7011 2970 0003 9281 8596

Western Refining
GALLUP

ENTERED

WNR LISTED NYSE

April 22, 2015

30 2015

Mr. John E. Kieling, Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Bldg 1
Santa Fe, New Mexico 87505-6303

RE: NOTIFICATION OF POTENTIAL HYDROCARBON DISCOVERY
NORTH DRAINAGE DITCH
WESTERN REFINING COMPANY, SOUTHWEST, INC.,
GALLUP REFINERY EPA ID # NMD000333211

Dear Mr. Kieling:

Pursuant to the RCRA Permit for the Gallup Refinery, Western Refining Southwest, Inc. ("Western") is providing notice of a potential hydrocarbon discovery. Possible hydrocarbon staining in a drainage ditch was discovered on the northern portion of the refinery (see Figure 1). The staining was minor and around the edges of standing water. A reportable quantity (RQ) was not observed. Therefore, a NM Oil Conservation Division (OCD) Form C-141 submittal was not required.

The ditch and soil erosion appurtenances were constructed by the federal government before the refinery existed. Surface water is present in the ditch on a seasonal basis. Three surface water samples were collected from the ditch (see Figure 2) and these initial analyses confirmed the presence of petroleum hydrocarbons. The chemical analyses are enclosed.

There is no known documentation of historical waste management operations in this area. Western has removed standing surface water from the ditch using a vacuum truck and currently plans to repeat this exercise prior to collecting any additional surface water samples. The recovered water was processed through the API and waste water treatment plant. This letter also provides notice of the intention to complete several shallow soil borings in the area of the ditch with the potential to collect groundwater samples.

If there are any questions regarding this notice, please contact Ed Riege at (505) 722-0217.

Certification

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

Sincerely,

William Carl McClain

Mr. Billy McClain
Refinery Manager

Western Refining Southwest, Inc. – Gallup Refinery

cc D. Cobrain NMED HWB without enclosure
K. Van Horn, NMED HWB without enclosure
C. Chavez, OCD
A. Allen, Western El Paso

Figure 1
Location Map

Figure 2
North Drainage Ditch

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 07, 2015

Beck Larsen
Western Refining Southwest, Gallup
92 Giant Crossing Road
Gallup, NM 87301
TEL: (505) 722-0258
FAX (505) 722-0210

RE: N. Drainage Ditch OrderNo.: 1503979

Dear Beck Larsen:

Hall Environmental Analysis Laboratory received 3 sample(s) on 3/20/2015 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. In order to properly interpret your results it is imperative that you review this report in its entirety. 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. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1503979**
Date Reported: **4/7/2015**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: A1
Project: N. Drainage Ditch
Collection Date: 3/19/2015 11:45:00 AM
Lab ID: 1503979-001 **Matrix:** AQUEOUS **Received Date:** 3/20/2015 4:25:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst: **JME**	
Diesel Range Organics (DRO)	6.4	1.0		mg/L	1	3/24/2015 7:35:03 PM	18263
Motor Oil Range Organics (MRO)	11	5.0		mg/L	1	3/24/2015 7:35:03 PM	18263
Surr: DNOP	118	76.5-150		%REC	1	3/24/2015 7:35:03 PM	18263
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	21	2.5		mg/L	50	3/25/2015 11:04:58 AM	R25071
Surr: BFB	94.1	80-120		%REC	50	3/25/2015 11:04:58 AM	R25071
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Methyl tert-butyl ether (MTBE)	200	120		µg/L	50	3/25/2015 11:04:58 AM	R25071
Benzene	5200	100		µg/L	100	3/25/2015 6:50:12 PM	R25071
Toluene	130	50		µg/L	50	3/25/2015 11:04:58 AM	R25071
Ethylbenzene	630	50		µg/L	50	3/25/2015 11:04:58 AM	R25071
Xylenes, Total	1200	100		µg/L	50	3/25/2015 11:04:58 AM	R25071
1,2,4-Trimethylbenzene	240	50		µg/L	50	3/25/2015 11:04:58 AM	R25071
1,3,5-Trimethylbenzene	78	50		µg/L	50	3/25/2015 11:04:58 AM	R25071
Surr: 4-Bromofluorobenzene	113	80-120		%REC	50	3/25/2015 11:04:58 AM	R25071
EPA METHOD 7470: MERCURY						Analyst: **MED**	
Mercury	ND	0.00020		mg/L	1	3/27/2015 12:45:07 PM	18373
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **JLF**	
Arsenic	0.16	0.020		mg/L	1	3/27/2015 3:46:49 PM	18333
Barium	12	0.40		mg/L	20	3/27/2015 4:00:54 PM	18333
Cadmium	ND	0.0020		mg/L	1	3/27/2015 3:46:49 PM	18333
Chromium	ND	0.0060		mg/L	1	3/27/2015 3:46:49 PM	18333
Lead	0.0058	0.0050		mg/L	1	3/27/2015 3:46:49 PM	18333
Selenium	ND	0.050		mg/L	1	3/27/2015 3:46:49 PM	18333
Silver	ND	0.0050		mg/L	1	3/27/2015 3:46:49 PM	18333

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: B1
Project: N. Drainage Ditch
Collection Date: 3/19/2015 11:55:00 AM
Lab ID: 1503979-002
Matrix: AQUEOUS
Received Date: 3/20/2015 4:25:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst: **JME**	
Diesel Range Organics (DRO)	6.5	1.0		mg/L	1	3/24/2015 8:02:46 PM	18263
Motor Oil Range Organics (MRO)	11	5.0		mg/L	1	3/24/2015 8:02:46 PM	18263
Surr: DNOP	119	76.5-150		%REC	1	3/24/2015 8:02:46 PM	18263
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	21	5.0		mg/L	100	3/25/2015 1:57:29 PM	R25071
Surr: BFB	96.8	80-120		%REC	100	3/25/2015 1:57:29 PM	R25071
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Methyl tert-butyl ether (MTBE)	ND	250		µg/L	100	3/25/2015 1:57:29 PM	R25071
Benzene	5400	100		µg/L	100	3/25/2015 1:57:29 PM	R25071
Toluene	130	100		µg/L	100	3/25/2015 1:57:29 PM	R25071
Ethylbenzene	580	100		µg/L	100	3/25/2015 1:57:29 PM	R25071
Xylenes, Total	1200	200		µg/L	100	3/25/2015 1:57:29 PM	R25071
1,2,4-Trimethylbenzene	220	100		µg/L	100	3/25/2015 1:57:29 PM	R25071
1,3,5-Trimethylbenzene	ND	100		µg/L	100	3/25/2015 1:57:29 PM	R25071
Surr: 4-Bromofluorobenzene	115	80-120		%REC	100	3/25/2015 1:57:29 PM	R25071
EPA METHOD 7470: MERCURY						Analyst: **MED**	
Mercury	ND	0.00020		mg/L	1	3/27/2015 12:46:58 PM	18373
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **JLF**	
Arsenic	0.28	0.020		mg/L	1	3/27/2015 3:48:18 PM	18333
Barium	20	0.40		mg/L	20	3/27/2015 4:07:11 PM	18333
Cadmium	ND	0.0020		mg/L	1	3/27/2015 3:48:18 PM	18333
Chromium	ND	0.0060		mg/L	1	3/27/2015 3:48:18 PM	18333
Lead	0.012	0.0050		mg/L	1	3/27/2015 3:48:18 PM	18333
Selenium	ND	0.050		mg/L	1	3/27/2015 3:48:18 PM	18333
Silver	ND	0.0050		mg/L	1	3/27/2015 3:48:18 PM	18333

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup
Client Sample ID: C1
Project: N. Drainage Ditch
Collection Date: 3/19/2015 12:08:00 PM
Lab ID: 1503979-003 **Matrix:** AQUEOUS **Received Date:** 3/20/2015 4:25:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE						Analyst: **JME**	
Diesel Range Organics (DRO)	8.9	1.0		mg/L	1	3/24/2015 8:30:24 PM	18263
Motor Oil Range Organics (MRO)	14	5.0		mg/L	1	3/24/2015 8:30:24 PM	18263
Surr: DNOP	131	76.5-150		%REC	1	3/24/2015 8:30:24 PM	18263
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	20	5.0		mg/L	100	3/25/2015 2:26:50 PM	R25071
Surr: BFB	94.2	80-120		%REC	100	3/25/2015 2:26:50 PM	R25071
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Methyl tert-butyl ether (MTBE)	ND	250		µg/L	100	3/25/2015 2:26:50 PM	R25071
Benzene	5300	100		µg/L	100	3/25/2015 2:26:50 PM	R25071
Toluene	120	100		µg/L	100	3/25/2015 2:26:50 PM	R25071
Ethylbenzene	550	100		µg/L	100	3/25/2015 2:26:50 PM	R25071
Xylenes, Total	1100	200		µg/L	100	3/25/2015 2:26:50 PM	R25071
1,2,4-Trimethylbenzene	210	100		µg/L	100	3/25/2015 2:26:50 PM	R25071
1,3,5-Trimethylbenzene	ND	100		µg/L	100	3/25/2015 2:26:50 PM	R25071
Surr: 4-Bromofluorobenzene	109	80-120		%REC	100	3/25/2015 2:26:50 PM	R25071
EPA METHOD 7470: MERCURY						Analyst: **MED**	
Mercury	ND	0.00020		mg/L	1	3/27/2015 12:48:50 PM	18373
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **JLF**	
Arsenic	0.28	0.020		mg/L	1	3/27/2015 3:49:56 PM	18333
Barium	19	0.40		mg/L	20	3/27/2015 4:08:38 PM	18333
Cadmium	ND	0.0020		mg/L	1	3/27/2015 3:49:56 PM	18333
Chromium	ND	0.0060		mg/L	1	3/27/2015 3:49:56 PM	18333
Lead	0.014	0.0050		mg/L	1	3/27/2015 3:49:56 PM	18333
Selenium	ND	0.050		mg/L	1	3/27/2015 3:49:56 PM	18333
Silver	ND	0.0050		mg/L	1	3/27/2015 3:49:56 PM	18333

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Wet Chemistry by Method 9012B/SW846 7.3.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Reactive CN (SW846 7.3.3.2)	ND		0.125	1	03/27/2015 10:33	WG777819

Wet Chemistry by Method 9034/9030B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Reactive Sulf.(SW846 7.3.4.1)	ND		25.0	1	,03/25/2015 16:16	WG777821

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
				date / time	
Corrosivity	Non-Corrosive		1	03/31/2015 10:04	WG778771

Wet Chemistry by Method D93/1010A

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	deg F			date / time	
Flashpoint	154		1	03/27/2015 08:41	WG778443

Wet Chemistry by Method 9012B/SW846 7.3.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Reactive CN (SW846 7.3.3.2)	ND		0.125	1	03/27/2015 10:34	WG777819

Wet Chemistry by Method 9034/9030B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Reactive Sulf.(SW846 7.3.4.1)	ND		25.0	1	03/25/2015 16:16	WG777821

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
				date / time	
Corrosivity	Non-Corrosive		1	03/31/2015 10:04	WG778771

Wet Chemistry by Method D93/1010A

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	deg F			date / time	
Flashpoint	DNF AT 170 F		1	03/27/2015 08:41	WG778443

Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Wet Chemistry by Method 9012B/SW846 7.3.2

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Reactive CN (SW846 7.3.3.2)	ND		0.125	1	03/27/2015 10:35	WG777819

Wet Chemistry by Method 9034/9030B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Reactive Sulf.(SW846 7.3.4.1)	ND		25.0	1	03/25/2015 16:16	WG777821

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis	Batch
				date / time	
Corrosivity	Non-Corrosive		1	03/31/2015 10:04	WG778771

Wet Chemistry by Method D93/1010A

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	deg F			date / time	
Flashpoint	125		1	03/27/2015 08:41	WG778443

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) 03/27/15 10:29

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Reactive CN (SW846 7.3.3.2)	ND		0.125

L754785-02 Original Sample (OS) • Duplicate (DUP)

(OS) 03/27/15 10:30 • (DUP) 03/27/15 10:31

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Reactive CN (SW846 7.3.3.2)	ND	ND	1	0.00		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 03/27/15 09:45 • (LCSD) 03/27/15 09:46

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Reactive CN (SW846 7.3.3.2)	0.100	0.105	0.102	105	102	90.0-110			2.90	20

Method Blank (MB)

(MB) 03/25/15 16:16

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Reactive Sulf.(SW846 7.3.4.1)	ND		25.0

L754785-02 Original Sample (OS) • Duplicate (DUP)

(OS) 03/25/15 16:16 • (DUP) 03/25/15 16:16

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Reactive Sulf.(SW846 7.3.4.1)	ND	ND	1	0.00		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 03/25/15 16:16 • (LCSD) 03/25/15 16:16

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Reactive Sulf.(SW846 7.3.4.1)	100	89.4	99.3	89.4	99.0	70.0-130			10.5	20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

L755335-01 Original Sample (OS) • Duplicate (DUP)

(OS) 03/31/15 10:04 • (DUP) 03/31/15 10:04

Analyte	Original Result	DUP Result	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Corrosivity	Non-Corrosive	Non-Corrosive	1	0.00		10

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 03/31/15 10:04 • (LCSD) 03/31/15 10:04

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Corrosivity	7.84	7.81	7.83	99.6	99.9	98.3-102			0.256	10

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

L755335-01 Original Sample (OS) • Duplicate (DUP)

(OS) 03/27/15 08:41 • (DUP) 03/27/15 08:41

Analyte	Original Result deg F	DUP Result deg F	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Flashpoint	150	154	1	0.00		20

L755335-02 Original Sample (OS) • Duplicate (DUP)

(OS) 03/27/15 08:41 • (DUP) 03/27/15 08:41

Analyte	Original Result deg F	DUP Result deg F	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Flashpoint	DNF AT 170 F	DNF AT 170 F	1	0.00		20

L755335-03 Original Sample (OS) • Duplicate (DUP)

(OS) 03/27/15 08:41 • (DUP) 03/27/15 08:41

Analyte	Original Result deg F	DUP Result deg F	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Flashpoint	130	126	1	0.80		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 03/27/15 08:41 • (LCSD) 03/27/15 08:41

Analyte	Spike Amount deg F	LCS Result deg F	LCSD Result deg F	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Flashpoint	82.0	82.80	83.80	101	102	96.0-104			1.20	7

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1503979**

07-Apr-15

Client: Western Refining Southwest, Gallup

Project: N. Drainage Ditch

Sample ID **MB-18263**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **PBW**	Batch ID: **18263**	RunNo: **24993**
Prep Date: **3/20/2015**	Analysis Date: **3/23/2015**	SeqNo: **737414** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	0.96		1.000		95.9	76.5	150			

Sample ID **LCS-18263**	SampType: **LCS**	TestCode: **EPA Method 8015D: Diesel Range**
Client ID: **LCSW**	Batch ID: **18263**	RunNo: **25014**
Prep Date: **3/20/2015**	Analysis Date: **3/24/2015**	SeqNo: **738573** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	5.1	1.0	5.000	0	102	60.1	156			
Surr: DNOP	0.52		0.5000		105	76.5	150			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1503979**

07-Apr-15

Client: Western Refining Southwest, Gallup
Project: N. Drainage Ditch

Sample ID **5ML RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBW**	Batch ID: **R25071**	RunNo: **25071**
Prep Date:	Analysis Date: **3/25/2015**	SeqNo: **739716** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		89.6	80	120			

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSW**	Batch ID: **R25071**	RunNo: **25071**
Prep Date:	Analysis Date: **3/25/2015**	SeqNo: **739717** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.49	0.050	0.5000	0	97.4	80	120			
Surr: BFB	20		20.00		102	80	120			

Sample ID **1503979-002AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **B1**	Batch ID: **R25071**	RunNo: **25071**
Prep Date:	Analysis Date: **3/25/2015**	SeqNo: **739875** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	72	5.0	50.00	20.62	103	51	131			
Surr: BFB	2100		2000		107	80	120			

Sample ID **1503979-002AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **B1**	Batch ID: **R25071**	RunNo: **25071**
Prep Date:	Analysis Date: **3/25/2015**	SeqNo: **739877** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	69	5.0	50.00	20.62	95.8	51	131	4.95	20	
Surr: BFB	2200		2000		108	80	120	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1503979**

07-Apr-15

Client: Western Refining Southwest, Gallup

Project: N. Drainage Ditch

Sample ID **5ML RB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW**	Batch ID: **R25071**	RunNo: **25071**
Prep Date:	Analysis Date: **3/25/2015**	SeqNo: **740176** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MBTE)	ND	2.5								
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Surr: 4-Bromofluorobenzene	20		20.00		101	80	120			

Sample ID **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW**	Batch ID: **R25071**	RunNo: **25071**
Prep Date:	Analysis Date: **3/25/2015**	SeqNo: **740177** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MBTE)	23	2.5	20.00	0	117	72.5	125			
Benzene	23	1.0	20.00	0	114	80	120			
Toluene	22	1.0	20.00	0	109	80	120			
Ethylbenzene	21	1.0	20.00	0	105	80	120			
Xylenes, Total	64	2.0	60.00	0	106	80	120			
1,2,4-Trimethylbenzene	22	1.0	20.00	0	109	80	120			
1,3,5-Trimethylbenzene	22	1.0	20.00	0	109	80	120			
Surr: 4-Bromofluorobenzene	24		20.00		119	80	120			

Sample ID **1503979-001AMS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **A1**	Batch ID: **R25071**	RunNo: **25071**
Prep Date:	Analysis Date: **3/25/2015**	SeqNo: **740186** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MBTE)	1400	120	1000	195.9	118	64.7	132			
Benzene	6100	50	1000	5124	102	77.5	121			E
Toluene	1200	50	1000	131.2	112	78.6	122			
Ethylbenzene	1700	50	1000	630.5	108	78.1	128			
Xylenes, Total	4500	100	3000	1249	108	80	120			
1,2,4-Trimethylbenzene	1300	50	1000	242.2	109	79.1	128			
1,3,5-Trimethylbenzene	1200	50	1000	77.50	108	80	120			
Surr: 4-Bromofluorobenzene	1200		1000		124	80	120			S

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1503979**

07-Apr-15

Client: Western Refining Southwest, Gallup

Project: N. Drainage Ditch

Sample ID **1503979-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **A1**	Batch ID: **R25071**	RunNo: **25071**
Prep Date:	Analysis Date: **3/25/2015**	SeqNo: **740187** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	1300	120	1000	195.9	108	64.7	132	7.98	20	
Benzene	5700	50	1000	5124	57.9	77.5	121	7.48	20	ES
Toluene	1200	50	1000	131.2	102	78.6	122	7.92	20	
Ethylbenzene	1600	50	1000	630.5	94.9	78.1	128	7.90	20	
Xylenes, Total	4200	100	3000	1249	97.0	80	120	7.35	20	
1,2,4-Trimethylbenzene	1300	50	1000	242.2	103	79.1	128	4.57	20	
1,3,5-Trimethylbenzene	1100	50	1000	77.50	103	80	120	4.83	20	
Surr: 4-Bromofluorobenzene	1200		1000		117	80	120	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
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- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1503979**

07-Apr-15

Client: Western Refining Southwest, Gallup
Project: N. Drainage Ditch

Sample ID **MB-18373**	SampType: **MBLK**	TestCode: **EPA Method 7470: Mercury**
Client ID: **PBW**	Batch ID: **18373**	RunNo: **25119**
Prep Date: **3/27/2015**	Analysis Date: **3/27/2015**	SeqNo: **741758** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID **LCS-18373**	SampType: **LCS**	TestCode: **EPA Method 7470: Mercury**
Client ID: **LCSW**	Batch ID: **18373**	RunNo: **25119**
Prep Date: **3/27/2015**	Analysis Date: **3/27/2015**	SeqNo: **741759** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0048	0.00020	0.005000	0	96.5	80	120			

Sample ID **LCSD-18373**	SampType: **LCSD**	TestCode: **EPA Method 7470: Mercury**
Client ID: **LCSS02**	Batch ID: **18373**	RunNo: **25119**
Prep Date: **3/27/2015**	Analysis Date: **3/27/2015**	SeqNo: **741760** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.1	80	120	2.60	20	

Qualifiers:

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- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1503979**

07-Apr-15

Client: Western Refining Southwest, Gallup

Project: N. Drainage Ditch

Sample ID **MB-18333**	SampType: **MBLK**	TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **PBW**	Batch ID: **18333**	RunNo: **25123**
Prep Date: **3/25/2015**	Analysis Date: **3/27/2015**	SeqNo: **742830** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	0.010	0.0050								

Sample ID **LCS-18333**	SampType: **LCS**	TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **LCSW**	Batch ID: **18333**	RunNo: **25123**
Prep Date: **3/25/2015**	Analysis Date: **3/27/2015**	SeqNo: **742831** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.53	0.020	0.5000	0	106	80	120			
Barium	0.49	0.020	0.5000	0	97.3	80	120			
Cadmium	0.50	0.0020	0.5000	0	99.3	80	120			
Chromium	0.49	0.0060	0.5000	0	98.5	80	120			
Lead	0.51	0.0050	0.5000	0	101	80	120			
Selenium	0.50	0.050	0.5000	0	99.8	80	120			
Silver	0.11	0.0050	0.1000	0	107	80	120			B

Qualifiers:

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- O RSD is greater than RSDlimit
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- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Western Refining Gallup** Work Order Number: **1503979** RcptNo: **1**

Received by/date: CS 03/20/15

Logged By: **Ashley Gallegos** **3/20/2015 4:25:00 PM** AG

Completed By: **Ashley Gallegos** **3/23/2015 11:08:48 AM** AG

Reviewed By: JA 03/23/15

Chain of Custody

1. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
2. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3. How was the sample delivered?	Courier		

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☑	
9. Was preservative added to bottles?	Yes ☑	No ☑	NA ☐
For Metals Analysis: Added 1mL HNO_3 +0.002 +-.003 for acceptable pH.			
10. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐ AG 03/23/15
11. Were any sample containers received broken?	Yes ☐	No ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 3 (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? YES
14. Is it clear what analyses were requested?	Yes ☑	No ☐	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: AG

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Pg 1-2

Chain-of-Custody Record

Client: Western Refining Gallup Refinery

Mailing Address: 92 Giant Crossing Rd Gallup, NM 87301

Phone #: (505) 722-3833

email or Fax#: (505) 863-0930

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

Accreditation: ☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time: ☒ Standard ☐ Rush

Project Name: N. Drainage Ditch

Project #:

Project Manager: Beck Larsen

Sampler: ACT (K. Sanchez)

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0°C

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. 1503979	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	RCI	Air Bubbles (Y or N)
3/19/15	1150	W	A1 water	g-3	HCL	-001	X												
	1150	W	A1 Surface	pl-1	HNO_3								X						
	1150	W	A1 Water	g-1	NONE				X										
	1145	W	A1 Surface	pl-1	2nd Acid/Base												X		
3/19/15	1145	W	A1 Water	pl-1	NaOH												X		
	1206	W	B1 Water	g-3	HCL	-002	X												
	1206	W	B1 Surface	pl-1	HNO_3								X						
	1206	W	B1 Water	g-1	NONE				X										
	1155	W	B1 surface	pl-1	2nd Acid/Base												X		
3/19/15	1155	W	B1 water	pl-1	NaOH												X		

Date: 3/19/15 Time: 1400 Relinquished by:

Received by: Date 3/20/15 Time 10:00

Date: 3-20-15 Time: 1625 Relinquished by:

Received by: Celina Sanchez Date 03/20/15 Time 1625

Remarks: Refer To ATTACHED MAP

Pg 1 of 2

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.

Pg 2-2

Chain-of-Custody Record

Client: Western Refining Gallup Refinery

Mailing Address: 92 Giant Crossing Rd Gallup, NM 87301

Phone #: (505) 722-3833

email or Fax#: (505) 863-0930

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

Accreditation: ☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time: ☒ Standard ☐ Rush

Project Name: N. Drainage Ditch

Project #:

Project Manager: Beck Larsen

Sampler: ACT (K. Sanchez)

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0°C

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. 1503979	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	RCI	Air Bubbles (Y or N)
3/19/15	1233	W	CL Water	g-3	HCL	-003	X												
	1233	W	CL Surface	pl-1	HNO_3								X						
	1233	W	CL Water	g-1	NONE				X										
	1208	W	CL Surface	pl-1	ZnAc/NaOH												X		
3/19/15	1208	W	CL Water	pl-1	NaOH												X		

Date: 3/19/15 Time: 1400 Relinquished by: [signature]

Received by: Celina Sanchez Date: 03/20/15 Time: 1025

Date: Time: Relinquished by:

Received by: Date: Time:

Remarks: Refer To ATTACHED MAP

Pg 2 of 2

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.