

June 21, 2011

John E. Kieling, Acting Bureau Chief
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505

UPS Tracking #: 1ZF9F6470190155127

UPS Tracking #: 1ZF9F6470192387534

**RE: Updated Summary Report on Newly Surfaced Groundwater East Fork Area
Western Refining Southwest, Inc. – Bloomfield Refinery
EPA ID# NMD089416416**

Western Refining Southwest, Inc. – Bloomfield Refinery (Western) is providing New Mexico Environment Department Hazardous Waste Bureau (NMED) and New Mexico Oil Conservation Division (NMOCD) a summary of the activities performed and recommendations proposed pertaining to the East Fork area as directed by NMED in the *Response to Newly Surfaced Groundwater Summary* letter dated March 2, 2011. In addition to a summary of the most recent monitoring activities performed in this area, this letter report also includes a brief summary explaining when the newly surface groundwater was discovered at the East Fork area and activities performed following its discovery prior to 2011. A more detailed account of activities performed and data collected prior to 2011 is provided in the *Newly Surfaced Groundwater Data Summary Report* dated February 11, 2011.

Activities Performed Prior to 2011

On Wednesday, May 19th, 2010 during a bi-monthly visual inspection of the area north of the Refinery, Western personnel identified a new area where groundwater had surfaced. This new area is located north of the raw water ponds within an arroyo along the north side of the Hammond Ditch. Western has identified this area as the “East Fork” area based on its location within the arroyo. **Figure 1** includes an aerial photo identifying the approximate location of the East Fork area.

In May 2010, groundwater samples were collected at the East Fork area upon discovery of the newly surfaced groundwater and analyzed for benzene, toluene, ethyl benzene, total xylenes (BTEX), and methyl tert-butyl ether (MTBE) via EPA Method 8260. Analytical results indicated detected concentrations of benzene ranging between 0.110 milligrams per liter (mg/L) and 0.167 mg/L. Analytical results for all other analytes were non-detect.

Although the origin of the impacted surfaced groundwater was unknown, Western voluntarily took immediate steps to capture the surfacing groundwater at the East Fork area. The voluntary measures performed included installation of a catchment system that consisted of a trough and pump used to transport the captured groundwater at the East Fork area to the Refinery’s wastewater treatment system.

Samples were collected from the East Fork area on a weekly basis from May 26, 2010 through July 8, 2010. The samples were analyzed for BTEX and MTBE via EPA method 8260. Samples collected on June 3, 2010 were also analyzed for total petroleum hydrocarbons - diesel range organics (TPH-DRO), gasoline range organics (TPH-GRO), and motor oil range organics (TPH-MRO) via EPA Method 8015B. During the seven week sampling period, detected benzene concentration gradually decreased over time from 0.167 mg/L to 0.002 mg/L. All other analytes remained non-detect throughout the seven week sampling period.

In compliance with the NMED letter dated July 30, 2010, four additional samples were collected spanning a period that included prior to and while the Hammond Ditch was operational. One East Fork area sample was collected one week before the Hammond Ditch was brought on-line for the season. Additional samples were collected two weeks, six weeks, and ten weeks after the Irrigation Ditch Company discontinued releasing water to the Hammond Ditch. All samples were analyzed for BTEX and MTBE via EPA Method 8260, and General Chemistry (major cations/anions, nitrates/nitrites, carbonate) via EPA Method 300.0. Samples collected six weeks after the Hammond Ditch was taken off-line and were also analyzed for TPH-GRO, TPH-DRO, and TPH-MRO via EPA Method 8015.

Activities Performed in 2011

On April 4, 2011, one week prior to the Hammond Ditch being placed into service, a sample was collected at the East Fork area and sent to Hall Analytical Laboratory for analysis. The sample was analyzed for BTEX and MTBE via EPA Method 8260, TPH-GRO, TPH-DRO, and TPH-MRO via EPA Method 8015.

One May 23, 2011, six weeks after the Hammond Ditch was brought on-line, another East Fork area sample was collected and sent to Hall Analytical Laboratory for analysis. The sample was analyzed for BTEX and MTBE via EPA Method 8260, TPH-GRO, TPH-DRO, and TPH-MRO via EPA Method 8015.

Field flow measurements were also collected from Outfall #3 on April 4, 2011 and May 23, 2011. Using a graduated container and a stopwatch, Western personnel determined the flow from Outfall #3 was approximately 5 gpm (as measured on April 4, 2011), and approximately 80 gpm (as measured on May 23, 2011). It was also noted that the flow rate at the East Fork area did not noticeably change between the time period of when the Hammond Ditch was off-line and after operation of the ditch commenced.

A summary of the analytical results is provided in **Table 1**. A copy of the analytical reports is provided in **Attachment A**.

Conclusions and Recommendations

Analytical results for samples collected at the East Fork area in April and May 2011 were non-detect for all analytes, which is consistent with all sample collected at the East For area since October 2010. Prior to October 2010, detected benzene concentrations have been below the respective screening level of 0.005 mg/L since June 16, 2010.

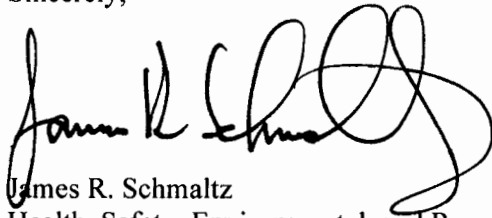
Flow measurements collected at Outfall #3 indicate that the flow rate at this location has a direct correlation with the operation of the Hammond Ditch. Water from Outfall #3 is fed directly from a pipe connected to the French drain system located underneath the Hammond Ditch. Obvious cracks in the concrete lining of the Hammond Ditch as seen by Western personnel in the field are likely the

contributors to the higher flow rates through the French drain system when the Hammond Ditch is operational (between April 15th and October 15th of each year). Flow observed at the East Fork area appears to not be affected by the operation of the Hammond Ditch. Previous flow rates measured at the East Fork area, as reported in the February 11, 2011 report submitted by Western, are approximately 1.4 gpm both prior to and during operation of the Hammond Ditch.

To date, the origin of the groundwater at the East Fork area is unknown. Based on analytical results from samples collected at the East Fork area since June 2010, the newly surface water at this location provides no harmful threat to the environment. Based on the information submitted in this updated summary report, it is requested that Western have no further obligation to continue sampling the East Fork area.

If you have any questions or would like to discuss this report in more detail, please do not hesitate to contact me at your convenience.

Sincerely,

A handwritten signature in black ink, appearing to read "James R. Schmaltz". The signature is fluid and cursive, with the first name "James" written in a larger, more prominent script than the last name "Schmaltz".

James R. Schmaltz
Health, Safety, Environmental, and Regulatory Director
Western Refining Southwest, Inc. – Bloomfield Refinery

Cc: D. Cobrain (NMED)
H. Petrie (NMED)
C. Chavez (OCD)
A. Hains (WNR)

TABLES

TABLE 1
East Fork Analytical Summary

Screening Level --> (mg/L)	0.005 ⁽²⁾	0.75 ⁽³⁾	0.7 ⁽²⁾	0.62 ⁽³⁾	0.012 ⁽¹⁾				1.6 ⁽³⁾	250 ⁽³⁾				600 ⁽³⁾							
Sampling Event	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylene (mg/L)	MTBE (mg/L)	DRO (mg/L)	MRO (mg/L)	GRO (mg/L)	Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrate/ Nitrite (mg/L)	Phosphorus (mg/L)	Sulfate (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)	Carbon Dioxide (mg/L)	Alkalinity (mg/L)	
5/23/2011 (6 wks on-line)	<0.001	<0.001	<0.001	<0.002	<0.001	<0.20	<2.5	<0.050	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4/4/2011 (1 wk before shut off)	<0.001	<0.001	<0.001	<0.002	<0.001	<0.20	<2.5	<0.050	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/20/2010 (10 wks after shut off)	<0.001	<0.001	<0.001	<0.002	<0.001	NA	NA	NA	0.41	12	NA	<1.0	<0.50	74	63	17	1.8	53	250	250	
11/22/2010 (6 wks after shut off)	<0.001	<0.001	<0.001	<0.002	<0.001	<0.20	<2.5	<0.05	0.44	12	0.14	<1.0	<0.50	75	65	17	1.4	53	250	250	
10/27/2010 (2 wks after shut off)	<0.001	<0.001	<0.001	<0.0015	<0.001	NA	NA	NA	0.45	12	NA	<1.0	<0.50	90	69	18	1.9	55	250	250	
10/06/2010 (1 wk before shut off)	<0.001	<0.001	<0.001	<0.002	<0.001	NA	NA	NA	0.47	13	0.11	<1.0	<0.50	110	73	19	1.9	57	250	250	
7/8/2010	0.002	<0.001	<0.001	<0.002	<0.001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7/1/2010	0.0023	<0.001	<0.001	<0.002	<0.001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/29/2010	0.0016	<0.001	<0.001	<0.002	<0.001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/16/2010	0.0034	<0.001	<0.001	<0.002	<0.001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/8/2010	0.0052	<0.001	<0.001	<0.002	<0.001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/3/2010	0.0096	<0.001	<0.001	<0.002	<0.001	<0.20	<2.5	<0.05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5/26/2010 ⁽⁵⁾	0.167	<0.002	<0.002	<0.002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5/26/2010	0.12	<0.001	<0.001	<0.002	<0.001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5/19/2010	0.11	<0.001	<0.001	<0.002	<0.001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

- (1) EPA Regional Screening Level (April 2009) - EPA Regional Screening Level Tap Water
- (2) EPA - Regional Screening Level (April 2009) - MCL
- (3) NMED WQCC Standards - Title 20 Chapter 6 Part 2 - 20.6.2.3101 Standards for Groundwater of 10,000 mg/L TDS Concentration or Less.
- (4) NMED TPH Screening Guidelines October 2006 - #3 and #6 fuel oil.
- (5) Split sample analyzed by Envirotech Analytical Laboratory.

NA - No Analysis
 mg/L = milligrams per liter
 MTBE = methyl tert-butyl ether
 DRO = Diesel Range Organics
 GRO = Gasoline Range Organics
 MRO = Motor Oil Range Organics

All samples were submitted to Hall Environmental Analytical Laboratory in Albuquerque, NM with the exception of the split sample collected on 5/26/2011.

FIGURES

FIGURE 1
East Fork Area Location Map



ATTACHMENT A

COVER LETTER

Tuesday, April 19, 2011

Kelly Robinson
Western Refining Southwest, Inc.
#50 CR 4990
Bloomfield, NM 87413
TEL: (505) 632-4166
FAX (505) 632-3911

RE: Drainage North of TK#38

Order No.: 1104194

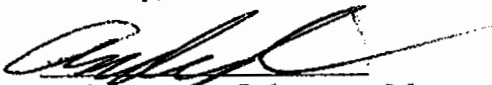
Dear Kelly Robinson:

Hall Environmental Analysis Laboratory, Inc. received 2 sample(s) on 4/5/2011 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag.

Please do not hesitate to contact HEAL for any additional information or clarifications.

Sincerely,


Andy Freeman, Laboratory Manager

NM Lab # NM9425 NM0901
AZ license # AZ0682
ORELAP Lab # NM100001
Texas Lab# T104704424-08-TX



Hall Environmental Analysis Laboratory, Inc.

Date: 19-Apr-11

CLIENT: Western Refining Southwest, Inc.
Lab Order: 1104194
Project: Drainage North of TK#38
Lab ID: 1104194-01

Client Sample ID: East Fork
Collection Date: 4/4/2011 8:40:00 AM
Date Received: 4/5/2011
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JB
Diesel Range Organics (DRO)	ND	0.20		mg/L	1	4/9/2011 7:08:01 PM
Motor Oil Range Organics (MRO)	ND	2.5		mg/L	1	4/9/2011 7:08:01 PM
Surr: DNOP	117	95.2-140		%REC	1	4/9/2011 7:08:01 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	4/13/2011 5:25:44 PM
Surr: BFB	103	79.4-132		%REC	1	4/13/2011 5:25:44 PM
EPA METHOD 8280: VOLATILES SHORT LIST						Analyst: RAA
Benzene	ND	1.0		µg/L	1	4/14/2011 8:22:17 PM
Toluene	ND	1.0		µg/L	1	4/14/2011 8:22:17 PM
Ethylbenzene	ND	1.0		µg/L	1	4/14/2011 8:22:17 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/14/2011 8:22:17 PM
Xylenes, Total	ND	2.0		µg/L	1	4/14/2011 8:22:17 PM
Surr: 1,2-Dichloroethane-d4	113	65.8-138		%REC	1	4/14/2011 8:22:17 PM
Surr: 4-Bromofluorobenzene	127	72.7-128		%REC	1	4/14/2011 8:22:17 PM
Surr: Dibromofluoromethane	109	69-135		%REC	1	4/14/2011 8:22:17 PM
Surr: Toluene-d8	112	86.1-134		%REC	1	4/14/2011 8:22:17 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Date: 19-Apr-11

CLIENT: Western Refining Southwest, Inc.
Lab Order: 1104194
Project: Drainage North of TK#38
Lab ID: 1104194-02

Client Sample ID: TRIP BLANK
Collection Date:
Date Received: 4/5/2011
Matrix: TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	ND	1.0		µg/L	1	4/14/2011 8:48:21 PM
Toluene	ND	1.0		µg/L	1	4/14/2011 8:48:21 PM
Ethylbenzene	ND	1.0		µg/L	1	4/14/2011 8:48:21 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	4/14/2011 8:48:21 PM
Xylenes, Total	ND	2.0		µg/L	1	4/14/2011 8:48:21 PM
Surr: 1,2-Dichloroethane-d4	106	65.8-138		%REC	1	4/14/2011 8:48:21 PM
Surr: 4-Bromofluorobenzene	117	72.7-128		%REC	1	4/14/2011 8:48:21 PM
Surr: Dibromofluoromethane	109	69-135		%REC	1	4/14/2011 8:48:21 PM
Surr: Toluene-d8	111	86.1-134		%REC	1	4/14/2011 8:48:21 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Inc.

Project: Drainage North of TK#38

Work Order: 1104194

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
---------	--------	-------	-----	--------	---------	------	----------	-----------	------	----------	------

Method: EPA Method 8015B: Diesel Range

Sample ID: MB-26321 MBLK Batch ID: 26321 Analysis Date: 4/9/2011 2:35:02 PM

Diesel Range Organics (DRO) ND mg/L 0.20

Motor Oil Range Organics (MRO) ND mg/L 2.5

Sample ID: LCS-26321 LCS Batch ID: 26321 Analysis Date: 4/9/2011 3:09:09 PM

Diesel Range Organics (DRO) 2.920 mg/L 0.20 2.5 0 117 74 157

Sample ID: LCSD-26321 LCSD Batch ID: 26321 Analysis Date: 4/9/2011 3:43:14 PM

Diesel Range Organics (DRO) 2.821 mg/L 0.20 2.5 0 113 74 157 3.47 23

Method: EPA Method 8015B: Gasoline Range

Sample ID: 6ML RB MBLK Batch ID: R44731 Analysis Date: 4/13/2011 7:59:03 AM

Gasoline Range Organics (GRO) ND mg/L 0.050

Sample ID: 2.5UG GRO LCS LCS Batch ID: R44731 Analysis Date: 4/13/2011 11:24:51 AM

Gasoline Range Organics (GRO) 0.5292 mg/L 0.050 0.5 0 106 81.8 120

Method: EPA Method 8260: Volatiles Short List

Sample ID: b8 MBLK Batch ID: R44760 Analysis Date: 4/14/2011 2:16:45 PM

Benzene ND µg/L 1.0

Toluene ND µg/L 1.0

Ethylbenzene ND µg/L 1.0

Methyl tert-butyl ether (MTBE) ND µg/L 1.0

Xylenes, Total ND µg/L 2.0

Sample ID: 100ng lcs1 LCS Batch ID: R44760 Analysis Date: 4/14/2011 3:09:13 PM

Benzene 20.90 µg/L 1.0 20 0 104 85.2 121

Toluene 19.64 µg/L 1.0 20 0 98.2 88.3 121

Qualifiers:

- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- H Holding times for preparation or analysis exceeded
- NC Non-Chlorinated
- R RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **WESTERN REFINING SOUT**

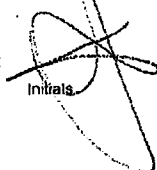
Date Received: **4/5/2011**

Work Order Number **1104194**

Received by: **LNLM**

Checklist completed by: 

4/5/11
Date

Sample ID labels checked by: 

Initials

Matrix:

Carrier name: UPS

Shipping container/cooler in good condition?	Yes ✓	No	Not Present	
Custody seals intact on shipping container/cooler?	Yes ✓	No	Not Present	Not Shipped
Custody seals intact on sample bottles?	Yes	No	N/A	✓
Chain of custody present?	Yes ✓	No		
Chain of custody signed when relinquished and received?	Yes ✓	No		
Chain of custody agrees with sample labels?	Yes ✓	No		
Samples in proper container/bottle?	Yes ✓	No		
Sample containers intact?	Yes ✓	No		
Sufficient sample volume for indicated test?	Yes ✓	No		
All samples received within holding time?	Yes ✓	No		
Water - VOA vials have zero headspace?	No VOA vials submitted	Yes ✓	No	Number of preserved bottles checked for pH:
Water - Preservation labels on bottle and cap match?	Yes	No	N/A ✓	
Water - pH acceptable upon receipt?	Yes	No	N/A ✓	<2 >12 unless noted below.
Container/Temp Blank temperature?	4.8°	<i><6° C Acceptable</i>		
COMMENTS:		If given sufficient time to cool.		

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding:

Comments:

Corrective Action

Chain-of-Custody Record

Client: Western Refining

Mailing Address: 50 CR 4990
Bloomfield, NM 87413

Phone #: 505-632-4161

email or Fax#: 505-632-3911

QA/QC Package:
 Standard Level 4 (Full Validation)

Accreditation
 NELAP Other _____

EDD (Type) _____

Turn-Around Time:
 Standard Rush

Project Name: 4-4-11

DRAWAGE North of TK# 38

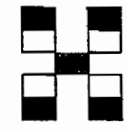
Project #:

Project Manager:

Sampler: Bob

On Ice: Yes No

Sample Temperature: 4.8



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Intox)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA) BTEX, MTBE and	8270 (Semi-VOA)	DRO 8015	Air Bubbles (Y or N)
4-4-11	8:40	H ₂ O	EAST Fork	3-VOA	HCl	1			X							X			
4-4-11	8:40	H ₂ O	EAST Fork	1-Liter		1												X	
			Trip. BLANK			2													

Date: 4-4-11 Time: 3:00 Relinquished by: Robert Krakow

Received by: [Signature] Date: 4/5/11 Time: 1330

Date: _____ Time: _____ Relinquished by: _____

Received by: [Signature] Date: _____ Time: _____

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



COVER LETTER

Tuesday, June 07, 2011

Bob Krakow
Western Refining Southwest, Inc.
#50 CR 4990
Bloomfield, NM 87413
TEL: (505) 632-4161
FAX (505) 632-3911

RE: Drainage North of TK# 38 5-23-11

Order No.: 1105879

Dear Bob Krakow:

Hall Environmental Analysis Laboratory, Inc. received 1 sample(s) on 5/24/2011 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag.

All samples are reported as received unless otherwise indicated.

Please do not hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman, Laboratory Manager

NM Lab # NM9425 NM0901
AZ license # AZ0682



Hall Environmental Analysis Laboratory, Inc.

Date: 07-Jun-11

CLIENT: Western Refining Southwest, Inc.
Project: Drainage North of TK# 38 5-23-11
Lab Order: 1105879

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Batch ID	Test Name	Collection Date
1105879-01A	East Fork	R45631	EPA Method 8015B: Gasoline Range	5/23/2011 9:05:00 AM
1105879-01A	East Fork	R45616	EPA Method 8260: Volatiles Short List	5/23/2011 9:05:00 AM
1105879-01B	East Fork	26995	EPA Method 8015B: Diesel Range	5/23/2011 9:05:00 AM

Hall Environmental Analysis Laboratory, Inc.

Date: 07-Jun-11

CLIENT: Western Refining Southwest, Inc.	Client Sample ID: East Fork
Lab Order: 1105879	Collection Date: 5/23/2011 9:05:00 AM
Project: Drainage North of TK# 38 5-23-11	Date Received: 5/24/2011
Lab ID: 1105879-01	Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JB
Diesel Range Organics (DRO)	ND	0.20		mg/L	1	6/1/2011 4:39:13 AM
Motor Oil Range Organics (MRO)	ND	2.5		mg/L	1	6/1/2011 4:39:13 AM
Surr: DNOP	118	95.2-140		%REC	1	6/1/2011 4:39:13 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	5/27/2011 6:44:44 PM
Surr: BFB	96.9	79.4-132		%REC	1	5/27/2011 6:44:44 PM
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: RAA
Benzene	ND	1.0		µg/L	1	5/26/2011 8:04:39 PM
Toluene	ND	1.0		µg/L	1	5/26/2011 8:04:39 PM
Ethylbenzene	ND	1.0		µg/L	1	5/26/2011 8:04:39 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/26/2011 8:04:39 PM
Xylenes, Total	ND	2.0		µg/L	1	5/26/2011 8:04:39 PM
Surr: 1,2-Dichloroethane-d4	115	65.8-138		%REC	1	5/26/2011 8:04:39 PM
Surr: 4-Bromofluorobenzene	103	72.7-128		%REC	1	5/26/2011 8:04:39 PM
Surr: Dibromofluoromethane	112	69-135		%REC	1	5/26/2011 8:04:39 PM
Surr: Toluene-d8	126	86.1-134		%REC	1	5/26/2011 8:04:39 PM

Qualifiers:

- | | |
|--|--|
| * Value exceeds Maximum Contaminant Level | B Analyte detected in the associated Method Blank |
| E Estimated value | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | MCL Maximum Contaminant Level |
| NC Non-Chlorinated | ND Not Detected at the Reporting Limit |
| PQL Practical Quantitation Limit | S Spike recovery outside accepted recovery limits |

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Inc.
 Project: Drainage North of TK# 38 5-23-11

Work Order: 1105879

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8015B: Diesel Range											
Sample ID: 1105879-01BMSD		MSD									
Diesel Range Organics (DRO)	2.754	mg/L	0.20	2.5	0	110	71	161	9.99	23	
Sample ID: MB-26995		MBLK									
Diesel Range Organics (DRO)	ND	mg/L	0.20								
Motor Oil Range Organics (MRO)	ND	mg/L	2.5								
Sample ID: LCS-26995		LCS									
Diesel Range Organics (DRO)	2.799	mg/L	0.20	2.5	0	112	74	157			
Sample ID: LCSD-26995		LCSD									
Diesel Range Organics (DRO)	2.704	mg/L	0.20	2.5	0	108	74	157	3.43	23	
Sample ID: 1105879-01BMS		MS									
Diesel Range Organics (DRO)	3.043	mg/L	0.20	2.5	0	122	71	161			
Method: EPA Method 8015B: Gasoline Range											
Sample ID: 5ML RB		MBLK									
Gasoline Range Organics (GRO)	ND	mg/L	0.050								
Sample ID: 2.5UG GRO LCS		LCS									
Gasoline Range Organics (GRO)	0.5246	mg/L	0.050	0.5	0	105	81.8	120			
Sample ID: 2.5UG GRO LCSD		LCSD									
Gasoline Range Organics (GRO)	0.5274	mg/L	0.050	0.5	0	105	81.8	120	0.532	17.1	
Method: EPA Method 8260: Volatiles Short List											
Sample ID: 5ml-rb		MBLK									
Benzene	ND	µg/L	1.0								
Toluene	ND	µg/L	1.0								
Ethylbenzene	ND	µg/L	1.0								
Methyl tert-butyl ether (MTBE)	ND	µg/L	1.0								
Xylenes, Total	ND	µg/L	2.0								
Sample ID: 100ng lcs		LCS									
Benzene	21.65	µg/L	1.0	20	0	108	85.2	121			
Toluene	20.60	µg/L	1.0	20	0	103	88.3	121			

Qualifiers:

E Estimated value
 J Analyte detected below quantitation limits
 ND Not Detected at the Reporting Limit
 H Holding times for preparation or analysis exceeded
 NC Non-Chlorinated
 R RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name WESTERN REFINING SOUT

Date Received:

5/24/2011

Work Order Number 1105879

Received by: MMG

Checklist completed by:

Sample ID labels checked by:

MMG
Initials

Signature

Date

Matrix:

Carrier name: UPS

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present Not Shipped
- Custody seals intact on sample bottles? Yes No N/A
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time? Yes No
- Water - VOA vials have zero headspace? No VOA vials submitted Yes No
- Water - Preservation labels on bottle and cap match? Yes No N/A
- Water - pH acceptable upon receipt? Yes No N/A

Number of preserved bottles checked for pH:

<2 >12 unless noted below.

Container/Temp Blank temperature? **1.9°** <6° C Acceptable
If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Chain-of-Custody Record

Client: Western Refining

Mailing Address: 50 CR 4990

Bloomfield, NM 87413

Phone #: 505-632-4135

email or Fax#: 505-632-3911

QA/QC Package:
 Standard Level 4 (Full Validation)

Accreditation
 NELAP Other _____

EDD (Type) _____

Turn-Around Time:
 Standard Rush

Project Name:

DRAINAGE North of TK# 38 5-23-11

Project #:

Project Manager:

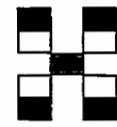
Bob

Sampler: Bob

On Ice: Yes No

Sample Temperature: 19

HEAL No: 1105879



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only) ^{MRD}	TPH Method 8015B (Gas/Extract)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA) ^{BTEX, MTBE only}	8270 (Semi-VOA)	DRO 805B	Air Bubbles (Y or N)
5-23-11	9:05	H ₂ O	EAST Fork	3-VOA	HCl	1105879			X							X			
1	1	"	"	1-500ml	Amber												X		

Date: 5-23-11 Time: 3:00 Relinquished by: Robert Krakow

Received by: Michael Garcia Date: 5/24/11 Time: 10:00

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.