

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Cyanide	0.512	mg/L	0.5	102.4	90-110	9/22/2014	9/22/2014

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
140918049-002	Cyanide	ND	0.550	mg/L	0.5	110.0	90-110	9/22/2014	9/22/2014

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide	0.521	mg/L	0.5	104.2	5.4	0-20	9/22/2014	9/22/2014

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide	ND	mg/L	0.01	9/22/2014	9/22/2014

AR Acceptable Range
ND Not Detected
PQL Practical Quantitation Limit
RPD Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621146** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Potassium	ND	1.0								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621147** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	98.6	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.0	85	115			
Calcium	49	1.0	50.00	0	97.2	85	115			
Chromium	0.48	0.0060	0.5000	0	96.8	85	115			
Copper	0.49	0.0060	0.5000	0	97.1	85	115			
Iron	0.50	0.020	0.5000	0	100	85	115			
Magnesium	49	1.0	50.00	0	97.8	85	115			
Potassium	48	1.0	50.00	0	96.0	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621149** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Potassium	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621150** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.7	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.8	85	115			
Calcium	48	1.0	50.00	0	96.8	85	115			
Chromium	0.48	0.0060	0.5000	0	96.4	85	115			
Copper	0.48	0.0060	0.5000	0	95.5	85	115			
Iron	0.50	0.020	0.5000	0	99.0	85	115			
Magnesium	49	1.0	50.00	0	97.7	85	115			
Potassium	48	1.0	50.00	0	96.3	85	115			

Sample ID **LCS TEST** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621170** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	101	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.6	85	115			
Calcium	50	1.0	50.00	0	99.9	85	115			
Chromium	0.49	0.0060	0.5000	0	98.7	85	115			
Copper	0.49	0.0060	0.5000	0	97.3	85	115			
Iron	0.50	0.020	0.5000	0	101	85	115			
Magnesium	50	1.0	50.00	0	99.5	85	115			
Potassium	50	1.0	50.00	0	99.2	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622776** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622777** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50	1.0	50.00	0	99.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622777** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	0.45	0.0020	0.5000	0	89.7	85	115			
Sodium	50	1.0	50.00	0	99.3	85	115			
Zinc	0.46	0.010	0.5000	0	91.8	85	115			

Sample ID **LCS Ag** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622778** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.096	0.0050	0.1000	0	95.7	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622779** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622780** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50	1.0	50.00	0	99.4	85	115			
Manganese	0.46	0.0020	0.5000	0	91.5	85	115			
Sodium	49	1.0	50.00	0	98.5	85	115			
Zinc	0.47	0.010	0.5000	0	93.7	85	115			

Sample ID **LCS Ag** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622781** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB-15343** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **15343** RunNo: **21297**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621503** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-15343** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **15343** RunNo: **21297**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621504** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.2	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.6	85	115			
Chromium	0.49	0.0060	0.5000	0	98.1	85	115			
Copper	0.48	0.0060	0.5000	0	96.9	85	115			
Iron	0.48	0.020	0.5000	0	96.5	85	115			
Manganese	0.48	0.0020	0.5000	0	95.0	85	115			
Zinc	0.48	0.010	0.5000	0	96.9	85	115			

Sample ID **LCS Ag-15343** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **15343** RunNo: **21297**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621505** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**R21493**	RunNo:	**21493**					
Prep Date:		Analysis Date:	**9/26/2014**	SeqNo:	**628608**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.7	85	115			
Selenium	0.022	0.0010	0.02500	0	90.0	85	115			

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**R21493**	RunNo:	**21493**					
Prep Date:		Analysis Date:	**9/26/2014**	SeqNo:	**628609**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	92.9	85	115			
Selenium	0.023	0.0010	0.02500	0	92.4	85	115			

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**R21493**	RunNo:	**21493**					
Prep Date:		Analysis Date:	**9/26/2014**	SeqNo:	**628610**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**PBW**	Batch ID:	**R21493**	RunNo:	**21493**					
Prep Date:		Analysis Date:	**9/26/2014**	SeqNo:	**628611**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**R21527**	RunNo:	**21527**					
Prep Date:		Analysis Date:	**9/29/2014**	SeqNo:	**629894**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.025	0.0010	0.02500	0	99.4	85	115			
Uranium	0.025	0.0010	0.02500	0	101	85	115			

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**					
Client ID:	**LCSW**	Batch ID:	**R21527**	RunNo:	**21527**					
Prep Date:		Analysis Date:	**9/29/2014**	SeqNo:	**629895**	Units:	**mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**LCS**	SampType:	**LCS**	TestCode:	**EPA 200.8: Dissolved Metals**						
Client ID:	**LCSW**	Batch ID:	**R21527**	RunNo:	**21527**						
Prep Date:		Analysis Date:	**9/29/2014**	SeqNo:	**629895**	Units:	**mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead		0.025	0.0010	0.02500	0	101	85	115			
Uranium		0.025	0.0010	0.02500	0	101	85	115			

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**						
Client ID:	**PBW**	Batch ID:	**R21527**	RunNo:	**21527**						
Prep Date:		Analysis Date:	**9/29/2014**	SeqNo:	**629896**	Units:	**mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead		ND	0.0010								
Uranium		ND	0.0010								

Sample ID	**MB**	SampType:	**MBLK**	TestCode:	**EPA 200.8: Dissolved Metals**						
Client ID:	**PBW**	Batch ID:	**R21527**	RunNo:	**21527**						
Prep Date:		Analysis Date:	**9/29/2014**	SeqNo:	**629897**	Units:	**mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead		ND	0.0010								
Uranium		ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LLLCS-15343** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **15343** RunNo: **21376**
Prep Date: **9/17/2014** Analysis Date: **9/23/2014** SeqNo: **624955** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0	104	85	115			
Lead	0.026	0.0010	0.02500	0	103	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.026	0.0010	0.02500	0	105	85	115			

Sample ID **MB-15343** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **15343** RunNo: **21376**
Prep Date: **9/17/2014** Analysis Date: **9/23/2014** SeqNo: **624958** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**MB-15449**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**
Client ID:	**PBW**	Batch ID:	**15449**	RunNo:	**21410**
Prep Date:	**9/23/2014**	Analysis Date:	**9/24/2014**	SeqNo:	**625480** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-15449**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**
Client ID:	**LCSW**	Batch ID:	**15449**	RunNo:	**21410**
Prep Date:	**9/23/2014**	Analysis Date:	**9/24/2014**	SeqNo:	**625481** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.5	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**		
Client ID: **PBW**	Batch ID: **R21283**	RunNo: **21283**		
Prep Date:	Analysis Date: **9/17/2014**	SeqNo: **621017**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**		
Client ID: **LCSW**	Batch ID: **R21283**	RunNo: **21283**		
Prep Date:	Analysis Date: **9/17/2014**	SeqNo: **621018**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.47	0.10	0.5000	0	94.8	90	110			
Chloride	4.6	0.50	5.000	0	92.4	90	110			
Bromide	2.4	0.10	2.500	0	96.3	90	110			
Phosphorus, Orthophosphate (As P	4.6	0.50	5.000	0	91.2	90	110			
Sulfate	9.5	0.50	10.00	0	94.9	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	97.6	90	110			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**		
Client ID: **PBW**	Batch ID: **R21310**	RunNo: **21310**		
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621823**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**		
Client ID: **LCSW**	Batch ID: **R21310**	RunNo: **21310**		
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **621824**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.3	0.20	3.500	0	95.6	90	110			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**		
Client ID: **PBW**	Batch ID: **R21321**	RunNo: **21321**		
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **622134**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**			
Client ID: **LCSW**	Batch ID: **R21321**	RunNo: **21321**			
Prep Date:	Analysis Date: **9/18/2014**	SeqNo: **622135**	Units: **mg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.9	90	110			
Sulfate	9.6	0.50	10.00	0	96.2	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB-15312**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **PBW**	Batch ID: **15312**	RunNo: **21248**
Prep Date: **9/16/2014**	Analysis Date: **9/17/2014**	SeqNo: **619740** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.99		1.000		99.1	59	141			

Sample ID **LCS-15312**	SampType: **LCS**	TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSW**	Batch ID: **15312**	RunNo: **21248**
Prep Date: **9/16/2014**	Analysis Date: **9/17/2014**	SeqNo: **619860** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	101	69.7	142			
Surr: DNOP	0.49		0.5000		98.9	59	141			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**
Client ID:	**PBW**	Batch ID:	**R21267**	RunNo:	**21267**
Prep Date:		Analysis Date:	**9/17/2014**	SeqNo:	**620386** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		89.0	70.9	130			

Sample ID	**2.5UG GRO LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**
Client ID:	**LCSW**	Batch ID:	**R21267**	RunNo:	**21267**
Prep Date:		Analysis Date:	**9/17/2014**	SeqNo:	**620387** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.49	0.050	0.5000	0	98.4	80	120			
Surr: BFB	19		20.00		93.9	70.9	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R21319**	RunNo: **21319**			
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622116**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R21319**	RunNo: **21319**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622116** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.7		10.00		97.2	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.2	70	130			
Surr: Dibromofluoromethane	10		10.00		99.8	70	130			
Surr: Toluene-d8	8.8		10.00		87.9	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R21319**	RunNo: **21319**
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622118** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	70	130			
Toluene	19	1.0	20.00	0	95.1	80	120			
Chlorobenzene	18	1.0	20.00	0	92.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **LCSW**	Batch ID: **R21319**	RunNo: **21319**			
Prep Date:	Analysis Date: **9/19/2014**	SeqNo: **622118**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	23	1.0	20.00	0	116	82.6	131			
Trichloroethene (TCE)	19	1.0	20.00	0	97.1	70	130			
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.1	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.8	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.2	70	130			
Surr: Toluene-d8	9.3		10.00		93.3	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15342**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **15342**	RunNo: **21301**			
Prep Date: **9/17/2014**	Analysis Date: **9/18/2014**	SeqNo: **621609**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15342**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **15342**	RunNo: **21301**			
Prep Date: **9/17/2014**	Analysis Date: **9/18/2014**	SeqNo: **621609**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	93		200.0		46.3	12.1	85.8			
Surr: Phenol-d5	84		200.0		41.9	17.7	65.8			
Surr: 2,4,6-Tribromophenol	130		200.0		64.4	26	138			
Surr: Nitrobenzene-d5	66		100.0		65.5	47.5	119			
Surr: 2-Fluorobiphenyl	63		100.0		62.6	48.1	106			
Surr: 4-Terphenyl-d14	74		100.0		73.5	44	113			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **lcs-15342** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **15342** RunNo: **21301**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621610** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	58	10	100.0	0	58.1	47.9	114			
4-Chloro-3-methylphenol	130	10	200.0	0	62.8	51.7	122			
2-Chlorophenol	120	10	200.0	0	58.4	40.7	113			
1,4-Dichlorobenzene	50	10	100.0	0	50.4	39.6	99.9			
2,4-Dinitrotoluene	47	10	100.0	0	47.3	40.8	113			
N-Nitrosodi-n-propylamine	64	10	100.0	0	64.3	51.2	111			
4-Nitrophenol	66	10	200.0	0	32.8	15.7	86.9			
Pentachlorophenol	93	20	200.0	0	46.4	21.6	104			
Phenol	86	10	200.0	0	43.1	28.6	71.7			
Pyrene	64	10	100.0	0	64.2	54.2	128			
1,2,4-Trichlorobenzene	49	10	100.0	0	49.5	40.9	101			
Surr: 2-Fluorophenol	84		200.0		42.0	12.1	85.8			
Surr: Phenol-d5	80		200.0		39.9	17.7	65.8			
Surr: 2,4,6-Tribromophenol	110		200.0		55.7	26	138			
Surr: Nitrobenzene-d5	61		100.0		60.6	47.5	119			
Surr: 2-Fluorobiphenyl	57		100.0		56.6	48.1	106			
Surr: 4-Terphenyl-d14	67		100.0		66.5	44	113			

Sample ID **lcsd-15342** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **15342** RunNo: **21301**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621611** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	70	10	100.0	0	70.1	47.9	114	18.7	27.2	
4-Chloro-3-methylphenol	140	10	200.0	0	72.1	51.7	122	13.7	25.9	
2-Chlorophenol	110	10	200.0	0	55.9	40.7	113	4.29	22.5	
1,4-Dichlorobenzene	52	10	100.0	0	51.9	39.6	99.9	2.93	24.6	
2,4-Dinitrotoluene	71	10	100.0	0	70.6	40.8	113	39.5	25.3	R
N-Nitrosodi-n-propylamine	70	10	100.0	0	69.7	51.2	111	8.09	23.6	
4-Nitrophenol	69	10	200.0	0	34.4	15.7	86.9	4.53	34.7	
Pentachlorophenol	83	20	200.0	0	41.3	21.6	104	11.6	32.8	
Phenol	87	10	200.0	0	43.3	28.6	71.7	0.509	25.5	
Pyrene	82	10	100.0	0	82.0	54.2	128	24.4	31.4	
1,2,4-Trichlorobenzene	53	10	100.0	0	52.5	40.9	101	6.00	25.9	
Surr: 2-Fluorophenol	73		200.0		36.5	12.1	85.8	0	0	
Surr: Phenol-d5	77		200.0		38.4	17.7	65.8	0	0	
Surr: 2,4,6-Tribromophenol	110		200.0		53.7	26	138	0	0	
Surr: Nitrobenzene-d5	61		100.0		60.9	47.5	119	0	0	
Surr: 2-Fluorobiphenyl	64		100.0		63.6	48.1	106	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**lcsd-15342**	SampType:	**LCSD**	TestCode:	**EPA Method 8270C: Semivolatiles**				
Client ID:	**LCSS02**	Batch ID:	**15342**	RunNo:	**21301**				
Prep Date:	**9/17/2014**	Analysis Date:	**9/18/2014**	SeqNo:	**621611**	Units:	**µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	85		100.0		84.6	44	113	0	0	

Sample ID	**mb-15398**	SampType:	**MBLK**	TestCode:	**EPA Method 8270C: Semivolatiles**				
Client ID:	**PBW**	Batch ID:	**15398**	RunNo:	**21328**				
Prep Date:	**9/19/2014**	Analysis Date:	**9/19/2014**	SeqNo:	**622451**	Units:	**µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15398**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **15398**	RunNo: **21328**			
Prep Date: **9/19/2014**	Analysis Date: **9/19/2014**	SeqNo: **622451**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15398** SampType: **MBLK** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **PBW** Batch ID: **15398** RunNo: **21328**
Prep Date: **9/19/2014** Analysis Date: **9/19/2014** SeqNo: **622451** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	130		200.0		64.5	12.1	85.8			
Surr: Phenol-d5	110		200.0		52.8	17.7	65.8			
Surr: 2,4,6-Tribromophenol	120		200.0		60.2	26	138			
Surr: Nitrobenzene-d5	68		100.0		67.7	47.5	119			
Surr: 2-Fluorobiphenyl	59		100.0		59.1	48.1	106			
Surr: 4-Terphenyl-d14	62		100.0		62.2	44	113			

Sample ID **lcs-15398** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **15398** RunNo: **21328**
Prep Date: **9/19/2014** Analysis Date: **9/19/2014** SeqNo: **622452** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	71	10	100.0	0	70.8	47.9	114			
4-Chloro-3-methylphenol	170	10	200.0	0	84.8	51.7	122			
2-Chlorophenol	160	10	200.0	0	81.5	40.7	113			
1,4-Dichlorobenzene	64	10	100.0	0	63.9	39.6	99.9			
2,4-Dinitrotoluene	60	10	100.0	0	59.8	40.8	113			
N-Nitrosodi-n-propylamine	76	10	100.0	0	75.5	51.2	111			
4-Nitrophenol	110	10	200.0	0	56.8	15.7	86.9			
Pentachlorophenol	130	20	200.0	0	63.9	21.6	104			
Phenol	130	10	200.0	0	66.8	28.6	71.7			
Pyrene	69	10	100.0	0	68.9	54.2	128			
1,2,4-Trichlorobenzene	62	10	100.0	0	62.1	40.9	101			
Surr: 2-Fluorophenol	140		200.0		69.1	12.1	85.8			
Surr: Phenol-d5	120		200.0		60.4	17.7	65.8			
Surr: 2,4,6-Tribromophenol	140		200.0		70.8	26	138			
Surr: Nitrobenzene-d5	75		100.0		75.4	47.5	119			
Surr: 2-Fluorobiphenyl	69		100.0		68.7	48.1	106			
Surr: 4-Terphenyl-d14	73		100.0		72.5	44	113			

Sample ID **lcsd-15398** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **15398** RunNo: **21328**
Prep Date: **9/19/2014** Analysis Date: **9/19/2014** SeqNo: **622453** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	66	10	100.0	0	66.1	47.9	114	6.84	27.2	
4-Chloro-3-methylphenol	170	10	200.0	0	84.3	51.7	122	0.485	25.9	
2-Chlorophenol	160	10	200.0	0	81.9	40.7	113	0.575	22.5	
1,4-Dichlorobenzene	64	10	100.0	0	64.3	39.6	99.9	0.718	24.6	
2,4-Dinitrotoluene	58	10	100.0	0	57.7	40.8	113	3.61	25.3	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409800**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **lcsd-15398** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **15398** RunNo: **21328**
Prep Date: **9/19/2014** Analysis Date: **9/19/2014** SeqNo: **622453** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Nitrosodi-n-propylamine	77	10	100.0	0	77.1	51.2	111	2.10	23.6	
4-Nitrophenol	110	10	200.0	0	54.2	15.7	86.9	4.68	34.7	
Pentachlorophenol	110	20	200.0	0	56.7	21.6	104	11.9	32.8	
Phenol	140	10	200.0	0	68.0	28.6	71.7	1.72	25.5	
Pyrene	68	10	100.0	0	68.2	54.2	128	1.02	31.4	
1,2,4-Trichlorobenzene	63	10	100.0	0	63.0	40.9	101	1.37	25.9	
Surr: 2-Fluorophenol	140		200.0		67.9	12.1	85.8	0	0	
Surr: Phenol-d5	120		200.0		61.1	17.7	65.8	0	0	
Surr: 2,4,6-Tribromophenol	140		200.0		68.6	26	138	0	0	
Surr: Nitrobenzene-d5	72		100.0		72.1	47.5	119	0	0	
Surr: 2-Fluorobiphenyl	67		100.0		67.1	48.1	106	0	0	
Surr: 4-Terphenyl-d14	75		100.0		75.3	44	113	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
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Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Western Refining Gallup** Work Order Number: **1409800** RcptNo: **1**

Received by/date: C.S. 09/16/14

Logged By: **Ashley Gallegos** **9/16/2014 5:03:00 PM** AG

Completed By: **Ashley Gallegos** **9/17/2014 7:50:39 AM** AG

Reviewed By: AG 09/17/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: del 1 (<2 or >12 unless noted)
Adjusted? No
Checked by: mg

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

2 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard ☐ Rush

Project Name: 2014 ~~Ap~~ 09/17/14 ~~2041~~ ANNUAL GW

Project #: SMW-2,-4

Project Manager: C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: X Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1409800	8260 + MTBE	8015B extended	8270 + phenols	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	Major Cations/Anions	Cyanide							Air Bubbles (Y or N)
9/11/14	1510	H_2O	SMW-2			-001	X	X	X	X	X	X	X							
9/11/14	1640	H_2O	SMW-4			-002	X	X	X	X	X	X	X							
			Trip Blank			-004 ~~-003~~	X	X												
			KT 09/17/14			WWS 9/18/14														
9/11/14	1625	H_2O	FB-Group 32-9/11/14			-003	X													

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/16/14	1450			9/16/14	1450
9/16/14	1703		Alexis Sanchez	09/16/14	1703

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 30, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: 2014 Annual GW OrderNo.: 1409452

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 9/10/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1409452**
Date Reported: **9/30/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP-1 to EP-2
Project: 2014 Annual GW
Collection Date: 9/10/2014 8:23:00 AM
Lab ID: 1409452-001
Matrix: AQUEOUS
Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	2.4	1.0		mg/L	1	9/11/2014 7:20:55 PM	15239
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/11/2014 7:20:55 PM	15239
Surr: DNOP	99.5	59-141		%REC	1	9/11/2014 7:20:55 PM	15239
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.50		mg/L	10	9/11/2014 11:48:12 AM	R21162
Surr: BFB	92.5	70.9-130		%REC	10	9/11/2014 11:48:12 AM	R21162
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	54	2.0	*	mg/L	20	9/10/2014 9:34:19 PM	R21137
Chloride	310	10		mg/L	20	9/10/2014 9:34:19 PM	R21137
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	9/10/2014 9:21:55 PM	R21137
Bromide	2.2	0.50		mg/L	5	9/10/2014 9:21:55 PM	R21137
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	9/10/2014 9:21:55 PM	R21137
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	9/10/2014 9:21:55 PM	R21137
Sulfate	1200	25		mg/L	50	9/19/2014 12:11:34 AM	R21321
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.087	0.0020		mg/L	1	9/11/2014 2:24:02 PM	R21155
Cadmium	ND	0.0020		mg/L	1	9/11/2014 2:24:02 PM	R21155
Calcium	67	1.0		mg/L	1	9/11/2014 2:24:02 PM	R21155
Chromium	0.018	0.0060		mg/L	1	9/11/2014 2:24:02 PM	R21155
Copper	ND	0.0060		mg/L	1	9/11/2014 2:24:02 PM	R21155
Iron	3.5	0.10	*	mg/L	5	9/11/2014 2:25:49 PM	R21155
Magnesium	17	1.0		mg/L	1	9/11/2014 2:24:02 PM	R21155
Manganese	0.18	0.0020	*	mg/L	1	9/11/2014 2:24:02 PM	R21155
Potassium	53	1.0		mg/L	1	9/11/2014 2:24:02 PM	R21155
Silver	ND	0.0050		mg/L	1	9/11/2014 2:24:02 PM	R21155
Sodium	600	10		mg/L	10	9/11/2014 2:31:23 PM	R21155
Zinc	0.087	0.010		mg/L	1	9/11/2014 2:24:02 PM	R21155
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.098	0.0020		mg/L	1	9/12/2014 5:15:10 PM	15250
Cadmium	ND	0.0020		mg/L	1	9/12/2014 5:15:10 PM	15250
Chromium	0.017	0.0060		mg/L	1	9/15/2014 11:12:04 AM	15250
Copper	ND	0.0060		mg/L	1	9/12/2014 5:15:10 PM	15250
Iron	3.7	0.10	*	mg/L	5	9/15/2014 11:14:02 AM	15250
Manganese	0.18	0.0020	*	mg/L	1	9/12/2014 5:15:10 PM	15250
Silver	ND	0.0050		mg/L	1	9/12/2014 5:15:10 PM	15250
Zinc	0.12	0.010		mg/L	1	9/12/2014 5:15:10 PM	15250
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**

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O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP-1 to EP-2
Project: 2014 Annual GW
Collection Date: 9/10/2014 8:23:00 AM
Lab ID: 1409452-001
Matrix: AQUEOUS
Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.011	0.010	*	mg/L	10	9/19/2014 1:32:43 PM	R21332
Lead	ND	0.0010		mg/L	1	9/19/2014 12:27:26 PM	R21332
Selenium	0.022	0.010		mg/L	10	9/19/2014 1:32:43 PM	R21332
Uranium	0.0028	0.0010		mg/L	1	9/19/2014 12:27:26 PM	R21332
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.014	0.010	*	mg/L	10	9/18/2014 5:47:37 PM	15250
Lead	ND	0.0010		mg/L	1	9/18/2014 5:19:45 PM	15250
Selenium	0.021	0.010		mg/L	10	9/23/2014 1:14:14 PM	15250
Uranium	0.0045	0.0010		mg/L	1	9/18/2014 5:19:45 PM	15250
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/15/2014 2:28:52 PM	15279
SM5210B: BOD						Analyst:	**SMS**
Biochemical Oxygen Demand	270	2.0		mg/L	1	9/16/2014 12:03:00 PM	15237
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Acenaphthylene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Aniline	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Anthracene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Azobenzene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Benz(a)anthracene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Benzo(a)pyrene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Benzo(b)fluoranthene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Benzo(g,h,i)perylene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Benzo(k)fluoranthene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Benzoic acid	ND	20		µg/L	1	9/15/2014 4:06:27 PM	15274
Benzyl alcohol	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Bis(2-chloroethyl)ether	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
4-Bromophenyl phenyl ether	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Butyl benzyl phthalate	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Carbazole	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
4-Chloro-3-methylphenol	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
4-Chloroaniline	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
2-Chloronaphthalene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
2-Chlorophenol	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274

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Received Date: 9/10/2014 12:00:00 PM

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EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Chrysene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Di-n-butyl phthalate	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Di-n-octyl phthalate	ND	20		µg/L	1	9/15/2014 4:06:27 PM	15274
Dibenz(a,h)anthracene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Dibenzofuran	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
1,2-Dichlorobenzene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
1,3-Dichlorobenzene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
1,4-Dichlorobenzene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
3,3´-Dichlorobenzidine	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Diethyl phthalate	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Dimethyl phthalate	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
2,4-Dichlorophenol	ND	20		µg/L	1	9/15/2014 4:06:27 PM	15274
2,4-Dimethylphenol	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	9/15/2014 4:06:27 PM	15274
2,4-Dinitrophenol	ND	20		µg/L	1	9/15/2014 4:06:27 PM	15274
2,4-Dinitrotoluene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
2,6-Dinitrotoluene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Fluoranthene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Fluorene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Hexachlorobenzene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Hexachlorobutadiene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Hexachlorocyclopentadiene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Hexachloroethane	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Isophorone	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
1-Methylnaphthalene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
2-Methylnaphthalene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
2-Methylphenol	22	20		µg/L	1	9/15/2014 4:06:27 PM	15274
3+4-Methylphenol	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
N-Nitrosodimethylamine	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
N-Nitrosodiphenylamine	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Naphthalene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
2-Nitroaniline	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
3-Nitroaniline	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
4-Nitroaniline	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Nitrobenzene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
2-Nitrophenol	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274

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Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
4-Nitrophenol	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Pentachlorophenol	ND	20		µg/L	1	9/15/2014 4:06:27 PM	15274
Phenanthrene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Phenol	140	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Pyrene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Pyridine	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
1,2,4-Trichlorobenzene	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
2,4,5-Trichlorophenol	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
2,4,6-Trichlorophenol	ND	10		µg/L	1	9/15/2014 4:06:27 PM	15274
Surr: 2-Fluorophenol	42.3	12.1-85.8		%REC	1	9/15/2014 4:06:27 PM	15274
Surr: Phenol-d5	31.0	17.7-65.8		%REC	1	9/15/2014 4:06:27 PM	15274
Surr: 2,4,6-Tribromophenol	65.6	26-138		%REC	1	9/15/2014 4:06:27 PM	15274
Surr: Nitrobenzene-d5	60.2	47.5-119		%REC	1	9/15/2014 4:06:27 PM	15274
Surr: 2-Fluorobiphenyl	60.6	48.1-106		%REC	1	9/15/2014 4:06:27 PM	15274
Surr: 4-Terphenyl-d14	73.9	44-113		%REC	1	9/15/2014 4:06:27 PM	15274
EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
Benzene	18	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Toluene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Ethylbenzene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Methyl tert-butyl ether (MTBE)	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,2,4-Trimethylbenzene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,3,5-Trimethylbenzene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,2-Dichloroethane (EDC)	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,2-Dibromoethane (EDB)	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Naphthalene	ND	4.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1-Methylnaphthalene	ND	8.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
2-Methylnaphthalene	ND	8.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Acetone	1300	200		µg/L	20	9/18/2014 10:48:06 AM	R21306
Bromobenzene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Bromodichloromethane	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Bromoform	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Bromomethane	ND	6.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
2-Butanone	160	20		µg/L	2	9/17/2014 12:33:58 PM	R21270
Carbon disulfide	58	20		µg/L	2	9/17/2014 12:33:58 PM	R21270
Carbon Tetrachloride	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Chlorobenzene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Chloroethane	ND	4.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Chloroform	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Chloromethane	ND	6.0		µg/L	2	9/17/2014 12:33:58 PM	R21270

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Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
2-Chlorotoluene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
4-Chlorotoluene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
cis-1,2-DCE	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
cis-1,3-Dichloropropene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,2-Dibromo-3-chloropropane	ND	4.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Dibromochloromethane	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Dibromomethane	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,2-Dichlorobenzene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,3-Dichlorobenzene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,4-Dichlorobenzene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Dichlorodifluoromethane	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,1-Dichloroethane	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,1-Dichloroethene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,2-Dichloropropane	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,3-Dichloropropane	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
2,2-Dichloropropane	ND	4.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,1-Dichloropropene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Hexachlorobutadiene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
2-Hexanone	ND	20		µg/L	2	9/17/2014 12:33:58 PM	R21270
Isopropylbenzene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
4-Isopropyltoluene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
4-Methyl-2-pentanone	ND	20		µg/L	2	9/17/2014 12:33:58 PM	R21270
Methylene Chloride	ND	6.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
n-Butylbenzene	ND	6.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
n-Propylbenzene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
sec-Butylbenzene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Styrene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
tert-Butylbenzene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,1,2,2-Tetrachloroethane	ND	4.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Tetrachloroethene (PCE)	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
trans-1,2-DCE	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
trans-1,3-Dichloropropene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,2,3-Trichlorobenzene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,2,4-Trichlorobenzene	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,1,1-Trichloroethane	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
1,1,2-Trichloroethane	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Trichloroethene (TCE)	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Trichlorofluoromethane	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270

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EPA METHOD 8260B: VOLATILES						Analyst:	**KJH**
1,2,3-Trichloropropane	ND	4.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Vinyl chloride	ND	2.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Xylenes, Total	ND	3.0		µg/L	2	9/17/2014 12:33:58 PM	R21270
Surr: 1,2-Dichloroethane-d4	88.9	70-130		%REC	2	9/17/2014 12:33:58 PM	R21270
Surr: 4-Bromofluorobenzene	106	70-130		%REC	2	9/17/2014 12:33:58 PM	R21270
Surr: Dibromofluoromethane	78.9	70-130		%REC	2	9/17/2014 12:33:58 PM	R21270
Surr: Toluene-d8	97.5	70-130		%REC	2	9/17/2014 12:33:58 PM	R21270
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst:	**KS**
Total Dissolved Solids	2590	200	*	mg/L	1	9/15/2014 10:27:00 AM	15240

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group 13
Project: 2014 Annual GW
Collection Date: 9/10/2014 8:30:00 AM
Lab ID: 1409452-002
Matrix: AQUEOUS
Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
Benzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Toluene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Ethylbenzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Naphthalene	ND	2.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1-Methylnaphthalene	ND	4.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
2-Methylnaphthalene	ND	4.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Acetone	ND	10		µg/L	1	9/16/2014 10:25:33 PM	R21241
Bromobenzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Bromodichloromethane	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Bromoform	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Bromomethane	ND	3.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
2-Butanone	ND	10		µg/L	1	9/16/2014 10:25:33 PM	R21241
Carbon disulfide	ND	10		µg/L	1	9/16/2014 10:25:33 PM	R21241
Carbon Tetrachloride	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Chlorobenzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Chloroethane	ND	2.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Chloroform	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Chloromethane	ND	3.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
2-Chlorotoluene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
4-Chlorotoluene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
cis-1,2-DCE	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Dibromochloromethane	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Dibromomethane	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,1-Dichloroethane	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,1-Dichloroethene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,2-Dichloropropane	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,3-Dichloropropane	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
2,2-Dichloropropane	ND	2.0		µg/L	1	9/16/2014 10:25:33 PM	R21241

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group 13
Project: 2014 Annual GW
Collection Date: 9/10/2014 8:30:00 AM
Lab ID: 1409452-002
Matrix: AQUEOUS
Received Date: 9/10/2014 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **KJH**	
1,1-Dichloropropene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Hexachlorobutadiene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
2-Hexanone	ND	10		µg/L	1	9/16/2014 10:25:33 PM	R21241
Isopropylbenzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
4-Isopropyltoluene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
4-Methyl-2-pentanone	ND	10		µg/L	1	9/16/2014 10:25:33 PM	R21241
Methylene Chloride	ND	3.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
n-Butylbenzene	ND	3.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
n-Propylbenzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
sec-Butylbenzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Styrene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
tert-Butylbenzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
trans-1,2-DCE	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Trichlorofluoromethane	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Vinyl chloride	ND	1.0		µg/L	1	9/16/2014 10:25:33 PM	R21241
Xylenes, Total	ND	1.5		µg/L	1	9/16/2014 10:25:33 PM	R21241
Surr: 1,2-Dichloroethane-d4	92.0	70-130		%REC	1	9/16/2014 10:25:33 PM	R21241
Surr: 4-Bromofluorobenzene	93.5	70-130		%REC	1	9/16/2014 10:25:33 PM	R21241
Surr: Dibromofluoromethane	82.2	70-130		%REC	1	9/16/2014 10:25:33 PM	R21241
Surr: Toluene-d8	95.4	70-130		%REC	1	9/16/2014 10:25:33 PM	R21241

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

September 19, 2014

Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

ESC Sample # : L721313-01

Date Received : September 12, 2014
Description :

Site ID :

Sample ID : 1409452-002I SPT-1 TO EP-2

Project # :

Collected By :
Collection Date : 09/10/14 08:23

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	1500	100	mg/l	410.4	09/19/14	10

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
This report shall not be reproduced, except in full, without the written approval from ESC.
.
Reported: 09/19/14 15:34 Printed: 09/19/14 15:35

ESC
L·A·B S·C·I·E·N·C·E·S
YOUR LAB OF CHOICE

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Hall Environmental Analysis Laboratory

4901 Hawkins NE

Albuquerque, NM 87109

Quality Assurance Report
Level II

L721313

September 19, 2014

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
COD	< 10	mg/l			WG743680	09/19/14 13:26

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
COD	mg/l	17.0	17.0	0.0	5	L721299-01	WG743680
COD	mg/l	13.0	13.0	0.0	5	L721299-10	WG743680

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
COD	mg/l	183	175.	95.6	90-110	WG743680

Laboratory Control Sample Duplicate

Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
COD	mg/l	179.	175.	98.0	90-110	2.26	5	WG743680

Matrix Spike

Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
COD	mg/l	405.	12.0	400	98.0	90-110	L721299-02	WG743680

Matrix Spike Duplicate

Analyte	Units	MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
COD	mg/l	415.	405.	101.	90-110	2.44	5	L721299-02	WG743680

Batch number /Run number / Sample number cross reference

WG743680: R2991182: L721313-01

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**
30-Sep-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**	
Client ID: **PBW**	Batch ID: **R21155**	RunNo: **21155**	
Prep Date:	Analysis Date: **9/11/2014**	SeqNo: **615741**	Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**	
Client ID: **LCSW**	Batch ID: **R21155**	RunNo: **21155**	
Prep Date:	Analysis Date: **9/11/2014**	SeqNo: **615742**	Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.7	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.2	85	115			
Calcium	47	1.0	50.00	0	94.0	85	115			
Chromium	0.47	0.0060	0.5000	0	94.7	85	115			
Copper	0.47	0.0060	0.5000	0	95.0	85	115			
Iron	0.47	0.020	0.5000	0	94.5	85	115			
Magnesium	47	1.0	50.00	0	94.2	85	115			
Manganese	0.49	0.0020	0.5000	0	98.8	85	115			
Potassium	45	1.0	50.00	0	90.5	85	115			
Silver	0.49	0.0050	0.5000	0	98.2	85	115			
Sodium	46	1.0	50.00	0	92.6	85	115			
Zinc	0.50	0.010	0.5000	0	100	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**
30-Sep-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**MB-15250**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**PBW**	Batch ID:	**15250**	RunNo:	**21179**
Prep Date:	**9/12/2014**	Analysis Date:	**9/12/2014**	SeqNo:	**616404** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID	**LCS-15250**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**LCSW**	Batch ID:	**15250**	RunNo:	**21179**
Prep Date:	**9/12/2014**	Analysis Date:	**9/12/2014**	SeqNo:	**616405** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.7	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.3	85	115			
Chromium	0.50	0.0060	0.5000	0	99.2	85	115			
Copper	0.49	0.0060	0.5000	0	98.2	85	115			
Manganese	0.51	0.0020	0.5000	0	101	85	115			
Silver	0.48	0.0050	0.5000	0	96.9	85	115			
Zinc	0.52	0.010	0.5000	0	105	85	115			

Sample ID	**MB-15250**	SampType:	**MBLK**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**PBW**	Batch ID:	**15250**	RunNo:	**21196**
Prep Date:	**9/12/2014**	Analysis Date:	**9/15/2014**	SeqNo:	**617274** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								

Sample ID	**LCS-15250**	SampType:	**LCS**	TestCode:	**EPA Method 200.7: Total Metals**
Client ID:	**LCSW**	Batch ID:	**15250**	RunNo:	**21196**
Prep Date:	**9/12/2014**	Analysis Date:	**9/15/2014**	SeqNo:	**617275** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.53	0.020	0.5000	0	105	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**
30-Sep-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21332** RunNo: **21332**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622621** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.4	85	115			
Lead	0.025	0.0010	0.02500	0	101	85	115			
Selenium	0.024	0.0010	0.02500	0	96.3	85	115			
Uranium	0.026	0.0010	0.02500	0	103	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21332** RunNo: **21332**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622622** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	93.2	85	115			
Lead	0.025	0.0010	0.02500	0	101	85	115			
Selenium	0.024	0.0010	0.02500	0	96.4	85	115			
Uranium	0.026	0.0010	0.02500	0	104	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21332** RunNo: **21332**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622623** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21332** RunNo: **21332**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622624** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**
30-Sep-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LLLCS-15250** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **15250** RunNo: **21206**
Prep Date: **9/12/2014** Analysis Date: **9/15/2014** SeqNo: **617630** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.1	85	115			
Lead	0.025	0.0010	0.02500	0	99.5	85	115			
Selenium	0.023	0.0010	0.02500	0	91.4	85	115			
Uranium	0.026	0.0010	0.02500	0	102	85	115			

Sample ID **MB-15250** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **15250** RunNo: **21206**
Prep Date: **9/12/2014** Analysis Date: **9/15/2014** SeqNo: **617631** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**
30-Sep-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**MB-15279**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**
Client ID:	**PBW**	Batch ID:	**15279**	RunNo:	**21205**
Prep Date:	**9/15/2014**	Analysis Date:	**9/15/2014**	SeqNo:	**617635** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-15279**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**
Client ID:	**LCSW**	Batch ID:	**15279**	RunNo:	**21205**
Prep Date:	**9/15/2014**	Analysis Date:	**9/15/2014**	SeqNo:	**617636** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0055	0.00020	0.005000	0	109	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**
30-Sep-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R21137** RunNo: **21137**
Prep Date: Analysis Date: **9/10/2014** SeqNo: **615456** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R21137** RunNo: **21137**
Prep Date: Analysis Date: **9/10/2014** SeqNo: **615457** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.51	0.10	0.5000	0	102	90	110			
Chloride	4.7	0.50	5.000	0	94.1	90	110			
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	94.1	90	110			
Bromide	2.5	0.10	2.500	0	99.4	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	100	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	95.7	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R21321** RunNo: **21321**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **622134** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R21321** RunNo: **21321**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **622135** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	9.6	0.50	10.00	0	96.2	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**
30-Sep-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB-15239** SampType: **MBLK** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **PBW** Batch ID: **15239** RunNo: **21142**
Prep Date: **9/11/2014** Analysis Date: **9/11/2014** SeqNo: **616131** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.93		1.000		93.4	59	141			

Sample ID **LCS-15239** SampType: **LCS** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSW** Batch ID: **15239** RunNo: **21142**
Prep Date: **9/11/2014** Analysis Date: **9/11/2014** SeqNo: **616132** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.3	1.0	5.000	0	106	69.7	142			
Surr: DNOP	0.49		0.5000		97.7	59	141			

Sample ID **1409452-001DMS** SampType: **MS** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **STP-1 to EP-2** Batch ID: **15239** RunNo: **21142**
Prep Date: **9/11/2014** Analysis Date: **9/11/2014** SeqNo: **616150** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	8.5	1.0	5.000	2.450	121	55	159			
Surr: DNOP	0.51		0.5000		103	59	141			

Sample ID **1409452-001DMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **STP-1 to EP-2** Batch ID: **15239** RunNo: **21142**
Prep Date: **9/11/2014** Analysis Date: **9/11/2014** SeqNo: **616151** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	9.3	1.0	5.000	2.450	136	55	159	8.48	20	
Surr: DNOP	0.52		0.5000		104	59	141	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**
30-Sep-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**
Client ID:	**PBW**	Batch ID:	**R21162**	RunNo:	**21162**
Prep Date:		Analysis Date:	**9/11/2014**	SeqNo:	**616044** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	17		20.00		82.7	70.9	130			

Sample ID	**2.5UG GRO LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**
Client ID:	**LCSW**	Batch ID:	**R21162**	RunNo:	**21162**
Prep Date:		Analysis Date:	**9/11/2014**	SeqNo:	**616045** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.47	0.050	0.5000	0	93.2	80	120			
Surr: BFB	19		20.00		94.2	70.9	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**
30-Sep-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **b3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R21241**	RunNo: **21241**	
Prep Date:	Analysis Date: **9/16/2014**	SeqNo: **619016**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**
30-Sep-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **b3**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R21241**	RunNo: **21241**
Prep Date:	Analysis Date: **9/16/2014**	SeqNo: **619016** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.6		10.00		95.9	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130			
Surr: Dibromofluoromethane	8.7		10.00		87.0	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R21241**	RunNo: **21241**
Prep Date:	Analysis Date: **9/16/2014**	SeqNo: **619018** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	93.4	70	130			
Toluene	22	1.0	20.00	0	112	80	120			
Chlorobenzene	21	1.0	20.00	0	104	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**
30-Sep-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **100ng lcs2**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R21241**	RunNo: **21241**
Prep Date:	Analysis Date: **9/16/2014**	SeqNo: **619018** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	20	1.0	20.00	0	101	82.6	131			
Trichloroethene (TCE)	20	1.0	20.00	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		109	70	130			
Surr: Dibromofluoromethane	8.8		10.00		88.3	70	130			
Surr: Toluene-d8	10		10.00		100	70	130			

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R21270**	RunNo: **21270**
Prep Date:	Analysis Date: **9/17/2014**	SeqNo: **620438** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**
30-Sep-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **5mL-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**	
Client ID: **PBW**	Batch ID: **R21270**	RunNo: **21270**	
Prep Date:	Analysis Date: **9/17/2014**	SeqNo: **620438**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.9		10.00		99.1	70	130			
Surr: 4-Bromofluorobenzene	8.3		10.00		83.3	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**
30-Sep-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **5mL-rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R21270** RunNo: **21270**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **620438** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	8.5		10.00		84.5	70	130			
Surr: Toluene-d8	9.2		10.00		92.2	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R21270** RunNo: **21270**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **620440** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.0	70	130			
Toluene	23	1.0	20.00	0	116	80	120			
Chlorobenzene	21	1.0	20.00	0	103	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	105	82.6	131			
Trichloroethene (TCE)	22	1.0	20.00	0	108	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	9.0		10.00		90.2	70	130			
Surr: Dibromofluoromethane	9.4		10.00		94.3	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID **b7** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R21306** RunNo: **21306**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621784** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acetone	ND	10								
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.6	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		91.4	70	130			
Surr: Dibromofluoromethane	9.3		10.00		92.8	70	130			
Surr: Toluene-d8	9.3		10.00		93.2	70	130			

Sample ID **100ng lcs2** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R21306** RunNo: **21306**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621786** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.9		10.00		88.8	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		91.4	70	130			
Surr: Dibromofluoromethane	9.2		10.00		92.0	70	130			
Surr: Toluene-d8	9.4		10.00		94.0	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**
30-Sep-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15274**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **15274**	RunNo: **21200**			
Prep Date: **9/15/2014**	Analysis Date: **9/15/2014**	SeqNo: **617967**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	20								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**
30-Sep-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **mb-15274**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **15274**	RunNo: **21200**			
Prep Date: **9/15/2014**	Analysis Date: **9/15/2014**	SeqNo: **617967**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	100		200.0		50.8	12.1	85.8			
Surr: Phenol-d5	70		200.0		35.0	17.7	65.8			
Surr: 2,4,6-Tribromophenol	130		200.0		65.9	26	138			
Surr: Nitrobenzene-d5	70		100.0		69.7	47.5	119			
Surr: 2-Fluorobiphenyl	66		100.0		65.5	48.1	106			
Surr: 4-Terphenyl-d14	73		100.0		73.2	44	113			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**
30-Sep-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **lcs-15274** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **15274** RunNo: **21200**
Prep Date: **9/15/2014** Analysis Date: **9/15/2014** SeqNo: **617970** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	62	10	100.0	0	62.2	50.3	109			
4-Chloro-3-methylphenol	140	10	200.0	0	69.5	51.2	113			
2-Chlorophenol	130	10	200.0	0	66.8	48.5	104			
1,4-Dichlorobenzene	52	10	100.0	0	52.0	39.5	106			
2,4-Dinitrotoluene	54	10	100.0	0	54.5	45.4	107			
N-Nitrosodi-n-propylamine	61	10	100.0	0	60.8	50.4	119			
4-Nitrophenol	66	10	200.0	0	33.0	15.5	62.2			
Pentachlorophenol	100	20	200.0	0	50.1	23.5	93.5			
Phenol	80	10	200.0	0	40.0	26.8	65.6			
Pyrene	71	10	100.0	0	70.7	54.4	108			
1,2,4-Trichlorobenzene	55	10	100.0	0	54.7	39.9	106			
Surr: 2-Fluorophenol	100		200.0		50.2	12.1	85.8			
Surr: Phenol-d5	70		200.0		35.1	17.7	65.8			
Surr: 2,4,6-Tribromophenol	150		200.0		74.4	26	138			
Surr: Nitrobenzene-d5	68		100.0		67.9	47.5	119			
Surr: 2-Fluorobiphenyl	68		100.0		68.0	48.1	106			
Surr: 4-Terphenyl-d14	82		100.0		82.5	44	113			

Sample ID **lcsd-15274** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **15274** RunNo: **21200**
Prep Date: **9/15/2014** Analysis Date: **9/15/2014** SeqNo: **617972** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	65	10	100.0	0	65.4	50.3	109	4.98	27.2	
4-Chloro-3-methylphenol	140	10	200.0	0	70.9	51.2	113	1.99	25.9	
2-Chlorophenol	150	10	200.0	0	73.3	48.5	104	9.27	22.5	
1,4-Dichlorobenzene	55	10	100.0	0	55.4	39.5	106	6.29	24.6	
2,4-Dinitrotoluene	65	10	100.0	0	64.8	45.4	107	17.3	25.3	
N-Nitrosodi-n-propylamine	66	10	100.0	0	66.2	50.4	119	8.48	23.6	
4-Nitrophenol	61	10	200.0	0	30.5	15.5	62.2	7.87	34.7	
Pentachlorophenol	100	20	200.0	0	51.0	23.5	93.5	1.82	32.8	
Phenol	90	10	200.0	0	45.0	26.8	65.6	11.7	25.5	
Pyrene	78	10	100.0	0	77.8	54.4	108	9.51	31.4	
1,2,4-Trichlorobenzene	56	10	100.0	0	55.5	39.9	106	1.60	25.9	
Surr: 2-Fluorophenol	97		200.0		48.6	12.1	85.8	0	0	
Surr: Phenol-d5	72		200.0		35.9	17.7	65.8	0	0	
Surr: 2,4,6-Tribromophenol	130		200.0		67.3	26	138	0	0	
Surr: Nitrobenzene-d5	64		100.0		64.1	47.5	119	0	0	
Surr: 2-Fluorobiphenyl	63		100.0		62.7	48.1	106	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**
30-Sep-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**lcsd-15274**	SampType:	**LCSD**	TestCode:	**EPA Method 8270C: Semivolatiles**
Client ID:	**LCSS02**	Batch ID:	**15274**	RunNo:	**21200**
Prep Date:	**9/15/2014**	Analysis Date:	**9/15/2014**	SeqNo:	**617972** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	79		100.0		79.4	44	113	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**
30-Sep-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB-15237** SampType: **MBLK** TestCode: **SM5210B: BOD**
Client ID: **PBW** Batch ID: **15237** RunNo: **21252**
Prep Date: **9/11/2014** Analysis Date: **9/16/2014** SeqNo: **619535** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID **MB--15237** SampType: **MBLK** TestCode: **SM5210B: BOD**
Client ID: **PBW** Batch ID: **15237** RunNo: **21252**
Prep Date: **9/11/2014** Analysis Date: **9/16/2014** SeqNo: **619536** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID **LCS-15237** SampType: **LCS** TestCode: **SM5210B: BOD**
Client ID: **LCSW** Batch ID: **15237** RunNo: **21252**
Prep Date: **9/11/2014** Analysis Date: **9/16/2014** SeqNo: **619537** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	230	2.0	198.0	0	116	77.5	136			

Sample ID **LCSD-15237** SampType: **LCSD** TestCode: **SM5210B: BOD**
Client ID: **LCSS02** Batch ID: **15237** RunNo: **21252**
Prep Date: **9/11/2014** Analysis Date: **9/16/2014** SeqNo: **619538** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	210	2.0	198.0	0	107	77.5	136	8.84	35.5	

Sample ID **1409452-001ADUP** SampType: **DUP** TestCode: **SM5210B: BOD**
Client ID: **STP-1 to EP-2** Batch ID: **15237** RunNo: **21252**
Prep Date: **9/11/2014** Analysis Date: **9/16/2014** SeqNo: **619540** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	270	2.0						1.20	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409452**
30-Sep-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB-15240**	SampType: **MBLK**		TestCode: **SM2540C MOD: Total Dissolved Solids**		
Client ID: **PBW**	Batch ID: **15240**		RunNo: **21194**		
Prep Date: **9/11/2014**	Analysis Date: **9/15/2014**		SeqNo: **617174**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID **LCS-15240**	SampType: **LCS**		TestCode: **SM2540C MOD: Total Dissolved Solids**		
Client ID: **LCSW**	Batch ID: **15240**		RunNo: **21194**		
Prep Date: **9/11/2014**	Analysis Date: **9/15/2014**		SeqNo: **617175**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1020	20.0	1000	0	102	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1409452 RcptNo: 1

Received by/date: MG 09/10/14

Logged By: **Lindsay Mangin** 9/10/2014 12:00:00 PM

Completed By: **Lindsay Mangin** 9/10/2014 12:05:51 PM

Reviewed By: MG 09/10/14 @ 1321

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☑ CS 09/10/14
9. Was preservative added to bottles? Yes ☑ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 4
(<2 or >12 unless noted)
Adjusted? yes
Checked by: CS

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks: For metals analysis: Added 1ml HNO3 to -001G for an acceptable pH Held in login for 24 hours. - CS 09/10/14

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.4	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

2 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard ☐ Rush

Project Name:

~~2041~~ 14 ANNUAL GW

Project #:

STP-1 to EP-2

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☑ Yes ☐ No

Sample Temperature: 2.4°

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1409152	8260 + MTBE	8015B extended	8270 + phenols	WQCC Metals - Total	WQCC Metals - Dissolved, filtered	Major cations/anions	BOD	COD	TDS					Air Bubbles (Y or N)
9/10/14	0823	H_2O	STP-2 to EP-2	VARIOUS	VARIOUS	-001	X	X	X	X	X	X	X	X	X					
9/10/14	0830	H_2O	FB-Group 13	VOA x 2	HCl	-002	X													

Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
9/10/14	0946	[signature]	[signature]	9/10/14	0946	
9/10/14	1200	[signature]	[signature]	09/10/14	1200	

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 04, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: Q4 2014 OrderNo.: 1411471

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 11/12/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: **1411471**
Date: **12/4/2014**

CLIENT: Western Refining Southwest, Gallup
Project: Q4 2014

Analytical Comments Regarding BOD:
The method blank(s) had a DO depletion >0.2mg/L.

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP-1 to EP-2
Project: Q4 2014
Collection Date: 11/12/2014 10:30:00 AM
Lab ID: 1411471-001
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Barium	0.068	0.0020		mg/L	1	11/16/2014 8:19:57 PM	R22599
Cadmium	ND	0.0020		mg/L	1	11/16/2014 8:19:57 PM	R22599
Chromium	0.014	0.0060		mg/L	1	11/16/2014 8:19:57 PM	R22599
Copper	ND	0.0060		mg/L	1	11/16/2014 8:19:57 PM	R22599
Iron	1.4	0.10	*	mg/L	5	11/16/2014 8:21:46 PM	R22599
Manganese	0.17	0.0020	*	mg/L	1	11/16/2014 8:19:57 PM	R22599
Silver	ND	0.0050		mg/L	1	11/16/2014 8:19:57 PM	R22599
Zinc	0.072	0.010		mg/L	1	11/16/2014 8:19:57 PM	R22599
EPA METHOD 200.7: TOTAL METALS						Analyst:	**ELS**
Barium	0.071	0.0020		mg/L	1	11/18/2014 3:34:27 PM	16416
Cadmium	ND	0.0020		mg/L	1	11/18/2014 3:34:27 PM	16416
Chromium	0.013	0.0060		mg/L	1	11/18/2014 3:34:27 PM	16416
Copper	0.0066	0.0060		mg/L	1	11/18/2014 3:34:27 PM	16416
Iron	1.6	0.10	*	mg/L	5	11/18/2014 3:36:18 PM	16416
Manganese	0.18	0.0020	*	mg/L	1	11/18/2014 3:34:27 PM	16416
Silver	ND	0.0050		mg/L	1	11/18/2014 3:34:27 PM	16416
Zinc	0.044	0.010		mg/L	1	11/20/2014 3:59:21 PM	16416
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.010	0.0010	*	mg/L	1	11/24/2014 5:29:37 PM	R22774
Lead	ND	0.0010		mg/L	1	11/24/2014 5:29:37 PM	R22774
Selenium	ND	0.025		mg/L	1	11/24/2014 5:29:37 PM	R22774
Uranium	0.0013	0.0010		mg/L	1	11/24/2014 5:29:37 PM	R22774
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.011	0.010	*	mg/L	10	11/26/2014 5:59:53 PM	16416
Lead	ND	0.0010		mg/L	1	11/18/2014 2:31:32 PM	16416
Selenium	0.025	0.010		mg/L	10	11/26/2014 5:59:53 PM	16416
Uranium	0.0022	0.0010		mg/L	1	11/18/2014 2:31:32 PM	16416
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	11/21/2014 3:02:34 PM	16511
SM5210B: BOD						Analyst:	**SMS**
Biochemical Oxygen Demand	630	2.0		mg/L	1	11/18/2014 2:28:00 PM	16371

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: BW to EP-2
Project: Q4 2014
Collection Date: 11/12/2014 8:47:00 AM
Lab ID: 1411471-002
Matrix: AQUEOUS
Received Date: 11/12/2014 4:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**LGP**
Fluoride	ND	0.10		mg/L	1	11/13/2014 12:10:35 PM	R22546
Chloride	4100	250		mg/L	500	11/24/2014 10:48:44 PM	R22776
Nitrogen, Nitrite (As N)	ND	2.0		mg/L	20	11/13/2014 12:47:49 PM	R22546
Bromide	0.15	0.10		mg/L	1	11/13/2014 12:10:35 PM	R22546
Nitrogen, Nitrate (As N)	0.78	0.10		mg/L	1	11/13/2014 12:10:35 PM	R22546
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	11/13/2014 12:10:35 PM	R22546
Sulfate	990	250		mg/L	500	11/24/2014 10:48:44 PM	R22776
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**ELS**
Calcium	19	1.0		mg/L	1	11/16/2014 8:31:07 PM	R22599
Magnesium	5.1	1.0		mg/L	1	11/16/2014 8:31:07 PM	R22599
Potassium	7.5	1.0		mg/L	1	11/16/2014 8:31:07 PM	R22599
Sodium	680	10		mg/L	10	11/24/2014 12:08:28 PM	R22752

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

12065 Lebanon Rd.
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(615) 758-5858
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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

November 19, 2014

Hall Environmental Analysis Laborat
4901 Hawkins NE
Albuquerque, NM 87109

ESC Sample # : L733761-01

Date Received : November 14, 2014
Description :

Site ID :

Sample ID : 1411471-001D STP-1 TO EP-2

Project # :

Collected By :
Collection Date : 11/12/14 10:30

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	1300	50.	mg/l	410.4	11/19/14	5

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
This report shall not be reproduced, except in full, without the written approval from ESC.
.
Reported: 11/19/14 15:37 Printed: 11/19/14 15:37

ESC
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Est. 1970

Hall Environmental Analysis Laboratory

4901 Hawkins NE

Albuquerque, NM 87109

Quality Assurance Report
Level II

L733761

November 19, 2014

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
COD	< 10	mg/l			WG755289	11/19/14 12:12

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
COD	mg/l	410.	410.	0.0	5	L733939-08	WG755289
COD	mg/l	9600	9600	0.0	5	L733485-01	WG755289

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
COD	mg/l	183	189.	103.	90-110	WG755289

Laboratory Control Sample Duplicate

Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
COD	mg/l	189.	189.	103.	90-110	0.0	5	WG755289

Matrix Spike

Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
COD	mg/l	699.	260.	400	110.	90-110	L733812-01	WG755289

Matrix Spike Duplicate

Analyte	Units	MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
COD	mg/l	700.	699.	110.	90-110	0.143	5	L733812-01	WG755289

Batch number /Run number / Sample number cross reference

WG755289: R3005377: L733761-01

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411471**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22599** RunNo: **22599**
Prep Date: Analysis Date: **11/16/2014** SeqNo: **666147** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22599** RunNo: **22599**
Prep Date: Analysis Date: **11/16/2014** SeqNo: **666149** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22599** RunNo: **22599**
Prep Date: Analysis Date: **11/16/2014** SeqNo: **666151** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	99.2	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.5	85	115			
Calcium	45	1.0	50.00	0	90.8	85	115			
Chromium	0.48	0.0060	0.5000	0	96.9	85	115			
Copper	0.49	0.0060	0.5000	0	98.1	85	115			
Iron	0.48	0.020	0.5000	0	95.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411471**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22599** RunNo: **22599**
Prep Date: Analysis Date: **11/16/2014** SeqNo: **666151** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	45	1.0	50.00	0	89.1	85	115			
Manganese	0.47	0.0020	0.5000	0	94.7	85	115			
Potassium	43	1.0	50.00	0	86.4	85	115			
Silver	0.11	0.0050	0.1000	0	105	85	115			
Zinc	0.50	0.010	0.5000	0	99.2	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22599** RunNo: **22599**
Prep Date: Analysis Date: **11/16/2014** SeqNo: **666152** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.55	0.0020	0.5000	0	109	85	115			
Cadmium	0.55	0.0020	0.5000	0	110	85	115			
Calcium	56	1.0	50.00	0	113	85	115			
Chromium	0.54	0.0060	0.5000	0	108	85	115			
Copper	0.55	0.0060	0.5000	0	109	85	115			
Iron	0.53	0.020	0.5000	0	107	85	115			
Magnesium	56	1.0	50.00	0	112	85	115			
Manganese	0.52	0.0020	0.5000	0	104	85	115			
Potassium	54	1.0	50.00	0	109	85	115			
Silver	0.12	0.0050	0.1000	0	117	85	115			S
Zinc	0.54	0.010	0.5000	0	109	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22752** RunNo: **22752**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671318** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22752** RunNo: **22752**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **671319** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	52	1.0	50.00	0	104	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411471**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**							
Client ID: **PBW**	Batch ID: **R22752**	RunNo: **22752**							
Prep Date:	Analysis Date: **11/24/2014**	SeqNo: **671320**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**							
Client ID: **LCSW**	Batch ID: **R22752**	RunNo: **22752**							
Prep Date:	Analysis Date: **11/24/2014**	SeqNo: **671321**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	50	1.0	50.00	0	99.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411471**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB-16416** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **16416** RunNo: **22614**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666852** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-16416** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **16416** RunNo: **22614**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666853** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	101	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Copper	0.51	0.0060	0.5000	0	101	85	115			
Iron	0.50	0.020	0.5000	0	101	85	115			
Manganese	0.49	0.0020	0.5000	0	98.1	85	115			
Silver	0.11	0.0050	0.1000	0	111	85	115			
Zinc	0.50	0.010	0.5000	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411471**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22774** RunNo: **22774**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672122** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	92.5	85	115			
Lead	0.024	0.0010	0.02500	0	94.4	85	115			
Selenium	0.022	0.0010	0.02500	0	89.7	85	115			
Uranium	0.024	0.0010	0.02500	0	95.2	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R22774** RunNo: **22774**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672123** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.3	85	115			
Lead	0.024	0.0010	0.02500	0	97.3	85	115			
Selenium	0.024	0.0010	0.02500	0	95.2	85	115			
Uranium	0.024	0.0010	0.02500	0	94.8	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22774** RunNo: **22774**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672124** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R22774** RunNo: **22774**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672125** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411471**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **LLLCS-16416** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **16416** RunNo: **22609**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666765** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.5	85	115			
Lead	0.026	0.0010	0.02500	0	106	85	115			
Selenium	0.024	0.0010	0.02500	0	96.6	85	115			
Uranium	0.026	0.0010	0.02500	0	106	85	115			

Sample ID **MB-16416** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **16416** RunNo: **22609**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **666767** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **1411471-001BLLMS** SampType: **MSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **STP-1 to EP-2** Batch ID: **16416** RunNo: **22609**
Prep Date: **11/17/2014** Analysis Date: **11/18/2014** SeqNo: **667250** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.028	0.0010	0.02500	0	113	70	130			
Uranium	0.034	0.0010	0.02500	0.002219	126	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411471**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID	**MB-16511**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**
Client ID:	**PBW**	Batch ID:	**16511**	RunNo:	**22710**
Prep Date:	**11/21/2014**	Analysis Date:	**11/21/2014**	SeqNo:	**669836** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	**LCS-16511**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**
Client ID:	**LCSW**	Batch ID:	**16511**	RunNo:	**22710**
Prep Date:	**11/21/2014**	Analysis Date:	**11/21/2014**	SeqNo:	**669837** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	0	102	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411471**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22546** RunNo: **22546**
Prep Date: Analysis Date: **11/13/2014** SeqNo: **664770** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R22546** RunNo: **22546**
Prep Date: Analysis Date: **11/13/2014** SeqNo: **664771** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	98.9	90	110			
Nitrogen, Nitrite (As N)	0.96	0.10	1.000	0	96.4	90	110			
Bromide	2.5	0.10	2.500	0	100	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	101	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	98.0	90	110			

Sample ID **1411471-002AMS** SampType: **MS** TestCode: **EPA Method 300.0: Anions**
Client ID: **BW to EP-2** Batch ID: **R22546** RunNo: **22546**
Prep Date: Analysis Date: **11/13/2014** SeqNo: **664777** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	1.6	0.10	2.500	0.1480	57.2	82.5	103			S
Nitrogen, Nitrate (As N)	3.1	0.10	2.500	0.7802	93.1	84	109			
Phosphorus, Orthophosphate (As P	2.0	0.50	5.000	0	39.0	69	109			S

Sample ID **1411471-002AMSD** SampType: **MSD** TestCode: **EPA Method 300.0: Anions**
Client ID: **BW to EP-2** Batch ID: **R22546** RunNo: **22546**
Prep Date: Analysis Date: **11/13/2014** SeqNo: **664778** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	1.5	0.10	2.500	0.1480	56.0	82.5	103	2.00	20	S
Nitrogen, Nitrate (As N)	2.9	0.10	2.500	0.7802	85.7	84	109	6.16	20	
Phosphorus, Orthophosphate (As P	2.1	0.50	5.000	0	41.3	69	109	5.82	20	S

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R22776** RunNo: **22776**
Prep Date: Analysis Date: **11/24/2014** SeqNo: **672163** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411471**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**		
Client ID: **PBW**	Batch ID: **R22776**	RunNo: **22776**		
Prep Date:	Analysis Date: **11/24/2014**	SeqNo: **672163**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**		
Client ID: **LCSW**	Batch ID: **R22776**	RunNo: **22776**		
Prep Date:	Analysis Date: **11/24/2014**	SeqNo: **672164**	Units: **mg/L**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000	0	92.5	90	110			
Sulfate	9.6	0.50	10.00	0	95.8	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1411471**
04-Dec-14

Client: Western Refining Southwest, Gallup
Project: Q4 2014

Sample ID **MB-16371** SampType: **MBLK** TestCode: **SM5210B: BOD**
Client ID: **PBW** Batch ID: **16371** RunNo: **22705**
Prep Date: **11/13/2014** Analysis Date: **11/18/2014** SeqNo: **669659** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID **MB--16371** SampType: **MBLK** TestCode: **SM5210B: BOD**
Client ID: **PBW** Batch ID: **16371** RunNo: **22705**
Prep Date: **11/13/2014** Analysis Date: **11/18/2014** SeqNo: **669660** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID **LCS-16371** SampType: **LCS** TestCode: **SM5210B: BOD**
Client ID: **LCSW** Batch ID: **16371** RunNo: **22705**
Prep Date: **11/13/2014** Analysis Date: **11/18/2014** SeqNo: **669661** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	200	2.0	198.0	0	100	89.6	126			

Sample ID **LCSD-16371** SampType: **LCSD** TestCode: **SM5210B: BOD**
Client ID: **LCSS02** Batch ID: **16371** RunNo: **22705**
Prep Date: **11/13/2014** Analysis Date: **11/18/2014** SeqNo: **669662** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	220	2.0	198.0	0	111	89.6	126	10.3	31.9	

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1411471 RcptNo: 1

Received by/date: AG 11/12/14

Logged By: **Ashley Gallegos** 11/12/2014 4:12:00 PM

Completed By: **Ashley Gallegos** 11/13/2014 8:43:03 AM

Reviewed By: 11/13/14 ~~0103~~ 0936

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 5 (<2 or >12 unless noted)
Adjusted? NO
Checked by: CS

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☑ No ☐ NA ☐

Person Notified:	Cheryl Johnson	Date:	11/13/2014
By Whom:	Anne Thorne	Via:	☑ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:	E Coli Sample was rejected		
Client Instructions:	See Section 19.		

17. Additional remarks:

E. Coli Sample for -001 was rejected, sample was too dark even after dilution per Stephanie

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

2 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard ☐ Rush

Project Name:

Q4 2014

Project #:

STP-1 to EP-2

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1411471	BOD / COD	metals (T+D)	8260B	Cation / anion *sep email 11/12/14									Air Bubbles (Y or N)
11-12-14	1030	Aq	STP-1 to EP-2	4		-001	X	X											
11-12-14	847		BW to EP-2	4		-002	X	X		X									
11-12-14	—		~~TB-103~~	~~3~~		~~-003~~			X										

Date:	Time:	Relinquished by:	Received by:	Date Time
11-12-14	1340	Pam Landers		11-12-14 1:00
11-12-14	1612			11/12/14 1612

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 09, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: 2014 2nd Quarter OrderNo.: 1406811

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 3 sample(s) on 6/17/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1406811**
Date Reported: **7/9/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP-1NW
Project: 2014 2nd Quarter
Collection Date: 6/16/2014 10:00:00 AM
Lab ID: 1406811-001
Matrix: AQUEOUS
Received Date: 6/17/2014 4:14:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	6/19/2014 4:31:24 AM	13766
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	6/19/2014 4:31:24 AM	13766
Surr: DNOP	101	62.7-145		%REC	1	6/19/2014 4:31:24 AM	13766
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	6/19/2014 2:24:00 PM	R19392
Surr: BFB	116	70.9-130		%REC	1	6/19/2014 2:24:00 PM	R19392
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	0.85	0.10		mg/L	1	6/18/2014 11:23:48 AM	R19384
Chloride	1000	50	*	mg/L	100	6/24/2014 2:00:15 AM	R19470
Bromide	2.2	0.10		mg/L	1	6/18/2014 11:23:48 AM	R19384
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	6/18/2014 11:23:48 AM	R19384
Sulfate	160	10		mg/L	20	6/18/2014 12:01:02 PM	R19384
Nitrate+Nitrite as N	15	1.0	*	mg/L	5	6/19/2014 5:23:33 AM	R19384
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.083	0.0020		mg/L	1	6/27/2014 3:32:35 PM	R19563
Cadmium	ND	0.0020		mg/L	1	6/27/2014 3:32:35 PM	R19563
Calcium	35	1.0		mg/L	1	6/27/2014 3:32:35 PM	R19563
Chromium	ND	0.0060		mg/L	1	6/27/2014 3:32:35 PM	R19563
Copper	ND	0.0060		mg/L	1	6/27/2014 3:32:35 PM	R19563
Iron	0.047	0.020		mg/L	1	6/27/2014 3:32:35 PM	R19563
Magnesium	4.8	1.0		mg/L	1	6/27/2014 3:32:35 PM	R19563
Manganese	0.040	0.0020		mg/L	1	6/27/2014 3:32:35 PM	R19563
Potassium	10	1.0		mg/L	1	6/27/2014 3:32:35 PM	R19563
Silver	ND	0.0050		mg/L	1	7/1/2014 5:44:01 PM	R19605
Sodium	750	20		mg/L	20	7/2/2014 3:58:30 PM	R19650
Zinc	0.33	0.010		mg/L	1	6/27/2014 3:32:35 PM	R19563
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.11	0.0020		mg/L	1	6/27/2014 1:08:56 PM	13879
Cadmium	ND	0.0020		mg/L	1	6/27/2014 1:08:56 PM	13879
Calcium	41	1.0		mg/L	1	6/27/2014 1:08:56 PM	13879
Chromium	ND	0.0060		mg/L	1	6/27/2014 1:08:56 PM	13879
Copper	ND	0.0060		mg/L	1	6/27/2014 1:08:56 PM	13879
Iron	0.42	0.020	*	mg/L	1	6/27/2014 1:08:56 PM	13879
Magnesium	5.4	1.0		mg/L	1	6/27/2014 1:08:56 PM	13879
Manganese	0.055	0.0020	*	mg/L	1	6/27/2014 1:08:56 PM	13879
Potassium	9.0	1.0		mg/L	1	6/27/2014 1:08:56 PM	13879
Silver	ND	0.0050		mg/L	1	6/27/2014 1:08:56 PM	13879

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP-1NW
Project: 2014 2nd Quarter
Collection Date: 6/16/2014 10:00:00 AM
Lab ID: 1406811-001
Matrix: AQUEOUS
Received Date: 6/17/2014 4:14:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Sodium	890	50		mg/L	50	6/30/2014 4:39:56 PM	13879
Zinc	0.26	0.010		mg/L	1	6/27/2014 1:08:56 PM	13879
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	7/2/2014 5:59:40 PM	R19649
Lead	ND	0.010		mg/L	10	7/2/2014 5:59:40 PM	R19649
Selenium	0.022	0.010		mg/L	10	7/2/2014 5:59:40 PM	R19649
Uranium	0.077	0.010	*	mg/L	10	7/2/2014 5:59:40 PM	R19649
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	ND	0.010		mg/L	10	7/2/2014 2:37:22 PM	13879
Lead	ND	0.010		mg/L	10	7/2/2014 2:37:22 PM	13879
Selenium	0.028	0.010		mg/L	10	7/2/2014 2:37:22 PM	13879
Uranium	0.065	0.010	*	mg/L	10	7/2/2014 2:37:22 PM	13879
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	6/27/2014 2:53:26 PM	13930
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Acenaphthylene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Aniline	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Anthracene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Azobenzene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Benz(a)anthracene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Benzo(a)pyrene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Benzo(b)fluoranthene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Benzo(g,h,i)perylene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Benzo(k)fluoranthene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Benzoic acid	ND	20		µg/L	1	6/19/2014 5:32:28 PM	13776
Benzyl alcohol	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Bis(2-chloroethyl)ether	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
4-Bromophenyl phenyl ether	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Butyl benzyl phthalate	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Carbazole	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
4-Chloro-3-methylphenol	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
4-Chloroaniline	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
2-Chloronaphthalene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP-1NW
Project: 2014 2nd Quarter
Collection Date: 6/16/2014 10:00:00 AM
Lab ID: 1406811-001
Matrix: AQUEOUS
Received Date: 6/17/2014 4:14:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2-Chlorophenol	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Chrysene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Di-n-butyl phthalate	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Di-n-octyl phthalate	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Dibenz(a,h)anthracene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Dibenzofuran	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
1,2-Dichlorobenzene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
1,3-Dichlorobenzene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
1,4-Dichlorobenzene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
3,3´-Dichlorobenzidine	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Diethyl phthalate	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Dimethyl phthalate	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
2,4-Dichlorophenol	ND	20		µg/L	1	6/19/2014 5:32:28 PM	13776
2,4-Dimethylphenol	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	6/19/2014 5:32:28 PM	13776
2,4-Dinitrophenol	ND	20		µg/L	1	6/19/2014 5:32:28 PM	13776
2,4-Dinitrotoluene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
2,6-Dinitrotoluene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Fluoranthene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Fluorene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Hexachlorobenzene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Hexachlorobutadiene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Hexachlorocyclopentadiene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Hexachloroethane	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Isophorone	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
1-Methylnaphthalene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
2-Methylnaphthalene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
2-Methylphenol	ND	20		µg/L	1	6/19/2014 5:32:28 PM	13776
3+4-Methylphenol	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
N-Nitrosodimethylamine	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
N-Nitrosodiphenylamine	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Naphthalene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
2-Nitroaniline	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
3-Nitroaniline	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
4-Nitroaniline	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Nitrobenzene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP-1NW
Project: 2014 2nd Quarter
Collection Date: 6/16/2014 10:00:00 AM
Lab ID: 1406811-001
Matrix: AQUEOUS
Received Date: 6/17/2014 4:14:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2-Nitrophenol	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
4-Nitrophenol	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Pentachlorophenol	ND	20		µg/L	1	6/19/2014 5:32:28 PM	13776
Phenanthrene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Phenol	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Pyrene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Pyridine	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
1,2,4-Trichlorobenzene	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
2,4,5-Trichlorophenol	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
2,4,6-Trichlorophenol	ND	10		µg/L	1	6/19/2014 5:32:28 PM	13776
Surr: 2-Fluorophenol	52.6	12.1-85.8		%REC	1	6/19/2014 5:32:28 PM	13776
Surr: Phenol-d5	41.0	17.7-65.8		%REC	1	6/19/2014 5:32:28 PM	13776
Surr: 2,4,6-Tribromophenol	61.6	26-138		%REC	1	6/19/2014 5:32:28 PM	13776
Surr: Nitrobenzene-d5	81.3	47.5-119		%REC	1	6/19/2014 5:32:28 PM	13776
Surr: 2-Fluorobiphenyl	78.5	48.1-106		%REC	1	6/19/2014 5:32:28 PM	13776
Surr: 4-Terphenyl-d14	76.5	44-113		%REC	1	6/19/2014 5:32:28 PM	13776
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Benzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Toluene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Ethylbenzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Methyl tert-butyl ether (MTBE)	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,2,4-Trimethylbenzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,3,5-Trimethylbenzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,2-Dichloroethane (EDC)	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,2-Dibromoethane (EDB)	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Naphthalene	ND	2.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1-Methylnaphthalene	ND	4.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
2-Methylnaphthalene	ND	4.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Acetone	ND	10	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Bromobenzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Bromodichloromethane	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Bromoform	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Bromomethane	ND	3.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
2-Butanone	ND	10	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Carbon disulfide	ND	10	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Carbon Tetrachloride	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Chlorobenzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Chloroethane	ND	2.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Chloroform	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP-1NW
Project: 2014 2nd Quarter
Collection Date: 6/16/2014 10:00:00 AM
Lab ID: 1406811-001
Matrix: AQUEOUS
Received Date: 6/17/2014 4:14:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Chloromethane	ND	3.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
2-Chlorotoluene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
4-Chlorotoluene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
cis-1,2-DCE	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
cis-1,3-Dichloropropene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,2-Dibromo-3-chloropropane	ND	2.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Dibromochloromethane	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Dibromomethane	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,2-Dichlorobenzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,3-Dichlorobenzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,4-Dichlorobenzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Dichlorodifluoromethane	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,1-Dichloroethane	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,1-Dichloroethene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,2-Dichloropropane	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,3-Dichloropropane	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
2,2-Dichloropropane	ND	2.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,1-Dichloropropene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Hexachlorobutadiene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
2-Hexanone	ND	10	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Isopropylbenzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
4-Isopropyltoluene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
4-Methyl-2-pentanone	ND	10	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Methylene Chloride	ND	3.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
n-Butylbenzene	ND	3.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
n-Propylbenzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
sec-Butylbenzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Styrene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
tert-Butylbenzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,1,1,2-Tetrachloroethane	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,1,2,2-Tetrachloroethane	ND	2.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Tetrachloroethene (PCE)	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
trans-1,2-DCE	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
trans-1,3-Dichloropropene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,2,3-Trichlorobenzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,2,4-Trichlorobenzene	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,1,1-Trichloroethane	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,1,2-Trichloroethane	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Trichloroethene (TCE)	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: STP-1NW
Project: 2014 2nd Quarter
Collection Date: 6/16/2014 10:00:00 AM
Lab ID: 1406811-001
Matrix: AQUEOUS
Received Date: 6/17/2014 4:14:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **cadg**	
Trichlorofluoromethane	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
1,2,3-Trichloropropane	ND	2.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Vinyl chloride	ND	1.0	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Xylenes, Total	ND	1.5	p	µg/L	1	6/18/2014 11:24:57 PM	R19361
Surr: 1,2-Dichloroethane-d4	104	70-130	p	%REC	1	6/18/2014 11:24:57 PM	R19361
Surr: 4-Bromofluorobenzene	103	70-130	p	%REC	1	6/18/2014 11:24:57 PM	R19361
Surr: Dibromofluoromethane	118	70-130	p	%REC	1	6/18/2014 11:24:57 PM	R19361
Surr: Toluene-d8	100	70-130	p	%REC	1	6/18/2014 11:24:57 PM	R19361

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Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-17
Project: 2014 2nd Quarter
Collection Date: 6/16/2014 11:05:00 AM
Lab ID: 1406811-002
Matrix: AQUEOUS
Received Date: 6/17/2014 4:14:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**JRR**
Fluoride	0.61	0.10		mg/L	1	6/18/2014 10:58:59 AM	R19384
Chloride	98	10		mg/L	20	6/18/2014 11:11:24 AM	R19384
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	6/18/2014 10:58:59 AM	R19384
Bromide	0.26	0.10		mg/L	1	6/18/2014 10:58:59 AM	R19384
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	6/18/2014 10:58:59 AM	R19384
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	6/18/2014 10:58:59 AM	R19384
Sulfate	60	10		mg/L	20	6/18/2014 11:11:24 AM	R19384
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.24	0.0020		mg/L	1	6/27/2014 3:46:43 PM	R19563
Cadmium	ND	0.0020		mg/L	1	6/27/2014 3:46:43 PM	R19563
Calcium	89	1.0		mg/L	1	6/27/2014 3:46:43 PM	R19563
Chromium	ND	0.0060		mg/L	1	6/27/2014 3:46:43 PM	R19563
Copper	ND	0.0060		mg/L	1	6/27/2014 3:46:43 PM	R19563
Iron	0.94	0.020	*	mg/L	1	6/27/2014 3:46:43 PM	R19563
Magnesium	17	1.0		mg/L	1	6/27/2014 3:46:43 PM	R19563
Manganese	3.3	0.010	*	mg/L	5	6/27/2014 3:48:28 PM	R19563
Potassium	2.6	1.0		mg/L	1	6/27/2014 3:46:43 PM	R19563
Silver	ND	0.0050		mg/L	1	7/1/2014 5:51:50 PM	R19605
Sodium	240	5.0		mg/L	5	7/2/2014 4:00:12 PM	R19650
Zinc	0.14	0.010		mg/L	1	6/27/2014 3:46:43 PM	R19563
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.61	0.0020		mg/L	1	6/27/2014 1:12:49 PM	13879
Cadmium	ND	0.0020		mg/L	1	6/27/2014 1:12:49 PM	13879
Calcium	140	5.0		mg/L	5	6/27/2014 1:14:37 PM	13879
Chromium	0.013	0.0060		mg/L	1	6/27/2014 1:12:49 PM	13879
Copper	0.012	0.0060		mg/L	1	6/27/2014 1:12:49 PM	13879
Iron	10	1.0	*	mg/L	50	6/27/2014 1:18:00 PM	13879
Magnesium	27	1.0		mg/L	1	6/27/2014 1:12:49 PM	13879
Manganese	4.1	0.010	*	mg/L	5	6/27/2014 1:14:37 PM	13879
Potassium	4.3	1.0		mg/L	1	6/27/2014 1:12:49 PM	13879
Silver	ND	0.0050		mg/L	1	6/27/2014 1:12:49 PM	13879
Sodium	240	5.0		mg/L	5	6/30/2014 4:41:37 PM	13879
Zinc	0.036	0.010		mg/L	1	6/27/2014 1:12:49 PM	13879
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	0.0054	0.0050		mg/L	5	7/2/2014 6:02:42 PM	R19649
Lead	ND	0.0050		mg/L	5	7/2/2014 6:02:42 PM	R19649
Selenium	ND	0.0050		mg/L	5	7/2/2014 6:02:42 PM	R19649
Uranium	0.022	0.0050		mg/L	5	7/2/2014 6:02:42 PM	R19649

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-17
Project: 2014 2nd Quarter
Collection Date: 6/16/2014 11:05:00 AM
Lab ID: 1406811-002
Matrix: AQUEOUS
Received Date: 6/17/2014 4:14:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0063	0.0010		mg/L	1	7/2/2014 2:40:25 PM	13879
Lead	0.022	0.0010	*	mg/L	1	7/2/2014 2:40:25 PM	13879
Selenium	0.0045	0.0010		mg/L	1	7/2/2014 2:40:25 PM	13879
Uranium	0.027	0.0010		mg/L	1	7/2/2014 2:40:25 PM	13879
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	6/27/2014 2:58:59 PM	13930
EPA METHOD 8270C: SEMIVOLATILES						Analyst:	**DAM**
Acenaphthene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Acenaphthylene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Aniline	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Anthracene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Azobenzene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Benz(a)anthracene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Benzo(a)pyrene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Benzo(b)fluoranthene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Benzo(g,h,i)perylene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Benzo(k)fluoranthene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Benzoic acid	ND	20		µg/L	1	6/19/2014 3:35:02 PM	13776
Benzyl alcohol	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Bis(2-chloroethyl)ether	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
4-Bromophenyl phenyl ether	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Butyl benzyl phthalate	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Carbazole	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
4-Chloro-3-methylphenol	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
4-Chloroaniline	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
2-Chloronaphthalene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
2-Chlorophenol	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Chrysene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Di-n-butyl phthalate	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Di-n-octyl phthalate	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Dibenz(a,h)anthracene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Dibenzofuran	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
1,2-Dichlorobenzene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
1,3-Dichlorobenzene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776

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Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
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S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-17
Project: 2014 2nd Quarter
Collection Date: 6/16/2014 11:05:00 AM
Lab ID: 1406811-002
Matrix: AQUEOUS
Received Date: 6/17/2014 4:14:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
1,4-Dichlorobenzene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
3,3´-Dichlorobenzidine	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Diethyl phthalate	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Dimethyl phthalate	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
2,4-Dichlorophenol	ND	20		µg/L	1	6/19/2014 3:35:02 PM	13776
2,4-Dimethylphenol	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	6/19/2014 3:35:02 PM	13776
2,4-Dinitrophenol	ND	20		µg/L	1	6/19/2014 3:35:02 PM	13776
2,4-Dinitrotoluene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
2,6-Dinitrotoluene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Fluoranthene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Fluorene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Hexachlorobenzene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Hexachlorobutadiene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Hexachlorocyclopentadiene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Hexachloroethane	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Isophorone	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
1-Methylnaphthalene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
2-Methylnaphthalene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
2-Methylphenol	ND	20		µg/L	1	6/19/2014 3:35:02 PM	13776
3+4-Methylphenol	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
N-Nitrosodimethylamine	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
N-Nitrosodiphenylamine	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Naphthalene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
2-Nitroaniline	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
3-Nitroaniline	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
4-Nitroaniline	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Nitrobenzene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
2-Nitrophenol	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
4-Nitrophenol	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Pentachlorophenol	ND	20		µg/L	1	6/19/2014 3:35:02 PM	13776
Phenanthrene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Phenol	39	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Pyrene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Pyridine	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
1,2,4-Trichlorobenzene	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
2,4,5-Trichlorophenol	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-17
Project: 2014 2nd Quarter
Collection Date: 6/16/2014 11:05:00 AM
Lab ID: 1406811-002
Matrix: AQUEOUS
Received Date: 6/17/2014 4:14:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2,4,6-Trichlorophenol	ND	10		µg/L	1	6/19/2014 3:35:02 PM	13776
Surr: 2-Fluorophenol	51.0	12.1-85.8		%REC	1	6/19/2014 3:35:02 PM	13776
Surr: Phenol-d5	43.8	17.7-65.8		%REC	1	6/19/2014 3:35:02 PM	13776
Surr: 2,4,6-Tribromophenol	81.0	26-138		%REC	1	6/19/2014 3:35:02 PM	13776
Surr: Nitrobenzene-d5	83.1	47.5-119		%REC	1	6/19/2014 3:35:02 PM	13776
Surr: 2-Fluorobiphenyl	93.1	48.1-106		%REC	1	6/19/2014 3:35:02 PM	13776
Surr: 4-Terphenyl-d14	87.4	44-113		%REC	1	6/19/2014 3:35:02 PM	13776

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-16
Project: 2014 2nd Quarter
Collection Date: 6/16/2014 11:20:00 AM
Lab ID: 1406811-003
Matrix: AQUEOUS
Received Date: 6/17/2014 4:14:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Acenaphthylene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Aniline	11	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Anthracene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Azobenzene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Benz(a)anthracene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Benzo(a)pyrene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Benzo(b)fluoranthene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Benzo(g,h,i)perylene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Benzo(k)fluoranthene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Benzoic acid	ND	20		µg/L	1	6/19/2014 4:04:27 PM	13776
Benzyl alcohol	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Bis(2-chloroethyl)ether	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
4-Bromophenyl phenyl ether	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Butyl benzyl phthalate	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Carbazole	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
4-Chloro-3-methylphenol	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
4-Chloroaniline	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
2-Chloronaphthalene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
2-Chlorophenol	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Chrysene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Di-n-butyl phthalate	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Di-n-octyl phthalate	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Dibenz(a,h)anthracene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Dibenzofuran	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
1,2-Dichlorobenzene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
1,3-Dichlorobenzene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
1,4-Dichlorobenzene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
3,3´-Dichlorobenzidine	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Diethyl phthalate	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Dimethyl phthalate	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
2,4-Dichlorophenol	ND	20		µg/L	1	6/19/2014 4:04:27 PM	13776
2,4-Dimethylphenol	170	10		µg/L	1	6/19/2014 4:04:27 PM	13776
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	6/19/2014 4:04:27 PM	13776
2,4-Dinitrophenol	ND	20		µg/L	1	6/19/2014 4:04:27 PM	13776

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: MKTF-16
Project: 2014 2nd Quarter
Collection Date: 6/16/2014 11:20:00 AM
Lab ID: 1406811-003
Matrix: AQUEOUS
Received Date: 6/17/2014 4:14:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2,4-Dinitrotoluene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
2,6-Dinitrotoluene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Fluoranthene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Fluorene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Hexachlorobenzene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Hexachlorobutadiene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Hexachlorocyclopentadiene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Hexachloroethane	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Isophorone	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
1-Methylnaphthalene	37	10		µg/L	1	6/19/2014 4:04:27 PM	13776
2-Methylnaphthalene	42	10		µg/L	1	6/19/2014 4:04:27 PM	13776
2-Methylphenol	220	20		µg/L	1	6/19/2014 4:04:27 PM	13776
3+4-Methylphenol	160	10		µg/L	1	6/19/2014 4:04:27 PM	13776
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
N-Nitrosodimethylamine	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
N-Nitrosodiphenylamine	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Naphthalene	140	10		µg/L	1	6/19/2014 4:04:27 PM	13776
2-Nitroaniline	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
3-Nitroaniline	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
4-Nitroaniline	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Nitrobenzene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
2-Nitrophenol	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
4-Nitrophenol	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Pentachlorophenol	ND	20		µg/L	1	6/19/2014 4:04:27 PM	13776
Phenanthrene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Phenol	420	50		µg/L	5	6/20/2014 10:31:11 AM	13776
Pyrene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Pyridine	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
1,2,4-Trichlorobenzene	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
2,4,5-Trichlorophenol	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
2,4,6-Trichlorophenol	ND	10		µg/L	1	6/19/2014 4:04:27 PM	13776
Surr: 2-Fluorophenol	26.5	12.1-85.8		%REC	1	6/19/2014 4:04:27 PM	13776
Surr: Phenol-d5	48.4	17.7-65.8		%REC	1	6/19/2014 4:04:27 PM	13776
Surr: 2,4,6-Tribromophenol	90.2	26-138		%REC	1	6/19/2014 4:04:27 PM	13776
Surr: Nitrobenzene-d5	88.6	47.5-119		%REC	1	6/19/2014 4:04:27 PM	13776
Surr: 2-Fluorobiphenyl	92.4	48.1-106		%REC	1	6/19/2014 4:04:27 PM	13776
Surr: 4-Terphenyl-d14	87.1	44-113		%REC	1	6/19/2014 4:04:27 PM	13776

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**
09-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19563** RunNo: **19563**
Prep Date: Analysis Date: **6/27/2014** SeqNo: **566849** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19563** RunNo: **19563**
Prep Date: Analysis Date: **6/27/2014** SeqNo: **566850** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.48	0.0020	0.5000	0	96.6	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.3	85	115			
Calcium	49	1.0	50.00	0	97.4	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Copper	0.47	0.0060	0.5000	0	94.6	85	115			
Iron	0.51	0.020	0.5000	0	102	85	115			
Magnesium	49	1.0	50.00	0	98.0	85	115			
Manganese	0.50	0.0020	0.5000	0	99.8	85	115			
Potassium	48	1.0	50.00	0	96.4	85	115			
Zinc	0.48	0.010	0.5000	0	96.2	85	115			

Sample ID **1406811-001GMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **STP-1NW** Batch ID: **R19563** RunNo: **19563**
Prep Date: Analysis Date: **6/27/2014** SeqNo: **566938** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.54	0.0020	0.5000	0.08342	90.5	70	130			
Cadmium	0.49	0.0020	0.5000	0	97.7	70	130			
Calcium	81	1.0	50.00	35.01	92.5	70	130			
Chromium	0.49	0.0060	0.5000	0.005410	96.3	70	130			
Copper	0.50	0.0060	0.5000	0.002490	98.9	70	130			
Iron	0.53	0.020	0.5000	0.04659	96.1	70	130			
Magnesium	52	1.0	50.00	4.760	93.8	70	130			
Manganese	0.51	0.0020	0.5000	0.04002	94.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**
09-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **1406811-001GMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **STP-1NW** Batch ID: **R19563** RunNo: **19563**
Prep Date: Analysis Date: **6/27/2014** SeqNo: **566938** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	62	1.0	50.00	10.27	103	70	130			
Zinc	0.78	0.010	0.5000	0.3292	89.8	70	130			

Sample ID **1406811-001GMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **STP-1NW** Batch ID: **R19563** RunNo: **19563**
Prep Date: Analysis Date: **6/27/2014** SeqNo: **566939** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.53	0.0020	0.5000	0.08342	89.6	70	130	0.851	20	
Cadmium	0.48	0.0020	0.5000	0	96.5	70	130	1.24	20	
Calcium	81	1.0	50.00	35.01	91.8	70	130	0.464	20	
Chromium	0.49	0.0060	0.5000	0.005410	96.2	70	130	0.0596	20	
Copper	0.49	0.0060	0.5000	0.002490	98.3	70	130	0.599	20	
Iron	0.53	0.020	0.5000	0.04659	96.9	70	130	0.777	20	
Magnesium	52	1.0	50.00	4.760	93.8	70	130	0.0503	20	
Manganese	0.51	0.0020	0.5000	0.04002	93.4	70	130	1.28	20	
Potassium	62	1.0	50.00	10.27	104	70	130	0.641	20	
Zinc	0.77	0.010	0.5000	0.3292	87.5	70	130	1.51	20	

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19605** RunNo: **19605**
Prep Date: Analysis Date: **7/1/2014** SeqNo: **568367** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19605** RunNo: **19605**
Prep Date: Analysis Date: **7/1/2014** SeqNo: **568368** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	101	85	115			

Sample ID **1406811-001GMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **STP-1NW** Batch ID: **R19605** RunNo: **19605**
Prep Date: Analysis Date: **7/1/2014** SeqNo: **568970** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.090	0.0050	0.1000	0	89.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**
09-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **1406811-001GMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **STP-1NW** Batch ID: **R19605** RunNo: **19605**
Prep Date: Analysis Date: **7/1/2014** SeqNo: **568971** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.089	0.0050	0.1000	0	88.8	70	130	1.08	20	

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19650** RunNo: **19650**
Prep Date: Analysis Date: **7/2/2014** SeqNo: **570374** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19650** RunNo: **19650**
Prep Date: Analysis Date: **7/2/2014** SeqNo: **570375** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	48	1.0	50.00	0	96.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**
09-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **MB-13879** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **13879** RunNo: **19525**
Prep Date: **6/25/2014** Analysis Date: **6/26/2014** SeqNo: **565020** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Sample ID **LCS-13879** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **13879** RunNo: **19525**
Prep Date: **6/25/2014** Analysis Date: **6/26/2014** SeqNo: **565021** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0020	0.5000	0	100	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.6	85	115			
Chromium	0.50	0.0060	0.5000	0	99.9	85	115			
Copper	0.49	0.0060	0.5000	0	98.3	85	115			
Iron	0.52	0.020	0.5000	0	103	85	115			
Manganese	0.50	0.0020	0.5000	0	100	85	115			
Silver	0.10	0.0050	0.1000	0	100	85	115			
Zinc	0.51	0.010	0.5000	0	101	85	115			

Sample ID **LCS CAT-13879** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **13879** RunNo: **19525**
Prep Date: **6/25/2014** Analysis Date: **6/26/2014** SeqNo: **565022** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	51	1.0	50.00	0	101	85	115			
Magnesium	51	1.0	50.00	0	102	85	115			
Potassium	49	1.0	50.00	0	98.6	85	115			
Sodium	50	1.0	50.00	0	99.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**
09-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19649** RunNo: **19649**
Prep Date: Analysis Date: **7/2/2014** SeqNo: **570332** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.6	85	115			
Lead	0.025	0.0010	0.02500	0	99.4	85	115			
Selenium	0.024	0.0010	0.02500	0	95.1	85	115			
Uranium	0.026	0.0010	0.02500	0	102	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R19649** RunNo: **19649**
Prep Date: Analysis Date: **7/2/2014** SeqNo: **570333** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	93.4	85	115			
Lead	0.025	0.0010	0.02500	0	98.7	85	115			
Selenium	0.024	0.0010	0.02500	0	94.4	85	115			
Uranium	0.025	0.0010	0.02500	0	100	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19649** RunNo: **19649**
Prep Date: Analysis Date: **7/2/2014** SeqNo: **570334** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R19649** RunNo: **19649**
Prep Date: Analysis Date: **7/2/2014** SeqNo: **570335** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**
09-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **LLLCS-13879** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **13879** RunNo: **19535**
Prep Date: **6/25/2014** Analysis Date: **6/26/2014** SeqNo: **565868** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.3	85	115			
Lead	0.025	0.0010	0.02500	0	98.2	85	115			
Selenium	0.024	0.0010	0.02500	0	97.2	85	115			
Uranium	0.025	0.0010	0.02500	0	99.0	85	115			

Sample ID **MB-13879** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **13879** RunNo: **19535**
Prep Date: **6/25/2014** Analysis Date: **6/26/2014** SeqNo: **565873** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**
09-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID	**MB-13930**	SampType:	**MBLK**		TestCode:	**EPA Method 245.1: Mercury**					
Client ID:	**PBW**	Batch ID:	**13930**		RunNo:	**19549**					
Prep Date:	**6/27/2014**	Analysis Date:	**6/27/2014**		SeqNo:	**566235**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		ND	0.00020								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**
09-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R19384** RunNo: **19384**
Prep Date: Analysis Date: **6/18/2014** SeqNo: **560593** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R19384** RunNo: **19384**
Prep Date: Analysis Date: **6/18/2014** SeqNo: **560594** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.46	0.10	0.5000	0	91.6	90	110			
Chloride	4.7	0.50	5.000	0	94.5	90	110			
Nitrogen, Nitrite (As N)	0.93	0.10	1.000	0	93.0	90	110			
Bromide	2.4	0.10	2.500	0	95.6	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	98.5	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	93.9	90	110			
Sulfate	9.7	0.50	10.00	0	97.2	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	96.9	90	110			

Sample ID **1406811-001EMS** SampType: **MS** TestCode: **EPA Method 300.0: Anions**
Client ID: **STP-1NW** Batch ID: **R19384** RunNo: **19384**
Prep Date: Analysis Date: **6/18/2014** SeqNo: **560598** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.3	0.10	0.5000	0.8475	80.7	72.7	110			
Bromide	4.5	0.10	2.500	2.178	92.9	85.1	108			
Phosphorus, Orthophosphate (As P	4.4	0.50	5.000	0.1927	83.3	81.3	101			H

Sample ID **1406811-001EMSD** SampType: **MSD** TestCode: **EPA Method 300.0: Anions**
Client ID: **STP-1NW** Batch ID: **R19384** RunNo: **19384**
Prep Date: Analysis Date: **6/18/2014** SeqNo: **560599** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.3	0.10	0.5000	0.8475	81.9	72.7	110	0.510	20	
Bromide	4.5	0.10	2.500	2.178	92.8	85.1	108	0.0301	20	
Phosphorus, Orthophosphate (As P	4.4	0.50	5.000	0.1927	84.2	81.3	101	1.12	20	H

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**
09-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R19384** RunNo: **19384**
Prep Date: Analysis Date: **6/18/2014** SeqNo: **560647** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R19384** RunNo: **19384**
Prep Date: Analysis Date: **6/18/2014** SeqNo: **560648** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	98.7	90	110			
Chloride	4.8	0.50	5.000	0	95.2	90	110			
Nitrogen, Nitrite (As N)	0.95	0.10	1.000	0	95.1	90	110			
Bromide	2.4	0.10	2.500	0	96.8	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	100	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	98.6	90	110			
Sulfate	9.9	0.50	10.00	0	98.5	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	98.6	90	110			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW** Batch ID: **R19470** RunNo: **19470**
Prep Date: Analysis Date: **6/23/2014** SeqNo: **563268** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW** Batch ID: **R19470** RunNo: **19470**
Prep Date: Analysis Date: **6/23/2014** SeqNo: **563269** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	95.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**
09-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **MB-13766** SampType: **MBLK** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **PBW** Batch ID: **13766** RunNo: **19341**
Prep Date: **6/18/2014** Analysis Date: **6/18/2014** SeqNo: **560186** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.1		1.000		107	62.7	145			

Sample ID **LCS-13766** SampType: **LCS** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSW** Batch ID: **13766** RunNo: **19341**
Prep Date: **6/18/2014** Analysis Date: **6/18/2014** SeqNo: **560188** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.4	1.0	5.000	0	107	78.6	146			
Surr: DNOP	0.47		0.5000		94.8	62.7	145			

Sample ID **LCSD-13766** SampType: **LCSD** TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSS02** Batch ID: **13766** RunNo: **19341**
Prep Date: **6/18/2014** Analysis Date: **6/18/2014** SeqNo: **560189** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.7	1.0	5.000	0	93.5	78.6	146	13.8	26.5	
Surr: DNOP	0.44		0.5000		88.0	62.7	145	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**
09-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID	**5ML RB**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBW**	Batch ID:	**R19392**	RunNo:	**19392**					
Prep Date:		Analysis Date:	**6/19/2014**	SeqNo:	**561077**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		ND	0.050								
Surr: BFB		19		20.00		97.2	70.9	130			

Sample ID	**2.5UG GRO LCS**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSW**	Batch ID:	**R19392**	RunNo:	**19392**					
Prep Date:		Analysis Date:	**6/19/2014**	SeqNo:	**561078**	Units:	**mg/L**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		0.51	0.050	0.5000	0	103	80	120			
Surr: BFB		20		20.00		102	70.9	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**
09-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **5mL rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **PBW**	Batch ID: **R19361**	RunNo: **19361**			
Prep Date:	Analysis Date: **6/18/2014**	SeqNo: **559943**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**
09-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **5mL rb** SampType: **MBLK** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW** Batch ID: **R19361** RunNo: **19361**
Prep Date: Analysis Date: **6/18/2014** SeqNo: **559943** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		102	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		106	70	130			
Surr: Dibromofluoromethane	11		10.00		110	70	130			
Surr: Toluene-d8	9.8		10.00		98.3	70	130			

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **R19361** RunNo: **19361**
Prep Date: Analysis Date: **6/18/2014** SeqNo: **559947** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	70	130			
Toluene	21	1.0	20.00	0	103	80	120			
Chlorobenzene	19	1.0	20.00	0	94.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**
09-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**			
Client ID: **LCSW**	Batch ID: **R19361**	RunNo: **19361**			
Prep Date:	Analysis Date: **6/18/2014**	SeqNo: **559947**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22	1.0	20.00	0	110	82.6	131			
Trichloroethene (TCE)	19	1.0	20.00	0	94.9	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		100	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**
09-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **mb-13776**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **13776**	RunNo: **19399**			
Prep Date: **6/19/2014**	Analysis Date: **6/19/2014**	SeqNo: **561284**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3´-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**
09-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **mb-13776**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**			
Client ID: **PBW**	Batch ID: **13776**	RunNo: **19399**			
Prep Date: **6/19/2014**	Analysis Date: **6/19/2014**	SeqNo: **561284**	Units: **µg/L**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	120		200.0		61.8	12.1	85.8			
Surr: Phenol-d5	100		200.0		51.8	17.7	65.8			
Surr: 2,4,6-Tribromophenol	150		200.0		77.2	26	138			
Surr: Nitrobenzene-d5	92		100.0		92.1	47.5	119			
Surr: 2-Fluorobiphenyl	84		100.0		83.6	48.1	106			
Surr: 4-Terphenyl-d14	95		100.0		95.5	44	113			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**
09-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **lcs-13776** SampType: **LCS** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW** Batch ID: **13776** RunNo: **19399**
Prep Date: **6/19/2014** Analysis Date: **6/19/2014** SeqNo: **561285** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	84	10	100.0	0	83.8	50.3	109			
4-Chloro-3-methylphenol	180	10	200.0	0	89.2	51.2	113			
2-Chlorophenol	150	10	200.0	0	77.1	48.5	104			
1,4-Dichlorobenzene	66	10	100.0	0	65.8	39.5	106			
2,4-Dinitrotoluene	80	10	100.0	0	80.2	45.4	107			
N-Nitrosodi-n-propylamine	79	10	100.0	0	79.4	50.4	119			
4-Nitrophenol	110	10	200.0	0	52.8	15.5	62.2			
Pentachlorophenol	140	20	200.0	0	69.4	23.5	93.5			
Phenol	93	10	200.0	0	46.7	26.8	65.6			
Pyrene	100	10	100.0	0	103	54.4	108			
1,2,4-Trichlorobenzene	65	10	100.0	0	65.4	39.9	106			
Surr: 2-Fluorophenol	100		200.0		51.3	12.1	85.8			
Surr: Phenol-d5	88		200.0		44.1	17.7	65.8			
Surr: 2,4,6-Tribromophenol	150		200.0		75.6	26	138			
Surr: Nitrobenzene-d5	81		100.0		80.6	47.5	119			
Surr: 2-Fluorobiphenyl	84		100.0		84.1	48.1	106			
Surr: 4-Terphenyl-d14	87		100.0		87.0	44	113			

Sample ID **lcsd-13776** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **13776** RunNo: **19399**
Prep Date: **6/19/2014** Analysis Date: **6/19/2014** SeqNo: **561286** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	94	10	100.0	0	93.7	50.3	109	11.1	27.2	
4-Chloro-3-methylphenol	220	10	200.0	0	108	51.2	113	19.0	25.9	
2-Chlorophenol	190	10	200.0	0	95.2	48.5	104	21.0	22.5	
1,4-Dichlorobenzene	85	10	100.0	0	85.3	39.5	106	25.9	24.6	R
2,4-Dinitrotoluene	97	10	100.0	0	97.0	45.4	107	19.0	25.3	
N-Nitrosodi-n-propylamine	94	10	100.0	0	94.0	50.4	119	16.8	23.6	
4-Nitrophenol	140	10	200.0	0	67.5	15.5	62.2	24.6	34.7	S
Pentachlorophenol	150	20	200.0	0	76.8	23.5	93.5	10.2	32.8	
Phenol	110	10	200.0	0	57.3	26.8	65.6	20.4	25.5	
Pyrene	120	10	100.0	0	115	54.4	108	11.7	31.4	S
1,2,4-Trichlorobenzene	81	10	100.0	0	80.8	39.9	106	21.0	25.9	
Surr: 2-Fluorophenol	130		200.0		63.8	12.1	85.8	0	0	
Surr: Phenol-d5	110		200.0		56.8	17.7	65.8	0	0	
Surr: 2,4,6-Tribromophenol	190		200.0		93.6	26	138	0	0	
Surr: Nitrobenzene-d5	100		100.0		103	47.5	119	0	0	
Surr: 2-Fluorobiphenyl	93		100.0		93.0	48.1	106	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1406811**
09-Jul-14

Client: Western Refining Southwest, Gallup
Project: 2014 2nd Quarter

Sample ID **lcsd-13776** SampType: **LCSD** TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02** Batch ID: **13776** RunNo: **19399**
Prep Date: **6/19/2014** Analysis Date: **6/19/2014** SeqNo: **561286** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	110		100.0		107	44	113	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1406811 RcptNo: 1

Received by/date: CS 06/17/14

Logged By: **Celina Sessa** 6/17/2014 4:14:00 PM Celina Sessa

Completed By: **Celina Sessa** 6/17/2014 5:07:26 PM Celina Sessa

Reviewed By: 06/18/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☑
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☑ CS 06/18/14
9. Was preservative added to bottles? Yes ☑ No ☑ NA ☐
   metals analysis: Added 0.4 ml HNO_3 to -001G for an acceptable pH. Held in login for 24 hours. CS 06/18/14
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑ CS 06/18/14
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH:	36
(<2 or >12 unless noted)	
Adjusted?	yes
Checked by:	CS

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

92 GIANT CROSSING ROAD, GALLUP, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard ☐ Rush

Project Name:

2014 2ND QUARTER

MKTF-16 / MKTF-17 / STP-1NW

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler: C. JOHNSON/K. SANCHEZ

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0°

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1406811	8260+MTBE	8015B EXTENDED	8270 + Phenols	WQCC Metals - Total	WQCC Metals - Dissolved (Filtered)	Major Cations/Anions									Air Bubbles (Y or N)
6/16/2014	1000	H20	STP-1NW	MISC	MISC	-001	X	X	X	X	X	X									
6/16/2014	1105	H20	MKTF-17	MISC	MISC	-002			X	X	X	X									
6/16/2014	1120	H20	MKTF-16	1-L AMBER	NONE	-003			X												

Date:	Time:	Relinquished by:	Received by:	Date	Time
6/17/14	0900			6-17-14	2:00
Date:	Time:	Relinquished by:	Received by:	Date	Time
6-17-14	414		Celin Sm	06/17/14	16:14

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 06, 2014

Cheryl Johnson
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0231
FAX (505) 722-0210

RE: 2014 Annual GW OrderNo.: 1409802

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 9/16/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1409802**
Date Reported: **10/6/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: West LDU
Project: 2014 Annual GW
Collection Date: 9/11/2014 9:45:00 AM
Lab ID: 1409802-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst:	**BCN**
Diesel Range Organics (DRO)	6.6	1.0		mg/L	1	9/18/2014 12:45:21 PM	15312
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	9/18/2014 12:45:21 PM	15312
Surr: DNOP	95.3	59-141		%REC	1	9/18/2014 12:45:21 PM	15312
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**DJF**
Gasoline Range Organics (GRO)	6.7	2.5		mg/L	50	9/17/2014 12:59:36 PM	R21267
Surr: BFB	86.9	70.9-130		%REC	50	9/17/2014 12:59:36 PM	R21267
EPA METHOD 8021B: VOLATILES						Analyst:	**DJF**
Methyl tert-butyl ether (MTBE)	ND	120		µg/L	50	9/17/2014 12:59:36 PM	R21267
Benzene	870	50		µg/L	50	9/17/2014 12:59:36 PM	R21267
Toluene	300	50		µg/L	50	9/17/2014 12:59:36 PM	R21267
Ethylbenzene	110	50		µg/L	50	9/17/2014 12:59:36 PM	R21267
Xylenes, Total	940	100		µg/L	50	9/17/2014 12:59:36 PM	R21267
1,2,4-Trimethylbenzene	410	50		µg/L	50	9/17/2014 12:59:36 PM	R21267
1,3,5-Trimethylbenzene	150	50		µg/L	50	9/17/2014 12:59:36 PM	R21267
Surr: 4-Bromofluorobenzene	99.4	66.6-167		%REC	50	9/17/2014 12:59:36 PM	R21267
EPA METHOD 200.7: DISSOLVED METALS						Analyst:	**JLF**
Barium	0.49	0.0020		mg/L	1	9/19/2014 4:13:31 PM	R21336
Cadmium	ND	0.0020		mg/L	1	9/18/2014 1:37:26 PM	R21290
Chromium	0.27	0.0060	*	mg/L	1	9/18/2014 1:37:26 PM	R21290
Copper	ND	0.0060		mg/L	1	9/18/2014 1:37:26 PM	R21290
Iron	1.3	0.10	*	mg/L	5	9/19/2014 4:21:51 PM	R21336
Manganese	0.64	0.010	*	mg/L	5	9/19/2014 4:21:51 PM	R21336
Silver	ND	0.0050		mg/L	1	9/24/2014 12:27:29 PM	R21433
Zinc	0.26	0.010		mg/L	1	9/19/2014 4:13:31 PM	R21336
EPA METHOD 200.7: TOTAL METALS						Analyst:	**JLF**
Barium	0.52	0.0020		mg/L	1	9/18/2014 4:30:15 PM	15343
Cadmium	ND	0.0020		mg/L	1	9/18/2014 4:30:15 PM	15343
Chromium	0.28	0.0060	*	mg/L	1	9/18/2014 4:30:15 PM	15343
Copper	ND	0.0060		mg/L	1	9/18/2014 4:30:15 PM	15343
Iron	5.1	0.20	*	mg/L	10	9/18/2014 5:12:40 PM	15343
Manganese	0.73	0.0020	*	mg/L	1	9/18/2014 4:30:15 PM	15343
Silver	ND	0.0050		mg/L	1	9/18/2014 4:30:15 PM	15343
Zinc	0.57	0.010		mg/L	1	9/18/2014 4:30:15 PM	15343
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Arsenic	ND	0.0050		mg/L	5	9/26/2014 1:52:28 PM	R21493
Lead	ND	0.010		mg/L	10	9/29/2014 4:31:26 PM	R21527
Selenium	ND	0.0050		mg/L	5	9/26/2014 1:52:28 PM	R21493

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

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E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: West LDU
Project: 2014 Annual GW
Collection Date: 9/11/2014 9:45:00 AM
Lab ID: 1409802-001
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst:	**DBD**
Uranium	ND	0.010		mg/L	10	9/29/2014 4:31:26 PM	R21527
200.8 ICPMS METALS:TOTAL						Analyst:	**DBD**
Arsenic	0.0031	0.0010		mg/L	1	9/23/2014 5:38:58 PM	15343
Lead	0.0013	0.0010		mg/L	1	9/23/2014 5:38:58 PM	15343
Selenium	0.0034	0.0010		mg/L	1	9/23/2014 5:38:58 PM	15343
Uranium	ND	0.0010		mg/L	1	9/23/2014 5:38:58 PM	15343
EPA METHOD 245.1: MERCURY						Analyst:	**MMD**
Mercury	ND	0.00020		mg/L	1	9/24/2014 10:40:56 AM	15449

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group 6-9/11/14
Project: 2014 Annual GW
Collection Date: 9/11/2014 12:10:00 PM
Lab ID: 1409802-002
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **DJF**	
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	9/17/2014 3:59:46 PM	R21267
Benzene	ND	1.0		µg/L	1	9/17/2014 3:59:46 PM	R21267
Toluene	ND	1.0		µg/L	1	9/17/2014 3:59:46 PM	R21267
Ethylbenzene	ND	1.0		µg/L	1	9/17/2014 3:59:46 PM	R21267
Xylenes, Total	ND	2.0		µg/L	1	9/17/2014 3:59:46 PM	R21267
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/17/2014 3:59:46 PM	R21267
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/17/2014 3:59:46 PM	R21267
Surr: 4-Bromofluorobenzene	111	66.6-167		%REC	1	9/17/2014 3:59:46 PM	R21267

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: FB-Group 5-9/11/14
Project: 2014 Annual GW
Collection Date: 9/11/2014 12:10:00 PM
Lab ID: 1409802-003
Matrix: AQUEOUS
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES						Analyst: **DJF**	
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	9/17/2014 4:29:59 PM	R21267
Benzene	ND	1.0		µg/L	1	9/17/2014 4:29:59 PM	R21267
Toluene	ND	1.0		µg/L	1	9/17/2014 4:29:59 PM	R21267
Ethylbenzene	ND	1.0		µg/L	1	9/17/2014 4:29:59 PM	R21267
Xylenes, Total	ND	2.0		µg/L	1	9/17/2014 4:29:59 PM	R21267
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/17/2014 4:29:59 PM	R21267
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/17/2014 4:29:59 PM	R21267
Surr: 4-Bromofluorobenzene	105	66.6-167		%REC	1	9/17/2014 4:29:59 PM	R21267

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: TRIP BLANK
Project: 2014 Annual GW
Collection Date:
Lab ID: 1409802-004
Matrix: TRIP BLANK
Received Date: 9/16/2014 5:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**DJF**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	9/17/2014 5:00:08 PM	R21267
Surr: BFB	87.7	70.9-130		%REC	1	9/17/2014 5:00:08 PM	R21267
EPA METHOD 8021B: VOLATILES						Analyst:	**DJF**
Methyl tert-butyl ether (MTBE)	ND	2.5		µg/L	1	9/17/2014 5:00:08 PM	R21267
Benzene	ND	1.0		µg/L	1	9/17/2014 5:00:08 PM	R21267
Toluene	ND	1.0		µg/L	1	9/17/2014 5:00:08 PM	R21267
Ethylbenzene	ND	1.0		µg/L	1	9/17/2014 5:00:08 PM	R21267
Xylenes, Total	ND	2.0		µg/L	1	9/17/2014 5:00:08 PM	R21267
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/17/2014 5:00:08 PM	R21267
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/17/2014 5:00:08 PM	R21267
Surr: 4-Bromofluorobenzene	95.4	66.6-167		%REC	1	9/17/2014 5:00:08 PM	R21267

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409802**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621146** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621147** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.50	0.0020	0.5000	0	99.0	85	115			
Chromium	0.48	0.0060	0.5000	0	96.8	85	115			
Copper	0.49	0.0060	0.5000	0	97.1	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621149** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621150** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.48	0.0020	0.5000	0	96.8	85	115			
Chromium	0.48	0.0060	0.5000	0	96.4	85	115			
Copper	0.48	0.0060	0.5000	0	95.5	85	115			

Sample ID **LCS TEST** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621170** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.49	0.0020	0.5000	0	98.6	85	115			
Chromium	0.49	0.0060	0.5000	0	98.7	85	115			
Copper	0.49	0.0060	0.5000	0	97.3	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409802**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **1409802-001CMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **West LDU** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621174** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.47	0.0020	0.5000	0	93.8	70	130			
Chromium	0.76	0.0060	0.5000	0.2657	98.8	70	130			
Copper	0.45	0.0060	0.5000	0	90.1	70	130			

Sample ID **1409802-001CMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **West LDU** Batch ID: **R21290** RunNo: **21290**
Prep Date: Analysis Date: **9/18/2014** SeqNo: **621175** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.53	0.0020	0.5000	0	105	70	130	11.5	20	
Chromium	0.78	0.0060	0.5000	0.2657	103	70	130	2.47	20	
Copper	0.46	0.0060	0.5000	0	91.5	70	130	1.47	20	

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622776** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Iron	ND	0.020								
Manganese	ND	0.0020								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622777** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.46	0.0020	0.5000	0	91.9	85	115			
Iron	0.47	0.020	0.5000	0	93.2	85	115			
Manganese	0.45	0.0020	0.5000	0	89.7	85	115			
Zinc	0.46	0.010	0.5000	0	91.8	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622779** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Iron	ND	0.020								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409802**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622779** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	ND	0.0020								
Zinc	ND	0.010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622780** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.0020	0.5000	0	94.1	85	115			
Iron	0.48	0.020	0.5000	0	95.4	85	115			
Manganese	0.46	0.0020	0.5000	0	91.5	85	115			
Zinc	0.47	0.010	0.5000	0	93.7	85	115			

Sample ID **1409802-001CMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **West LDU** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622812** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.94	0.0020	0.5000	0.4895	89.4	70	130			
Zinc	0.66	0.010	0.5000	0.2649	78.0	70	130			

Sample ID **1409802-001CMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **West LDU** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622813** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.94	0.0020	0.5000	0.4895	89.5	70	130	0.0598	20	
Zinc	0.65	0.010	0.5000	0.2649	77.2	70	130	0.655	20	

Sample ID **1409802-001CMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **West LDU** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622817** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	3.6	0.10	2.500	1.328	91.7	70	130			
Manganese	2.9	0.010	2.500	0.6426	89.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409802**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **1409802-001CMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **West LDU** Batch ID: **R21336** RunNo: **21336**
Prep Date: Analysis Date: **9/19/2014** SeqNo: **622818** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	3.7	0.10	2.500	1.328	93.8	70	130	1.48	20	
Manganese	3.0	0.010	2.500	0.6426	92.6	70	130	2.72	20	

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21433** RunNo: **21433**
Prep Date: Analysis Date: **9/24/2014** SeqNo: **626248** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21433** RunNo: **21433**
Prep Date: Analysis Date: **9/24/2014** SeqNo: **626249** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.097	0.0050	0.1000	0	97.0	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21433** RunNo: **21433**
Prep Date: Analysis Date: **9/24/2014** SeqNo: **626252** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21433** RunNo: **21433**
Prep Date: Analysis Date: **9/24/2014** SeqNo: **626253** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409802**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **MB-15343** SampType: **MBLK** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW** Batch ID: **15343** RunNo: **21297**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621503** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Copper	ND	0.0060								
Iron	ND	0.020								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID **LCS-15343** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **15343** RunNo: **21297**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621504** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0	97.2	85	115			
Cadmium	0.49	0.0020	0.5000	0	98.6	85	115			
Chromium	0.49	0.0060	0.5000	0	98.1	85	115			
Copper	0.48	0.0060	0.5000	0	96.9	85	115			
Iron	0.48	0.020	0.5000	0	96.5	85	115			
Manganese	0.48	0.0020	0.5000	0	95.0	85	115			
Zinc	0.48	0.010	0.5000	0	96.9	85	115			

Sample ID **LCS Ag-15343** SampType: **LCS** TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW** Batch ID: **15343** RunNo: **21297**
Prep Date: **9/17/2014** Analysis Date: **9/18/2014** SeqNo: **621505** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.10	0.0050	0.1000	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409802**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628608** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	94.7	85	115			
Selenium	0.022	0.0010	0.02500	0	90.0	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628609** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	92.9	85	115			
Selenium	0.023	0.0010	0.02500	0	92.4	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628610** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21493** RunNo: **21493**
Prep Date: Analysis Date: **9/26/2014** SeqNo: **628611** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21527** RunNo: **21527**
Prep Date: Analysis Date: **9/29/2014** SeqNo: **629894** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.025	0.0010	0.02500	0	99.4	85	115			
Uranium	0.025	0.0010	0.02500	0	101	85	115			

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21527** RunNo: **21527**
Prep Date: Analysis Date: **9/29/2014** SeqNo: **629895** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409802**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **R21527** RunNo: **21527**
Prep Date: Analysis Date: **9/29/2014** SeqNo: **629895** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.025	0.0010	0.02500	0	101	85	115			

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21527** RunNo: **21527**
Prep Date: Analysis Date: **9/29/2014** SeqNo: **629896** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Sample ID **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **R21527** RunNo: **21527**
Prep Date: Analysis Date: **9/29/2014** SeqNo: **629897** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409802**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **LLLCS-15343** SampType: **LCSLL** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC** Batch ID: **15343** RunNo: **21376**
Prep Date: **9/17/2014** Analysis Date: **9/23/2014** SeqNo: **624955** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0	104	85	115			
Lead	0.026	0.0010	0.02500	0	103	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.026	0.0010	0.02500	0	105	85	115			

Sample ID **MB-15343** SampType: **MBLK** TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW** Batch ID: **15343** RunNo: **21376**
Prep Date: **9/17/2014** Analysis Date: **9/23/2014** SeqNo: **624958** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409802**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**MB-15449**	SampType:	**MBLK**	TestCode:	**EPA Method 245.1: Mercury**						
Client ID:	**PBW**	Batch ID:	**15449**	RunNo:	**21410**						
Prep Date:	**9/23/2014**	Analysis Date:	**9/24/2014**	SeqNo:	**625480**	Units:	**mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		ND	0.00020								

Sample ID	**LCS-15449**	SampType:	**LCS**	TestCode:	**EPA Method 245.1: Mercury**						
Client ID:	**LCSW**	Batch ID:	**15449**	RunNo:	**21410**						
Prep Date:	**9/23/2014**	Analysis Date:	**9/24/2014**	SeqNo:	**625481**	Units:	**mg/L**				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.0049	0.00020	0.005000	0	97.5	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409802**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID	**MB-15312**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Diesel Range**					
Client ID:	**PBW**	Batch ID:	**15312**	RunNo:	**21248**					
Prep Date:	**9/16/2014**	Analysis Date:	**9/17/2014**	SeqNo:	**619740**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.99		1.000		99.1	59	141			

Sample ID	**LCS-15312**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Diesel Range**					
Client ID:	**LCSW**	Batch ID:	**15312**	RunNo:	**21248**					
Prep Date:	**9/16/2014**	Analysis Date:	**9/17/2014**	SeqNo:	**619860**	Units:	**mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.0	1.0	5.000	0	101	69.7	142			
Surr: DNOP	0.49		0.5000		98.9	59	141			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409802**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW** Batch ID: **R21267** RunNo: **21267**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **620386** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		89.0	70.9	130			

Sample ID **2.5UG GRO LCS** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW** Batch ID: **R21267** RunNo: **21267**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **620387** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.49	0.050	0.5000	0	98.4	80	120			
Surr: BFB	19		20.00		93.9	70.9	130			

Sample ID **1409802-001AMS** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **West LDU** Batch ID: **R21267** RunNo: **21267**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **620389** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	31	2.5	25.00	6.680	98.7	70.4	127			
Surr: BFB	1100		1000		107	70.9	130			

Sample ID **1409802-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **West LDU** Batch ID: **R21267** RunNo: **21267**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **620390** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	31	2.5	25.00	6.680	96.2	70.4	127	2.06	20	
Surr: BFB	1100		1000		107	70.9	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409802**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **5ML RB** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW** Batch ID: **R21267** RunNo: **21267**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **620423** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5								
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Surr: 4-Bromofluorobenzene	21		20.00		104	66.6	167			

Sample ID **100NG BTEX LCS** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW** Batch ID: **R21267** RunNo: **21267**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **620424** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	17	2.5	20.00	0	86.3	67.4	147			
Benzene	19	1.0	20.00	0	97.0	80	120			
Toluene	20	1.0	20.00	0	98.3	80	120			
Ethylbenzene	20	1.0	20.00	0	98.1	80	120			
Xylenes, Total	61	2.0	60.00	0	102	80	120			
1,2,4-Trimethylbenzene	20	1.0	20.00	0	102	80	120			
1,3,5-Trimethylbenzene	21	1.0	20.00	0	103	80	120			
Surr: 4-Bromofluorobenzene	19		20.00		95.8	66.6	167			

Sample ID **1409802-001AMS** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **West LDU** Batch ID: **R21267** RunNo: **21267**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **620428** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	820	120	1000	0	81.8	45.4	143			
Benzene	1900	50	1000	867.5	107	80	120			
Toluene	1400	50	1000	298.5	108	80	120			
Ethylbenzene	1200	50	1000	109.4	105	79.7	126			
Xylenes, Total	4100	100	3000	937.4	107	80	120			
1,2,4-Trimethylbenzene	1500	50	1000	409.6	106	80.3	122			
1,3,5-Trimethylbenzene	1200	50	1000	145.9	107	80	120			
Surr: 4-Bromofluorobenzene	1200		1000		124	66.6	167			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1409802**
06-Oct-14

Client: Western Refining Southwest, Gallup
Project: 2014 Annual GW

Sample ID **1409802-001AMSD** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **West LDU** Batch ID: **R21267** RunNo: **21267**
Prep Date: Analysis Date: **9/17/2014** SeqNo: **620429** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	790	120	1000	0	78.6	45.4	143	4.03	20	
Benzene	1800	50	1000	867.5	94.1	80	120	6.98	20	
Toluene	1300	50	1000	298.5	98.1	80	120	7.70	20	
Ethylbenzene	1100	50	1000	109.4	99.7	79.7	126	4.27	20	
Xylenes, Total	4000	100	3000	937.4	101	80	120	4.33	20	
1,2,4-Trimethylbenzene	1400	50	1000	409.6	103	80.3	122	1.47	20	
1,3,5-Trimethylbenzene	1200	50	1000	145.9	102	80	120	4.17	20	
Surr: 4-Bromofluorobenzene	1200		1000		122	66.6	167	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Western Refining Gallup** Work Order Number: **1409802** RcptNo: **1**

Received by/date: C.S. 09/16/14

Logged By: **Ashley Gallegos** **9/16/2014 5:03:00 PM** AG

Completed By: **Ashley Gallegos** **9/17/2014 7:58:21 AM** AG

Reviewed By: AT 09/17/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☑ No ☐ Not Present ☐
2. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☑ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
9. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
10. VOA vials have zero headspace? Yes ☑ No ☐ No VOA Vials ☐
11. Were any sample containers received broken? Yes ☐ No ☑
12. Does paperwork match bottle labels? Yes ☑ No ☐
    (Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
14. Is it clear what analyses were requested? Yes ☑ No ☐
15. Were all holding times able to be met? Yes ☑ No ☐
    (If no, notify customer for authorization.)

# of preserved bottles checked for pH: 2
(<2 or >12 unless noted)
Adjusted? No
Checked by: mg

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

2 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

X Standard ☐ Rush_____

Project Name:

2014 ~~80~~ 09/17/14

~~2041~~ ANNUAL GW

Project #:

East/West/Oil Sump LDUs

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.1°

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1409802	8021 + MTBE	8015B extended	WQCC Metals - Total	WQCC Metals - Dissolved, Filtered									Air Bubbles (Y or N)
9/11/14	0945	H_2O	West LDU			-001	X	X	X	X									
9/11/14	1200	H_2O	FB-Group6-9/11/14			-002	X												
9/11/14	1210	H_2O	FB-Group5-9/11/14			-003	X												
			Trip Blank			-004	X	X											
			AT 09/17/14																

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/16/14	1450	[signature]	[signature]	9/16/14	1450
9-16-14	1703	[signature]	Celina Sanchez	09/16/14	1703

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Annual ~~Ground Water~~Groundwater Monitoring Report: Gallup Refinery – ~~2013~~2014

Western Refining

Annual Groundwater Monitoring Report 2014
92 Giant Crossing Road
Gallup, NM 87301

Gallup, New Mexico
Submitted: August ~~29, 2014~~28, 2015

~~**Annual Ground Water Monitoring Report 2013**~~
~~Gallup Refinery~~
~~92 Giant Crossing Road~~
~~Gallup, NM 87301~~

~~**W Western**~~
~~**W W Refining**~~

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

William Carl McClain August 29, 2014

~~William~~
~~McClain, Jr.~~

Date

~~Prepared by:~~

~~C ryl Johnso~~
~~Environmental Specialist~~

~~Reviewed by:~~

~~E~~ PH
~~Environmental Manager~~

Annual Groundwater Monitoring Report 2014
92 Giant Crossing Road
Gallup, NM 87301

~~**Annual Ground Water Monitoring Report**~~
~~**2013** Gallup Refinery~~
~~92 Giant Crossing Road~~
~~Gallup, NM 87301~~

William C. McClain, Jr. Date

Refinery Manager

Prepared by: Trihydro Corporation Reviewed by:

H. Joey Waldmann Jr., P.G. Ed Riege, MPH

Project Manager / Geologist Environmental Manager

Cheryl Johnson

Environmental Specialist

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~~Annual Ground Water Monitoring Report~~
~~2013 Gallup Refinery~~
~~92 Giant Crossing Road~~
~~Gallup, NM 87301~~

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LIST OF ACRONYMS

AC	Alternating Current
AL	Aeration Lagoon
API	American Petroleum Institute
BMP	Best Management Practices
BOD	Biochemical Oxygen Demand
BTEX	Benzene, Toluene, ~~Ethyl benzene~~Ethylbenzene, Xylene
BW	Boundary Well
COC	Chain of Custody
COD	Chemical Oxygen Demand
DC	Direct Current
DGF	Dissolved Gas Flotation
DO	Dissolved Oxygen
DRO	Diesel Range Organics
DTB	Depth to Bottom
DTP	Depth to Product
DTW	Depth to Water
EP	Evaporation Pond
EPA	Environmental Protection Agency
FT	Foot/Feet
FWGWMP	Facility Wide ~~Ground Water~~Groundwater Monitoring Plan
GPM	Gallons ~~per minute~~Per Minute
GRO	Gasoline Range Organics
GWM	~~Ground Water~~Groundwater Monitoring Well
HP	Horse Power

HWB	Hazardous Waste Bureau
IDW	Investigation Derived Waste
ISE	Ion Selective Electrode

LIST OF ACRONYMS - continued

LDU	Leak Detection Unit
LPG	Liquefied Petroleum Gas
LTU	Land Treatment Unit
MCL	Maximum Contaminant Level
MPPE	Macro Porous Polymer Extraction
MRO	Motor Oil Range Organics
MTBE	Methyl Tert Butyl Ether
mg/L	Milligrams/liter
mV	Millivolts

~~LIST OF ACRONYMS – CONTINUED~~

MW	Monitoring Well
NAIC	North American Industry Classification System
NAPIS	New American Petroleum Institute Separator
NAPL	Non Aqueous Petroleum Liquid
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NOD	Notice of Disapproval
NPDES	National Pollutant Discharge Elimination System
OBSM	Oil Bearing Secondary Material
OCD	Oil Conservation Division
OW	Observation Well
ORP	Oxidation Reduction Potential
PAH	Polycyclic Aromatic Hydrocarbon
PSTB	Petroleum Storage Tank Bureau
PVC	Polyvinyl ~~chloride~~Chloride
PW	Process Well
RCRA	Resource Conservation and Recovery Act
<RL	Less than the ~~Reporting~~Applicable standards Detection Limit

LIST OF ACRONYMS - continued

RSL	Regional Screening Level
RW	Recovery Well
SMW	Shallow Monitoring Well
SPH	Separate Phase Hydrocarbon

STP	Sanitary Treatment Pond
SVOC	Semi-volatile Organic Compound
~~SWMU~~SMWU	Solid Waste Management Unit
SWPPP	Storm Water Pollution and Prevention Plan
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbon
µm	Micrometer
UPS	United Parcel Service
VOC	Volatile Organic Compounds
WQCC	Water Quality Control Commission
WWTP	Waste Water Treatment Plant
YTD	~~Yearto~~Year to Date

~~**Annual Ground Water Monitoring Report**~~
~~**2013 Gallup** Refinery~~
~~92 Giant Crossing Road~~
~~Gallup, **NM 87301**~~

EXECUTIVE SUMMARY

The Annual ~~Ground Water~~Groundwater Monitoring Report for ~~2013~~2014 (Report) incorporates all of the field monitoring, sampling, and inspection of all active wells located on the facility. Analytical data and field notes are incorporated into this report to show any changes or discoveries of various constituents found in the ~~ground water~~groundwater collected for sampling. On February 15, 2012, ~~Ground Water~~Groundwater Discharge Permit GW-032 was rescinded by the Oil Conservation Division (OCD) of New Mexico. We are however required to continue to abate pollution of ~~ground water~~groundwater pursuant to 19.15.30 NMAC (Remediation) under case number AP-111 with remediation activities already in place under ~~Ground Water~~Groundwater Discharge Permit GW-032. Monitoring and field work activities conducted for ~~2013~~2014 followed the guidelines of the approved 2010, Revision 1, Annual ~~Ground Water~~Groundwater Monitoring Report, approved on December 12, 2012 and concurrence from Comment 6 of ~~NMED's~~New Mexico Environmental Department's (NMED) Disapproval Facility Wide ~~Ground Water~~Groundwater Monitoring Work Plan, 2011 Updates, September 24, 2012.

~~GROUND WATER~~GROUNDWATER MONITORING

There are a total of ~~41~~87 monitoring wells located throughout the refinery property. The ~~ground water~~groundwater program consists of a number of sampling locations, target analytes, and monitoring frequencies which are monitored on a quarterly, semi-annual, and annual basis. These monitoring wells have been grouped as follows:

~~GROUPA GROUPB GROUPC GROUPD~~

~~BW-1A, 1B, 1C GWM-1, 2, 3~~

~~OW-13, 14, 29, 30 RW-2, 3, 4~~

~~BW-2A, 2B, 2C NAPIS-1, 2, 3, KA-3 OW-50, 52 OW-1, 10~~

~~BW-3A, 3B, 3C OAPIS-1 RW-1, 2, 5, 6 OW-11, 12~~
~~MW-1, 2, 4, 5 LDU (3)~~
~~SMW-2, 4~~

~~Annual Ground Water Monitoring Report 2013 Gallup Refinery 92 Giant Crossing Road Gallup, NM 87301~~GROUP A	GROUP B	GROUP C	GROUP D	GROUP E
BW-1A, 1B, 1C BW-2A, 2B, 2C BW-3A, 3B, 3C MW-1, 2, 4, 5 SMW-2, 4	GWM-1, 2, 3 NAPIS-1, 2, 3, KA-3 OAPIS-1 STP1-NW STP1-SW	OW-13, 14, 29, 30 OW-50, 52 RW-1, 2, 5, 6	PW-2, 3, 4 OW-1, 10 OW-11, 12	MKTF-1 thru MKTF-45

Inserted Cells
Inserted Cells
Inserted Cells

GROUP A - WELLS

There are a total of nine boundary wells located on the northwest section of the refinery property~~, three~~. Three (BW-1A, 1B, 1C) are located between evaporation ponds 7 and 8, and three (BW-2A, 2B, 2C) are located on the west end of evaporation pond 11. BW-3A, 3B, 3C are located ~~in a~~on flat terrain directly northwest of evaporation pond 12A.

- Three of the seven wells (BW-1A, BW-1B, and BW-3A) continue to indicate no water level since original installation in 2003 and 2004.
- No benzene, toluene, ethylbenzene, or total xylenes (BTEX) or methyl tert butyl ether (MTBE) constituents have been detected in any of the boundary wells to date.
- Bis~~-~~(2-ethylhexyl)~~-~~phthalate was first detected in BW-3B in 2009, BW-3C in 2011, and in BW-~~3C~~1C in ~~2011~~2013. The detection of this organic compound is suspected to be a laboratory contaminant or possibly from the ~~PVC (~~polyvinyl chloride (PVC) pipe materials used in the well. Subsequent ~~yearly sampling~~annual sample results have indicated non-detectable levels of the organic constituent in ~~both~~each of these wells~~ since the initial discovery. No BTEX (benzene, toluene, ethylbenzene, total xylenes) or MTBE (methyl tert butyl ether) constituents have been detected in any of the boundary wells to date.~~.

Within this ~~section a~~ area of the refinery, three Resource Conservation Recovery Act (RCRA) land treatment ~~unit (LTU) exists, each cell measuring~~units (LTU) exist. Each of the three LTU cells measure 480 feet x 240 feet ~~sections (3 cells total)~~ and received hazardous waste application until 1990~~ and non~~.

Non-hazardous waste application ceased in 1993. Each section is diked and ~~contains~~ encompasses a surface area of 2.6 acres ~~of surface~~. The MW series (MW-1, 2, 4, and 5) and SMW series (SMW-2, and SMW-4) of wells were installed to monitor the detection of hazardous constituents ~~in the ground water. Three up-gradient monitoring wells are located along the~~ from the LTU in groundwater. On the northern edge (up gradient) of the LTU are three monitoring wells (MW-1, SMW-4 and MW-2~~) and down~~). Down gradient along the eastern ~~section there~~edge of the LTU are two monitoring wells (MW-5, SMW-2). MW-4 is located on the northwest corner of evaporation pond 2 (EP-2) and was installed as a background monitoring well.

~~Monitoring wells MW-1, MW-2, MW-4 and MW-5 in this group have shown non-detectable levels of BTEX plus MTBE constituents. No volatile organic compounds (VOCs) or semi-volatile organic compounds (SVOCs) have been detected in any of these wells that exceeded the applicable standards for 2013. Trace levels of three VOCs and SVOCs have been detected in all the MW wells at various times. In 2008 in MW-4, bis(2-ethylhexyl)phthalate was detected exceeding the EPA MCL standard, however yearly sampling to date have all been less than the Reporting Detection Limit (<RL) on~~ A summary of the laboratory ~~analysis. The detection of this organic constituent is suspected to be a~~

~~laboratory contaminant or possibly from the PVC pipe materials used as casing for this well. The RCRA land farm is on a ten year sampling schedule per the RCRA Post Closure Care Permit and next scheduled sampling for the land farm is to occur in year 2019, and~~ analyses for these wells through 2014 includes ~~ground water sampling for the MW and SMW series of wells in this group.~~:

- ~~The last sets of wells in this group are SMW-2 and SMW-4 located on the north and southeast corner of the RCRA land treatment unit. Low concentrations of~~ Low concentrations of MTBE ~~have been~~were detected in SMW-2 from 2008 through ~~2013. No BTEX constituents~~2014.
- Low concentrations of fluoride and chloride have been detected in ~~either~~MW-1, MW-2, MW-3, MW-4, and SWM-4. SMW-2 ~~or SMW-4 from 2006 to 2013. No VOCs or SVOCs have been detected in the ground water during the 2013 annual sampling event, although low concentrations of acetone, diethylphthalate, 1,4-Dioxane~~has exceeded the Water Quality Control Commission (WQCC) standards for chloride and ~~benzenethiol have been detected in~~ sulfate since 2008~~ through 2010 in SMW-2. SMW-4 had low~~.
- Manganese and uranium concentrations ~~of bis(2-ethylhexyl)phthalate, diethylphthalate, and phenol in~~have exceeded the WQCC standard since 2012 in SMW-2. SMW-4 has exceeded the standard for uranium concentrations since 2011. Low concentrations of manganese and uranium were detected in the remaining wells.
- In 2008~~ and 2009.~~, SMW-2 had exceedances of 1,4-dioxane; however, annual samples through 2014 have all been less than the applicable standards limit. The detection of this organic constituent is suspected to be a laboratory artifact or possibly from the PVC pipe materials used as casing for this well.

In addition to the annual sampling requirements, the LTU monitoring wells are on a once every ten year sample schedule per the RCRA Post Closure Care Permit. The next RCRA Post Closure Care Permit sample event is scheduled to occur in 2019.

GROUP B - WELLS

~~Centrally~~The Group B wells are located ~~at~~within and around the aeration basin~~ are the Group B wells.~~. Wells GWM-1, GWM-2 and GWM-3 are located on the ~~western~~west edge of ~~aeration lagoon~~Aeration Lagoon 2 (AL-2) and ~~pond~~Pond 1. ~~Four monitoring~~The NAPIS-2, NAPIS-3, and KA-3 wells are ~~located at~~adjacent to the west bay of the New American Petroleum Institute Separator (NAPIS~~). Three wells~~

~~(NAPIS-2, NAPIS-3 and KA-3 are adjacent to the west bay of the NAPIS on the west side~~) and NAPIS-1 is located upstream on the ~~south east~~southeast side of the east bay of the NAPIS. ~~At the NAPIS are also three~~A leak detection ~~units~~unit (LDU~~),~~) well, the West LDU, is located on the west bay of the NAPIS. The Oil ~~sump~~Sump LDU and East Bay LDU ~~which~~wells are located on the east bay ~~and the West LDU which is located on the west bay~~ of the NAPIS.

~~Located on the northwest corner of AL-2 is monitoring well GWM-1. High concentrations of benzene have been detected in GWM-1 since 2006 through 2013. Fourth quarter 2012 was the only quarter in which no BTEX constituents were detected in the ground water samples. Low concentration of MTBE has been detected in GWM-1 from 2008 through 2013 and Diesel Range Organics (DRO) was also detected in all four quarters of 2013 at concentration levels above the TPH screening guidelines. Three metal compounds (arsenic, iron, and manganese) continue to be~~

~~detected exceeding the applicable standards since 2008 and lead was detected only in the fourth quarter. Low concentrations of barium, copper, selenium, uranium and zinc were also detected in 2013. Two organic compounds were detected exceeding the applicable standards in 2013 (1,2,4-Trimethylbenzene and 1-Methylnaphthalene). Five organic compounds were also detected at concentrations below the applicable standards.~~

~~GWM-2 is located on the southwest corner of pond 1, adjacent to GWM-1, and GWM-3 is located on the northwest corner of pond 1. No water has been detected in GWM-2 or GWM-3 from 2005 through 2009. Water was first discovered during a quarterly inspection in 2010 and has been observed in both wells during quarterly inspection in 2012. In 2013, GWM-2 continued to have a water level and beginning in 2013, quarterly inspections of GWM-3 found the well to be dry. No BTEX constituents exceeded applicable standards, however low concentrations of MTBE were found in GWM-2. Chlorides and sulfates were above the WQCC standards throughout 2013 and no DRO, or MRO was detected, however in the first quarter GRO was detected at 0.052 mg/L. Uranium and manganese both exceeded the WQCC standards all four quarters in 2013 and iron only in the second quarter. No VOCs were detected in GWM-2 in 2013.~~

~~Located down gradient of the NAPIS on the west side, are three wells (NAPIS-2, NAPIS-3, and KA-3). NAPIS-1 is located up gradient of the NAPIS on the southeast corner. No detections of BTEX, MTBE, VOC, or SVOCs have been found in the ground water in NAPIS-1 and NAPIS-3. No metals (total/dissolved), VOCs, or SVOCs were detected in NAPIS-1 in 2013.~~

~~NAPIS-2 had high concentrations of MTBE from 2008 through 2013. Benzene has also been detected in NAPIS-2 from 2008 through third quarter 2013. High concentrations of barium, iron, and manganese were also detected in 2013. Two organic constituents were detected in NAPIS-2 (1-Methylnaphthalene and naphthalene). In NAPIS-3, uranium and iron exceeded applicable standards in~~

~~all four quarters of 2013. Arsenic, barium, chromium, lead and mercury also exceeded standards in 2013. No VOCs or SVOCs were detected in NAPIS-3 or KA-3.~~

~~KA-3 also had high concentrations of benzene in the first and second quarters of 2013 and MTBE exceeded the NMED Tap Water standard in the third quarter of 2013. High concentrations of barium, iron, manganese and uranium were also detected throughout 2012.~~

In July 2012, a new well (OAPIS-1) was installed ~~at the aeration basin~~ on the northwest side of Aeration Lagoon 1 (AL~~-~~1). The ~~development~~installation of this well ~~was a result of a site investigation conducted by RPS Consultants and Enviro-Drill on ground water and soils surrounding the aeration basin known as~~resulted from the Solid Waste Management Units (~~SWMU), SWMU~~SMWU) No. 1, Aeration Basin and ~~SWMU~~SMWU No. 14, Old API Separator~~. The Investigation Work Plan~~ site investigation. The investigation work was implemented to determine if there ~~has~~had been a release ~~to~~from the ~~environment~~aeration basin and to delineate impacts associated with any such releases ~~at the aeration basin.~~. Information collected from this site investigation ~~will~~is also ~~be~~ used to ~~help determine the source of ground water that has been observed in~~track groundwater in monitoring wells GWM-2 and GWM-3.

Two new monitoring wells ~~GWM-2 and GWM-3 since 2010. Benzene and MTBE have exceeded applicable standards in all four quarters of 2013 as well as chloride and DRO. High concentrations of arsenic, iron, manganese, uranium and cyanide were also detected in OAPIS-1. Only one organic compound, 1-Methylnaphthalene was detected in the first and fourth quarter of 2013.~~

(STP1-NW and STP1-SW~~**GROUP C WELLS**~~

) were installed at the new sanitary treatment pond in May of 2014. STP1-NW is located on the west end of the north bay of STP-1 and STP1-SW is located on the southwest corner of the south bay of STP-1. Both of these wells were added to the ground water sampling plan.

A summary of laboratory analyses for the Group B wells through 2014 is listed below:

GWM 1, GWM-2, GWM-3

- No groundwater was detected in GWM-2 and GWM-3 in 2014.

- High benzene concentrations have been detected in GWM-1 since 2006.
- Low concentrations of total xylenes and MTBE have been detected in GWM-1 from 2006.
- Fluoride and chloride have exceeded standards in each of the three wells since 2006.
- A low concentration of uranium below the applicable standard was detected in GWM-1.
- Low concentrations of DRO and GRO have been detected in each well with DRO exceeding the applicable standard in GWM-1 since 2010 through 2014.
- Arsenic, iron, and manganese concentrations exceeding applicable standards have been detected in each of the three wells.
- The organic compound, 1-methylnaphthalene, has exceeded the EPA RSL standard in GWM-1 since 2009.

NAPIS-1, NAPIS-2, NAPIS-3, and KA-3

- NAPIS-2 has had exceedances in benzene and MTBE through 2014.
- Low concentrations of benzene and MTBE were also detected in the remaining NAPIS wells.
- DRO exceedances were detected in NAPIS-2.
- A fluoride exceedance was detected in NAPIS-1 in 2014. Barium has exceeded the WQCC standard in NAPIS-2 since November 2009. Uranium concentrations exceeded standards in NAPIS-3 since 2010 through 2014. Iron and manganese concentrations have been detected in each of the NAPIS wells.
- Naphthalene was detected exceeding the applicable standards for NAPIS-2 in one sample collected in 2014.

West LDU, Oil Sump LDU, and East Bay LDU

- The Oil Sump LDU has an insufficient volume of water for sample collection in 2014.
- Constituents in BTEX and DRO have exceeded applicable standards since 2010 through 2014. GRO concentrations have been detected in each of the LDU wells since 2010.
- Arsenic, chromium, iron, and manganese have been detected in concentrations exceeding applicable standards in each of the LDU wells sampled in 2014. Neither total nor dissolved uranium was detected.
- The organic constituents 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene have shown concentrations exceeding applicable standards in each of the LDU wells since 2010 through 2014 (no sample in 2014 for Oil Sump LDU).

OAPIS-1~~Directly north of the main refinery tank farm on the eastern section of the property are six (6) observation wells (OW-13, OW-14, OW-29, OW-30, OW-50 and OW-52) located in an open field on the northeast section of the refinery property. OW-30 is located on the east side of the rail road~~

~~track spur which enters the refinery property from the north and ends at the railcar loading rack. Four (4) recovery wells (RW-1, RW-2, RW-5 and RW-6) are located within the refinery tank farm upstream of the OW wells in Group C. RW-5 and RW-6 are located on the northeast section of Tank 345; RW-2 is located on the southwest side of Tank 576 and RW-1 is located on the east section of the main refinery tank farm, east of Tank 568.~~

~~Ground water monitoring activities for the OW wells have shown the presence of MTBE in OW-13, OW-14, OW-29, and OW-30. Only three wells (OW-14, OW-29 and OW-30), have high~~

~~concentrations of MTBE that have exceeded the NMED Tap Water Standard of 0.125 mg/L. OW-14 is the only well that had three organic constituents (benzene, ethyl benzene and MTBE) detected in the ground water samples at concentration levels above the applicable screening levels for 2013.~~

~~In October 2009 wells (OW-50 and OW-52) were installed per New Mexico Environmental Department (NMED) requirement dated May 28, 2009 to "*determine if contamination has migrated north, northwest of the refinery and potentially offsite*" from up gradient wells OW-13 and OW-29. From 2009 through 2013, no BTEX or MTBE constituents have been detected in either of these wells. The only compound detected in OW-50 in the first quarter 2010 was bis(2-ethylhexyl) phthalate (0.011 mg/L) exceeding the EPA MCL standard of 0.006 mg/L. The contaminant detected is suspected to be a laboratory contaminant or possibly from the PVC pipe casing materials used to install the well.~~

~~The last group of wells in Group C are four shallow recovery wells from which separate phase hydrocarbons (SPH) have been recovered (RW-1, RW-2, RW-5, RW-6). These recovery wells were installed as a result of a tank farm site investigation conducted in 1987 through early 1990, which indicated high concentrations of BTEX constituents in the ground water as well as hydrocarbons. Recovery through hand bailing continues on a quarterly basis in RW-5 and RW-6 and a portable drop in submersible pump is used in RW-1. RW-2 has not shown any measureable hydrocarbon levels and is not bailed. The volume of SPH has continued to drop substantially from year to year in RW-1, RW-5 and RW-6. In 2013 only Recovery Well (RW-1) had a measureable hydrocarbon level. No measureable hydrocarbon levels were detected in RW-5 and RW-6, however bailing continues as a hydrocarbon odor is detected and oil sheen observed on the bailed water from both of these wells.~~

- Benzene and MTBE have exceeded the applicable standards in OAPIS-1 since 2013.
- Concentrations of fluoride, chloride, and DRO have shown exceedances in OAPIS-1 since 2013.
- Arsenic, iron, manganese, uranium, and cyanide have exceeded applicable standards in OAPIS-1

since 2013.

STP1-NW and STP1-SW

- There were no detections of BTEX, MTBE, DRO, GRO, or MRO above applicable standards in 2014.
- Chloride and nitrate concentrations exceeded applicable standards during each 2014 sampling event.
- Total and dissolved uranium concentrations in the second quarter 2014 exceeded the applicable standard. Low concentrations of barium, iron, manganese, selenium, and zinc were detected during each 2014 event.

~~GROUP D WELLS~~

~~On the south, southwest sections of the refinery property are the Group D wells. There are three process/production wells (PW-2, PW-3 and PW-4) which are used to provide the refinery's process~~

~~water, drinking water to the refinery, company housing and also to the Pilot Travel Center. Four observation wells have also been placed in this group (OW-1, OW-10, OW-11 and OW-12).~~

~~PW-2 is located on the west side of the refinery property directly west of evaporation pond 6 at a depth of 1000 feet. PW-3 is centrally located on the refinery property directly north of the maintenance shop, west of the domestic water tank Z-86-T2 at a depth of 1000 feet. PW-4 is located on the south side of the refinery property directly south of the Pilot Lift Station at a depth of 1000 feet. In one sampling event in 2008, a high concentration of 2-Methylaphthalene was detected in PW-3 exceeding the EPA RSL standard. Due to the detection of an organic constituent,~~

~~PW-3 was placed on an annual sampling schedule as directed per NMED's Comment 12 of the May 16, 2011 Notice Of Disapproval (NOD) (May 2011 NOD) for the Annual Ground Water Monitoring Report: Gallup Refinery 2009. Annual sampling results for SVOCs since 2009 through 2013 have all been non-detect (<RL). PW-3 continues to be sampled on an annual basis. 2013 sampling results for~~

~~PW-4 indicate no detectable concentration levels of BTEX and MTBE. Iron was detected above the applicable standard and low concentrations of three VOCs (1,2-4-Trimethylbenzene, 1,3,5-Trimethylbenzene and n-Propylbenzene were detected in 2013. Last sampling activities for PW-2 (2011) have all indicated no detection of BTEX, MTBE, SVOC or metal constituents.~~

~~OW-1 is an artesian well located on the west side of the refinery property. OW-1 was added to the quarterly ground water sampling schedule in 2010. No BTEX or MTBE constituents have been detected in this well to date. Uranium concentration levels fluctuate in this well from quarter to quarter all at levels exceeding the WQCC standard of 0.03 mg/L. No VOCs have been detected in OW-1.~~

~~OW-10 is also located on the west side of the refinery property, directly east of evaporation pond 9. Low concentration of MTBE has been detected in OW-10 since 2010 and gradually increasing over time. In the first and second quarter of 2013, MTBE exceeded the NMED Tap~~

~~**Water screening level of 0.125 mg/L. Uranium has also been detected in OW-10 at levels exceeding the WQCC standard of 0.03 mg/L since 2010. Low concentrations of three organic compounds (1,1-Dichloroethane, 1,2-Dichloroethane (EDC), and 1,1-Dichloroethane) have been detected in fourth quarter of 2012 , and in the first quarter of 2013 in OW-10.**~~

GROUP C WELLS

~~OW-11~~Group C wells include six observation wells and four recovery wells. Observation well OW-14 is adjacent to the liquefied petroleum gas (LPG) compound while OW-13, OW-29, and OW-30 are located north of the tank farm. Observation wells OW-50 and OW-52 were installed in 2009 per NMED and monitor the potential for contaminant migration offsite. Recovery well RW-1 is located within the tank farm east of Tank 568 while RW-2 is located on the ~~west side of the main access road entering the refinery property. OW-12 is centrally located directly north west of the main refinery tank farm at a site known as the bone yard.~~southwest side of Tank 576. Recovery well RW-5 and RW-6 are located northeast of Tank 345. The recovery wells were installed during a subsurface investigation conducted between 1987 and 1992 near the tank farm. BTEX concentrations and separate-phase hydrocarbons (SPH) were detected in the groundwater.

SPH recovery continues quarterly. Recovery is completed using a disposable hand-bailer in RW-5 and RW-6 and completed in RW-1 using a portable submersible pump. Measureable SPH has not been detected in RW-2. The SPH volume has continued to drop from year to year in the three wells.

A summary of the observation wells and recovery well laboratory analyses through 2014 is as follows:

OW-13, OW-14, OW-29, OW-30, OW-50, and OW-52

- Benzene has exceeded the EPA MCL standard in OW-14 since 2008 through 2014. MTBE concentrations have shown exceedances in OW-14, OW-29, and OW-30 since have exceeded applicable standards since 2007 (2010 for OW-29) through 2014. No BTEX or MTBE constituents have been detected in ~~either of these wells. Uranium has been~~OW-13, OW-50, and OW-52.
- Manganese and uranium concentrations exceeded standards in OW-29 and OW-30.
- No other VOCs or SVOCs were detected in ~~OW-11~~any of the observation wells,

RW-1, RW-2, RW-5, and RW-6

- Benzene and ethylbenzene concentrations have exceeded standards in each of the RW wells since ~~2007 in concentration levels~~2011. In 2014, concentrations of toluene and total xylenes exceeded the constituent standards in RW-1 and RW-2.
- Barium, iron, and manganese have exceeded applicable standards in each of the recovery wells since 2011 through 2014. Arsenic was detected in concentrations exceeding the standard in

RW-1 and RW-6 during 2014. Low concentrations of uranium below the standard were detected in RW-1. Uranium was not detected in any other RW well.

- During 2014, the organic constituents 1,2,4-trimethylbenzene and aniline concentrations exceeded the applicable standards in RW-2. In RW-5 and RW-6, the organic constituents 1,2,4-trimethylbenzene, naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene concentrations exceeded the applicable standards.
- During 2014, the following organic constituents were detected in RW wells above the applicable standards::
  - RW-1: Aniline and 3,4-methylphenol exceeded the applicable standards.
  - RW-2: Aniline, 1,2,4-trimethylbenzene, and 3,4-methylphenol exceeded the applicable standards.
  - RW-5: 1,2,4-trimethylbenzene, naphthalene, 1-methylnaphthalene, and 2-methylnapthalene exceeded the constituent applicable standards.
  - RW-6: the same constituents as those in RW-5, plus 1,3,5-trimethylbenzene exceeded the applicable standards.
- Hydrocarbon recovery from RW-1 has shown a steady decrease from 2005 through 2014. In 2014, total hydrocarbon recovery is estimated at 2.25 gallons in 83 gallons of water purged compared to the 2005 estimate of 431 gallons of hydrocarbons in 1,210 gallons of water. No measureable hydrocarbons have been detected in RW-2 since the well was installed. SPH has not been detected in RW-5 and RW-6 since February 2009 and November 2011, respectively.

GROUP D WELLS

The Group D wells can be found within the refinery property and include three process/production wells (PW-2, PW-3 and PW-4) and four observation wells (OW-1, OW-10, OW-11, and OW-12). The process/production wells are used to provide process water for the refinery and drinking water for both the refinery and the Pilot Travel Center. PW-2 is located on the central west side of the refinery directly west of Evaporation Pond 6 (EP-6). PW-3 is centrally located on the refinery property north of the maintenance shop and west of the domestic water tank Z-86-T2. PW-4 is located south of the Pilot Lift Station. Each of the PW wells is screened at a depth of 1,000 feet. The observation well OW-1 is found west of PW-2 and is an artesian well. Observation well OW-10 is located east of Evaporation Pond 9 (EP-9), OW-11 is located on the west side of the main access road, and OW-12 is centrally located west of the refinery tank farm.

A summary of the Group D Wells laboratory analyses through 2014 is as follows:

PW-2, PW-3, and PW-4

- No BTEX or MTBE constituents were detected in the process wells since 2004 (2006 for PW-3).

- Low concentrations of barium and iron were detected but did not exceed applicable standards. Low total and dissolved uranium was detected in each of the PW wells at concentrations below the applicable standard.
- No VOCs SVOCs were detected in the process wells in 2014.

OW-1, OW-10, OW-11, and OW-12

- Other than low concentrations of MTBE in OW-10 during each 2014 quarter, no BTEX or MTBE were detected in the observation wells during 2014.
- Chloride concentrations exceeded the WQCC standard ~~of 0.03 mg/L. The organic compound~~ in well OW-10, and fluoride and sulfate exceeded the applicable standards in OW-11 and OW-12 during 2014.
- Uranium concentrations have exceeded the constituent standards in OW-1, OW-10, and OW-11 for 2014.
- During the 2013 annual sampling event, bis-2(ethylhexyl)phthalate was detected in OW-11 at a concentration exceeding the ~~EPA MCL~~ standard of 0.006 mg/L ~~during~~; however, this is suspected to be either a lab artifact or from the PVC well materials.

GROUP E WELLS

To date, a total of 44 monitoring wells (MKTF-1 through MKTF-44) have been installed to aid in delineating the extent of a hydrocarbon seep discovered in 2013 ~~annual~~in an isolated area approximately 100 yards west of the crude tanks T-101 and T-102. A pre-existing well located in the seep investigation site area at the loading rack was added to the marketing wells and has been labeled as MKTF-45. Site investigations have included excavations within the seep area, soil/water samples, and the installation of six temporary sumps to recover the non-aqueous phase liquid (NAPL). Liquid recovery from the sumps through the end of 2014 is estimated at 362,987 gallons of NAPL and ground water. A hole was identified in the refinery's waste water process sewer line near the bundle cleaning pad and a leaking transmix transfer line was also identified in the area. Interim measures are on-going to identify any potential sources from the hydrocarbon seep. Recovery of SPH from six temporary sumps and from the 10 wells that have a product layer are on-going. The MKTF series of wells have also been added to the ground water sampling ~~event~~program for 2014.

The MKTF wells are sampled quarterly. BTEX, MTBE, DRO, GRO, total and dissolved metals including uranium, and several VOCs and SVOCs have been detected in many of the wells above the referenced standards.

ADDITIONAL SITES MONITORED

~~Eighteen (18) monitoring wells were included in the 2013 Facility Wide Ground Water Monitoring Work Plan Updates submitted on March 31, 2014, pending approval. These additional wells are a result of an on-going site investigation of a hydrocarbon seep discovered in an isolated area approximately 100 yards west of Tanks 101 and 102. Site investigation included excavations of seep area, soil/aqueous samples and the installation of six temporary sumps to recover the non aqueous petroleum liquid (NAPL) discovered. Liquid recovery from the sumps through the end of December 2013 is estimated to be 2,264 gallons of NAPL recovered and 76, 167 gallons of water. Efforts to identify the source of the hydrocarbons completed through 2013 include dye tracer tests on sewer system, additional soil borings and site inspections. Western will continue efforts to further characterize potential source areas to recover NAPL and to delineate the lateral extent of impacts to ground water.~~

The new waste water treatment plant (WWTP) and the new holding pond Sanitary Treatment Pond (STP-1) were completed and put in service in May of 2012. All waste water flow was routed to the WWTP in May 2012 and in January 2013, the demolition and removal of the benzene strippers was completed. Pilot effluent was routed to the WWTP in June of 2013 and the aeration lagoons~~,~~ and pond 1 are no longer receiving any flow. All influent and effluent sample sites continued between lagoons and pond 1 as long as there was continued gravitational flow.

Outfall BW to EP-2

- The flow from the boiler unit discharges into EP-2. It is sampled at its discharge point to the pond on a semi-annual basis for major cations/anions.
- Chloride concentrations exceeded the standard of 250 mg/L during both sampling events.

Outfall STP1 to EP-2

- The EP-2 Inlet designation was changed to STP1 to EP-2 in the second half of 2012 as flow to the aeration lagoons and pond 1 were diverted to the new WWTP. Aeration lagoons and pond 1 were taken out of service and no longer receiving flow. STP-1 effluent now flows into the northeast corner of EP-2. The outfall is sampled on a quarterly basis.
- Benzene and DRO concentrations exceeded the constituent respective standards in 2014.
- Total and dissolved arsenic, total and dissolved iron, and total and dissolved manganese concentrations exceeded the respective constituent standards in 2014. Low total and dissolved uranium concentrations were detected but were below the applicable standard.
- Concentrations of 2-methylphenol and phenol exceeded the respective applicable standards. Low concentrations of acetone, 2-butanone, and carbon disulfide were detected but are below applicable standards.

Evaporation Ponds

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There are a total of twelve evaporation ponds including pond 1 that are sampled semi-annually. Pond 1 (EP-1) thru evaporation pond 6 (EP-6) are centrally located on the west end of the refinery property (west of the aeration basin) and evaporation pond 9 is located on the south section of the refinery property divided by a dirt road separating EP-9 from EP-1 through EP-6. Evaporation ponds 7, 8, 11, 12A/B are located on the northwest corner of the refinery boundary.

~~Figure 6 contains the general layout of the refinery and well locations.~~

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- ~~**ADDITONAL REPORTING**~~Pond 1 is no longer in service.
- In 2014, BTEX and MTBE concentrations were below applicable standards for all the evaporation ponds.
- In 2014, concentrations of fluoride, chloride, sulfates, and COD exceeded the applicable WQCC standards in all of the evaporation pond samples.
- In 2014, BOD concentrations exceeded the applicable standards in each of the evaporation ponds except for EP-7, EP-8, and EP-9.
- Total and dissolved arsenic and manganese concentrations exceeded applicable standards in all of the ponds throughout 2014. Total and dissolved uranium concentrations were mostly not detected.
- Aniline, phenol, and 3,4-methylphenol concentrations that exceeded the applicable standards were detected in several ponds during the March 2014 sampling event. However, there were no VOC or SVOC exceedances during the November 2014 event.

ADDITIONAL APPLICABLE STANDARDS REQUIREMENTS

OCD Discharge Permit is now ~~entitled~~titled GW-032/AP111. The Discharge Permit was rescinded by NM-OCD on February 15, 2012; however ~~we are~~Gallup is still required to continue with abatement of pollution of ~~ground water~~groundwater pursuant to 19.15.30 NMAC (Remediation), with remediation activities already in place.

This report includes:

- Monitoring of the aeration lagoons, ponds and outfalls between the lagoons and ponds on a quarterly, semi-annual and annual basis. (Section 8)
- Summary of Monthly Waste Water Flow Rate (Appendix D)
- New ~~Well – OAPIS-1,~~Wells – MKTF~~-1~~-19 thru ~~18~~MKTF-45 (Appendix F)
- Major Refinery Activities and Events (Summary EPA/NMED/RCRA Activity) (Appendix G)
- Summary of All Leaks, Spills, and Releases (Appendix H)
- Temporary Land Farm Analytical Results (Appendix J)
- Analytical Data (Appendix K)

SECTION 1

INTRODUCTION

The ~~2013~~2014 Annual ~~Ground Water~~Groundwater Monitoring Report has been prepared to describe monitoring and remediation activities undertaken throughout ~~2013. Ground water~~2014. Groundwater sampling is performed on a quarterly, semi-annual and annual basis and also includes sampling of the evaporation ponds located on the northwest section of the refinery property. The activities completed include analysis of all active monitoring wells and evaporation ponds~~ and the~~. The data generated is used to characterize the nature and extent of impacts to the ~~ground water~~groundwater, at the refinery, from historical releases and to monitor any levels of constituents that exceed applicable standards.

This report presents the results of the ~~ground water~~groundwater monitoring activities and contains the following information:

- Scope of activities
- Sampling methods and procedures ~~Ground water elevation surveys; Regulatory criteria~~
- Groundwater elevation surveys
- Regulatory criteria~~Ground water~~
- Groundwater monitoring results
- Conclusions and recommendations~~.~~

1.1 FACILITY OWNERSHIP, OPERATION AND LOCATION

This report pertains to the Western Refining Southwest Inc~~.~~., Gallup Refinery, located at Exit 39 on Interstate I-40, approximately 17 miles east of Gallup, New Mexico, in Jamestown, New Mexico. Figure 1 shows the regional location of the refinery.

Owner: Western Refining (Parent Corporation)

123 West Mills Avenue, El Paso, TX 79901

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Operator: Western Refining Southwest, Inc. (Postal address)

92 Giant Crossing Road, Gallup, NM 87301

Western Refining Southwest, Inc. (Physical address)

I-40, Exit 39, Jamestown, New Mexico 87347

The following regulatory identification and permit governs the Gallup Refinery:

- SIC code 2911 (Petroleum Refining) applies to the Gallup Refinery
- U.S. EPA ID Number NMD000333211
- OCD Discharge case number AP-111(GW-032/AP-111)

The refinery status is corrective action/compliance. Annual, semi-annual, and quarterly ~~ground water~~groundwater sampling is conducted at the refinery to evaluate present conditions. The refinery is situated on an 810 acre irregular shaped tract of land that is substantially located within the lower one~~-~~-quarter of Section 28 and throughout Section 33 of Township 15 North, Range 15 ~~West~~west, of the New Mexico Prime Meridian. A small component of the property lies within the northeastern one~~-~~-quarter of Section 4 of Township 14 North, Range 15 West. Figure 2~~ in Section 11~~ is a topographic map showing the general layout of the refinery in comparison to the local topography.

1.2 BACKGROUND INFORMATION

The refinery primarily receives crude oil via two 6-inch diameter pipelines; two pipelines from the Four Corners Area enter the refinery property from the north. In addition, the refinery also receives natural gasoline feed stocks via a 4-inch diameter pipeline that comes in from the west along the Interstate 40 corridor from the Wingate Plant, formerly Conoco gas plant. Crude oil and other products also arrive at the site via railroad cars. These feed stocks are then stored in tanks until refined into products.

The refinery incorporates various processing units that refine crude oil and natural gasoline into finished products. These units are briefly described as follows:

Crude Distillation Unit: separates crude oil into various fractions; including gas, naphtha, light oil, heavy oil, and residuum.

Fluidized Catalytic Cracking Unit (FCCU~~)~~): dissociates long-chain hydrocarbon molecules into smaller molecules, and essentially converts heavier oils into naphtha and lighter oils.

Alkylation Unit: combines specific types of hydrocarbon molecules into a high octane gasoline blending component.

Reforming Unit: breaks up and reforms low octane naphtha molecules to form high octane naphtha.

Hydro Treating Unit: removes undesirable sulfur and nitrogen compounds from

intermediate feed stocks, and also saturates the feed stocks with hydrogen to make diesel fuel.

Additional Treater Units ~~also~~: remove impurities from various intermediate and blending feed stocks to produce finished products that comply with sales specifications.

Isomerization Unit: converts low octane hydrocarbon molecules into high octane molecules.

A set of Acid Gas Treating and Sulfur Recovery Units: convert and recover various sulfur compounds from other processing units in order to produce either ammonium thiosulfate or a solid elemental sulfur byproduct.

As a result of these processing steps, the refinery produces a wide range of petroleum products including propane, butane, unleaded gasoline, diesel, kerosene, and residual fuel. In addition to the aforementioned processing units~~,~~ and various other equipment and systems support the operation of the refinery and are briefly described as follows~~.~~:

- Storage tanks are used throughout the refinery to hold and store crude oil, natural gasoline, intermediate feed stocks, finished products, chemicals, and water. These tanks are all located aboveground and the capacity ranges from 80,000 barrels to less than 1,000 barrels.
- Pumps, valves, and piping systems are used throughout the refinery to transfer various liquids among storage tanks and processing units. A railroad spur track and a railcar loading rack are used to transfer feed stocks and products from refinery storage tanks into and out of railcars.

- Several tank truck loading racks are used at the refinery to load out finished products and also may receive crude oil, other feed stocks, additives, and chemicals. Gasoline and diesel ~~is~~are delivered to the Pilot Travel Center via tanker truck. An underground diesel pipeline exists between the refinery and the Pilot Travel Center. As a result of an off-refinery release in 2011, the pipeline was purged of product, filled with nitrogen and temporarily taken out of service. Western worked with the NMED – PSTB (Petroleum Storage Tank Bureau) and the NM OCD (Oil Conservation Division) to place this line back in service. In 2013 the underground diesel line from the Gallup Refinery to the Pilot Travel Center was replaced. The replaced line runs above ground from the marketing area of the refinery for approximately 150 feet and continues underground to the Pilot Travel Center. The diesel line was re-commissioned and put back in service on February 3, 2014.

- A designated area is used to conduct employee firefighting training. During these training activities waste water and/or wash water drains directly into a dedicated tank that is located in the vicinity. The waste water is removed via a vacuum truck and drained into a process sewer leading to the NAPIS after each training exercise. Oily water and sludge is transferred via vacuum truck to the NAPIS for processing and oil-water separation.

- The process waste water system is a network of curbing, paving, catch basins, and underground piping that collects waste water effluent from various processing areas within the refinery. The waste water effluent flows into T-27, T-28 and into T-35 (which works in parallel to T-27 and T-28) and into the NAPIS which provides the first stage oil-water separation where the removal of free oil is separated from waste water by gravity. The clarified water is routed to the new waste water treatment plant (WWTP) Dissolved Gas Flotation (DGF) system which provides the second stage oil-water separation process. The DGF process involves the pressurization of waste water in the presence of air or nitrogen, creating a super-saturated solution called coagules that are carried to the surface. The float is removed to disposal by mechanical float scrapers and the effluent is recycled back to the flotation chamber. The skimmed float is sent to the DGF float management system, “float tanks”. Oily solids collected in the float tanks ~~is~~are recycled through the refining process (on-site) or handled as a K048 listed hazardous waste for proper disposal.

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- The clarified effluent from the DGF system then flows to the Macro Porous Polymer Extraction (MPPE) system. The MPPE system removes dissolved and dispersed hydrocarbons from the waste water~~ which includes~~, including aromatics, ~~polyaromatic~~polycyclic aromatic hydrocarbons (PAH~~)~~), through a liquid-liquid extraction process where waste water is passed through a column packed with MPPE particles (porous polymer beads) ~~that contain~~containing the extraction liquid suitable for removal of aromatic hydrocarbons and PAHs. The waste water that passes through the MPPE column discharges into the sanitary treatment pond (STP-1). The hydrocarbon-water mixture is recycled and sent back to the refinery for reprocessing. Carbon filtration was also used at various times ~~in 2013 in parallel with the MPPE to increase waste water treated.~~during 2013 in conjunction with the MPPE to increase waste water treated. In December 2014, the MPPE was removed from service and replaced with the carbon canister system. The two systems ran in parallel for three months in the second half of 2014 followed by trial with carbon canisters for two months before the MPPE was removed from service. The MPPE unit did not perform as expected from a flow rate standpoint. It removed benzene efficiently, but became plugged so that flow rates decreased below adequate levels. Flow rates up to 50o gpm can now be achieved through the carbon system.

- STP-1 has two bays, north and south and each bay is equipped with five aerators. The treated waste water is mixed with air in order to oxidize any remaining organic constituents and increase the dissolved oxygen concentration available in the water for growth of bacteria and other microbial organisms. The microbes degrade most of the hydrocarbons into carbon dioxide and water. Five 15-hp mechanical aerators provide aeration in each bay (North and South) in STP-1. Effluent from STP-1 then flows onward into evaporation pond 2 (EP-2) and is gravitated to the rest of the ponds.

- The initial startup of the new WWTP was in May of 2012 which resulted in the decommissioning of Benzene Strippers 1, 2, and 3, and the Aeration Lagoons 1 and 2 (AL-1 and AL-2). In November of 2012, the benzene strippers were taken off~~-~~line permanently and ~~removal of the strippers for demolition was completed~~completely demolished in January of 2013.

- At the evaporation ponds, waste water is converted into vapor via solar and mechanical wind-effect evaporation. ~~Two~~ There are a total of four evaporators located at the ponds. Two 80 gpm, electrically driven water evaporators are located between evaporation ponds 4 and 5 (EP-4 and EP-5) and two additional 66 gpm sprayers were installed between ponds 3 and 4~~.~~ in October 2014. No waste water is discharged from the refinery to surface waters of the ~~state.~~U.S. All treated waste water is routed ~~to~~into several evaporation ponds which have large surface areas that are designed to efficiently evaporate water by sunlight and exposure to the changing ambient temperatures.

The ~~storm water~~stormwater system is a network of valves, gates, berms, embankments, culverts, trenches, ditches, natural arroyos, and retention ponds that collect, convey, control, treat, and release ~~storm~~

- ~~water~~stormwater that falls within or passes through refinery property. ~~Storm water~~Stormwater that falls within the processing areas is considered equivalent to process waste water and is sent to tanks T-27, T-28 and T-35, NAPIS, WWTP, STP-1 and into EP-2 where flow is gravitated to the rest of the evaporation ponds.

~~T-35 NAPIS WWTP STP-1 and into EP-2 where flow is gravitated to the rest of the evaporation ponds.~~

- ~~Storm water~~Stormwater discharge from the refinery is infrequent due to the arid desert-like nature of the surrounding geographical area. Gallup Refinery maintains a Storm Water Pollution Prevention Plan (SWPPP) that includes Best Management Practices (BMPs) for effective storm water pollution prevention and control. The refinery has constructed several berms in various areas and improved outfalls (installed barrier dams equipped with gate valves) to minimize the possibility of potentially impacted runoff leaving the refinery property.

1.3 SITE CHARACTERISTICS

Built in the 1950's, the refinery is located within a rural and sparsely populated section of McKinley County ~~in~~, Jamestown, New Mexico, and located 17 miles east of Gallup, New Mexico. The setting is a high desert plain on the western slope of the Continental Divide. The surrounding land is comprised primarily of public lands and is used for cattle and sheep grazing at a density of less than six cattle or 30 sheep per section. The nearest population centers are the Pilot Travel Center (formerly Giant) refueling plaza, the Interstate 40 highway corridor, and a small cluster of residential homes located on the south side of Interstate 40, approximately 2 miles southwest of the refinery (Jamestown). Surface vegetation consists of native xerophytic vegetation including grasses, shrubs, small junipers and some prickly pear cacti. Average ~~yearly~~ rainfall is less than ten inches per year with the maximum average precipitation occurring ~~in~~during the month of August.

Local topography consists of an inclined down-slope from high ground in the southeast to a lowland fluvial plain in the northwest. The highest point on refinery property is located at the southeast corner boundary (elevation approximately 7,040 feet) and the lowest point is located at the northwest corner boundary (elevation approximately 6,860 feet). The refinery processing facility is located on a flat man-made terrace at an elevation of approximately 6,950 feet.

Surface water in this region consists of man-made evaporation ponds and aeration basins located within the refinery, a livestock watering pond (Jon Myer's Pond) located one mile east of the refinery, two small unnamed spring fed ponds located south of the refinery, and the South Fork of the Puerco River and its tributary arroyos. The various ponds and basins typically contain water consistently throughout the year. The South Fork of the Puerco River and its tributaries are intermittent and generally only contain water ~~only~~ during, and immediately after, the occurrence of precipitation.

The 810 acre refinery property site is located on a layered geologic formation. Surface soils generally consist of fluvial and alluvial deposits; primarily clay and silt with minor inter-bedded sand

~~1~~

layers. Below ~~this~~the surface layer is the Chinle Formation, which consists of very low permeability clay stones and siltstones that comprise the shale of this formation. As such, the Chinle Formation effectively serves as an aquiclude. Inter-bedded within the Chinle Formation is the Sonsela Sandstone bed, which represents the uppermost potential aquifer in the region. The Sonsela Sandstone bed lies within and parallels the dip of the Chinle Formation. As such, its high point is located southeast of the refinery and it slopes downward to the northwest as it passes under the refinery. Due to the confinement of the Chinle Formation aquiclude, the Sonsela Sandstone bed acts as a water-bearing reservoir and is artesian at its lower extremis. Artesian conditions exist through much of the central and western portions of the refinery property.

~~Ground water~~Groundwater flow within the Chinle Formation is extremely slow and typically averages less than

10-~~10^{-}~~^{10} centimeters per second (less than 0.01 feet per year). ~~Ground water~~Groundwater flow within the surface soil layer, above the Chinle Formation, is highly variable due to the presence of complex and irregular stratigraphy; including sand stringers, cobble beds, and dense clay layers. As such, hydraulic

conductivity may range from 10-~~$^{-}$~~^{8} centimeters per second in the clay soil layers located near the

surface and up to 10-~~$^{-}$~~^{2} centimeters per second in the gravelly sands immediately overlying the Chinle Formation. ~~Section 11,~~ Figure 4~~,~~ depicts the regional surface water flows are in a westerly direction and Figure 5 depicts surface water bodies and flow lines.

Shallow ~~ground water~~groundwater located under refinery property generally flows along the upper contact of the Chinle Formation. Although the prevailing flow direction is from the southeast and toward the northwest; a subsurface ridge has been identified and is thought to deflect some flow in a northeasterly direction in the vicinity of the refinery tank farm.

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SECTION 2

SCOPE OF ACTIVITIES ~~2013~~2014

The ~~2013~~2014 quarterly~~,~~ and annual ~~ground water~~groundwater sampling, and semi-annual evaporation pond sampling was conducted by Trihydro Corporation on behalf of Western. The third quarter ~~ground water~~groundwater sampling was combined with the annual sampling event per approval from NMED and OCD and conducted in September ~~2013~~2014. The following is a list of monitoring and inspections completed for ~~2013.~~2014:

- Separate Phase Hydrocarbon Recovery Logs – Appendix A
- Field Inspection ~~logs~~Logs–Appendix C
- Treatment System Monitoring – Monthly Flow Rate – Appendix D
- New Well Installation~~—~~, MKTF~~-1 THRU~~-19 thru MKTF-~~18~~45 – Appendix F
- ~~Spill Reporting~~Summary of all Leaks, Spills, and Releases–Appendix H
- Temporary Land Farm Semi-Annual Sampling – Appendix J
- Data Tables~~–~~, Analytical Data – Section 8
- Well Data DTW/DTB Measurements (Elevations) – Section 9
- Quarterly, ~~semi-annual, annual inspections summary –~~Semiannual, Annual Inspections Summary – Section 10

2.1 MONITORING AND SAMPLING PROGRAM

The primary objective of ~~ground water~~groundwater monitoring program is to analyze ~~ground water~~groundwater samples collected and use data to assess ~~ground water~~groundwater quality at and near the refinery. ~~Ground water~~Groundwater elevation data was collected to evaluate ~~ground water~~groundwater flow conditions. The ~~ground water~~groundwater monitoring program for the refinery consists of sample collection and analysis from a series of monitoring, recovery, boundary, process, and shallow monitoring wells, ~~including~~and includes evaporation pond locations and influents/effluents at ~~1~~

the aeration basin.

The ~~ground-water~~groundwater monitoring network is separated into ~~four~~five investigation areas (Group A, Group B, Group C, Group D, and Group ~~D~~E). The sampling frequency, analyses and target analytes vary for each investigation areas and include the outfalls/evaporation pond locations. The combined data from these investigation areas ~~was~~were used to assess ~~ground-water~~groundwater quality beneath and immediately down-gradient of the refinery, and to evaluate local ~~ground-water~~groundwater flow conditions. Samples were collected annually from monitoring wells that had measurable separate~~-~~ phase hydrocarbon (SPH) levels. For wells that were purged dry, samples were collected if recharge volume was sufficient for sample collection, within 24 hours. Wells not sampled due to insufficient recharge ~~was~~were documented in the field ~~log~~logs.

Daily field activities, including observations and field procedures, ~~was~~were recorded for each activity and are maintained at the ~~Gallup Refinery.~~refinery. Field logs include the following information:

- Sample Location Identification
- Date
- Start and finish sampling time
- Field team members, including visitors
- Weather conditions
- Daily activities and times conducted
- Observations
- Record of samples collected with sample designations
- Photo log (if needed)
- Field monitoring data, including health and safety monitoring (if needed)
- Equipment used and calibration records, if appropriate
- List of additional data sheets and maps completed
- An inventory of the waste generated and the method of storage or disposal
- Signature of personnel completing the field record

All samples collected for analysis are recorded in the field report or data sheets. Chain-of-Custody (COC) forms are completed at the end of each sampling day, prior to the transfer of samples off~~-~~ site. The signed copy of the COC is placed inside ~~container~~sample containers with the samples ~~when samples are~~and shipped to the laboratory. A custody seal is affixed to the lid of the shipping container. Copies of all COC forms generated are kept ~~on site~~at the refinery.

~~Field duplicates and trip blanks are obtained for quality assurance during sampling activities at a frequency of one for each shipping event involving twenty or more samples.~~

2.2 SAMPLING METHODS AND PROCEDURES

Each monitoring well was gauged for depth to water (DTW~~) and or~~), total depth, and depth to product (DTP~~)~~), if applicable, to determine the amount of water to purge. A minimum of two well volumes ~~are~~is purged from each well prior to sampling. If water level is at a minimum or the well has a low recharge rate, ~~then~~ the well is allowed to recharge within 24 hours before a sample is collected. For wells that are not supplied with dedicated pumps, a portable pump is lowered slowly into the well to minimize disturbance to a depth of the midpoint of the screened interval of the well. The pump controller is started at a slow rate and gradually increased until water is discharged. Field water quality measurements must stabilize for a minimum of three consecutive readings taken at 2 to 5~~-~~-minute intervals~~ and are~~, within the following limits before purging will be discontinued and sampling may begin: ~~Dissolved Oxygen~~dissolved oxygen (DO) (10%), ~~Specific Conductance~~specific conductance (3%), ~~Temperature~~temperature (3%), pH ~~(+/-~~ (10 ~~mV).~~%).

~~Ground water~~Groundwater samples were obtained from each well within 24 hours of the completion of well purging. The samples were transferred to an appropriate, clean, laboratory-prepared containers provided by the analytical laboratory. Sample collection methods have been documented in the field monitoring reports. Weather conditions, the volume of ~~ground water~~groundwater purged, description of water, the instruments used, and the water quality readings obtained at each interval were recorded on the field-monitoring log.

Well purging and sampling ~~are~~were performed using disposable polyethylene bailers and/or appropriate portable sampling pumps where applicable. Some of the wells have dedicated pumps installed where a controller is used to power the submersible pump to purge water. In shallow wells, new disposable bailers were used for each well to hand bail purge water and retrieve water samples.

All purged ~~ground water from monitoring wells~~groundwater was collected in 55 gallon drum(s) and/or 5 gallon bucket(s) and drained into the refinery waste water treatment system upstream of the NAPIS. ~~2~~

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~~Ground water~~ Groundwater samples intended for metals analysis were submitted to the laboratory as total and dissolved metals samples.

At a minimum, the following procedure was followed when collecting/shipping samples~~.~~ :

- Protective eye wear (safety glasses, goggles and or face shield)
- Neoprene, nitrile, or other protective gloves are worn when collecting samples. New disposable gloves are used to collect sample at each sample point.
- All samples collected for chemical analysis are transferred into clean sample containers supplied by the analytical laboratory. ~~The sample~~Sample container ~~is~~are clearly marked and labeled.
- ~~Ground water~~Groundwater samples obtained for dissolved metals analysis are filtered through a 0.45 µm (micrometer) mesh size disposable filter on site.
- Samples are labeled, sealed, placed in cooler with ice until they are shipped via United Parcel Service (UPS) Red, Federal Express Overnight or personally delivered to the analytical laboratory.
- Standard COC procedures are followed for all samples collected. The COC form and sample request form are shipped inside the sealed storage container to be delivered to the laboratory, signed and dated.
- Field duplicates and trip blanks are obtained for quality assurance during sampling activities. Trip blanks accompany laboratory sample bottles and shipping and storage containers intended for volatile organic compound (VOC) analyses. Trip blanks consist of a sample of analyte free de-ionized water placed in an appropriate sample container. Trip blanks are analyzed at a frequency of one for each shipping event involving twenty or more samples.

In order to prevent cross-contamination, field equipment that came into contact with water or soil was decontaminated before each sampling event. The decontamination procedure for the portable pump consists of rinsing/washing the equipment with a detergent water mixture followed by two rinses before use in another well. Any equipment that came in contact with each well, such as data loggers or tape measure, was decontaminated with a detergent water mixture and rinsed with distilled water before each use. Decontamination of equipment when feasible is done at the bundle pad where decontamination water is drained into the sewer system.

~~pad where decontamination water is drained into the sewer system.~~ Decontamination water from field work was caught in an appropriate container and drained into the sewer system upstream of the NAPIS.

2.2.1 EQUIPMENT

- A submersible bladder pump 2 inch, 115 volt AC to DC converter, Grundfos Redi-flo2 constructed of stainless steel with check valve and 1/2 in. Teflon tubing, adjustable rate controller powered by a gas generator is used to purge ~~ground water~~groundwater from monitoring wells. Equipment is located downwind and at least 20 feet from the well so that exhaust fumes do not cross~~-~~-contaminate the samples.

- Water level instrument used is a Heron Instrument 100 feet DipperT electric water~~-~~-depth tape complying with US GGG-T-106E, EEC, Class II. This instrument measures water level, indication is a steady audible tone and hydrocarbon indication is an erratic audible tone.

- Parameter Instrument – YSI Model 556 MPS Multi Probe System which simultaneously measures DO, conductivity, temperature, and optional pH and ORP (Oxidation Reduction Potential). As a backup, we also have an IQ Scientific Instrument, Model IQ180GLP which measures pH, DO, TDS (Total Dissolved Solids), conductivity, salinity, ISE (Ion Selective Electrode), mV (Millivolts) and temperature.

- Disposable Bailers – Polyethylene bailer (1.5 inches X 36 inches) overall length (OAL); capacity approximately 1 liter). Individually sealed packaging, single check valve bailer with slide in angle cut nozzle for sample removal. A new bailer is used for each well that requires hand bailing for purging and sample retrieval.

- Field equipment parameter instruments were calibrated to known standards in accordance with the manufacturers' recommended schedules and procedures. Calibration checks are conducted before a sampling event and the instruments recalibrated as deemed necessary. Calibration of equipment was noted in the daily field logs.

- If field equipment becomes inoperable, a properly calibrated replacement instrument is used in the interim. Type of instrumentation used during a sampling event is recorded in the daily field logs.

2.3 COLLECTION AND MANAGEMENT OF INVESTIGATION DERIVED WASTE

Investigation derived waste (IDW) generated during each ~~ground water~~groundwater sampling event includes purged water, decontamination water, excess sample material, and disposable sampling equipment. All water purged from monitoring wells generated during sampling and decontamination activities was temporarily stored in a labeled 55-gallon drum(s) and/or 5 gallon bucket(s) and then drained into the refinery sewer system upstream of the NAPIS.

2.4 COLLECTION OF SURFACE WATER SAMPLES

At the evaporation ponds, grab samples were collected near the inlets (pond edge). This location was noted in the field notebooks. For outfalls, a grab sample was collected at the pipe end, and recorded in the field log.

2.5 ANALYTICAL METHODS

~~Ground water~~Groundwater and surface water samples collected during the monitoring events were analyzed for the constituents listed in Table 1, Section ~~9~~10.0. In addition, the WQCC standard was used for total and dissolved metals analysis.

2.6 PERIMETER INSPECTION

Perimeter inspections are part of the daily routine for refinery personnel to report any hydrocarbon staining, spills or any release that could result in material leaving the property boundary.

2.7 REMEDIATION ACTIVITIES

~~Site~~A site investigation ~~conducted in 1987~~ of the refinery tank farm network conducted in 1987 indicated high concentrations of BTEX constituents in the ~~ground water~~groundwater as well as hydrocarbons. As a result of the findings from ~~the~~additional site investigations conducted from 1987 through 1990, four recovery wells (RW-1, RW-2, RW-5, and RW-6) were installed to recover the ~~hydrocarbons (RW-1, RW2, RW-5, and RW-6). Separate Phase Hydrocarbon (~~SPH~~)~~. SPH has been recovered from RW-1 using a submersible bladder pump and ~~in~~from RW-5 and RW-6~~,~~ by hand-bailing using a disposable polyethylene bailer~~ is used to hand-bail~~. Tables in Appendix A summarizes measurements, volume of product and water purged and also provides year to date (~~YTO~~YTD) product purged from each well. RW-2 is~~ also~~ listed as a recovery well but to date no visible hydrocarbon layer or odor has been observed in this well during quarterly inspections.

In RW-1 a bladder pump was used to pump out SPH on a quarterly basis into a labeled 55~~-~~-gallon drum. Visible layer of product on the top was measured with a tape measure and calculated as best as possible for volume of product recovered. In RW-5 and RW-6, a 3 foot disposable hand bailer was used to extract product and water from the wells. Bailed water was collected in a 5~~-~~-gallon bucket and the visible layer of floating product was then measured with a tape measure to estimate volume of SPH recovered. The purged water was drained into the refinery waste water treatment system upstream of the NAPIS. ~~In 2013, product recovered from RW-1 was estimated at 2.38 gallons for the year.~~

Hydrocarbon recovery from RW-~~5~~1 has shown a ~~decline in SPH levels beginning in the second quarter of 2009~~ steady decrease from 2005 through ~~2013. Quarterly inspections in 2013 continue~~2014. In 2014, total hydrocarbon recovery is estimated at 2.25 gallons in 83 gallons of water purged compared to ~~indicate no~~the 2005 estimate of 431 gallons of hydrocarbons in 1,210 gallons of water. No measureable ~~SPH level~~ hydrocarbons have been detected in RW-2 since the well was installed. RW-5 and ~~purging continued~~RW-6 have shown a steady decrease in hydrocarbons since 2005. SPH has not been detected in RW-5 ~~despite the lack of a measureable SPH level as observations~~and RW-6 since February 2009 and November ~~2~~

2011, respectively. However, an oil sheen, and a hydrocarbon odor has persisted in RW-5 (Appendix A).

On June 26, 2013, notification of the ~~water bailed had a visible sheen and also had~~discovery of a hydrocarbon ~~odor. RW-6 continued to show a decline in SPH levels from 2005 where an estimated 17 gallons of~~ seep to the land surface was made to NMED and OCD. The area has been identified as the "Hydrocarbon Seep", located directly west of crude Tanks 101 and 102. Response actions have included installation of six temporary sumps, and to date a total of 44 permanent monitoring wells (MKTF-1 through MKTF-44) have been installed to monitor ground water impacts. From June 2013 through December 2014 total hydrocarbon recovery is estimated to be 5,296 gallons and 421,179 gallons of water from the sumps. Of the 44 permanent monitoring wells installed, nine (MKTF 3, 5, 6, 7, 8, 12, 13, 14, 15) wells have been identified to have a product ~~was recovered and no measurable~~layer. Hydrocarbon recovery from these nine wells is estimated at 10 gallons when wells were pumped in August 2014. The nine wells identified to have a product ~~level beginning in 2012 and 2013. Although there was no measureable product level in RW-6 for 2012,~~layer will be pumped on a more frequent basis to determine recharge rate and recovery of hydrocarbons.

~~purging of water continued as there was a visible sheen observed in the water purged and an odor detected.~~

SECTION 3

~~GROUND WATER~~GROUNDWATER DTW/DTP ELEVATION ~~DATA~~

~~Ground water~~ Groundwater elevation data ~~was~~were collected from the wells listed in Table 1, Section 10.0. ~~Summary~~A summary of field measurements (DTW, DTP) taken during the quarterly, semi-annual and annual inspections is ~~listed~~included in Section 9. ~~Ground water~~Groundwater levels and SPH column thickness measurements (from the RW series of wells as well as the MKTF wells) were collected quarterly to monitor ~~ground water~~groundwater elevation and product column thickness fluctuations over time. Maps were generated using elevation data collected from ~~the survey~~surveys conducted by DePauli Engineering ~~on June 6, 2011~~ and from ~~the 2013~~Hammon Enterprises Inc., professional surveyor and data from the 2014 field inspection logs.

Field notes and measurement data ~~was~~were recorded in field logs ~~from~~for each well for ~~2013~~2014 and ~~is~~are located in Appendix C. The depth to ~~ground water~~groundwater and SPH column thickness levels were measured to the nearest 0.01~~-~~-ft. The depth to ~~ground water~~groundwater and SPH column thickness are recorded relative to the surveyed well casing rim or other surveyed datum. A corrected water table elevation is provided in wells containing SPH by adding 0.8 times the measured SPH column thickness to the measured water table elevation (Section 9).

All water/product levels are measured to an accuracy of the nearest 0.01~~-~~-ft~~-~~ using an electrical ~~conductivity~~water-level based meter, the Heron Instruments ~~100-ft.~~ DipperT 100-ft electric water depth tape complying with US GGG-T-106E, EEC Class II. After the water level is determined, the well volume is calculated using the height of the liquid column and the internal cross sectional area of the well. The purge volume is a minimum of two times the well volume.

~~Ground water~~Groundwater and SPH levels were measured in all wells within 48 hours of the start of ~~ground water~~groundwater sampling activities. All manual extraction of SPH and water from recovery wells, observation wells, and collection wells is discontinued for 48 hours prior to the measurement of water ~~2~~

and SPH levels. Figure 6 (Section 11) shows the locations of all ~~the~~ active wells.

SECTION 4

REGULATORY CRITERIA

~~Analytical~~Laboratory analytical data is compared to the most current regulatory standards (Appendix B) at time of submission of report.

- New Mexico 20NMAC 20.6.2.3103 (WQCC). Standards for ~~Ground Water~~Groundwater of 10,000 mg/L TDS Concentration or Less~~.~~
- EPA 40 CFR 141.62. National Primary Drinking Water Regulations (Updated ~~April 24, 2014)~~June 2015) (EPA MCL~~).~~)
- NMED Table 6.2 (unknown oil). Total petroleum hydrocarbon (TPH) screening guidelines for Potable Groundwater (GW-1), (December 2014)
- NMED Tap Water Screening Levels (December 2014)
- EPA Regional Screening Levels set for Residential Risk-Based Screening Levels (EPA RSL) for Tap Water (Ross) (~~November 2013).~~June 2015)

~~NMED Table 6.2 (unknown oil). Total petroleum hydrocarbon (TPH) screening guidelines for Potable Ground water (GW-1), (June 2012).~~

~~NMED Tap Water Screening Levels (April 2012)~~

~~**Annual Ground Water Monitoring Report**~~
~~**2013 Gallup** Refinery~~
~~92 Giant Crossing Road~~
~~Gallup, **NM 87301**~~

SECTION 5

~~GROUND WATER~~GROUNDWATER ELEVATIONS

~~Ground water~~Groundwater elevations are depicted in the following maps generated using elevation data ~~from survey conducted by DePauli Engineering on June 7, 2011 and field inspection logs for 2013.~~.

- Figure 7 (Section 11) presents a south-north geologic profile (~~East Side~~east side of the refinery) showing contours of monitoring wells with reference to stratigraphic locations in which the water bearing zones are located.
- Figure 8 (Section 11) presents a south-north section on the ~~West Side~~west side of the refinery showing contours of monitoring wells with reference to stratigraphic locations in which the water bearing zones are located.
- Figure 14 (Section 11) represents a geologic profile for ~~West-East~~the west-east well locations

SECTION 6

GROUNDWATER MONITORING RESULTS

All analytical data tables, referenced in the following subsections, are included in Section 8 of this report. Bold and highlighted values indicate a constituent exceeds a listed standard(s). Laboratory data for 2014 sampling events are available on the CD provided in Appendix K.

6.1 CONSTITUENT LEVELS IN GROUP A MONITORING WELLS

Group A wells are located within the northwest corner of the refinery property. Nine monitoring wells are situated along the refinery boundary and six monitoring wells are within the RCRA LTU area.

6.1.1 Boundary Wells (BW-1A/1B/1C, BW-2A/2B/2C, BW-3A/3B/3C)

The nine boundary wells (BW), downgradient of the Refinery property, are screened within three different stratigraphic units. BW-1A, BW-2A, and BW-3A are screened within the Upper Sand stratigraphic unit; BW-1B, BW-2B, and BW-3B are screened in the Chinle/Alluvium Interface stratigraphic unit (Figure 10); and BW-1C, BW-2C and BW-3C are screened within the Sonsela stratigraphic unit (Figure 9).

The BW-1A, BW-1B, and BW-1C wells are located on the elevated dike separating evaporation pond 7 (EP-7) and evaporation pond 8 (EP-8). BW-2A, 2B, and 2C are located on the northwest edge of evaporation pond 11 (EP-11) and BW-3A, 3B, and 3C are located in the field north of evaporation ponds 12A and 12B (EP-12A and EP-12B). The boundary wells are sampled on an annual basis and evaluated for the following analytes: 8260B plus MTBE, 8270 plus phenol, major cations/anions, and WQCC total and dissolved metals.

Wells BW-1A, BW-3A, and BW-1B contained no water on the fluid-level gauging date (September 8, 2014) and were not sampled. The boundary wells were sampled and/or inspected on the following dates:

~~Annual Ground Water Monitoring Report 2013 Gallup~~	**BW-1B:** 9/9/2014

~~3~~

Refinery 92 Giant Crossing Road	
Gallup, NM 87301**BW-1A:** 9/9/2014	
BW-1C: 9/10/2014	**BW-2A:** 9/9/2014
BW-2B: 9/9/2014	**BW-2C:** 9/10/2014
BW-3A: 9/10/2014	**BW-3B:** 9/10/2014
BW-3C: 9/10/2014	

SECTION 6

GROUND WATER MONITORING RESULTS

- Section 8 containsIn the data tables that summarizes allsecond quarter of 2014, berm work repairs resulted in increased berm height along the analytical data for each sampling site in 2013. Boldwest edge of ponds 7 and highlighted values8 which resulted in extending the well casing and well shrouds on wells BW-1A, BW-1B and BW-1C. Wells were re-surveyed by Hammon Enterprises in September 2014.

- The 2014 annual sample event results indicate thatBTEX and MTBE constituents were not detected in BW-1C, BW-2A, BW-2B, BW-2C, BW-3B or BW-3C. BTEX and MTBE constituents have not been detected in these wells since 2006 (Table 8.1).

- The anion, fluoride, was detected above the WQCC standard (1.6 mg/L) in BW-1C at 2.6 mg/L and in BW-2C at 2.0 mg/L. Nitrite and nitrate was detected exceeding the standards in 2013 but 2014 sample results are below the standards. Low concentrations of chloride, bromide, and sulfate were detected in each of the BW wells sampled in 2014 (Table 8.1.1).

- Low concentrations of barium, iron, and manganese were detected in the BW wells with wells BW-2C and BW-3C exceeding the WQCC standard for iron in 2014. Chromium was previously detected in BW-1C (2012) and cadmium in BW-2C (2012). Both constituents were reported below the detection limits since August 2012. The remaining total metals analyzed for each well did not exceed applicable standards (Table 8.1.2). No dissolved metals analyzed exceeded applicable standards; however, low concentrations of barium, iron, lead, and manganese were detected in each well (Table 8.1.3).

- Bis(2-ethylhexyl)phthalate was detected in BW-1C in 2013, in BW-3B in 2009, and BW-3C in 2011 and may possibly be a lab contaminant or from the pvc pipe materials used as casing in these wells. The constituent exceeds the highlighted standard listed. The laboratory analytical data reports have been copied onto a CD (disc)was not detected in any of the BW wells sampled in 2014 (Table 8.1.4).

6.1.2 Land Treatment Unit (MW-1, MW-2, MW-4, MW-5, SMW-2, and SMW-4)

The LTU groundwater monitoring wells include MW-1, MW-2, MW-4, MW-5, SMW-2, and SMW-4. MW-1, SMW-4, and MW-2 are located ~~in Appendix K.~~down gradient along the north edge of the closed RCRA LTU. MW-5 and SMW-2 are located on the eastern perimeter of the LTU and MW-4 is located up gradient (south) of the LTU. MW-1, MW-2, MW-4, MW-5 are screened within the Sonsela stratigraphic unit. SMW-4 is screened within the Chinle/Alluvium Interface and SMW-2 is screened in both the Chinle/Alluvium Interface and Upper Sand stratigraphic units.

The LTU monitoring wells are sampled on an annual basis. In addition, MW-1, MW-2, MW-4, and MW-5, SMW-2 and SMW-4 are sampled every 10 years to comply with the RCRA Post Closure Permit. Annual samples were analyzed for the following analytes: 8260B plus MTBE, DRO, GRO, MRO, major cations/anions, WQCC total and dissolved metals, cyanide, and additional VOCs and SVOCs.

Annual sampling and inspections for 2014 on the LTU monitoring wells were completed on the following dates:

~~**Annual Ground Water Monitoring Report 2013 Gallup Refinery 92 Giant Crossing Road Gallup, NM 87301**~~**MW-1:** 9/16/2014	**MW-2:** 9/16/2014
MW-4: 9/17/2014	**MW-5:** 9/17/2014
SMW-2: 9/11/2014	**SMW-4:** 9/11/2014

The next 10 year RCRA Post Closure Permit sampling event for MW-1, MW-2, MW-4, MW-5, SMW-2 and SMW-4 is scheduled to occur in 2019. The following analytes are evaluated during the RCRA Post Closure Permit sample event: modified Skinner List for VOCs, SVOCs, total petroleum hydrocarbons (TPH), DRO, GRO, MRO, metals to include mercury and cyanide, and major cations/anions with pH and conductance.

- In 2014, concentrations of BTEX or MTBE were not detected above applicable standards limits in LTU monitoring wells except for SMW-2. Low concentrations of MTBE, not exceeding applicable standards (0.0.143 mg/L), have historically been detected in SMW-2 (Tables 8.2 and 8.3).
- Since 2008, GRO has been detected in SMW-2 (0.23 mg/L for 2014). DRO and GRO were not detected above the applicable standards limits for the remaining LTU monitoring wells. Concentrations of MRO have not been reported above the applicable standards in any of the LTU monitoring well since being added to the sampling plan in 2010.
- Low concentrations of bromide and fluoride were detected in each of the LTU monitoring wells with the exception of SMW-2. In SMW-2, concentrations of chloride (2500 mg/L) and sulfate (1400 mg/L) have exceeded the WQCC standards of 250 mg/L and 600 mg/L, respectively. SMW-2 has a history of exceeding the WQCC standard for these two anions. The remaining LTU monitoring wells had concentrations of chloride and sulfate below the applicable standards. ~~3~~

Concentrations for the remaining major list of anions and cations were not detected above the applicable standards in each of the LTU monitoring wells (Tables 8.2.1 and 8.3.1).

- Concentrations of arsenic and barium remain below the applicable standards for each of the LTU monitoring wells. Concentrations of chromium, selenium, cyanide, mercury, and zinc were not detected above the detection limits in 2014 in each of the LTU monitoring wells. Low concentrations of barium and manganese were detected in all of the LTU monitoring wells with the exception of SMW-2. SMW-2 exceeded the WQCC standard for manganese (0.2 mg/L) since 2011 with a 2014 concentration of 0.28 mg/L. Iron and lead were not detected in any of the LTU monitoring wells except for a low concentration of total and dissolved iron detected in SMW-2 (0.052 mg/L), SMW-4 (0.35 mg/L), and a low concentration of both iron (0.11 mg/L), lead (0.0017 mg/L) in MW-1. Total and dissolved uranium levels have exceeded the WQCC standard (0.03 mg/L) for SMW-2 and SMW-4 since 2011 and again in 2014 with uranium detected at 0.11 mg/L (total) in SMW-2 and at 0.037 mg/L (total) in SMW-4. Uranium was detected in lower concentrations for the remaining LTU monitoring wells (Tables 8.2.2 and 8.3.2).

- Neither VOCs nor SVOCs were detected above applicable standards in any of the LTU wells in 2014 (Tables 8.2.4 and 8.3.4).

6.~~1~~2 CONSTITUENT LEVELS IN GROUP ~~A~~B MONITORING WELLS

~~6.1.1 BW-1A, 2A, 3A, BW-2A, 2B, 2C, BW-3A, 3B, 3C~~

~~**The boundary wells (BW-1A, 1B, 1C)**~~There are ten monitoring wells in Group B, not including the three leak detection units. These wells are located ~~**on an elevated berm between evaporation ponds 7 and 8 on the western edge**~~within the aeration basin west of the refinery tank farm. Group B includes three groundwater monitoring wells (GWM), four monitoring wells for the New American Petroleum Institute Separator (NAPIS), three leak detection units (LDU), OAPIS-1 installed in 2012 as a result of the Solid Waste Management Units (SMWU) No. 1, Aeration Basin and SMWU No. 14, Old API Separator site investigation. Two new monitoring wells (STP1-NW and STP1-SW), were installed at the sanitary treatment pond (STP-1) in May 2014.

6.2.1 GROUNDWATER MONITORING WELLS (GWM-1, GWM-2, GWM-3)

The GWM series of wells are all screened in the Chinle/Alluvium Interface stratigraphic unit. ~~**property. BW-2A, 2B and 2C**~~ GWM-1 and GWM-2 are located on the west side of the aeration basin straddling the dike that separates AL-2 and EP-1. Downgradient from GWM-1 and GWM-2 is GWM-3 located on the northwest ~~**edge of evaporation pond 11. BW-3A, 3B and 3C are located in the field directly north of evaporation pond 12B. The boundary wells were**~~ corner of EP-1. These wells are inspected and sampled on ~~**an**~~a quarterly basis. No groundwater was detected in GWM-3 during 2013 and 2014. An insufficient volume was detected in the fourth quarter of 2013 for GWM-2 and the well was reported dry for all of 2014. In

agreement with OCD and approved by NMED, the third quarter sampling event was combined with the annual ~~basis. Ground water~~sampling.

Groundwater samples from GMW-1 were analyzed for the following ~~analytes: Major~~constituents: BTEX, MTBE, DRO, GRO, MRO, major cations/anions, ~~8260B plus MTBE, 8270 plus phenol~~WQCC total and ~~WQCC~~dissolved metals~~. The boundary~~, and VOCs and SVOCs.

Quarterly inspections and sampling of the GMW wells were ~~sampled and/or inspected~~completed on the following dates:

Well ID	**GWM-1**	**GWM-2**	**GWM-3**
Quarter 1	~~BW-1A: 9/~~3/~~13~~11/2014	~~BW-2A: 9/9/13~~3/11/2014	~~BW-3A: 9/~~3/~~13~~11/2014
Quarter 2	6/5/2014	6/5/2014	6/5/2014
Quarter 3	~~BW-1B:~~ 9/~~3/13~~12/2014	~~BW-2B:~~ 9/~~9/13~~12/2014	~~BW-3B:~~ 9/~~9/13~~12/2014
~~BW-1C: 9/9/13~~**Quarter 4**	~~BW-2C: 9/9~~11/13/2014	~~BW-3C: 9/9/13~~11/11/2014	11/11/2014

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~~The BW wells are screened in three different stratigraphic zones. BW-1A, BW-2A, and BW-3A are all screened in what is known as the Upper Sand, while BW-1B, BW-2B and BW-3B are all screened in the Chinle/Alluvium Interface. BW-1C, BW-2C and BW-3C are screened in the Sonsela.~~

~~During the 2013 annual ground water sampling event, no water was detected in BW-1A, BW-1B and BW-3A. In BW-1C, BW-2A, BW-2B, BW-2C, BW-3B and BW-3C, annual sampling results indicated no BTEX and MTBE constituents detected in any of these wells from 2006 through 2013. Fluoride was detected above the WQCC standard of 1.6 mg/L in BW-1C (2.1 mg/L) and BW-2B (1.7 mg/L). Nitrates were detected above the WQCC standard of 10 mg/L in BW-1C, BW-2B, BW-2C, and BW-3B.~~

~~Total metals detected above the WQCC and/or EPA RSL standards include: In BW-2B, selenium (1.3E-03 mg/L) and in BW-3C iron (1.5 mg/L). In wells BW-1C, BW-2B/2C and BW-3C, low concentration of uranium was detected in 2013. No dissolved metals analyzed exceeded applicable standards in 2013 although low concentrations of arsenic, barium, iron, manganese, selenium and zinc were detected. Only one organic compound (bis(2-ethylhexyl)phthalate) was detected in BW-1C exceeding the EPA MCL standard of 0.006 mg/L in 2013. The contaminant discovered in the BW-1C may be a lab contaminant or from the PVC pipe materials used as casing in these wells as this contaminant was also detected in BW-3B and BW-3C in 2009 and 2011. See Section 8.1 for a detailed list of the analytical summary.~~

~~6.1.2 MW-1, MW-2, MW-4, MW-5~~

- ~~MW-1 and MW-2 and MW-5 are located down gradient (North edge) of the closed Land Treatment Unit (LTU)~~Concentrations of benzene in GWM-1 exceeded the EPA MCL standard (0.005 mg/L) for all four quarters since 2006 with the exception of the fourth quarter in 2012. The highest concentration of benzene (0.012 mg/L) for 2014 was recorded in the fourth quarter. Concentrations of ethylbenzene, toluene, xylenes, and MTBE remain within the applicable standards for GWM-1 (Table 8.4).

- Concentrations of DRO and GRO were detected in GWM-1 with DRO exceeding the WQCC 2013 standard (0.2 mg/L) throughout 2013 and 2014. DRO has also exceeded applicable standards since quarter 3 of 2010 through quarter one of 2012. The highest concentration of DRO in GMW-1 was detected in quarter two during 2014 at a concentration of 3.4 mg/L.

- Concentrations of fluoride exceeding the WQCC standard (1.6 mg/L) have been prevalent since 2006 in GWM-1 with the exception of quarter four in 2011. In 2014, quarter one recorded the highest concentration of fluoride in GWM-1 at 2.6 mg/L. Chloride has exceeded the WQCC standard (250 mg/L) consistently in GWM-1 since 2006 with the highest 2014 reading recorded during quarter four at 1,000 mg/L. Bromide and sulfate concentrations have consistently been detected in GWM-1 since 2006. Nitrate, nitrite, and phosphorous concentrations remain within applicable standards (Table 8.4.1).

- Concentrations of total and dissolved arsenic, iron, and manganese in GWM-1 have exceeded applicable standards since 2008. The highest arsenic and iron concentrations for 2014 were detected in quarter four. Manganese concentrations for 2014 averaged 2.4 mg/L which exceeds the WQCC standard (0.2 mg/L). Low concentrations of total copper and zinc were detected during quarter four of 2014. Low concentrations of both total and dissolved zinc have been detected in GWM-1 since 2009. Total and dissolved barium and total lead concentrations, were ~~3~~

detected within the applicable standards for all of 2014. Concentrations of the remaining total and dissolved metals did not exceed the applicable standards during 2014 (Tables 8.4.2 and 8.4.3).

Concentrations of VOCs and SVOCs were not detected above the applicable standards in 2014 with the exception of 1-methyl naphthalene which exceeded the EPA RSL standard (.0011 mg/L) during quarter three of 2013 and quarters one and ~~MW-4 is located up-gradient (south) of the closed LTU on the northwest corner of EP-2. The monitoring wells were sampled on an annual basis and ground-water samples were analyzed for the following analytes: Major cations/anions, 8260 plus MTBE, WQCC Metals and 8015B. Annual sampling and inspections were completed on the following dates:~~

~~MW-1: 9/9/13~~	~~MW-2: 9/10/13~~	~~MW-4: 9/10/13~~	~~MW-5: 9/10/13~~

~~The MW series of wells are also sampled every 10 years per our RCRA Post Closure Permit for the following analytes: General chemistry, Modified Skinner List Metals including mercury and cyanide and Modified Skinner List VOC, SVOC, and total petroleum hydrocarbons (TPH). The next scheduled 10 year sampling event is to occur in year 2019.~~

~~All the MW wells are screened in what is known as the Sonsela stratigraphic unit. No concentrations of BTEX or MTBE have been detected in any of the MW series of wells since 2006~~

~~through 2013. Low concentrations of fluoride, chloride, sulfate and bromide were detected in all of the MW series of wells. Diesel range organics (DRO), gasoline range organics (GRO) and motor oil range organics (MRO) were all less than the reporting detection limit (<RL). See Section 8.2 for the complete analytical summary for all the MW wells listed.~~

~~In MW-1, total metals analytical results indicated only low concentration of arsenic, barium, cyanide and uranium. Dissolved metals analysis results also indicated low concentrations of arsenic, barium and uranium. No VOCs or SVOCs were detected in 2013 although a low concentration of diethylphthalate was detected in July 2010. See Section 8.2 for a detailed list of the analytical summary.~~

~~Total metals analysis in MW-2 detected low concentrations of arsenic, barium, manganese and uranium. Cyanide was less than the reporting detection limit (<0.01 mg/L) in 2013. Low concentrations of dissolved metals include: barium, manganese and uranium. No VOCs or SVOCs were detected in 2013 although a low concentration of acetone (2.73E-03 mg/L) was detected in March 2010.~~

~~Total metals analysis in MW-4 detected low concentrations of barium, manganese and uranium. Cyanide was less than the reporting detection limit (<0.01 mg/L) in 2013. Low concentrations of dissolved metals include: Barium, manganese, uranium and zinc. No VOCs or SVOCs were detected in 2013 although bis (2-ethylhexyl)phthalate (6.79E-03 mg/L) was detected in August 2008 exceeding the EPA MCL standard of 0.006 mg/L. The contaminant discovered may possibly be a lab contaminant or from the PVC pipe materials used for casing in this well.~~

~~Total metals analysis in MW-5 include detection of low concentrations of barium, manganese and uranium. Cyanide was less than the reporting detection limit (<0.01 mg/L) in 2013.~~two of 2014. Low concentrations of ~~dissolved metals include: Barium, manganese, uranium, and zinc. No VOCs or SVOCs were detected in 2013 however, a low concentration of acetone was detected in July 2009 (4.92E-03 mg/L) and again in March 2010 (6.36E-03 mg/L). See Section~~ ~~3~~

~~8.2 for the complete analytical summary of the wells in this section.~~

~~6.1.3 SMW-2, SMW-4~~

~~SMW-2 is located up gradient (southeast corner) of the closed RCRA LTU and SMW-~~1,2,4~~ is located down gradient (north side) of the closed RCRA LTU. SMW-2 and SMW-4 were sampled on an annual basis. Ground water samples were analyzed for the following analytes: Major cations/anions, 8260B plus MTBE, 8015B, WQCC metals. Annual sampling was conducted on the following dates:~~

~~SMW-2: 9/9/13~~	~~SMW-4: 9/9/13~~

~~Both of these wells are also sampled every 10 years per our RCRA Post Closure Permit for the following parameters: General chemistry, Modified Skinner List Metals including mercury and cyanide and Modified Skinner List VOC, SVOC, and TPH. The next scheduled 10-year sampling event is to occur in year 2019. SMW-2 is screened in the Chinle/Alluvium and Upper Sand stratigraphic unit while SMW-4 is screened in the Chinle/Alluvium Interface.~~

~~No BTEX constituents have been detected in SMW-2 and SMW-4 from 2007 through 2013. Low concentration of MTBE has been detected in SMW-2 in 2008, 2010, 2011 through 2013 all at~~ -trimethylbenzene have historically been detected in GWM-1, but constituent concentrations have been below the ~~NMED Tap Water standard of 0.125 mg/L. No MTBE has been detected in SMW-4 (less than the reporting detection limit (<0.001 mg/L)) since 2007.~~

~~In SMW-2, chloride (2500 mg/L) and sulfate (1500 mg/L) were detected at concentration levels above the WQCC standards. Fluoride and bromide were also detected at concentration levels below the applicable standards. GRO was detected at a concentration level of 0.15 mg/L while no DRO or MRO was detected (<RL). See Section 8.3.1 for a complete list of the analytes detected. Total metals detected at high concentration levels include manganese (0.27 mg/L)~~ ~~3~~

~~and uranium (0.11 mg/L) in 2013. Low concentrations of barium, chromium, iron, cyanide and zinc were also detected. Uranium (0.1 mg/L) was the only dissolved metal that exceeded the WQCC standard of 0.03 mg/L in 2013. Other metals detected at low concentrations include~~

~~arsenic, barium, iron, manganese, selenium and zinc. See Sections 8.3.2 and 8.3.3 for a complete list of metals detected.~~

~~In 2013, 2012 and 2011, no VOCs or SVOCs were detected in SMW-2. However, 1,4-Dioxane (1.48E-02 mg/L) was first detected in ground water samples collected during the 2007 annual sampling event conducted in January 2008 and again in August 2008 with results of 1.36E-02 mg/L both exceeding the NMED Tap Water screening level of 6.72E-03 mg/L. Low concentrations of acetone, diethylphthalate, and benzenethiol have been detected in 2008, 2009 and 2010. Refer to Section 8.3.4 data table for a complete list of analytes detected.~~

~~In SMW-4 no anions exceeded the applicable standards as well as DRO/GRO/MRO. Uranium (0.031 mg/L) was the only metal (total/dissolved) that exceeded the WQCC~~applicable standard ~~of 0.03 mg/L in 2013. Low concentrations of arsenic, barium, chromium, iron, manganese and zinc were also detected. See Section 8.3.2 data table for a complete list of total metals detected. Low concentrations of dissolved metals detected include: Arsenic, barium, and chromium. See Data Tables 8.3.2 and 8.3.3 in Section 8 for a complete list of total and dissolved metals analyzed.~~

~~No VOCs or SVOCs have been detected from 2010 through 2013. However in 2008 and 2009, low concentrations of bis(2-ethylhexyl)phthalate, diethylphthalate, and phenol have been detected in SMW-4. The contaminants detected are suspected to be a lab contaminant or possibly from the PVC pipe materials used as casing for this well. See Section 8.3 for a complete list of the analytical summary.~~

~~6.2 CONSTITUENT LEVELS IN GROUP B MONITORING WELLS~~

~~6.2.1 GWM-1, GWM-2, GWM-3~~

~~GWM series of wells are located at the aeration basin. GWM-1 and GWM-2 are located between AL-2 and pond 1. GWM-1 is located on the southwest corner of pond 1 and GWM-2 is located~~

~~up-gradient (north) of GWM-1 at the southwest corner of AL-2. Down-gradient from GWM-1 is GWM-3 located on the northwest corner of pond 1. Quarterly inspections and/or ground water samples are collected from the GWM wells. Collection of ground water samples from GWM-2 and GWM-3 are collected only if a water level is detected. Third quarter sampling was combined with the annual sampling event per approval from NMED and OCD. In GWM-2, fourth quarter ground water samples were not collected as there was not enough water for collection of samples. Ground water samples were analyzed for the following parameters: Major cations, anions, 8260B plus MTBE, 8015B and WQCC metals. Sampling requirements for GWM-2 and GWM-3 are 8021B plus MTBE and 8015B if water is detected. 24 hour notification to NMED is also required if water is detected in either GWM-2 or GWM-3 during quarterly inspections. Quarterly inspections and sampling were completed on the following dates:~~

~~GWM-1: 3/18/13, 6/12~~	~~9/~~	~~11/11/13~~
~~GWM-2: 3/18/13, 6/12~~	~~9/~~	~~11/11/13~~
~~GWM-3: 3/18/13, 6/12~~	~~9/~~	~~11/11/13~~

(0.015 mg/L) since~~The GWM series of wells are all screened in the Chinle/Alluvium Interface stratigraphic unit. In GWM-1, high concentration of benzene has been detected since 2006 through third quarter 2012 and in all four quarters in 2013, exceeding the EPA MCL standard of 0.005 mg/L. Low concentrations of toluene, ethyl benzene, xylene and MTBE was detected in this well from 2008 through 2013. See Section 8.4.1 data tables for a complete list of BTEX and MTBE analytical data.~~

~~High concentrations of fluoride and chloride have been detected in this well since 2006 exceeding WQCC standards. DRO was detected above the NMED Table 6 (Unknown Oil) TPH Screening Guidelines for Potable Water (GW-1) (June 2012) in all four quarters of 2013. GRO was also detected in all four quarters while MRO was less than the reporting detection limit~~

~~(<5.0 mg/L). Data table in Section 8.4.1 lists all the constituents discussed in this paragraph.~~

~~In GWM-1, arsenic, iron, and manganese exceeded the applicable standard in all four quarters of 2013 and are listed as follows: First quarter, arsenic (0.12 mg/L), iron (8.0 mg/L), manganese (2.9 mg/L): Second quarter arsenic (0.12 mg/L), iron (11 mg/L), manganese (3.1 mg/L): Third quarter arsenic (0.12 mg/L), iron (15 mg/L), manganese (2.8 mg/L): Fourth quarter, arsenic (0.13 mg/L), iron (17 mg/L), lead (0.017 mg/L) and manganese (2.2 mg/L). Barium, copper, selenium, uranium and zinc were also detected in low concentrations in 2013. High concentrations of dissolved metals that exceeded the WQCC standards in all of 2013 include arsenic, iron and manganese. Other dissolved metals detected include barium, lead, selenium, uranium and zinc in 2013. For a complete list of metals detected, see Sections 8.4.2 and 8.4.3 data tables.~~

- ~~In 2013 two organic compounds were detected: 1,2,4-Trimethylbenzene (0.019 mg/L) in the first quarter and 1-Methylnaphthalene in~~ the second ~~(0.018 mg/L) and fourth (4.7E-03 mg/L) quarters that exceeded the EPA RSL standards. Low concentrations of 1,3,5-Trimethylbenzene, acetone, isopropylbenzene, n-Propylbenzene and 2,4-Dimethylphenol were also detected throughout 2013 in GWM-1. Section 8.4.4 data table lists all the VOCs and SVOCs analyzed. See Section 8.4 for a complete list of analytes discussed for GWM-1.~~quarter of 2013 (Table 8.4.4).

GWM-2 and GWM-3 were installed and developed in 2005~~ as dry wells. Both of these~~. The wells are checked quarterly for the presence of water. If water is detected, ~~the information is reported to~~ NMED and OCD are notified within 24 hours of discovery. ~~Ground water samples are collected only if there is an adequate supply for retrieval. After samples are collected, well is bailed of remaining water and depth to water is~~ The water is purged from the well and re-measured ~~and recorded~~ to ~~check~~calculate the potential recharge rate~~ if applicable.~~. Groundwater samples are collected when water level is sufficient.

~~Water~~Groundwater was first ~~discovered~~observed in ~~2008 in~~GWM-2 during the first quarter ~~while conducting a quarterly inspection~~ of ~~GWM-2. Depth~~2008. The depth to water ~~of~~was 18.45 feet ~~was~~ ~~3~~

~~measured,~~ with an estimated water column ~~thickness~~height of 0.36 feet. ~~NMED~~ Samples were collected and ~~OCD were notified of finding within~~ the ~~24 hour reporting period. Per NMED,~~ well was bailed dry ~~after samples were collected to monitor recharge rate.~~. GWM-2 did not recharge and remained dry~~. Quarterly inspections in the second~~ until quarter three of 2010 ~~discovered water in~~. GWM-2 ~~with an estimated water column thickness of 1.5 feet and GWM-3~~

~~had an estimated water column thickness of 0.88 feet. Water was purged from each well with a disposable bailer, gauged and recorded on the field log. No samples were collected due to low water level. Both wells were re-checked on June 4, 2010 and found to be dry, however in the third and fourth quarters of 2010, water was discovered in GWM-2 and GWM-3. 24 hour notification was given to NMED and OCD of finding. Weekly inspections were done to monitor recharge rate on both wells and ground water samples were collected from both wells in September and October of 2010.~~

~~GWM-2 and GWM-3~~ continued to ~~show a water level during quarterly inspections through 2011. Per NMED's instructions, Western was instructed to take monthly measurements of both wells from February thru June of 2011. Recharge rate remained steady and no significant water level increase was observed in GWM-2 or GWM-3 during this period. Monthly checks were discontinued in July 2011. Ground water samples were collected quarterly from each well in 2011.~~

~~2013 quarterly inspections of GWM-2 continued to indicate the presence of water in all four quarters. GWM-2 estimated water column thickness levels fluctuated from first quarter of 2.04 feet to fourth quarter of 0.42 feet. GWM-3 quarterly inspections for 2013 all indicated no presence of water.~~recharge as samples were collected throughout 2011, 2012, and most of 2013. GWM-2 has had an insufficient volume for sampling since quarter four of 2013 and remained dry throughout 2014. Similar to GWM-2; GWM-3 was first sampled in the third quarter of 2010. Samples were consistently collected throughout 2011 and 2012. In late 2012 through early 2013 the levels in the aeration lagoons dropped approximately one to two feet and gravitational flow between lagoons to ~~pond 1 began to decrease. The last effluent~~ ~~3~~

~~going into AL-1 (Pilot Effluent) was permanently routed into the WWTP in June 2013. All flows ceased to AL-1 and the levels in the lagoons began to decrease as well as gravitational flow from AL-1 to AL-2 and AL-2 to pond 1.~~EP-1 began to decrease. GWM-3 has remained dry since quarter one of 2013.

~~Grab samples collected from GWM-2 analyzed for BTEX constituents were all less than the reporting detection limit from 2008 to 2013. Low concentration of MTBE was detected in 2013. See Section 8.4 data table for a list of the BTEX constituents analyzed. Chloride and sulfate exceeded detection levels in all of 2013. Nitrate (44 mg/L) was also above the detection level of 10 mg/L in the third quarter of 2013. DRO and MRO were non-detect while GRO was detected only in the first quarter at 0.052 mg/L. See Section 8.4.1data table.~~

6.2.2 GROUNDWATER MONITORING WELLS: NAPIS-1, NAPIS-2, NAPIS-3, AND KA-3

The NAPIS groundwater monitoring wells are located east of AL-1. NAPIS-1 is an up gradient well located on the southeast side of the separator. The NAPIS-2 monitoring well is located in the southwest corner of the bay to the separator, and NAPIS-3 is located in the northwest corner. KA-3 is located between NAPIS-2 and NAPIS-3 on the west side of the bay to the separator unit. These wells are screened in the Chinle/Alluvium stratigraphic unit with three of the wells (NAPIS-2, NAPIS-3, and KA-3) installed subsurface.

The NAPIS and KA wells are sampled on a quarterly basis. In agreement with OCD and approved by NMED, the third quarter sampling is combined with the annual sampling event. Groundwater samples were analyzed for the following parameters: BTEX, MTBE, major cations/anions, WQCC total and dissolved metals, and VOCs and SVOCs. When applicable, standing water is removed from the vault of the three sub-surface wells prior to opening and sampling each well. The standing water is placed into a container for proper disposal.

Quarterly inspections and sampling were completed for the NAPIS and KA wells on the following dates:

~~Annual Ground Water Monitoring Report 2013 Gallup Refinery 92 Giant Crossing Road Gallup, NM 87301~~Well ID	NAPIS-1	NAPIS-2	NAPIS-3	KA-3
Quarter 1	3/10/2014	3/10/2014	3/10/2014	3/10/2014

Inserted Cells
Inserted Cells
Inserted Cells

Quarter 2	6/05/2014	6/05/2014	6/05/2014	6/05/2014
Quarter 3	9/11/2014	9/11/2014	9/11/2014	9/11/2014
Quarter 4	11/11/2014	11/11/2014	11/13/2014	11/11/2014

- ~~Total metals detected exceeding~~ BTEX and MTBE have remained below the applicable standards ~~for~~ since 2008 for NAPIS-1. Benzene and MTBE concentrations in NAPIS-2 have exceeded the applicable standards since 2008 and remained in exceedance for 2014. BTEX and MTBE were not detected in NAPIS-3 with the exception of benzene in the first and second quarter of 2010 where concentrations exceeded the EPA MCL standard of 0.005 mg/L. Monitoring well KA-3 has had concentrations of benzene and MTBE exceeding applicable standards prior to the third quarter of 2013 ~~include~~; however, concentrations have remained below the applicable standards since the fourth quarter of 2013 (Table 8.5).

- Concentrations of DRO, GRO, or MRO have been below the applicable standards since 2008 for NAPIS-1 and NAPIS-3 (MRO since 2010) (Table 8.5.1).

- In NAPIS-2, DRO concentrations have consistently exceeded the WQCC standard from 2008 through quarter three of 2012 with exceedances also recorded in quarter one, two, and four of 2013 and the first three quarters of 2014. Low concentrations of GRO have also been detected in NAPIS-2 (Table 8.5.1).

- KA-3 has historically exhibited exceedances in DRO from 2009 through early 2012 (Table 8.5.1).

- Low concentrations of fluoride and chloride have been detected in NAPIS-1 since 2008 (Table 8.5.1).

- Fluoride and chloride concentrations in NAPIS-2 have exceeded the WQCC standards of 1.6 mg/L and 250 mg/L, respectively, for at least one quarter of each year since 2008 (since 2009 for fluoride) and continued to occasionally exceed applicable standards in 2014 (Table 8.5.1).

- Chloride concentrations in NAPIS-3 exceeded the WQCC standard (250 mg/L) during most of 2014 and have historically exceeded these standards since 2008. Fluoride levels have remained below the applicable standards for NAPIS-3 since 2008 (Table 8.5.1).

- Fluoride and chloride concentrations in KA-3 have remained below the WQCC standard since June of 2013 (Table 8.5.1).

- Concentrations of bromide and sulfate were detected in all of the NAPIS and KA wells during 2014. Nitrite and nitrate concentrations exceeding the applicable standards (1.0 mg/L and 10 mg/L, respectively) have historically been sporadic for each of the NAPIS and KA wells. There were no exceedances of any of these parameters in 2014 (Table 8.5.1).

- For 2014, total iron and manganese ~~(1.1 mg/L)~~concentrations exceeded the WQCC standard of 1.0 mg/L and 0.2 mg/L, respectively, in NAPIS-1 with iron at the greatest concentration (1.2 mg/L) in the second quarter and manganese with the greatest concentration (0.24 mg/L) during the fourth quarter (Tables 8.5.2 and 8.5.3).

- From 2010 through 2014, total and dissolved barium, iron, and manganese have exceeded the applicable standards in NAPIS-2 (Tables 8.5.2 and 8.5.3).

- In NAPIS-3, total and dissolved iron and uranium ~~(0.16 mg/L)~~exceeded applicable standards during 2014 and ~~iron in~~total manganese exceedances were reported for the ~~second quarter at 1.6 mg/L.~~ first three quarters of 2014 (Tables 8.5.2 and 8.5.3).
- In monitoring well KA-3, total and dissolved ~~metals analysis,~~ manganese and uranium ~~both~~ were detected above the applicable standards during 2014 (Tables 8.5.2 and 8.5.3).
- No VOCs or SVOCs were detected in the NAPIS and KA wells during 2014. In September of 2013, 1-methylnaphthalene (0.0094 mg/L) and naphthalene (0.0048 mg/L) exceeded the EPA RSL standards of 0.0011 mg/L and 0.00165 mg/L, respectively, in both NAPIS-2 and NAPIS-3, during the second quarter of 2010, and in KA-3 for all of 2009 and 2011. Naphthalene was also detected in KA-3 during 2010. Phenol and 1,1-dichloroethane concentrations were detected in NAPIS-2 during 2012 in 2011, respectively (Table 8.5.4).

6.2.3 LEAK DETECTION UNITS (LDU): EAST LDU, OIL SUMP LDU, WEST LDU

The NAPIS secondary containment units otherwise known as leak detection ~~levels and low concentrations of arsenic, barium copper, iron, lead, selenium and zinc were also detected. No VOCs were detected in GWM-2 in 2013. See Section 8.4 data tables for the complete analytical summary.~~

~~No samples were collected from GWM-3 for 2013 as there was no water discovered during quarterly inspections.~~

~~6.2.2 NAPIS-1, NAPIS-2, NAPIS-3, KA-3~~

~~NAPIS-1 is an up-gradient well located~~units (LDU) are installed on the ~~southeast side of the NAPIS. Down-gradient from NAPIS-1 (West) are NAPIS-2, NAPIS-3 and KA-3 located along the~~ east and west bay of the NAPIS~~. NAPIS-2~~ unit. The East LDU is located on the southeast corner in the east bay of the NAPIS unit between the unit and NAPIS-1. The Oil Sump LDU is located north of the East LDU on the northeast corner of the NAPIS unit. The West LDU is located in the southwest corner of the west bay of the NAPIS ~~while NAPIS-3 is located on the northwest corner of the west bay, and situated in between is~~ unit. The LDUs were monitored in 2010 as part of the 2010 Facility Wide Groundwater Monitoring Work Plan (FWGWMP). ~~KA-3.~~

~~NAPIS wells were~~ The LDU are sampled and inspected on a quarterly basis. ~~Third~~ In agreement with OCD and approved by NMED, the third quarter sampling was combined with the annual sample event. The LDUs were sampled for the following analytes in 2014: BTEX, MTBE, DRO, GRO, MRO, WQCC total and dissolved metals.

Quarterly inspections and sampling event per approval from NMED and OCD. Ground water samples were analyzed for the following analytes: Major cations/anions, 8021B plus MTBE, 8270 plus phenol, 8015B, and WQCC Metals. NAPIS wells were sampled were completed for the LDU wells on the following dates:

Sample ID	**East LDU**	**Oil Sump LDU**	**West LDU**
Quarter 1	3/10/2014	3/18/2013	3/10/2014
NAPIS-1: 3/18/13, 6/12/13,**Quarter 2**	9/3/13,6/12/2014	113/12/132013	NAPIS-3; 3/18/13, 6/12/13, 9/3/13, 11/12/136/03/2014
NAPIS-2: 3/18/13, 6/12/13,**Quarter 3**	9/3/13,11/2014	9/11/12/132014	KA-3: 3/18/13, 6/12/13, 9/3/13, 11/12/139/11/2014
Quarter 4	11/11/2014	11/11/2014	11/11/2014

- All The East LDU and West LDU were not sampled during the third and further quarters 2014, respectively, due to insufficient water. The Oil Sump LDU was not sampled during 2014 due to insufficient water.
- BTEX and GRO concentrations exceeded the applicable standards in each of the NAPISLDU wells are during 2014 with the exception of toluene and ethylbenzene in the West LDU. In 2014, the East LDU recorded the highest detection of benzene in quarter one (9.8 mg/L). The West LDU recorded the highest detection of benzene in quarter four (0.87 mg/L). DRO has exceeded the NMED Tap Water standard (0.2 mg/L) in each well since 2010 (Table 8.6).
- Total and dissolved arsenic, chromium, iron, and manganese concentrations were detected above the applicable standards in the East and West LDU wells during 2014. Concentrations of barium and zinc were also present in these two wells and have historically been present in all three LDU wells. Historically, low concentrations of total and dissolved selenium have been present in each of the LDU wells while cadmium, lead, and silver remained below the applicable standards. Manganese has been present in each of the three wells since 2010. Chromium levels have fluctuated; falling below the applicable standards for the East LDU in September of 2010 through March of 2011and falling below applicable standards for the West LDU in quarter one and two for 2012 and 2013, respectively (Tables 8.6.1 and 8.6.2).
- Concentrations of 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene exceeded the EPA RSL standard of 0.015 mg/L and 0.087 mg/L, respectively, for the East LDU and West LDU during 2014. Historically, these two constituents have exceeded applicable standards since sampling began in September of 2010 (Table 8.6.3).

6.2.4 GROUNDWATER MONITORING WELL: OAPIS-1

The OAPIS-1 groundwater monitoring well was installed in 2012 on the northeast edge of AL-2 as a result of the Investigation Work Plan for SMWU No. 1 (Aeration Basin) and SMWU No. 14 (Old API Separator). The OAPIS–1 well is screened in ~~what is known as~~ the Chinle/Alluvium Interface stratigraphic unit. ~~The three NAPIS wells (NAPIS-2, NAPIS-3 and KA-3) located adjacent to the NAPIS on the west side are located below ground level to allow for vehicle/equipment access into and around the NAPIS area. During~~ The OAPIS-1 well was added to the quarterly ~~inspections upon removing the cover, standing water was observed inside the vault of each well. The standing water was removed~~sample schedule in 2013. In agreement with OCD and as approved by NMED, the third quarter sample event was combined with the annual sample event. .

In 2014, groundwater samples were collected from ~~each well and placed inside a container for proper disposal before well cap was removed to continue with quarterly sampling.~~OAPIS-1 for the following analytes: 8260B plus MTBE, DRO, GRO, MRO, major cations/anions, WQCC total and dissolved metals, cyanide and SVOCs.

The OAPIS-1 well was inspected and sampled on the following dates in 2014:

~~Annual Ground Water Monitoring Report 2013 Gallup Refinery 92 Giant Crossing Road Gallup, NM 87301~~Well ID	OAPIS-1
Quarter 1	3/10/2014
Quarter 2	6/5/2014
Quarter 3	9/12/2014
Quarter 4	11/11/2014

~~In NAPIS-1, BTEX and MTBE constituents were at non-detectable levels from 2008 through 2013 (<RL). No anions were detected above the applicable standards in 2013 as well as no detection of DRO/GRO/MRO. See Section 8.5.1 data table. Total metals analysis detected only one metal, iron (1.4 mg/L) in the first quarter that was above the WQCC standard of (1.0 mg/L). Low concentrations of arsenic, barium, manganese, selenium, uranium and zinc were also detected in 2013. See Section 8.5.2 data table for total metals list. No dissolved metals exceeded any applicable standards only low concentrations of arsenic, barium, iron, manganese, selenium and uranium were detected. No VOCs have been detected in NAPIS-1. See Section 8.5 data tables for a complete list of constituents for NAPIS-1.~~

~~In NAPIS-2, high concentrations of benzene and MTBE have been detected from 2008 through 2013 exceeding the EPA MCL (0.005 mg/L) for benzene and NMED Tap Water (0.125 mg/L) standard for MTBE. Low concentration of ethyl benzene has been detected in all of 2013 and~~ ~~4~~

~~total xylene detected in the first and fourth quarters of 2013. High concentration of fluoride was detected in the second half of 2013 and chloride was detected in the first, third and fourth quarters all exceeding applicable standards. Low concentrations of bromide and sulfates were also detected that did not exceed applicable standards. DRO was detected in the first, second and fourth quarters exceeding the applicable standards. GRO was also detected in the ground water samples collected in all four quarters of 2013. No MRO was detected in 2013. See Section 8.5.1 for a complete list of the analytical summary.~~

~~High concentrations of total and dissolved metals, barium, iron and manganese were detected in all four quarters of 2013. Low concentrations of arsenic, copper, lead, selenium and zinc were also detected at concentrations below the applicable standards for both total and dissolved metals analyses. Uranium was less than the RL (<0.001 mg/L) for 2013. Dissolved metals analysis also detected low concentrations of arsenic, selenium and zinc at various times in 2013. See Section 8.6.2 and 8.6.3 data tables for a complete list of the WQCC analytical summaries.~~

~~In NAPIS-2, two organic constituents were detected exceeding the applicable standards in the third quarter, 1-Methylnaphthalene (9.4E-03 mg/L) and naphthalene (4.8E-03 mg/L). Low concentrations~~

- Benzene and MTBE concentrations exceeded the EPA MCL standards (0.005 mg/L and 0.143 mg/L, respectively) for each quarterly sample event during 2013 and 2014. Concentrations of ethylbenzene were also present but remained below the applicable standard. Toluene and xylenes were below the applicable standards for 2014 (Table 8.7).

- In 2014, the DRO concentrations continue to exceeded the NMED Tap Water standard (0.2 mg/L) with the highest concentration recorded during quarter four (9.2 mg/L). Fluoride and chloride concentrations exceeded the WQCC standards of 1.6 mg/L and 250 mg/L, respectively, with the highest concentration recorded in 2014 during quarter four (1.9 mg/L fluoride; 1700 mg/L chloride). Concentrations of bromide and sulfate were also present but remain below the applicable standards (Table 8.7.1).

- Total and dissolved arsenic, iron, manganese, and uranium concentrations exceeded the applicable standards in 2014 with the exception of dissolved arsenic and uranium during quarter four. Total cyanide exceeded the EPA RSL standard (0.0014 mg/L) during 2014 with the highest concentration recorded in quarter one (0.0846 mg/L). Total and dissolved cadmium and silver, total mercury, and dissolved chromium and copper were below the detection limits with the exception of quarter two in 2014 when low concentrations of dissolved chromium and copper were detected (Tables 8.7.2 and 8.7.3).

- No VOCs or SVOCs exceeded the applicable standards in 2014 despite an exceedance of 1-methylnaphthalene in quarter four of 2013 (Table 8.7.4).

6.2.5 STP1-NW and STP1-SW

Monitoring well STP1-NW is located on the west end of STP-1 north bay and STP1-SW is located on the southwest corner of the south bay of STP-1. These wells were installed in May of 2013. Ground water samples were analyzed for the following analytes: 8260B plus MTBE, DRO, GRO, MRO, major cations/anions, WQCC total and dissolved metals, cyanide and SVOCs. The sample location was inspected and sampled on the following dates:

The STP1-NW and STP1-SW wells were inspected and sampled on the following dates in 2014:

~~Annual Ground Water Monitoring Report 2013 Gallup Refinery 92 Giant Crossing Road Gallup, NM 87301~~Well ID	STP1-NW	STP1-SW
Quarter 2	6/16/2014	6/16/2014

Inserted Cells

Quarter 4	11/18/2014	11/18/2014

of isopropylbenzne, n-Propylbenzene, sec-Butylbenzene and 1,2,4-Trimethylbenzene were also detected. Section 8.5.4 data table contains the analytical summary for volatile and semi-volatile organic compounds.

- In NAPIS-3, no BTEXThere were no BTEX, MTBE, DRO, GRO, or MRO constituents detected above applicable standards in 2014 (Tables 8.8 and 8.8.1).
- Chloride and nitrate concentrations exceeded applicable standards during each sampling event. Additionally, nitrite exceeded its standard during quarter two (Table 8.8.1).

The total uranium concentration (0.065 mg/L) and MTBE constituents have been detected from the dissolved uranium concentration (0.077 mg/L) of the second half of 2010 through 2013. Chloride levels havequarter two sample exceeded the applicable standards since 2008 with the highest concentration for 2013 detected in the fourth quarter at 990 mg/L. Nitrates were also detected in all four quarters of 2013 exceeding the applicable standard.standard of 0.03 mg/L. Low concentrations of fluoride, bromide and sulfate were also detected and no detectable concentrations of DRO/GRO or MRO. See tables 8.5 and 8.5.1 data tables for complete analytical summary.

- Total metals analyzed detected high concentrations of iron and uranium in all four quarters of 2013 and in the first quarter, arsenic, barium, chromium and mercury were detected. Lead andiron, manganese were also detected exceeding applicable standards. (See Section 8.5.2). Dissolved metals analyzed include uranium exceeding the WQCC standard of 0.003 mg/L in all four quarters of 2013 and iron and manganese detected in the first quarter exceeding the WQCC standards. Low concentrations of arsenic, barium, copper, lead, selenium, and zinc were also detected. See Section 8.5.3 data tables for dissolved metals list. during each event (Tables 8.8.2 and 8.8.3).

No SVOCs or VOCs have been detected since the third quarter of 2010 through 2013. Four organic constituents were detected in June 2010, fluorene and phenanthrene at concentrations below applicable standards and 1-Methylnaphthalene (0.05 mg/L) and naphthalene (0.045 mg/L) were detected exceeding the applicable standards. See Sections 8.5.4 data table for a list of organic compounds detected.

In KA-3, benzene was detected in the first quarter (0.011 mg/L) and second quarter (0.009 mg/L) exceeding the EPA MCL standard of 0.005 mg/L. MTBE was detected in the third quarter at 0.2 mg/L

~~exceeding the NMED Tap Water standard of 0.125 mg/L. Low concentration of ethyl benzene has also been detected in 2013. See data table in Section 8.5 for analytical data.~~

~~Fluoride exceeded the WQCC standard of 1.6 mg/L in the first quarter of 2013 with a concentration of 1.8 mg/L. Low concentrations of chloride, bromide and sulfate were also detected in all four quarters of 2013. Nitrates were also above the applicable standards in the third quarter (20 mg/L). DRO and MRO concentrations were all non-detect for 2013 and GRO was detected in the first (0.063 mg/L) and second (0.072 mg/L) quarters. See Section 8.5.1 data table for list of the analytical data.~~

~~Total and dissolved metals analysis for KA-3 include the detection of manganese which exceeded the WQCC standard of 0.2 mg/L in all of 2013. Low concentrations of arsenic, barium, iron, lead, selenium, uranium and zinc were also detected. See Sections 8.5.2 and 8.5.3 data tables for a complete list of the analytical summaries for the total and dissolved metals.~~

~~No SVOCs or VOCs were detected in KA-3. In the past, five organic constituents, fluorene, 2-Methylphenol, phenanthrene, 1-Methylnaphthalene and naphthalene have been detected in 2009 and 2010. 1-Methylnaphthalene and naphthalene concentrations were the only two organics that exceeded the applicable standards and were last detected in 2011.~~

~~Section 8.5 contains a complete list of the analytical summaries for the NAPIS wells discussed in this section.~~

~~6.2.3 OAPIS-1~~

~~OAPIS-1 is a new well installed at the aeration basin on the northeast edge of aeration lagoon 2 (AL-2), (former site of the benzene strippers). OAPIS – 1 is screened in the Chinle/Alluvium Interface stratigraphic unit. This well was installed on June 17, 2012 per the Investigation Work Plan Solid Waste Management Unit (SWMU) No. 1 Aeration Basin and SWMU No. 14 Old API Separator site investigations. A request was made to NMED to add this new well to the 2013 Monitoring Schedule to be done on a quarterly basis. Third quarter sampling was combined with the annual sampling event per approval from NMED and OCD. Ground water samples were analyzed~~ [4]

~~for the following analytes: 8260B plus MTBE, 8015B, 8270, Major Cations/Anions and WQCC Metals. The well was sampled on the following dates:~~

~~Annual Ground Water Monitoring Report~~
~~2013 Gallup Refinery~~
~~92 Giant Crossing Road~~
~~Gallup, NM 87301~~

~~OAPIS 1: 3/18/13, 6/12/13, 9/3/13, 11/11/13~~

~~Benzene and MTBE were detected in all four quarters of 2013 exceeding the EPA MCL and NMED Tap Water standards. No detection of toluene and low concentrations of ethylbenzene and xylene. Chloride exceeded the WQCC standard of 250 mg/L in all four quarters as well. DRO was also detected in all four quarters exceeding the NMED TPH screening guidelines of 0.2 mg/L. GRO was also detected and MRO detected only in the third quarter. Total metals that exceeded the applicable standards include arsenic, iron, manganese, uranium and cyanide. Low concentrations of barium, chromium, copper, selenium and zinc were also detected. Phenol was detected in the first quarter at 0.01 mg/L which is above the WQCC standard of 0.005 mg/L and 1-Methylnaphthalene was detected in the second and fourth quarters at concentration levels above the EPA RSL standard.~~

- No VOCs or SVOCs were detected above applicable standards (Table 8.8.4).

6.3 CONSTITUENT LEVELS IN GROUP C MONITORING WELLS

~~**6.3.1**~~ The Group C wells include six observation wells (OW-13, OW-14, OW-29, OW-30

~~The~~, OW~~-wells in this section are~~ -50, and OW-52) located on ~~a flat~~level terrain ~~on the~~ northeast ~~section~~ of the refinery~~. OW-14 is located directly north of the LPG tank farm.~~ tank farm, and four recovery wells (RW-1, RW-2, RW-5, and RW-6) located within the refinery tank farm. Observation wells OW-50 and OW-52 were installed in 2009 to monitor potential migration of constituents. The recovery wells were installed between 1987 and 1990 and have been used to recover SPH.

6.3.1 OBSERVATION WELLS: OW-13, OW-14, OW-29, and OW-30

The observation wells OW-14, OW-29, and OW-30 are screened in the Chinle/Alluvium Interface; observation well OW-13 is screened in the Sonsela stratigraphic unit. OW-13 is down gradient (north~~-northwest) from~~) of the tank farm and OW-14~~.~~ is up gradient and adjacent to the LPG tank farm. OW- ~~4~~

29 is located down gradient from OW-30 (directly north- northwest) of OW-14 and OW-30 is down gradient from OW-14 (east- situated northeast) located on of OW-14 along the east side of the rail road trackrailroad spur that entersentering the refinery property from the north- and ends at the rail car loading rack.. These observation wells wereare sampled on a quarterly basis. Thirdand in agreement with OCD, approved by NMED, the third quarter sampling wasevent is combined with the annual sampling eventrequirement per approval from NMED and OCD. Ground waterthe OCD discharge permit.

Groundwater samples were analyzedcollected from these observation wells and submitted for laboratory analyses of the following analytes: 8260B plus BTEX, MTBE- and for annual the addition of, DRO, GRO, MRO, major cations/anions, WQCC total and dissolved metals- analysis. These, and VOCs and SVOCs.

Observation wells OW-13, OW-14, OW-29, and OW-30 were sampled on the following dates in 2014:

Well ID	**OW-13**: 3/19/13,	6/13/13,**OW-14**	9/4/13, 11/11/13	**OW-29**: 3/19/13,	**OW-30**6/13/13,	9/4/13, 11/11/13
Quarter 1	3/07/2014	3/07/2014		3/07/2014	3/07/2014	
Quarter 2	6/03/2014	6/03/2014		6/02/2014	6/03/2014	
Quarter 3	9/15/2014	9/15/2014		9/15/2014	9/17/2014	
OW-14: 3/19/13, **Quarter 4**	6/13/13,11/10/2014	9/4/13,11/10/2014		11/11/13 2014	OW-30: 3/19/13, 6/17/13, 9/4/13,	11/11/13 2014

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- BTEX constituents were not detected in OW-13, OW-29, or OW-30 during 2014; the wells have not had detectable BTEX concentrations since 2006. Through 2014, there were low MTBE concentrations detected in the well, but all were well below the standard of 0.143 mg/L (Table 8.9).

- Low concentrations of MTBE were detected in OW-13 in 2014, but each detected concentration was well below the standard. Concentrations of MTBE in OW-14, OW-29, and OW-30 during 2014 were all above the standard, with the highest being in OW-30 during the fourth quarter at 3.6 mg/L. MTBE concentrations in these three observation wells have been above the standard since at least 2009 (Table 8.9).

- Low concentrations of GRO were detected in each observation well during 2014 except for well OW-13. MRO was not detected above applicable standards in any observation well during 2014. Concentrations of DRO have exceeded the standard of 0.2 mg/L since 2014, with a concentration in 2014 of 4.5 mg/L. The constituent were not detected above applicable standards in the remaining three wells in 2013 or 2014 (Table 8.9.1).

- In 2014, concentrations of fluoride, bromide, and sulfate were detected in each of the four observation wells, however concentrations remain below applicable standards. Concentrations of chloride have exceeded the standard of 250 mg/L in OW-14 in 2013 and 2014 (Table 8.9.1).

- No concentrations of total or dissolved metals were detected above applicable standards in well OW-13 in 2014. In well OW-14, concentrations of total barium, iron, and manganese, and, concentrations of dissolved arsenic, barium, iron, and manganese were above applicable standards in 2014; the concentrations detected are similar to previous years. In well OW-29 during 2014, concentrations of total and dissolved manganese and uranium were above applicable standards, and are similar to previous years. In well OW-30, concentrations of total and dissolved uranium were above the standard of 0.03 mg/L and have been since 2012 (Tables 8.9.2 and 8.9.3).

- In 2014, no VOCs and SVOCs were detected in OW-13, OW-14, OW-29, and OW-30 with the exception of 1-methylnaphthalene detected at a concentration of 0.044 mg/L in OW-14 during quarter four of 2014. Concentrations of 1-methylnaphthalene in OW-14 have occasionally exceeded the standard since 2008 (Table 8.9.4).

6.3.2 OBSERVATION WELLS: OW-50 and OW-52

Observation wells OW-50 and OW-52 were installed up gradient from OW-13 and OW-29 in 2009 to monitor possible migration of MTBE. The two observation wells are screened in the Chinle/Alluvium Interface stratigraphic unit. A request to change the 2010 FWGWMP sample frequency from quarterly to annual for OW-50 and OW-52 was approved by NMED in 2012 (2011 Updates, Comment 6).

In 2014, groundwater samples were collected from observation wells OW-50 and OW-52 for the following analytes: BTEX, MTBE, DRO, GRO, MRO, major anions/cations, WQCC total and dissolved metals, and VOCs, SVOCs.

Observation wells OW-50 and OW-52 were sampled on the following dates in 2014:

~~Annual Ground Water~~	**OW-52:** 9/15/2014

~~Monitoring Report 2013 Gallup Refinery 92 Giant Crossing Road Gallup, NM 87301~~**OW-50:** 9/15/2014	

~~Three of the OW well (OW-14, OW-29 and OW-30) are screened in the Chinle/Alluvium Interface and OW-13 is screened in the Sonsela stratigraphic unit. OW-13 had no detectable BTEX constituents from 2006 to 2013. A low concentration of MTBE has been detected in this well since 2007 and analytical data indicates concentration levels are steadily increasing from year to year. No metals were detected that exceeded the applicable standards in 2013 for both total and dissolved metals analysis, however low concentration of uranium has been detected. No VOCs or SVOCs have been detected in this well. See Section 8.8 data tables for the analytical summaries.~~

~~OW-14 in this group is the only well which has high concentrations of benzene, ethyl benzene and MTBE exceeding applicable standards. Benzene analytical data indicates that since 2006, concentrations have been increasing from year to year with a high of 3.3 mg/L recorded in the fourth quarter 2013. Ethylbenzene has also exceeded the EPA MCL standard of 0.7 mg/L since fourth quarter 2010. MTBE has exceeded the EPA Tap Water Standard of 0.125 mg/L since 2006 through 2013 with a concentration level of 1.1 mg/L in fourth quarter 2013. Analytical data indicates that Benzene, ethylbenzene and MTBE concentrations have been increasing from year to year since its first detection. See Section 8.8 data table for analytical summaries. DRO was detected at 7.8 mg/L exceeding the NMED Table 6 screening guidelines and GRO was also detected at 7.6 mg/L while there was no detection of MRO in OW-14. Total metals analysis detected high concentrations of arsenic, barium, iron, and manganese in 2013. Low concentrations of lead, selenium, and uranium were also detected. Dissolved metals analysis detected high concentrations of arsenic, barium, iron and manganese and low concentrations of selenium, uranium and zinc for 2013. See Section 8.8.2 and 8.8.3 for metals summary.~~

~~One VOC (1-Methylnaphthalene) was detected that exceeded the EPA RSL Tap water standard of 9.7E-04 mg/L in the third and fourth quarter of 2013 and a low concentration of isopropylbenzene was detected in the fourth quarter 2013. In 2008 through 2011, 1-Methylnaphthalene has been~~

~~detected exceeding the EPA RSL standard of 9.7E-04 mg/L and naphthalene (2.1E-03 mg/L) was also detected in the third quarter 2011 exceeding the NMED Tap Water Standard of 1.43E-03 mg/L. See section 8.8.4 for list of VOCs analyzed.~~

- BTEX, MTBE, DRO, GRO, and MRO constituents have not been detected in either OW-50 or OW-52 since 2009 through 2014 (Tables 8.10 and 8.10.1).
- Low concentrations of fluoride, chloride bromide and sulfate were detected in 2014 but remain below the applicable standards (Table 8.10.1).
- Low concentrations of total and dissolved arsenic, barium, iron, lead, manganese, selenium, and uranium been detected in OW-50 and OW-52 in 2014, but all concentrations were below applicable standards (Tables 8.10.2 and 8.10.3).
- No VOCs or SVOCs were detected above applicable standards in OW-50 and OW-52 during 2014. In quarter one 2010, bis(2-ethylhexyl)phthalate exceeded the standard of 0.006 mg/L in OW-50 and a low concentration of benzoic acid was detected but have remained below this standard through 2014. The detection of these two organic compounds may possibly be lab contaminants or from the PVC pipe casing materials used for this well (Table 8.10.4).

6.3.3 RECOVERY WELLS: RW-1, RW-2, RW-5, RW-6

The recovery wells RW-1, RW-2, RW-5, and RW-6 are shallow wells installed in the refinery tank farm located in the east-central portion of the refinery property. The recovery wells are screened within the Chinle/Alluvium Interface stratigraphic unit and are used to recover SPH. RW-1 is located east of Tank 568; RW-2 is located between Tanks 581 and 582; and RW-5 and RW-6 are located in the northwest corner of the tank farm, east of Tanks 337 and 345.

Quarterly inspections for the RW wells include product recovery of SPH using disposable bailers in RW-5 and RW-6, and a portable 2-inch bladder pump for RW-1. Hydrocarbon thickness is measured prior to being removed. Purge water is collected and disposed upstream of the NAPIS. Hydrocarbon recovery is estimated based on measurements and observations.

The RW wells were added to the annual sampling schedule in 2011, per the *Approval with Modifications* in the 2010 FWGWMP and are evaluated for the following analytes: BTEX, MTBE, major cations/anions, WQCC total and dissolved metals, VOCs, and SVOCs.

The recovery wells were inspected and sampled in 2014 on the following dates:

~~Annual Ground Water Monitoring Report 2013 Gallup Refinery 92 Giant Crossing Road~~	RW-2	RW-5	RW-6

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~~Gallup, NM 87301~~RW-1			
9/18/2014	9/18/2014	9/18/2014	9/18/2014

- Benzene and ethylbenzene concentrations have exceeded the standards (0.005 mg/L and 0.7 mg/L, respectively) in each of the RW wells since 2011. In 2014, concentrations of toluene and total xylenes exceeded the standards (0.75 mg/L and 0.62 mg/L, respectively) in RW-1 and RW-2. Concentrations of total xylenes were detected in RW-5 and RW-6 but did not exceed the standard. In 2014, MTBE concentrations exceeding the standard of 0.143 mg/L was detected RW-2 (1.9 mg/L). MTBE concentrations have frequently exceeded applicable standards for RW-1 and RW-2 since 2011 (Table 8.11).
- Major cations and anions were not analyzed in 2014 (Table 8.11.1).
- Concentrations of total and dissolved barium, iron, and manganese have exceeded the applicable standards in each of the RW wells since 2011. Additionally, concentrations of total iron have exceeded its standard in each well since 2011. Concentrations of total arsenic above the standard were detected in 2014 in wells RW-1 and RW-6 (Tables 8.11.2 and 8.11.3).
- VOCs and SVOCs detected at concentrations above applicable standards in RW wells in 2014 include (Tables 8.11.4 and 8.11.5):
  - RW-1: Aniline and 3,4-methylphenol exceeded the applicable standard
  - RW-2: Aniline, 1,2,4-trimethylbenzene, and 3,4-methylphenol exceeded the applicable standards.
  - RW-5: 1,2,4-trimethylbenzene, naphthalene, 1-methylnaphthalene, and 2-methylnapthalene exceeded the constituent applicable standards.
  - RW-6: the same constituents as those in RW-5, plus 1,3,5-trimethylbenzene exceeded the applicable standards.

Hydrocarbon recovery from RW-1 has shown a steady decrease from 2005 through 2014. In 2014, total hydrocarbon recovery is estimated at 2.25 gallons in 83 gallons of water purged compared to the 2005 estimate of 431 gallons of hydrocarbons in 1,210 gallons of water. No measureable hydrocarbons have been detected in RW-2 since the well was installed. RW-5 and RW-6 have shown a steady decrease in hydrocarbons since 2005. SPH has not been detected in RW-5 and RW-6 since February 2009 and November 2011, respectively. However, an oil sheen and a hydrocarbon odor has persisted in RW-5 (Appendix A).

6.4 CONSTITUENT LEVELS IN GROUP D MONITORING WELLS

~~In OW-29, high concentrations of MTBE have been detected since 2010 through 2013 all exceeding the 0.125 mg/L NMED Tap Water standard. MTBE concentration has been steadily increasing since its detection in 2007 at 4.3E-03 mg/L to a high of 1.7 mg/L in the fourth quarter of 2013. BTEX constituents have been non-detect since 2006 through 2013. Section 8.8 for the analytical summary.~~

~~DRO/MRO were all non-detect and GRO was detected at 0.88 mg/L in OW-29. Total metals analyzed include detection of uranium exceeding the WQCC standard of 0.03 mg/L in all four quarters of 2013 and manganese in the first, second and fourth quarter all at levels above the applicable standards. Low concentrations of arsenic, barium, iron, selenium and zinc were also detected. Dissolved metals analysis detected manganese and uranium as exceeding the WQCC standard in all of 2013. Low concentrations of arsenic, barium, iron and selenium and zinc were also detected. See Section 8.8.2 and 8.8.3 for metals summary.~~

~~No VOCs have been detected in OW-29 from 2009 through 2013. In one sampling event in 2008, 1,2-Dichloroethane (EDC), was detected in the fourth quarter at 1.0E-03 mg/L. See Section 8.8.1 for list of VOCs.~~

~~In OW-30, MTBE has been detected since 2007 through 2013 all at concentration exceeding the 0.125 mg/L NMED Tap Water standard. Analytical data indicates MTBE concentration has been increasing from year to year. BTEX constituents have all been non-detect since 2007. DRO/MRO were all non-detect and GRO was detected at 1.4 mg/L in OW-30. See Section 8.8 for the complete analytical summary.~~

~~Total and dissolved metals analysis detected uranium exceeding the WQCC standard of 0.03 mg/L in all four quarters of 2013. Other metals detected include arsenic, barium, iron and manganese, and selenium that did not exceed applicable standards. Dissolved metals analysis also detected the following metals that did not exceed applicable standards: Arsenic, barium, iron, manganese, selenium and zinc in 2013. See Section 8.8.2 and 8.8.3 for metals summary.~~

The Group D wells include three process/production wells, PW-2, PW-3, and PW-4 that supply water to the refinery and for domestic uses. These process wells reach approximately 1,000 ft and are screened in the San Andreas/Yeso aquifer. Additionally, Group D also includes four observations wells OW-1, OW-10, OW-11, and OW-12. The OW-1 and OW-10 wells are located in the northwest portion of the refinery. OW-11 is located near the entrance of the refinery and OW-12 is west of the tank farm in the surplus yard.

6.4.1 PROCESS WELLS: PW-2, PW-3, PW-4

PW-2, PW-3 and PW-4 are all process/production wells which supply process water to the refinery and domestic water to the company housing and Pilot Travel Center. PW-2 is located west of evaporation pond 6 (EP-6). PW-3 is centrally located directly north of the maintenance shop, and PW-4 is located on the southern edge of the refinery property and adjacent to the Pilot Lift Station.

The production wells are on a staggered 3-year sampling schedule, with the exception of PW-3 which is sampled annually since the detection of 2-methylnaphthalene exceeding the applicable standard in 2008. In 2014, groundwater samples were collected from PW-2 and PW-3 for the following analytes: BTEX, MTBE, nitrate, WQCC total and dissolved metals, and VOCs and SVOCs.

The process wells PW-2 and PW-3 were sampled in 2014 on the following dates:

~~Annual Ground Water Monitoring Report 2013 Gallup Refinery 92 Giant Crossing Road~~ ~~Gallup, NM 87301~~**PW-2:** 9/10/2014
PW-3: 9/10/2014

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~~**No VOCs have been detected in OW-30 from 2010 through 2013 that exceeded applicable standards, however in the fourth quarter of 2013, chloroethane (4.7E-03 mg/L) was detected for the first time in this well. In December 2007, 1,2-Dichloroethane (EDC) was detected for the first time and again in 2008 and 2009 at concentrations below the EPA MCL standard of 0.005 mg/L. See**~~ 4

~~section 8.8 for a complete list of the analytical summary for the wells discussed in this section.~~

~~6.3.2 OW-50, OW-52~~

~~OW-50 and OW-52 were installed in October 2009 to monitor the possible migration of MTBE from up-gradient wells OW-14, OW-29 and OW-30 located on the northeast section of the refinery property. In the 2011 Facility Wide Ground Water Monitoring Work Plan, 2011 Updates, a request was made by Western to change the sampling frequency from quarterly to annual. On September 24, 2012, NMED concurred with Western's request in the NMED Disapproval, Facility Wide Ground Water Monitoring Work Plan 2011 Updates, Comment 6. Ground water samples were analyzed for the following analytes: 8260B plus MTBE, 8270 plus phenol, 8015B, General Chemistry and WQCC Metals. Wells were sampled on the following dates:~~

- BTEX and MTBE were not detected in PW-2 and PW-3 in 2014 (Table 8.12).
- A low concentration of nitrate was present in PW-2 (0.12 mg/L) in 2014 (Table 8.12); the concentration is below the standard of 10 mg/L (Table 8.12).
- In 2014, low concentrations of total and dissolved arsenic, barium, iron, selenium, uranium, and zinc (dissolved only) were detected in well PW-2. Each of the detected concentrations was below applicable standards. In well PW-3, detectable concentrations of total and dissolved arsenic, barium, iron, manganese (total only), selenium, uranium, and zinc were below applicable standards (Tables 8.12.1 and 8.12.2).
- No VOCs or SVOCs were detected in PW-2 and PW-3 in 2014. Low concentrations of 2-methylnahthalene (0.032), 2,4-dimethylphenol (0.016 mg/L), 2-methylphenol (0.21 mg/L), 3,4-methylphenol (0.36 mg/L), phenanthrene (0.017 mg/L), and phenol (0.8 mg/L) were detected in PW-3 in January 2008. PW-3 was sampled again in August 2008 with a blind duplicate with no detections confirmed for SVOCs (Tables 8.12.3 and 8.12.4).

6.4.2 OBSERVATION WELLS: OW-1 AND OW-10

Observation well OW-1 is an artesian well located on the west side of EP-6. Well OW-10 is located down gradient from OW-1 on the east side of EP-9. Wells OW-1 and OW-10 are screened in the Sonsela stratigraphic unit. Inspection requirements for these two wells were modified in 2010, per the 2010 FWGWMP, and included sampling on a quarterly basis. In agreement with OCD, approved by NMED, the third quarter sampling was combined with the annual sampling event. In 2014, groundwater samples from OW-1 and OW-10 were evaluated for the following analytes: BTEX, MTBE, DRO, GRO, MRO, major cations/anions, WQCC total and dissolved metals, VOCs, and SVOCs.

Groundwater samples were collected from OW-1 and OW-10 in 2014 on the following dates:

Well ID	OW-~~50: 9/4/13~~1	OW-~~52: 9/4/13~~10
Quarter 1	3/07/2014	3/07/2014
Quarter 2	6/03/2014	6/03/2014
Quarter 3	9/11/2014	9/12/2014
Quarter 4	11/10/2014	11/10/2014

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- BTEX was not detected above applicable standards in either well in 2014. MTBE was not detected above applicable standards in OW-1; low concentrations of MTBE below the standard of 0.143 mg/L were detected in each 2014 quarter in OW-10 (Table 8.13).
- DRO and MRO were not detected above applicable standards in either OW-1 or OW-10 during 2014. Low concentrations of GRO were detected in quarters two through four in OW-10, but the constituent was not detected in OW-1 in 2014 (Table 8.13.1).
- In 2014, low concentrations of fluoride, bromide, nitrate, and sulfate were detected in OW-1 and OW-10 but remain below the applicable standards. The chloride concentration in OW-10 continues to exceed the standard of 250 mg/L, but constituent concentrations remains below the standard for OW-1 (72 mg/L, quarter 4) (Table 8.13.1).
- In well OW-1, concentrations of total arsenic, chromium, iron, lead, manganese, and uranium (each quarter, consistently since 2010) were detected above the applicable standards in one or more quarter. Concentrations of dissolved iron, lead, manganese, and uranium (each quarter, consistently since 2010) were detected above the applicable standards during quarter three. In well OW-10, total and dissolved concentrations of uranium have exceeded the applicable standard of 0.03 mg/L from 2010 through 2014 (Tables 8.13.2 and 8.13.3)
- No VOCs or SVOCs were detected in OW-1 in 2014. In well OW-10, in quarters two through four, the constituent 1,1-dichloroethane was detected but concentrations did not exceed the standard of 0.025 mg/L (Table 8.13.4).

6.4.3 OBSERVATION WELLS: OW-11 AND OW-12

Observation well OW-11 is located approximately 1 mile to the west-southwest outside of the main [illegible] OW-11 and OW-12 are screened in the Chinle/Alluvium aquifer [illegible] of the main

~~OW-50 and OW-52 are screened in the Chinle/Alluvium Interface. No BTEX and MTBE constituents have been detected in OW-50 and OW-52 since 2009 through 2013. Low anion concentrations were detected in OW-50 and OW-52 as well as no detection of DRO/GRO or MRO. No metals (total or dissolved) exceeded any applicable standards in 2013, however low concentrations of arsenic, barium, iron, lead, manganese uranium and zinc were detected in OW-50/52. No SVOCs were detected in OW-50/52, however in March 2010, benzoic acid (0.02 mg/L) and bis(2-ethylhexyl) phthalate (0.011 mg/L) were detected during a quarterly sampling~~

~~**event in OW-50. The detection of these two organic compounds may possibly be lab contaminants or from the PVC pipe casing materials used for this well. Refer to Section 8.9 data tables for a complete list of the analytical**~~

Well inspections and sampling are conducted annually. In 2014, groundwater samples from the two wells were evaluated for the following analytes: BTEX, MTBE, major anions/cations, WQCC total and dissolved metals, VOCs, and SVOCs. Observation well OW-11 and OW-12 were sampled in the third quarter of 2014 on the following dates:

~~Annual Ground Water Monitoring Report 2013 Gallup Refinery 92 Giant Crossing Road~~ ~~Gallup, NM 87301~~**OW-11:** 9/12/2014	**OW-12:** 9/12/2014

- ~~summary~~BTEX and MTBE have not been detected in OW-11 and OW-12 since 2006 and remained non-detect for ~~this~~2014 (Table 8.14).
- Fluoride and sulfate concentrations continue to exceed the applicable standards (1.6 mg/L and 600 mg/L, respectively) in OW-11 with fluoride detected at 2.3 mg/L and sulfate at 960 mg/L in 2014. In 2014, chloride concentrations were detected in both wells but did not exceed the standard. Bromide was detected below applicable standards in OW-12 but remained below the applicable standards in OW-11 (Table 8.14.1).
- In OW-11, total and dissolved uranium concentrations continue to exceed the standard of 0.03 mg/L; the constituent was detected at 0.25 mg/L in 2014. Uranium concentrations were detected in OW-12 but remain below the standard. Low concentrations of iron and manganese were detected in both wells. Barium was detected in OW-12 but did not exceed the applicable standard (Tables 8.14.2 and 8.14.3).
- No VOCs or SVOCs were detected in either well~~.~~ in 2014. Bis(2-ethylhexyl)phthalate was detected in OW-11 during 2013 above the constituent's standard (Table 8.14.4).

6.5 CONSTITUENT LEVELS IN GROUP E MONITORING WELLS

To date, a total of 44 monitoring wells (MKTF-1 through MKTF-44) have been installed to aid in delineating the extent of a hydrocarbon seep discovered in 2013, directly west of crude tanks T-101 and T102. During the investigation, a pre-existing well (labeled as MKTF-45) was found directly west of the truck-loading rack. Each of the wells has been constructed into permanent monitoring wells, and these wells are designated as Group E wells.

6.6 CONSTITUENT LEVELS FOR MKTF WELLS

Thirty-one of the forty-five MKTF wells were sampled continuously throughout 2014. Sixteen of the MKTF wells (MKTF-19 through MKTF-26, MTKF-28, MKTF-36, MKTF-37, MKTF-38, MKTF-39, MKTF-40, MKTF-43, and MKTF-44) were reported with no significant changes in laboratory data and are pending approval for a change in sample frequency from quarterly to annually. In addition, the nine MKTF wells installed along the perimeter of the suspect plume (MKTF-27, MKTF-29 through MKTF-34, MKTF-41, and MKTF-42) are currently pending approval for a sample frequency change from quarterly to semi-annually, if there are no significant increases in concentrations for four consecutive quarters.

In 2014, groundwater samples were collected from the MKTF wells and evaluated for the following analytes: BTEX, MTBE, DRO, GRO, MRO, major cations/anions, metals, VOCs, and SVOCs. Wells that had a hydrocarbon layer were not sampled. Refer to Table 1 in Section ~~8.~~10 for inspection and sampling dates.

- Benzene concentrations exceeded the standard of 0.005 mg/L in the following wells: MKTF-1, MKTF-2, MKTF-4, MKTF-9~~ data tables for a complete list of the analytical summary for this well.~~, MKTF-10, MKTF-11, and MKTF-17 through MKTF-26. The greatest benzene concentration (20 mg/L) during 2014 occurred in well MKTF-16 during quarter four (Table 8.15).

~~6.3.3 RW-1, RW-2, RW-5, RW-6~~

- ~~The RW series of wells~~Toluene concentrations exceeded the standard of 0.75 mg/L in the following wells: MKTF-1, MKTF-10, MKTF-15, MKTF-16, MKTF-20, MKTF-21, and MKTF-23. The highest toluene concentration (20 mg/L) occurred in well MKTF-10 during quarter four (Table 8.15).
- Ethylbenzene concentrations exceeded the standard of 0.7 mg/L in the following wells: MKTF-1, MKTF-4, MKTF-10, MKTF-11, MKTF-15, MKTF-16, MKTF-19, MKTF-20, MKTF-21, and MKTF-36. The highest concentration (2.8 mg/L) occurred in MKTF-20 during quarter one (Table 8.15).
- Total xylenes concentrations exceeded the standard of 0.62 mg/L in the following wells: MKTF-1, MKTF-4, MKTF-10, MKTF-11, MKTF-15, MKTF-16, MKTF-19, MKTF-20, MKTF-23, and MKTF-37. The highest concentration (7.6 mg/L) occurred in well MKTF-20 during quarter four (Table 8.15).
- MTBE concentrations exceeded the standard of 0.143 mg/L in the following wells: MKTF-1, MKTF-4, MKTF-9, MKTF-11, MKTF-15 through MKTF-25, MKTF-32, MKTF-33, and MKTF-36. The highest concentration (9.7 mg/L) occurred in well MKTF-19 during quarter four (Table 8.15).
- The constituent DRO was detected exceeding the standard (0.2 mg/L) throughout 2014 in MKTF-4 (2.0 mg/L), MKTF-9 (2.1 mg/L), MKTF-10 (7.4 mg/L), MKTF-11 (1.8 mg/L), MKTF-15 (4.1 mg/L), MKTF-16 (4.1 mg/L), MKTF-17 (1.4 mg/L), MKTF-18 (2.3 mg/L), MKTF-19 (13 mg/L), MKTF-20 (24 mg/L), MKTF-21 (27 mg/L), MKTF-22 (1.6 mg/L), and MKTF-23 (7.7 mg/L). Detectable concentrations of GRO were detected in each of the wells sampled except for MKTF-27, MKTF-28,

MKTF-29, MKTF-40, and MKTF-44. There were no detectable concentrations of MRO in any well above the applicable standards. (Table 8.15.1).

- Chloride concentration exceedances above the standard (250 mg/L) were noted in the following wells: MKTF-1, MKTF-2, MKTF-10, MKTF-11, MKTF-15, MKTF-16, MKTF-23 through MKTF-28, MKTF-31, MKTF-31, MKTF-32, and MKTF-34. Fluoride concentration exceedances above the standard (1.6 mg/L) were noted in the wells MKTF-10 and MKTF-11 (Table 8.15.1)

- Total metals concentrations above applicable standards were noted in the following wells (Table 8.15.2):
  - Arsenic (0.01 mg/L): MKTF-16, MKTF-18, MKTF-19, MKTF-20, and MKTF-23
  - Barium (1 mg/L): MKTF-1, ,LTF-4, MKTF-10, MKTF-11, MKTF-15, MKTF-16, MKTF-18, MKTF-19, MKTF-20, and MKTF-22
  - Chromium (0.005 mg/L): MKTF-18
  - Iron (1 mg/L): all wells sampled
  - Lead (0.015 mg/L): MKTF-1, MKTF-4, MKTF-10, MKTF-17, MKTF-18, MKTF-19, and MKTF-20
  - Manganese (0.2 mg/L): all wells sampled
  - Uranium (0.03 mg/L): MKTF-2, MKTF-10, MKTF-24, MKTF-26, MKTF-27, MKTF-28, MKTF-30 through MKTF-33

- Dissolved metals concentrations above applicable standards were noted in the following wells (Table 8.15.3):
  - Arsenic: MKTF-16 and MKTF-19
  - Barium: MKTF-1, MKTF-4, MKTF-10, MKTF-11, MKTF-15, MKTF-18, and MKTF-19
  - Iron: MKTF-1, MKTF-2, MKTF-4, MKTF-9, MKTF-10, MKTF-11, MKTF-15, MKTF-16, MKTF-18, MKTF-19, MKTF-22, MKTF-23, and MKTF-24.
  - Lead: MKTF-11
  - Manganese: all wells except MKTF-20, MKTF-30, MKTF-31, MKTF-32, and MKTF-34
  - Uranium: MKTF-2, MKTF-24, and MKTF-26 through MKTF-33

- No VOCs or SVOCs were detected above applicable standards in wells MKTF-27, MKTF-28, MKTF-29, MKTF-33, MKTF-34, MKTF-40, and MKTF-44. The remaining wells had varying concentrations of the following constituents below and above the referenced standards (Tables 8.15.4 and 8.15.5):
  - Aniline (0.013 mg/L)
  - 1,2,4-trimethylbenzene (0.015 mg/L)
  - 1,3,5-trimethylbenzene (0.12 mg/L)
  - 1,2-dichloroethane (0.0017 mg/L)
  - Naphthalene (0.00017 mg/L)

- 1-methylnaphthalene (0.0011 mg/L)
- 2-methylnaphthalene (0.036 mg/L)
- 1,1-dichloroethane (0.025 mg/L)
- 1,1-dichloroethene (0.005 mg/L)
- 3,4-methylphenol (0.0015 mg/L)
- Bis(2-ethylhexyl)phthalate (0.006 mg/L)
- Phenol (0.005 mg/L)
- Trichloroethene (0.005 mg/L)
- Vinyl chloride (0.002)

6.7 CONSTITUENT LEVELS FOR EVAPORATION PONDS, INFLUENTS, AND EFFLUENTS

There are ~~shallow recovery wells from which separate-phase hydrocarbons (SPH) have been recovered on a quarterly basis. RW-1 is~~ twelve evaporation ponds located ~~on~~within the ~~eastern~~northwest section of the refinery. Evaporation pond 1 is more commonly known as Pond 1and is considered separate from the remaining SMWU No. 2 Evaporation Ponds. ~~tank farm, (East of Tank 568); RW-2 is~~ Pond 1 is separated by a dike along the north side of aeration lagoon 1 (AL-1) and aeration lagoon 2 (AL-2), and is used as a holding pond for the aeration lagoons. Evaporation ponds 2 through 6 are separated by dikes and are located ~~between tanks 581 and 582 on the lower northeast section of the tank farm; RW-5 and RW-6 are~~ west of AL-2. Evaporation pond 9 (EP-9) is to the south and is separated from EP-2 through EP-6 by a two-track road. Evaporation ponds 7, 8, 11, 12A, and 12B are also separated by dikes and are located on the ~~north west~~northwest corner of the refinery~~ tank farm east of tanks 337 and 345. These wells~~. In addition to the evaporation ponds, there are three influents and three effluent points that are routinely monitored.

6.7.1 EVAPORATION PONDS 1 THROUGH 12B

Samples have been collected annually from Pond 1 and EP-2 through EP-8 since 2007. In 2011, EP-9, EP-11, EP-12A, and EP-12B were added to the ~~annual sampling schedule~~sample list, per ~~Approval with Modifications,~~the 2010 ~~Facility Wide Ground Water Monitoring Work Plan dated August 25, 2010, which requires all wells including recovery wells containing separate phase hydrocarbons, for sample collection. Annual sampling was conducted for the first time~~FWGWMP, and the sample frequency was increased to semi-annually for ~~the RW series of wells in 2011. The wells are sampled~~ all of the ponds.

In 2014, samples were collected from Pond 1 and the evaporation ponds for the following analytes: ~~Major~~ BTEX, MTBE, major anions/cations~~/anions, 8260B plus MTBE, 8270 plus phenols and~~, biochemical oxygen demand (BOD), chemical oxygen demand (COD), e-coli bacteria, WQCC total and dissolved metals~~. The wells~~, and VOCs and SVOCs. Pond 1, EP-1 through EP-9, EP-11, EP-12A, and EP-12B were ~~inspected and~~ sampled in 2014 on the following dates:

~~RW-1: 3/26/13, 6/17/13, 11/12/13 Sampled: 9/16/13~~**Quarter 1:** 3/05/2014	~~RW-5: 3/26/13, 6/17/13,~~**Quarter 4:** 11/12/~~13 Sampled: 9/16/13~~2014
~~RW-2: 3/26/13, 6/17/13, 11/12/13 Sampled: 9/16/13~~	~~RW-6: 3/26/13, 6/17/13, 11/12/13 Sampled: 9/16/13~~

- ~~All of the RW wells are screened in the Chinle/Alluvium Interface.~~ BTEX and MTBE ~~constituents exceeded~~concentrations were below the applicable standards ~~in RW-1 and RW-2 in 2011, 2012~~for Pond 1 and each of the evaporation ponds (Table 8.15).
- Concentrations of fluoride, chloride, and ~~2013. Chloride levels also~~sulfates exceeded the applicable WQCC standards in Pond 1 and each evaporation pond during 2014. Low concentrations of bromide below the applicable standard ~~of 250~~ were also detected in each of the ponds during 2014 (Table 8.16.1).
- In 2014, BOD concentrations exceeded the general requirement of the 20 NMAC 6.2.2101 (<30 mg/L) in Pond 1 and each of the evaporation ponds except for EP-7, EP-8, and EP-9. COD concentrations exceeded the general requirement (<125 mg/L) in ~~2013~~ each of the ponds. The e-coli standard of 500 organisms/100 mL was exceeded in ~~RW-1.~~ two ponds, EP-2 (>24,916 CFU/100 mL) and EP-12B (1,012 CFU/100mL) (Table 8.16.2).
- Total ~~metals detected at high~~metal concentrations in ~~RW-1 include barium (4.9 mg/L), iron (19 mg/L)~~ pond samples were detected as follows (Table 8.16.3):
  - Arsenic and manganese ~~(3.3 mg/L) for 2013. Low concentrations of arsenic, chromium, copper, lead, selenium, uranium and zinc were also detected~~concentrations in ~~RW-1. Dissolved metals include barium, iron and manganese with concentration levels above~~each pond exceeded the applicable standards in one or more of the samples.
  - Detectable concentrations of barium and chromium were found in one or more samples, but were below applicable standards.
  - Cadmium, copper, and lead were below applicable standards in each pond sample.
  - A low concentration of mercury (0.00032 mg/L) was detected in one Pond 1 sample, but the constituent was below the applicable standard.
  - A low concentration of uranium (highest was 0.0071 mg/L) was detected in each EP-2 sample, but the constituent was below the applicable standard, as well as below the standards in s in all other pond samples.

- Low concentrations of iron, selenium, and zinc were detected in other ponds and samples, but each was below the constituent applicable standards.

- Dissolved metals concentrations in pond samples were detected as follows (Table 8.16.4):
  - Arsenic and manganese concentrations in each pond exceeded the applicable standards in one or more semiannual samples.
  - Iron concentrations exceeded the standard in one or more samples of EP-1, EP-2, EP-3, EP-4, EP-12A, and EP-12B.
  - Selenium concentrations exceeded the applicable standard in one or more samples of EP-7, EP-8, and EP-9.
  - Low concentrations of barium were detected in each pond, but all were below the applicable standard.
  - A low concentration of lead was detected in one EP-4 sample (0.0013 mg/L) but that concentration is below the applicable standard.
  - A low concentration of uranium was detected in one EP-4 sample (0.0039 mg/L), but that concentrations is below the applicable standard.
  - Cadmium, copper, and silver were not detected in any pond samples.

- No VOCs were detected in any of the ponds during 2014 with the exception of low concentrations of acetone and carbon disulfide in EP-2, EP-3, EP-4, EP-5, and EP-6.

- Aniline was detected in concentrations exceeding the standard of 0.013 mg/L during March 2014 in EP-2 (0.044 mg/L), EP-3 (0.045 mg/L), EP-4 (0.04 mg/L), and EP-5 (0.023 mg/L) but decreased below the applicable standards limit during November 2014. Phenol concentrations were similar in that the concentrations exceeded the standard of 0.005 mg/L in March 2014 for EP-2 (0.87 mg/L), EP-3 (0.79 mg/L), EP-4 (0.42 mg/L), EP-5 (0.26 mg/L), and in EP-6 (0.28 mg/L) then concentrations fell below the applicable standards for the same ponds in November 2014 with the exception of EP-2 which had a reduced concentration of 0.058 mg/L (Tables 8.16.5 and 8.16.6). Concentrations of 3,4-methylphenol that exceeded the applicable standard of 0.0015 mg/L were detected during the March 2014 event in EP-1 (0.14 m/L), EP-2 (0.35 mg/L), EP-3 (0.29 mg/L), EP-4 (0.21 mg/L), EP-5 (0.2 mg/L), EP-6 (0.088 mg/L), and EP-12B (0.079), but samples collected from these ponds in November 2014 were all below the standard.

6.7.2 INFLUENTS: AL-1, AL-2, AND EP-1

The start-up of the new WWTP occurred in May 2012. By the end of June 2012, all of the processed water going into AL-1 was re-routed to the WWTP, via Tank 35 and the NAPIS unit, with the exception of the Pilot lift station. Some gravitational flow continued from AL-1 to AL-2 and from AL-2 to Pond 1 (EP-1) through the second half of 2013.

The aeration lagoons and pond 1 are no longer in service and no samples were collected in 2014.

6.7.3 EFFLUENTS: AL-2 TO EP-1, PILOT, AND NAPIS

All effluents have been non-existent since June 2013 due to re-routing waters to the WWTP. The last effluent sample from AL-2 was in June 2013. The Pilot effluent was rerouted in June 2013~~. Low concentrations of arsenic, and zinc were also detected. One organic compound, 1,2,4-Trimethylbenzene (1.3 mg/L) was detected above the EPA RSL standard of 0.015 mg/L. In 2013, four SVOCs were detected that exceeded applicable standards:~~ while the NAPIS unit was re-routed mid-June 2012. No effluent analyses are available for 2014.

6.7.4 OUTFALL BW TO EP-2

BW is defined as reverse osmosis water coming from the boiler unit. The flow from the boiler unit discharges into EP-2 through a 4-inch PVC pipe. EP-2 is directly west of EP-1. The BW to EP-2 sample is taken on a semi-annual basis and evaluated for the following analytes: major anions/cations.

The BW to EP-2 samples was taken in 2014 on the following dates:

~~Annual Ground Water Monitoring Report 2013 Gallup Refinery 92 Giant Crossing Road Gallup, NM 87301~~**Quarter 1:** 3/05/2014	**Quarter 4:** 11/12/2014

~~Naphthalene (0.43 mg/L), 1-Methylnaphthalene (0.19 mg/L), 2-Methylnaphthalene (0.21 mg/L) and phenol (0.1 mg/L). Low~~ Chloride concentrations ~~of aniline, 2,4-Dimethylphenol, 2-Methylphenol, 3+4-Methylphenol and phenanthrene were also detected. See Section 8.10 data tables for a complete list of the analytical summary.~~

~~No anions were detected in RW-2 that~~ exceeded ~~applicable standards for 2013. Total and dissolved metals that exceeded the applicable standards include barium, iron and manganese. Low concentrations of arsenic, selenium, and zinc were also detected. In 2012 no VOCs were detected, however in 2011, 1,2,4-Trimethylbenzene, naphthalene and 1-Methylnaphthalene were detected at high concentrations as well as low concentrations of chloromethane and n-propylbenzene. See Section 8.10 data tables for a complete list of the analytical summary.~~

~~In RW-5 benzene and ethyl benzene exceeded the applicable standards in 2011, 2012 and 2013. Total xylene, MTBE and anions were also detected at concentrations below the applicable standards in 2013. Total and dissolved metals that exceeded the applicable standards include barium, iron and manganese. Low concentration of arsenic was detected while uranium was non-detect for 2013~~

~~(<0.001 mg/L). Dissolved metals analysis indicated low concentrations of arsenic, and zinc in 2013. High concentration of four organic compounds were detected that exceeded the applicable standards: 1,2,4-Trimethylbenzene (0.09 mg/L), naphthalene (0.12 mg/L), 1-Methylnaphtalene (0.097 mg/L), 2-Methylnaphthalene (0.13 mg/L), and phenol (0.018 mg/L) in 2013. Low concentrations of 1,3,5-Trimethylbenzene and n-Propylbenzene were also detected in 2013. See Section 8.12 data tables for a complete list of the analytical summary.~~

~~In RW-6 benzene, ethyl benzene and total xylene were all detected at concentration levels above the applicable standards. Low concentrations of toluene and MTBE were also detected in 2013. No anions were detected exceeding the applicable standards in RW-6. Total and dissolved metals that exceeded the applicable standards include arsenic, barium, iron and manganese. Lead and selenium were detected below applicable standards and no detection of uranium (<0.001 mg/L) in 2013. Low concentrations of arsenic, lead, selenium and zinc were detected as dissolved metals. Five VOCs were detected which exceeded applicable standards in 2013: 1,2,4-Trimethylbenzene (0.28 mg/L),~~

~~1,3,5-Trimethylbenzene (0.14 mg/L), naphthalene (0.48 mg/L), 1-Methylnaphthalene (0.2 mg/L) and 2-Methylnaphthalene (0.27 mg/L) in 2013. See Section 8.10 data tables for a complete list of the analytical summary.~~

~~Quarterly inspections for the RW series of wells include product recovery through the use of disposable bailers in RW-5 and RW-6 and a portable 2-inch bladder pump in RW-1. All purged water is collected in a 55-gallon drum or a 5-gallon bucket. The visible layer of hydrocarbon floating on the top is measured in inches before it is disposed of upstream of the NAPIS. Calculations are an estimated value based on the sampler's measurements and observations. See Appendix A for year to date information on the amount of hydrocarbon recovered from each well.~~

~~Hydrocarbon recovery from RW-1 has shown a steady decrease of hydrocarbon levels from 2005 to 2013. Total hydrocarbon recovery for 2013 was estimated at 2.3 gallons in 86 gallons of water purged compared to 2005 when an estimated 431 gallons of hydrocarbons was recovered in 1,210 gallons of total water purged. RW-1 quarterly inspections and SPH recovery continues. No measureable hydrocarbon has been detected in RW-2 during quarterly inspections and no product recovery is done at this well.~~

~~In RW-5 and RW-6, water is purged using a polyethylene disposable bailer. Purged water is collected in a 5-gallon bucket and disposed of upstream of the NAPIS. RW-5 has shown a steady decrease of hydrocarbon levels from 2005 to 2013. In 2005 an estimated 17 gallons of hydrocarbons was recovered and the last time hydrocarbons were recovered from this well was in 2009 with an estimated 0.05 gallons of product in 15 gallons of water purged. Although no measureable hydrocarbon layer has been detected since 2010, quarterly bailing continues as the water purged contains an oil sheen, has a slight yellow tint and also a hydrocarbon odor was detected.~~

~~RW-6 has also shown a decrease in product recovery compared to 2005 where an estimated 17 gallons of product was recovered and none in 2013. Although no measureable hydrocarbon level~~ ~~4~~

~~is detected during quarterly inspections, bailing continues as the purged water observed contains an oil sheen, has a slight yellow tint and a hydrocarbon odor was detected.~~

the ~~**6.4 CONSTITUENT LEVELS IN GROUP D MONITORING WELLS**~~

~~**6.4.1 PW-2, PW-3, PW-4**~~

~~PW-2, PW-3 and PW-4 are all process/production wells which supply process and domestic water for the refinery, company housing and for the Pilot Travel Center. PW-2 is located on the west side of the refinery property, directly west of evaporation pond 6. PW-3 is centrally located directly north of the maintenance shop and PW-4 is located on the southern edge of the refinery property next to the Pilot Lift Station. All three wells are set at 1000 feet and are located in the San Andreas/Yeso Aquifer.~~

~~PW-2 and PW-4 are on a 3-year staggered annual sampling schedule. PW-2 is scheduled for sampling in 2014 and PW-4 is scheduled for 2013. PW-3 is currently on an annual sampling schedule which began in 2010 due to the detection of 2-Methylnaphthalene (0.032 mg/L) at a concentration level above the EPA RSL standard of 0.027 mg/L. Pursuant to NMED's Comment 12 of the May 16, 2011 NOD (May 2011 NOD) for the Annual Ground Water Monitoring Report 2009, sampling was changed to an annual event. Ground water samples were analyzed for the following analytes: 8260B plus MTBE, 8270 plus phenol, WQCC Metals, cyanide and nitrates. Process wells were sampled on the following dates:~~

~~PW-3:9/10/2013~~
~~PW-4:9/10/2013~~

~~In PW-3, analytical results for BTEX and MTBE concentration levels were all non-detect (<RL) for 2013. No metals (total/dissolved) were detected that exceeded any applicable standards, however low concentrations of arsenic, barium, iron, manganese, selenium, uranium and zinc were detected. No~~

~~VOCs or SVOCs were detected in PW-3 in 2013. However in January 2008 2-Methylnaphthalene (0.032 mg/L) was detected for the first time in PW-3 exceeding the EPA RSL standard of 0.027 mg/L.~~

~~Low concentrations of 2,4-Dimethylphenol (0.016 mg/L), 2-Methylphenol (0.21 mg/L), 3+4-Methylphenol (0.36 mg/L), phenanthrene (0.017 mg/L) and phenol (0.8 mg/L) were also detected. PW-3 was re-sampled in August 2008 along with a blind duplicate and analytical results confirmed no detectable concentration levels of SVOCs.~~

~~PW-4 analytical results for BTEX and MTBE were all non-detect or less than the reporting detection limit for 2013. Iron (1.5 mg/L) was the only metal that exceeded the WQCC standard of 1.0 mg/L in 2013. Low concentrations of arsenic, barium, manganese, selenium, uranium and zinc were also detected. Three organic compounds were detected in 2013 at concentration levels below the applicable standards and are listed as follows: 1,2,4-Trimethylbenzene (6.8E-03 mg/L), 1,3,5-Trimethylbenzene (2.3E-03 mg/L) and n-Propylbenzene (1.3E-03 mg/L).~~

~~PW-2 was last sampled in 2011 and next scheduled sampling is in 2014. See Section 8.11 for a complete list of the analytical summaries for the PW wells.~~

~~6.4.2 OW-1, OW-10~~

~~OW-1 is located on the west side of the refinery property (west of EP-6). OW-10 is located up-gradient from OW-1 on the southeast section of the refinery property (east side of EP-9). OW-1 and OW-10 are screened in the Sonsela stratigraphic unit. In the approved 2010 FWGWMP (August 25, 2010), inspection requirements were modified on both of these wells to include sampling on a quarterly basis. Third quarter sampling was combined with the annual sampling event per approval from NMED and OCD. Ground water samples were analyzed for the following analytes: Major cations/anions, 8260B plus MTBE, 8015B and WQCC Metals. Ground water samples were taken on the following dates.~~

~~OW-1: 3/19/13,~~	~~6/13/13,~~	~~9/4/13,~~	~~11/11/13~~
~~OW-10: 3/19/13,~~	~~6/13/13,~~	~~9/4/13,~~	~~11/11/13~~

~~BTEX and MTBE analytical results continue to indicate no detectable levels from 2010 through 2013 in OW-1. Low concentrations of anions, nitrates were detected including no detectable levels of DRO/GRO/MRO in 2013. Uranium was the only metal (total/dissolved) that exceeded the WQCC standard of 0.03 mg/L from 2010 through 2013. Other metals detected at low concentrations include arsenic, barium, lead, manganese, selenium and zinc. Section 8.12.2 contains the analytical summary for the total metals and Section 8.12.3 contains the analytical summary for the dissolved metals. No VOCs were detected in OW-1 for 2013. For a complete list of the analytical summaries for OW-1 see Section 8.12.~~

~~In OW-10, analytical results for BTEX have all been less than the reporting detection limit (<RL) from 2010 through 2013. MTBE was detected exceeding the NMED Tap Water screening standard of 0.125 mg/L in the first (0.17 mg/L) and second (0.22 mg/L) quarters in 2013. Analytical data for MTBE indicates an increase in concentration from 2010 and exceeded the NMED Tap Water standard of 0.125 mg/L for the first time in the second quarter of 2012. Chloride was the only anion that exceeded the WQCC~~ standard of 250 mg/L ~~in all four quarters in 2013 with the highest reading in the second quarter (2400 mg/L). Nitrate also exceeded the WQCC standard of 10 mg/L in the third quarter 2013. GRO was detected in the first (0.11 mg/L), second (0.15 mg/L), third (0.051 mg/L) and fourth (0.055 mg/L) quarters of 2013. No DRO/MRO was detected. Uranium was the only metal (total/dissolved) that exceeded the WQCC standard of 0.03 mg/L from 2010 through 2013. Other metals (total/dissolved) detected at low concentrations include arsenic, barium, manganese, selenium and zinc. Section 8.12.2 contains the analytical summary for the total metals and Section 8.12.3 contains the analytical summary for the dissolved metals. Three organic~~during both semiannual sampling events, at 2,800 mg/L and 4,100 mg/L, respectively. Sulfate concentrations exceeded the standard of 600 mg/L during the first semiannual event. All other constituents were ~~detected at low concentrations in the first and second quarters of 2013 and are listed as follows: 1,1-Dichloroethane, 1,2-Dichloroethane (EDC), and 1,1-Dichloroethene. For a complete list of analytes for OW-10 see Section 8.12 data tables.~~

~~6.4.3 OW-11, OW-12~~

~~OW-11 is located along the main entrance into the refinery property on the southeast section of the~~

~~refinery property (west of the main entrance road). OW-12 is centrally located in the refinery directly northwest of the main refinery tank farm, also known as the bone yard and/or surplus yard.~~ either below applicable standards or were ~~OW-11 and OW-12 are screened in the Sonsela stratigraphic unit. Ground water sampling is conducted annually. Ground water samples were analyzed for the following analytes: OW-11 - Major cations/anions, 8260B plus MTBE, 8270 plus phenol, and WQCC metals and for OW-12: 8260B plus MTBE, general chemistry and WQCC metals. Wells were sampled on the following dates:~~

~~OW-11: 9/16/13~~	~~OW-12: 9/10/13~~

~~In OW-11 and OW-12, analytical results for BTEX and MTBE were all non-detect from 2006 through 2013. In OW-11, fluoride and sulfate concentration levels exceeded the applicable standards in 2013. Uranium was the only metal (total/dissolved) detected which exceeded the WQCC standard of 0.03 mg/L from 2007 through 2013 in OW-11. Low concentrations of arsenic, barium, iron, manganese and selenium were detected as total/dissolved metals. Additional dissolved metals analysis detected include arsenic, and zinc. No VOCs have been detected in OW-11 or OW-12. For a complete list of analytes see Section 8.13 data tables.~~

~~In 2013, no metals (total/dissolved) were detected that exceeded the applicable standards. Low concentrations of arsenic, barium, iron, manganese, uranium and zinc were detected. See section 8.13 data tables for a complete list of the analytical summary.~~

~~6.5 CONSTITUENT LEVELS IN EVAPORATION PONDS, INFLUENTS, EFFLUENTS, BOILER WATER TO EP-2 AND LEAK DETECTION UNITS~~

~~6.5.1 EVAPORATION PONDS 1 THROUGH 12B~~

~~The evaporation ponds are located on the west-northwest section of the refinery property. In 2011, the approved FWCWMP (August 25, 2010) added ponds 9A, 11, 12A and 12B to the monitoring~~

~~schedule and sampling frequency was changed from annual to semi-annual. Evaporation pond water samples were analyzed for the following analytes: General Chemistry, 8260B plus MTBE, WQCC metals, 8270 plus phenol, Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), E-Coli Bacteria. The ponds were sampled on the following dates:~~

~~EP-1 thru EP-12B: 5/28/13, 5/29/13, 10/15/13, 10/16/13~~

- ~~For clarification on pond 1 (identified as EP-1), is a holding pond for the aeration lagoons and is~~ not ~~considered as an evaporation pond but rather a holding pond (commonly referred to as pond 1) and is not included in SWMU No.~~detected (Tables 8.17 and 8.17.1). ~~2 Evaporation Ponds. Pond 1 (EP-1) has been continually sampled with the evaporation ponds on a semi-annual basis.~~

~~Analytical results for BTEX and MTBE were all at non-detectable concentration levels for EP-1 through EP-12B in 2013. High concentrations of fluoride, chloride, and sulfates have been detected in all of the evaporation ponds in 2013. BOD and COD analyses exceeded the general requirements listed in 20 NMAC 6.2.2101 in EP-1 through EP-12B. See Section 8.14.1 and 8.14.2 for a complete list of the analytical summaries.~~

~~Total metals detected that are common to all the ponds are arsenic and manganese with concentration levels exceeding the applicable WQCC standards in 2013. Iron was detected in EP-2 through 12B and selenium was detected in EP-7, EP-8 and EP-9 all at concentration levels above the WQCC standards. Low concentrations of barium, chromium, and zinc have also been detected in several of the evaporation ponds. Low concentration of uranium has only been detected in EP-1. Section 8.14.3 data table contains a complete list of total metals detected.~~

~~Dissolved metal manganese was detected in all of the ponds except in EP-4. Iron was also detected in EP-2 and arsenic was detected in EP-2 through EP-12A at concentrations above the applicable standards in 2013. Section 8.14.4 data table contains the dissolved metals list.~~

~~In 2013 no VOCs were detected in any of the evaporation ponds including pond 1. SVOCs detected in~~

~~various ponds include the following: Aniline was detected in EP-2, EP-4, EP-5 and EP-12A/B above~~

~~the EPA RSL standard of 0.012 mg/L. 2-Methylphenol was found in EP-2, EP-3 and EP-12B and phenol was detected in EP-2 through EP-6 and EP-12B. See Section 8.14 data tables for a summary of all analytes discussed in this section.~~

~~6.5.2 INFLUENTS TO AL-1; AL-2; EP-1~~

~~In 2013, the fluid levels in the lagoons began to decline due to re-routing of the influents into the WWTP. The lagoons at the aeration basin had higher than normal fluid levels beginning in the second half of 2011 through 2012 due to an increase in water usage in the process units and high precipitation. As a result the outlet discharge pipes going into pond 1 (EP-1) was immersed under water for most of 2012 due to the high levels.~~

~~Initial start up of the new Waste Water Treatment Plant (WWTP) occurred in May 2012 and all waste water was routed to the WWTP via Tank 35 and the NAPIS unit by the end of June 2012. Last set of samples collected from Infl to AL-1 was in June 2012 and the only "waste water" going into AL-1 was from the pilot lift station. The water level in AL-1 remained constant as this lagoon continued to receive effluent from the pilot lift station and gravitational flow continued between AL-1 to AL-2 and AL-2 to pond 1. Grab samples were collected at sample points as long as there was continued gravitational flow.~~

~~These outfalls were sampled on a quarterly basis. Influent to AL-1 and AL-2: 8260B plus MTBE, BOD, COD, Chloride, 8015B, pH and Phenol. Influent to EP-1: Major cations/anions, pH, BOD, COD, 8260B plus MTBE, 8270 plus phenol, 8015B, and WQCC Metals. Method 8270 analysis was missed during the November sampling event and on 12/5/12 samples were collected. Influents were sampled on the following dates:~~

~~Infl to AL 2: 3/19/13, 6/13/13~~
~~Infl to EP 1: 3/19/13, 6/13/13~~

~~No samples have been collected from sample point "Influent to AL-1" since June 2012. AL-1 continued to receive effluent from the Pilot Lift station through early June 2013 and samples were collected identified as "Pilot Effluent". In the second half of 2013, the lagoons began to recede due to inactivity (no source of flow).~~

~~Gravitational flow continued between lagoons and pond 1 through the second half of 2013. Infl to AL-2 and Infl to EP-1, had no detectable concentrations of BTEX and MTBE constituents in 2013. Chloride concentrations were also above the WQCC standard of 250 mg/L for all of 2013. DRO was detected at a concentration level above the NMED Table 6 (unknown oil) TPH screening guidelines for Potable Ground Water (GW-1) (Jun 2013) for the first and second quarters. GRO was detected at 2.1 mg/L in the first quarter and 5.0 mg/L in the second quarter and MRO was detected at 6.5 mg/L in the second quarter and no detection of DRO. BOD and COD concentration levels were above the applicable standards for the first and second quarters of 2013. No VOCs or SVOCs were detected in 2013. Section 8.18 contains the analytical summary.~~

~~Gravitational flow continued into pond-1 from AL-2 through the second half of 2013. There were no detectable concentrations of BTEX and MTBE constituents in 2013 from samples collected at Infl to pond-1. High concentrations of fluoride, chloride and sulfate were detected in all four quarters of 2013 including a high concentration of DRO and MRO in the second quarter no detection of GRO. BOD and COD concentration levels were above the applicable standards for 2013. Total metals with high concentrations include arsenic, iron and mercury in the second quarter of 2013. Low concentrations of barium, chromium, copper, lead, selenium, uranium and zinc were also detected. Analytical results for dissolved metals were all less than the WQCC standards. See Section 8.18.1 data table for list of the analytical data.~~

~~Phenol was the only SVOC detected in the second quarter 2013 exceeding the EPA RSL tap water standard (0.006 mg/L). Several VOCs and SVOCs were also detected at low concentrations and include acetone, carbon disulfide and 3+4 Methylphenol. See Section 8.18 data tables for a~~

~~complete list of analytes detected.~~

~~6.5.3 EFFLUENTS: AL-2 TO EP-1; PILOT EFFLUENT, NAPIS EFFLUENT~~

~~The last flow (Pilot Effluent) going into AL-1 was routed to the WWTP in June 2013. In mid June 2012, NAPIS effluent was routed to the new WWTP via Tank 35, and the NAPIS. The last set of samples collected from sample point "NAPIS effluent" occurred in June 2012.~~

~~The effluents are sampled on a quarterly basis. Pilot Effluent is sampled for the following analytes: 8260B plus MTBE, 8015B, BOD, COD and WQCC Metals. NAPIS Effluent is sampled for the following analytes: General chemistry, 8260B plus MTBE, 8270 plus phenol, 8015B and WQCC Metals. AL-2 to EP-1 is sampled for the following analytes: Major cations/anions, 8260B plus MTBE, 8270 plus Phenol, 8015B and WQCC Metals. The effluents were sampled on the following dates:~~

~~AL-2 to EP-1: 3/19/13, 6/13/13~~
~~Pilot Effluent: 3/19/13, 6/13/13~~

~~There were no BTEX or MTBE constituents detected in effluent AL-2 to EP-1 for 2013. Fluoride, chloride and sulfate all had high concentration levels exceeding the WQCC standards in 2013. DRO also exceeded the NMED Table 6 (Unknown Oil) TPH screening guidelines in the second quarter (6.0 mg/L) in 2013 and no GRO/MRO was detected. Total metals with high concentrations include arsenic, iron, manganese and mercury, detected only in the second quarter. Low concentrations of barium, chromium, copper, lead, selenium, uranium and zinc were also detected. Dissolved metals detected low concentrations of arsenic, barium, chromium, iron, manganese, selenium, uranium and zinc. No VOCs or SVOCs were detected exceeding the applicable standards in 2013, however low concentration of acetone, carbon disulfide, 3+4-Methylphenol and phenanthrene were detected. See Section 8.17 data tables for a complete list of analytes detected.~~

~~Pilot Effluent samples had no detectable concentration levels for benzene, ethylbenzene, total xylene and MTBE constituents in 2013. A low concentration of toluene was detected in the second quarter~~

~~(1.7E-03 mg/L). High concentrations of DRO was detected in both quarters exceeding the NMED Table 6 (Unknown Oil) TPH screening guidelines. GRO analysis indicated non-detect for 2013 and Motor Oil Range Organics (MRO) was detected in the second quarter at 14 mg/L. BOD and COD~~

~~concentration levels were all above the general requirements listed in NMAC 20.6.2.2101. Total metal analysis detected high concentrations of iron in the first and second quarters and low concentrations of arsenic, barium, chromium, copper, manganese, selenium, mercury and zinc. No dissolved metals exceeded applicable standards for 2013 only low concentrations of arsenic, barium, chromium, iron, manganese, selenium and zinc were detected. No VOCs were detected in 2013 that exceeded applicable standards, however very low concentrations of acetone and 4-Isopropyltoluene were detected. See section 8.17 data tables for a complete list of analytes detected.~~

~~No samples from sample point "NAPIS Effluent" were collected in 2013, as this flow was diverted into the WWTP in June 2012. See Section 8.17 data tables for a complete list of analytes detected at this location.~~

~~6.5.4 LEAK DETECTION UNITS (LDU): EAST LDU, WEST LDU, OIL SUMP LDU~~

~~The NAPIS secondary containment units or otherwise known as the leak detection units (LOUs) are identified as East LOU, West LOU and Oil Sump LOU. The leak detection units are installed on the east and west bays for leak detection. The East LOU is located on the southeast corner of the east bay of the NAPIS unit. The West LOU is located on the southwest end of the west bay of the NAPIS unit. The Oil Sump LOU is located on the northeast section of the east bay. The LOUs are a new addition to the approved 2010 FWGWMP (August 25, 2010) sample schedule.~~

~~The west bay of the NAPIS was taken out of service for maintenance repairs in June 2013, however the LOU had a water level and samples were collected. The west bay of the NAPIS remained out of service for the remainder of 2013. In the East LOU, no water was detected during the third quarter and no samples were collected. Third and fourth quarter inspections of the Oil Sump LOU indicated a water level of less than one inch thus no samples were collected.~~

~~These units are sampled and inspected on a quarterly basis. Third quarter sampling was combined with the annual sampling event per approval from NMEO and OCO. LOUs are sampled for the~~

~~following analytes: 8021B plus MTBE, 8015B and WQCC Metals. The units were sampled on the following dates:~~

~~East LOU: 3/18/13, 6/12/13, 11/12/13~~
~~West LOU: 3/18/13, 6/12/13, 9/5/13, 11/12/13~~
~~Oil Sump LOU: 3/18/13, 6/12/13~~

~~All three LOUs had high concentrations of benzene, toluene, total xylene in all four quarters of 2013. Ethylbenzene was detected in the Oil Sump LOU in the first and second quarter at concentration levels exceeding the EPA MCL standard of 0.7 mg/L. Low concentration of ethylbenzene was also detected in the East and West LOUs and no detectable level of MTBE in all three LOUs for 2013. High concentration of ORO was detected in all three LOUs as well as GRO. NO detection of MRO in any of the LOUs for 2013.~~

~~Total metals detected in the East LOU include arsenic, chromium and manganese that exceeded the applicable standards and low concentrations of barium, iron and selenium were also detected. Oissolved metals that exceeded the applicable standards include chromium and manganese in all four quarters. Arsenic, barium, iron, lead, selenium and zinc were also identified at low concentration levels. VOCs detected include 1,2,4-Trimethylbenzene and 1,3,5-Trimethylbenzene.~~

~~Total metals in the West LOU that exceeded the WQCC standard include chromium, iron and manganese. Low concentrations of arsenic, barium, selenium and zinc were also detected in 2013. Oissolved metals that exceeded the applicable standards include chromium, iron and manganese. Arsenic, barium and zinc were also identified at low concentration levels. VOCs detected include 1,2,4-Trimethylbenzene and 1,3,5-Trimethylbenzene.~~

~~Total metals detected in the Oil Sump LOU that exceeded the applicable standards are as follows: Arsenic, chromium and manganese and low concentrations of barium, iron, selenium and zinc were also detected in 2013. Oissolved metals that exceeded the applicable standard include arsenic, chromium, manganese and selenium. Barium, iron and zinc were also detected at low concentrations. VOCs detected include 1,2,4-Trimethylbenzene and 1,3,5-Trimethylbenzene. See~~ ~~5~~

~~Section 8.7 data tables for a summary of all analytes detected at these locations.~~

~~6.5.5 BOILER WATER TO EVAPORATION POND 2 (BW TO EP-2)~~

~~BW is defined as reverse osmosis water coming from the Boiler unit. The flow from the boiler unit flows into EP-2 through a 4-inch PVC pipe. The location is directly west of pond 1. BW to EP-2 is sampled on a semi-annual basis and sampled for the following analytes: Major cations and anions. BW to EP-2 was sampled on the following dates:~~

~~BW to EP-2: 5/28/13, 10/15/13~~

~~BW to EP-2 had no high concentration levels of cations and/or anions with the exception of sulfate which exceeded the WQCC standard in 2013. See Section 8.16 data tables for a complete list of analytes detected.~~

~~6.5.6 EVAPORATION POND 2 INLET (EP-2 INLET)~~

6.7.5 OUTFALL STP1 to EP-2 Inlet

The EP-2 Inlet designation was changed to STP1 to EP-2 in the second half of 2012 due to the startup of the new WWTP and the new sanitary treatment pond (STP-1). STP-1 effluent now flows into the northeast corner of EP-2. ~~2012 sample taken for~~ The STP1 to EP-2 ~~Inlet is from STP-1~~ inlet ~~flow. EP-2 Inlet~~ is sampled on an annual basis, and sampled for the following analytes: ~~8260B plus MTBE, 8015B~~VOCs, GRO, DRO, MRO, BOD, COD, and TDS. ~~EP-2 Inlet was sampled on the following date:~~

The EP-2 ~~Inlet: 9/5/13~~

~~Benzene (0.033 mg/L)~~inlet was ~~detected exceeding~~sampled in 2014 on the ~~EPA MCL standard of 0.005 mg/L during the annual sampling event and DRO was also detected at 3.3 mg/L exceeding the NMED TPH screening guidelines in 2013 and no detection of GRO/MRO. TDS was detected at 2340 mg/L, which is down from the previous year of 3720 mg/L. BOD and COD concentration levels were also~~ ~~6~~

~~above the 20 NMAC 6.2.2101 general requirements for 2013. Low concentration of acetone and 2-Butanone~~following dates:

~~Annual Ground Water Monitoring Report 2013 Gallup Refinery 92 Giant Crossing Road Gallup, NM 87301~~**Quarter 1:** 3/05/2014	**Quarter 3** 9/10/2014
Quarter 4: 3/05/2014	

~~were detected in 2013 that did not exceed any~~ The benzene and DRO concentrations of 0.018 mg/L and 2.4 mg/L, respectively, exceeded the constituents' applicable standards. ~~See Section 8.15 for a complete list of analytes.~~

~~6.6 ADDITIONAL SAMPLING AND/OR CHANGES~~

~~The start-up of the new waste water treatment plant (WWTP) occurred in~~ Additionally, the ~~month of May 2012. With this came revisions to~~TDS concentration of 2,780 mg/L exceeded the ~~influent and effluent sample locations at the aeration lagoons, pond~~ standard of 1~~ and at the NAPIS. Sample requirements for these locations were a result of historical New API Separator Spills addressed under the OCD Discharge Permit (GW-032), Section 16. In the second half of 2012, sample location NAPIS Effluent (NAPIS-EFF) and Influent to AL-1 (Infl to AL-1) were rerouted to the new WWTP and sampling at both of these location was discontinued. In June 2013, Pilot effluent was routed into the WWTP ending all flows into the aeration basin. The fluid levels in the aeration basin are slowly beginning to recede and grab samples continue to be collected at specified intervals as long as there is gravitational overflow from AL-1 into AL-2 and AL-2 into pond 1. By the third quarter of 2013 all flows ceased between lagoons and samples were no longer collected. There continues to be a fluid level in the lagoons and pond 1 due to precipitation.~~

~~6~~

~~In July of 2012 a new well was installed on the northwest corner of where the former benzene strippers were located. This well was installed as a result of a site investigation at the aeration basin for SWMU-1 and SWMU-14 (Old API Separator) conducted by RPS. The site investigation included numerous soil and ground water sampling at the aeration basin to determine and evaluate the presence, nature, and extent of releases at this site. The site investigation was conducted by RPS and the well was developed by Enviro-Drill, Inc. The new well is identified as OAPIS-1. Well logs and analytical data are presented in Appendix F. On April 2, 2013, OAPIS-1 was surveyed by a professional surveyor for vertical and horizontal positions, ground level elevation, well casing rim elevation, corresponding measuring point description and current coordinate system. Survey is in accordance with Sections 500.1 through 500.12 of the Regulations and Rules of the Board of Registration for Professional Engineers and Surveyors Minimum Standards for Surveying in New~~

~~Mexico. A copy of the survey is included in Appendix F. In the 2012 Updates, Facility Wide Ground Water Monitoring Work Plan, a request was made to add OAPIS-1 to the monitoring schedule for 2013, and is still pending approval from NMED. Although this request has not yet been approved, sampling began in 2013 and has been added to Group B Monitoring Wells.~~

~~The continued site investigation of the hydrocarbon seep resulted in the installation of several temporary wells of which 18 wells have been turned into permanent monitoring wells and are designated as "MKTF" wells. These wells were completed in late 2013 and have been requested to be added to the 2013 Monitoring Schedule in the 2013 Ground Water Work Plan Updates submitted in March 2014 (pending approval) to NMED. These wells will be designed as "Group E" wells in the 2014 Annual Ground Water Report. Depth to water and/or depth to product measurements are included in Section 9 as well as copies of the boring logs in Appendix F.~~

- ~~In the 2011 Updates for the Ground Water Work Plan, submitted March 29, 2012, a request was made to change the sampling schedule for OW-50 and OW-52 to reduce the quarterly sampling to an annual event. Since its development in 2009, no~~,000 mg/L. All other BTEX ~~or MTBE~~and 8015 constituents ~~have been detected in either of these wells. Metals detection has also been minimal with only trace levels detected. On September 24, 2012, in NMED's Disapproval, Facility Wide Ground Water Monitoring Work Plan, 2011 Updates, Comment 6. NMED concurred with Western's request and annual sampling of OW-50 and OW-52 commenced in 2013.~~were below the applicable standards (Table 8.18).

- ~~Another requirement~~The fluoride concentration (54 mg/L) exceeded the constituent standard during quarter three; the constituent was not detected during the fourth quarter. Chloride concentrations exceeded the applicable standard during each sampling event, with a high of 4,100 mg/L during quarter four. Sulfate, BOD, and COD concentrations exceeded the applicable standards during each sampling event of 2014 (Tables 8.18.1 and 8.18.2).

- Total metals were detected as follows (Table 8.18.3):

  - Arsenic concentrations exceeded the constituent standard of 0.01 mg/L during each sampling event.

  - Iron concentrations exceeded the constituent standard of 1.0 mg/L during quarters three and four.

  - Manganese concentrations exceeded the constituent standard of 0.2 mg/L during quarter one.

  - Low concentrations of barium, chromium, selenium, uranium, and zinc were detected during each sampling event but each were below applicable standards

- Lead, silver, and mercury were not detected during any sampling event.

- Dissolved metals were detected as follows (Table 8.18.4):
  - The arsenic concentration (0.011 mg/L) exceeded the constituent standard during quarter three.
  - Iron concentrations exceeded the constituent standard during quarters three and four.
  - Manganese concentrations exceeded the constituent standard during quarters one and three.
  - Low concentrations of barium, selenium, uranium, and zinc were detected below the applicable standards.
  - Cadmium, copper, and lead were not detected during any sampling event.

- The concentration of 2-methylphenol (22 mg/L) exceeded the applicable standard of 0.93 mg/L. The concentration of phenol (140 mg/L) exceeded the applicable standard of 5.8 mg/L. Low concentrations of acetone, 2-butanone, and carbon disulfide were detected but are below applicable standards (Tables 8.18.5 and 8.18.6).

6.8 ADDITIONAL SAMPLING AND/OR CHANGES

Requirements by NMED~~ was to sample~~:

- Sample wells ~~up gradient~~upgradient from the NAPIS~~ 1, NAPIS 2, NAPIS 3, KA 3~~ wells, OW-1, OW-10, and OW-11 and review ~~ground water~~ analytical results to determine if uranium detections are similar ~~to~~in concentrations in unaffected wells~~, per NMED correspondence dated December 12, 2012, Comment 12, Approval with Modifications, Annual Ground Water Monitoring Report, Gallup Refinery, 2010, Revision 1. The addition of WQCC metals (total/dissolved) was added as an additional sampling requirement for all up gradient wells of the NAPIS wells as well as~~.

- Sample upgradient wells from the NAPIS wells, OW-1, OW-10, and OW-11 for total and dissolved metals.

~~A request was also made in the 2011 Work Plan Updates to change analytical sampling method 8021B to 8260B for a more detailed list of VOCs in GWM-2 and GWM-3 which may help in determining the source of the water found in these wells, (Pending approval from NMED).~~

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The marketing (MKTF) wells from the hydrocarbon seep investigation have been added to the ground water sampling plan.

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SECTION 7

CONCLUSIONS AND RECOMMENDATIONS

This section is an overview of the analytical water quality data collected to identify potential impacts to the ~~ground water~~groundwater and determine if further monitoring or site investigations are required.

7.1 GROUP A

The boundary wells (BW-1A, BW-1B, BW-1C, BW-2A, BW-2B, BW-2C, BW-3A, BW-3B, and BW-3C) located in the northwest corner of the refinery along the west sides of evaporation ponds 7, 8 and 11 have not shown any detection of BTEX or MTBE constituents during annual sampling events. High concentrations of ~~fluorides were~~fluoride have been detected in BW-1C, BW-2B, and BW-~~2B~~2C, which may be naturally occurring in the ~~ground water.~~groundwater. In ~~BW-2B and BW-3C, two metals detected selenium and~~ 2014, iron ~~exceeded~~exceeding the applicable ~~standards in 2013.~~standard was detected in wells BW-2C and BW-3C, but this metal may be naturally occurring as well. Low concentrations of barium, lead, manganese, and uranium ~~have also been~~are frequently detected ~~at various times~~ in most of the ~~BW wells as well as chromium in BW-1C and BW-3B.~~boundary wells. In July 2009, the semi-volatile organic compound bis(2-ethylhexyl) phthalate was detected in BW-3B and in BW-3C in 2011. In 2013, the compound bis(2-ethylhexyl)phthalate was detected for the first time in BW-1C at a concentration level of 0.01 mg/L. Detection of this organic compound in the ~~ground water~~groundwater sample may be a laboratory contaminate or possibly from the PVC pipe materials used as casing for the wells. No detections of the SVOC ~~has~~have been identified in the ~~ground water~~groundwater samples collected since its first discovery in any of the wells in this group.

~~***RECOMMENDATION:*** *Continue with current monitoring schedule. There have been no significant changes or discoveries of contaminants that warrant any changes.*~~

RECOMMENDATION: *Discontinue SVOCs.*

The MW (MW-1, MW-2, MW-4, and MW-5) series of wells are located around the RCRA LTU. No detectable concentration levels of BTEX or MTBE constituents have been ~~discovered~~found in the ~~ground-water~~groundwater samples collected from these wells. No metals (total or dissolved) exceeded the applicable standards, however very low concentrations of arsenic, barium, iron, manganese, and uranium were detected in all of the MW series of wells. ~~2013~~2014 analytical data indicates no detection of VOCs or SVOCs in any of the MW wells~~,~~; however in 2008, bis~~-~~(2-ethylhexyl)~~-~~phthalate was detected in the ~~ground-water~~groundwater collected from MW-4. The detection of this particular constituent in the ~~ground-water~~groundwater sample may have been a laboratory contaminant or from the PVC pipe materials used in this well. These wells are also monitored under the RCRA Post Closure Permit on a 10-year cycle. The first cycle was completed in 2009/2010.

RECOMMENDATION: *Continue with current monitoring schedule and the RCRA 10 year monitoring. There have been no significant changes or discoveries of contaminants that warrant any changes other than the discovery of an organic compound in 2008.*

The SMW (SMW-2, SMW-4) wells are also located around the RCRA ~~land treatment unit~~LTU and are ~~developed~~screened in the Chinle/Alluvium Interface stratigraphic unit. These wells are also monitored under the RCRA Post Closure Permit on a 10-year cycle. The first cycle was completed in 2009/2010. No detectable concentration levels of BTEX constituents were found in these wells from 2006 through ~~2013~~2014. MTBE was only detected in SMW-2 in years 2008, 2010 through ~~2013~~2014 at concentration ~~level~~levels below the NMED Tap Water standard of 0.~~125~~143 mg/L. SMW-2 also had elevated chloride and sulfate levels, and two metals (total), manganese and uranium that were detected exceeding the WQCC standards. In SMW-4, uranium (0.~~031~~037 mg/L total and 0.033 mg/L dissolved) was the only metal that exceeded the WWCC standard of 0.03 mg/L in ~~2013~~2014. In ~~2013~~2014 no detections of any organic compounds have been detected in SMW-2 or SMW-4.

RECOMMENDATION: *Continue with current monitoring schedule~~ and the RCRA 10 year monitoring. There have been no significant changes or discoveries of contaminants that warrant any changes. Low concentrations of MTBE discovered in SMW-2 will be monitored.~~.*

7.2 GROUP B – ~~GROUND WATER~~GROUNDWATER MONITORING

Analyses of ~~ground-water~~groundwater samples collected from GWM-1 indicate high concentrations of benzene which would indicate the potential for historical releases from the aeration lagoons. ~~GWM-2 continued to have a water level throughout 2013 with no detection of BTEX constituents. MTBE has been discovered in GWM-2 at concentration levels below the NMED Tap Water Standard of 0.125 mg/L. In 2013 inspection of GWM-3 indicate no detection of water in this well for the year.~~ An insufficient volume of water was detected in GWM-2 during the fourth quarter of 2013, and the well was reported dry for all of 2014. Additionally, no groundwater was detected in GWM-3 during 2013 and 2014.

Pond levels in the lagoons and pond 1 decreased in 2013 because all the influent into the aeration lagoons ~~into~~was diverted to the WWTP plant~~ was completed in June 2013.~~. The lagoons and pond 1 were taken out of service and no longer receiving any water~~ and have been slowly receding.~~. The levels in the lagoons and pond 1 ~~are~~have been significantly low and slowly evaporating. It was noted that the decrease in pond volumes did affect the water levels detected in the GWM wells. There were no significant changes in contaminant detections noticed in the GWM wells.

RECOMMENDATION: *Continue with inspections/sampling of the GWM wells.*

Also at the aeration basin are four monitoring wells situated around the NAPIS installed in 2007 and 2008 to address potential hydrocarbon leaks ~~of hydrocarbons~~ from the NAPIS. NAPIS-1 located on the east side (up-gradient) of the NAPIS has had no detectable contaminants since 2008. Down gradient of the NAPIS on the west side, NAPIS-2 and KA-3 have ~~recorded high~~had concentrations of benzene and MTBE~~. Benzene is present in KA-3 and low concentrations of MTBE have been detected.~~ above the applicable standards. Samples collected from NAPIS-3 ~~has~~have not shown any BTEX or MTBE constituents since September 2010. 1-~~Methylnaphthalene~~methylnaphthalene and naphthalene are ~~common to~~frequently detected in NAPIS-2 and KA-3.

RECOMMENDATION: *Continue with inspections/sampling of the NAPIS wells.* ~~*Maintenance work*~~ ~~6~~

~~*continues on the NAPIS unit to address the continued presence of liquids in the leak detection units. The flow into the lagoons ceased as a result of the startup of the new WWTP. The levels in the lagoons will eventually recede and continued monitoring of GWM-2 and GWM-3 will indicate if the high levels in the lagoons may have been the source of the water detected in these wells.*~~

There are three leak detection units on the NAPIS Unit which are inspected for fluid level. Quarterly inspections of the units have indicated the presence of fluids. All three leak detection units (East LDU, West LDU, and Oil Sump LDU) continue to have a fluid level and are pumped out on a regular basis. ~~When this Unit~~ During 2014, there was insufficient water for sampling in the East LDU during the third quarter, in the West LDU in the fourth quarter, and in the Oil Sump LDU during the year. When this unit is down for scheduled maintenance, the bays will be inspected internally and returned to service after a hydro-test with dye confirms no leakage into any of the LDUs. In June of 2014, the west bay was repaired with a plate installation, hydro-tested with fluorescent dye and no leaks were observed in the West LDU and the Oil Sump LDU. The west bay was placed back into service on July 8, 2014. Both LDUs were re-checked on August 6, 2014 and both showed no signs of leakage. ~~The east bay is scheduled for maintenance on July 22, 2014. After repairs are made and hydro-tested, the LDUs will again be checked for leaks. The work on the east bay is currently ongoing.~~

RECOMMENDATION: *Continue with inspections, gauging of the LDUs. During scheduled maintenance shutdown of the bays, inspect welds and hydro-test before placing back in service.*

A new well was installed on July 17, 2012, designated as OAPIS-1. The installation of this well is from a site investigation conducted according to the Investigation Work Plan Solid Waste Management Unit (~~SWMU~~SMWU) No. 1 Aeration Basin and ~~SWMU~~SMWU No. 14 Old API Separator. Analytical results indicate high concentrations of benzene and MTBE ~~**in all of** 2013.~~throughout 2014. Also high concentrations of arsenic, uranium, iron, manganese and cyanide ~~was~~were detected in this well.

RECOMMENDATION: *Continue with sample schedule and site investigation associated with this well and the area (aeration basin). The aeration basin is currently designated as ~~SWMU~~SMWU-1 in the RCRA Post Closure Care Permit and is in the process of a site investigation to determine and evaluate the presence of contaminants. Site investigations will include the GWM series of wells, the area surrounding the lagoons and take into account historical spills that have occurred in the area. Site investigation for the aeration basin will include additional soil borings and possible installation of additional monitoring wells dependent on* ~~6~~

contaminant levels found in soil/water samples.

Initial sampling of STP1-NW began in the second quarter of 2014. Fluids were not detected in STP1-SW during 2014. Analytical data of the three quarters in 2014 that STP1-NW was sampled indicate no detections of BTEX, VOCs, or SVOCs.

RECOMMENDATIONS: *Continue with current monitoring and sampling schedule.*

7.3 GROUP C ~~GROUND WATER~~ – GROUNDWATER MONITORING

~~Ground water~~Groundwater monitoring activities from the Group A wells (northeast side of the Refinery) have shown that an MTBE plume exists between wells OW-13, OW-14, OW-29, and OW-30. In March of 2010 dedicated pumps were installed in all four wells to prevent possible cross contamination from sampling equipment and or field activities. Although concentration levels of MTBE in OW-13 does not exceed the applicable standard of 0.~~125~~143 mg/L, sample data indicates a steady increase of MTBE from year to year. Of the three wells OW-14 is the only well where three constituents (benzene, ethyl benzene and MTBE) have been consistently detected in the ~~ground water~~groundwater samples collected since 2006 that have exceeded the applicable standards. All three constituents analyzed continue to increase from year to year through 2014. OW-14 is located down-gradient from two recovery wells RW-1 and RW-2. RW-1 is the only well where hydrocarbons are continually recovered. ~~2013~~2014 analytical data from RW-1 and RW-2 indicate high levels of BTEX, MTBE, ~~benzene, toluene~~ and ~~total xylene~~phenol.

Down gradient from OW-14 is OW-29, and OW-30 and the analytical data from both of these wells indicates that MTBE is present in the ~~ground water~~groundwater at concentration levels exceeding the NMED Tap Water standard of 0.~~125~~143 mg/L since March of 2010 in OW-29 and December 2007 in OW-30. Analytical data for these four wells indicate a steady increase of MTBE concentration levels indicating that the MTBE plume is slowly migrating in a north, north-west direction down-gradient from RW-1 and RW-2. The stratigraphic units in which these wells exist are in what is known as the Chinle/Alluvium Interface.

RECOMMENDATIONS: *Continue with current sample schedule. MTBE plume is present between OW-13, OW-14, OW-29 and OW-30 and analytical data indicates a very slight increase in concentration levels*

over time. It was suspected that the migration of the MTBE plume may be in a northeast direction. As a result OW-50 and OW-52 were installed down gradient from these wells. After three years of sampling no contaminants have been detected in the ~~ground water~~groundwater collected quarterly from these wells. It is possible that the MTBE plume may be migrating in a north-

northwest direction from OW-29 following the natural formation of the Chinle-Alluvium interface. Analytical data indicates that MTBE concentrations have been slowly increasing from year to year in OW-29 as well as OW-30.

Two new wells (OW-50 and OW-52) were installed in October 2009 down gradient of OW-13, OW-14 and OW-29 to monitor possible migration of MTBE ~~from these wells~~ in a north, north-east direction. To date, no detectable concentration levels of BTEX or MTBE constituents have been detected in OW-50 and OW-52. Based on the analytical data from these two new wells the migration of MTBE may be in a north-northwest direction from OW-29.

RECOMMENDATION: *Discontinue SVOCs. Continue with ~~sampling~~the current monitoring schedule.*

The inspection of the four recovery wells (RW-1, RW-2, RW-5 and RW-6) will continue as scheduled along with SPH recovery. No changes in product recovery are required and will continue with scheduled quarterly inspections. These wells were added to the annual sampling schedule beginning in 2011. Product recovery continues in RW-1 as there is a measureable hydrocarbon column thickness level. Field notes indicate that product recovery from RW-1 has decreased in quantity over the years with ~~two gallon~~an estimated 2.37 gallons of product recovered in ~~2013~~2014. RW-5 and RW-6 product recovery has also been ~~steadily~~ declining. From 2010 through ~~2013~~2014, no product has been recovered from RW-5 and no product was recovered from RW-6 in ~~2013~~2014. Although there is no measureable product level in RW-5 and RW-6 both wells will continue to be bailed as there is evidence of hydrocarbons in the wells from observing the bailed water (slight odor with a visible sheen).

RECOMMENDATIONS: *Continue with SPH recovery quarterly. ~~Analytical data from the RW wells confirmed the presence of high concentrations of BTEX and MTBE constituents as well as the detection of organic compounds. The MTBE plume appears to be migrating north-northwest towards OW-13, OW-14, OW-29 and OW-30 wells.~~ These wells will continue to be inspected on a quarterly basis.*

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7.4 GROUP D ~~GROUND WATER~~ – GROUNDWATER MONITORING

PW-2, PW-3 and PW-4 are all process/production wells that are all set at around 1000 feet. All three of these wells are sampled every three years with the exception of PW-3 which was changed to annual in 2009 due to the detection of 2-~~Methylnaphthalene~~methylnaphthalene in January 2008. Although the samples collected in August 2008 were all non-detect, it was determined by NMED that annual sampling was required for PW-3. No organic compounds have been detected in PW-3 from 2009 through ~~2012~~2014. Based on the analytical data the remaining two process wells remain relatively free of contaminants. ~~In 2013 three~~No organic compounds were detected in PW-4 ~~at concentration levels below the applicable standards and are as follows: 1,3,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, and n-Propylbenzene~~in 2014. PW-3 continues to be sampled on an annual basis pending approval from NMED for a request to return PW-3 to the 3-year sampling schedule. The next three year sample cycle schedule for PW-2 is ~~in year 2014~~2017.

RECOMMENDATIONS: *Continue with ~~sample~~current sampling schedule.*

OW-1 is an artesian well located on the west section of the refinery property. OW-1 is a relatively clean well. The only contaminant that has exceeded the WQCC standard since 2010 is uranium which is a naturally occurring element found in rock, soil, and water. This particular well may require repair and/or re-location as the concrete base on this well has deep cracks.

RECOMMENDATIONS: *Continue with ~~inspections/~~current sampling ~~plan. Replace and/or repair well.~~schedule.*

OW-10 is developed in the Sonsela Aquifer and is located directly east of evaporation pond 9 (EP-9).

MTBE has been detected in the second and fourth quarter of 2012 as well as the first half of 2013 at a concentration level above the NMED Tap Water standard of 0.~~125~~143 mg/L. ~~A low concentration level of~~ MTBE ~~has been~~was detected in ~~OW-10 since 2010 and appears to be increasing from~~

~~7~~

~~year to year.~~the well throughout 2014 at concentrations below the applicable standard and remaining steady. Uranium concentration ~~level~~levels have has also exceeded the WQCC standard of 0.03 mg/L ~~for 2012, which~~since 2010, however it is ~~a~~ believed to be naturally ~~element found in rock, soil, and water.~~

occurring. Low ~~concentration level~~concentrations of 1,1~~-~~-dichloroethane ~~has also~~have been detected in ~~this~~the well ~~in~~since 2011, ~~possible~~ but this is suspected to be a lab ~~contaminant.~~artifact.

RECOMMENDATIONS*: Change the quarterly analytical sampling test methods to: VOCs, major cations/anions, arsenic, and uranium.*

Observation well OW-11 is located within the refinery property (southeast) on the west side of the main entrance. The well is screened in the Sonsela stratigraphic unit. No BTEX, MTBE, VOCs, SVOCs (other than bis(2-ethylhexyl)phthalate detected in 2013 that is suspected to be either a lab artifact or from the PVC materials used to construct the well) have been detected OW-11. Total and dissolved uranium concentrations continue to exceed the standard of 0.03 mg/L.

RECOMMENDATIONS: *Continue with ~~inspections/~~current sampling ~~plan.~~schedule.*

7.5 GROUP E – GROUNDWATER MONITORING

To date, a total of 44 permanent monitoring wells (MKTF-1 through MKTF-44) have been installed to aid in delineating the extent of a hydrocarbon seep discovered in 2013, directly west of crude tanks T-101 and T-102. During the investigation, a pre-existing well (labeled as MKTF-45) was found directly west of the truck-loading rack. The MKTF wells are sampled quarterly. BTEX, MTBE, DRO, GRO, total and dissolved, and several VOCs and SVOCs have been detected in many of the wells above the referenced standards. Recovery of SPH in several of the permanent wells will continue.

RECOMMENDATIONS:

Continue with SPH recovery from the MKTF wells that have a product layer, and continue with quarterly sampling.

7.6 ADDITIONAL MONITORING ~~7~~

- Continue with the sampling requirements of the most current approved Facility Wide ~~Ground Water~~Groundwater Monitoring Work Plan.
- Annual sampling for all wells that are not currently on an annual schedule will also include major cations/anions, VOCs, SVOCs, WQCC metals. Wells containing SPH will not be sampled.
- Submit the Annual ~~Ground Water~~Groundwater Monitoring Report on or before September 1 of every year.
- Submit recommendations to change or modify sampling requirements as needed. ~~Conduct site assessments as required when spills/leaks are discovered.~~

Conduct site assessments as required when spills/leaks are discovered.

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SECTION 8

DATA TABLES

Data tables are also located on CD-R disc in Appendix K.

8.1 BW-1A/B/C, BW-2A/B/C, BW-3A/B/C

8.2 MW-1, MW-2, MW-4, MW-5

8.3 SMW-2, SMW-4

8.4 GWM-1, GWM-2, GWM-3

8.5 NAPIS-1, NAPIS-2, NAPIS-3, KA-3

8.6 ~~MKTF-1 THRU MKTF-18~~

~~8.7~~ Leak Detection Units (~~3~~East LDU, West LDU, Oil Sump LDU)

8.7 OAPIS-1

8.8 STP1-NW

8.9 OW-13, OW-14, OW-29, OW-30

8.~~9~~10 OW-50, OW-52

8.~~10~~ 11 RW-1, RW-2, RW-5, RW-6

8.~~11~~ 12 PW-2, PW-3, PW-4

8.~~12~~ 13 OW-1, OW-10

8.~~13~~ 14 OW-11, OW-12

8.~~14~~ 15 MKTF Wells

8.16 EVAPORATION PONDS 1 - 12B

~~8.15 EP-2 INLET~~

~~8.16~~ 8.17 Boiler Water to EP2 (BW to ~~EP-2~~EP2)

~~8.17 EFFLUENTS~~

8.18 ~~INFLUENTS~~ STP1 to EP2

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SECTION 9

WELL DATA DTW/DTB MEASUREMENTS

~~The 2013~~The 2014 Well Data DTB/DTW Measurements has been updated with survey information submitted to and approved by NMED per notification received "Approval with Modifications, Requirement to Resurvey Groundwater Monitoring Wells and Recovery Wells issued on September 26, 2012. Western was required to resurvey the monitoring wells due to discrepancies found in applicable standards ground level elevation, well casing elevation, well casing bottom elevation and stick up lengths. All monitoring wells were surveyed by a licensed professional surveyor, DePauli Engineering 0.on June 7, 2011, April 2014, September 2014, December 2014, and January 2015. The Well Data Table is attached as Section 9.1.

The additional wells from the hydrocarbon seep (MKTF series) and the two new wells STP1-NW and STP1-SW were surveyed by Hammon Enterprises Inc., professional surveyor on September 15, 2014, December 16, 2014 and on December 16, 2014.

SECTION 10

2014 MONITORING SCHEDULE

The 2014 Well Data DTB/DTW Measurements has been updated with survey information submitted to and approved by NMED per notification received "Approval with Modifications, Requirement to Resurvey ~~Ground Water~~Groundwater Monitoring Wells and Recovery Wells issued on September 26, 2012. Western was required to resurvey the monitoring wells due to discrepancies found in ~~reporting~~applicable standards ground level elevation, well casing elevation, well casing bottom elevation and stick up lengths. All monitoring wells were surveyed by a licensed professional surveyor, DePauli Engineering ~~on June 7, 2011. The Well Data Table is attached as Section 9.1~~0.

TABLES

(ON ATTACHED CD)

FIGURES~~The site investigation of the hydrocarbon seep discovered west of Tanks 101/102 included investigative soil borings for site assessments which resulted in the installation of 18 permanent monitoring wells for this site and are designated as "MKTF" wells. The DTB/DTW measurements were recorded in 2013 and have been included in Section 9.2.~~

APPENDIX A

SEPARATE PHASE HYDROCARBON RECOVERY LOGS

APPENDIX B

APPLICABLE STANDARDS

APPENDIX C

FIELD INSPECTION LOGS

(ON ATTACHED CD)

APPENDIX D

SUMMARY OF WASTE WATER MONTHLY FLOW RATE

(The monthly waste water flow data is submitted on a monthly basis to NMED and OCD.)

APPENDIX E

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APPENDIX F

NEW WELLS – MKTF-19 THRU MKTF-45

(ON ATTACHED CD)

APPENDIX G

SUMMARY OF EPA/NMED/RCRA ACTIVITY

APPENDIX H

SUMMARY OF ALL LEAKS, SPILLS, AND RELEASES

APPENDIX I

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APPENDIX J

TEMPORARY LAND FARM ANALYTICAL RESULTS

(ON ATTACHED CD)

APPENDIX K

HALL LABORATORY ANALYTICAL DATA

(ON ATTACHED CD)