AE Order Number Banner

Report Description

This report shows an AE Order Number in Barcode format for purposes of scanning. The Barcode format is Code 39.

App Number: pENV000GW00001

GW - 1

SAN JUAN REFINING CO

8/24/2017

GW-001

C-141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

OIL CONS. DIV DIST. 3

AUG 19 2014

Form C-141
Revised August 8, 2011
Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company: Western Refining Southwest, Inc.	Contact: Kelly Robinson
Address: 50 Road 4990	Telephone No.: 505-632-4166
Facility Name: Bloomfield Terminal	Facility Type: Products Terminal

Surface Owner: Western Refining Southwest, Inc.	Mineral Owner	API No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
NWSW	26	29N	11W					

Latitude 36.695219 **Longitude** -107.967848

NATURE OF RELEASE

Type of Release: Sour Water	Volume of Release: < 25 barrels	Volume Recovered: 134 gallons
Source of Release: hydro test failure	Date and Hour of Occurrence: 08/01/2014 (approx. 11:00am)	Date and Hour of Discovery: 8/04/2014 at 08:00 AM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? 1) Carl Chavez with NMOCD – Santa Fe Office,	
By Whom? : Matt Krakow	Date and Hour : 1) 2:01 pm on 8/7/2014 to Carl Chavez (NMOCD)	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Pursuant to Condition 13 of the Facility's OCD Discharge Permit (GW-001), Western is required to perform annual hydro testing of underground piping at the facility. During the pressure testing of a sour water pipeline, a segment of testing pipe failed. This test failure was identified immediately by visible water stain at the point of discharge from the underground pipe. Western was able to isolate the pipeline from normal facility operations. It is Western's intent that the pipeline not be returned to service, and a new pipeline will be installed in its place.

Describe Area Affected and Cleanup Action Taken.*

The segment of pipeline which failed the hydro test is located along the west side service road that provides access to the evaporation ponds south of Highway 4990. Western was able to recover 134 gallons of the test water.

Due to the location of the pipeline breach, for safety reasons Western has chosen not to expose the pipeline. Therefore it is not certain as to the final quantity of water that was released during this event. Conservative calculations show that the maximum amount possible to release is less than 25 barrels. It is possible that this event resulted in a quantity of less than 5 barrels of water that discharged to ground.

The pipeline in-question is normally used to transfer sour water from the transfer pump located north of the evaporation ponds to the evaporation pond inlet. From the evaporation pond, the sour water is discharged through the on-site injection well. The hydro testing of the pipeline was done using the sour water that is normally carried through the pipeline. This water is sampled on a regular basis prior to the point of injection through the on-site injection well. Samples collected of the sour water are not normally analyzed for total petroleum hydrocarbons. However following the occurrence of this event, Western collected a sample of the sour water for TPH analysis. A copy of the analytical results showing the quality of the sour water released during this event is attached.

The analytical shows that the water does not contain concentrations that exceed the applicable spill clean-up standards pursuant to the OCD *Guidelines for Remediation of Leaks, Spills, and Releases* dated August 13, 1993. Therefore based on the analytical information provided, Western is requesting a no further corrective action be issued by OCD for this event.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Kelly Robinson	OIL CONSERVATION DIVISION
Printed Name: Kelly Robinson	Approved by I
Title: Environmental Manager	Approval Date
E-mail Address: Kelly.Robinson@wnr.com	Conditions of A
Date: 8/15/14 Phone: 505-632-4166	Attached ☐

District Copy
For Scanning Only
Has NOT been processed.

* Attach Additional Sheets If Necessary

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

August 15, 2014

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

RE: Injection Well 7-28-14 3rd QTR OrderNo.: 1407D12

Dear Kelly Robinson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 7/29/2014 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 **1407D12**
Date Reported: **8/15/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.
Project: Injection Well 7-28-14 3rd QTR
Lab ID: 1407D12-001 **Matrix:** AQUEOUS

Client Sample ID: Injection Well
Collection Date: 7/28/2014 9:30:00 AM
Received Date: 7/29/2014 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGP**	
Chloride	510	25		mg/L	50	8/4/2014 5:04:09 PM	R20363
Sulfate	41	2.5		mg/L	5	7/29/2014 4:17:43 PM	R20236
EPA METHOD 7470: MERCURY						Analyst: **MMD**	
Mercury	ND	0.00020		mg/L	1	8/4/2014 2:43:32 PM	14571
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **ELS**	
Arsenic	ND	0.020		mg/L	1	8/2/2014 2:09:02 PM	14549
Barium	0.63	0.020		mg/L	1	8/2/2014 2:09:02 PM	14549
Cadmium	ND	0.0020		mg/L	1	8/2/2014 2:09:02 PM	14549
Calcium	480	5.0		mg/L	5	8/2/2014 2:10:49 PM	14549
Chromium	ND	0.0060		mg/L	1	8/2/2014 2:09:02 PM	14549
Lead	ND	0.0050		mg/L	1	8/2/2014 2:09:02 PM	14549
Magnesium	99	1.0		mg/L	1	8/2/2014 2:09:02 PM	14549
Potassium	36	1.0		mg/L	1	8/2/2014 2:09:02 PM	14549
Selenium	ND	0.050		mg/L	1	8/2/2014 2:09:02 PM	14549
Silver	ND	0.0050		mg/L	1	8/2/2014 2:09:02 PM	14549
Sodium	1100	20		mg/L	20	8/2/2014 3:24:50 PM	14549
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Acenaphthene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Acenaphthylene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Aniline	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Anthracene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Azobenzene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Benz(a)anthracene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Benzo(a)pyrene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Benzo(b)fluoranthene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Benzo(g,h,i)perylene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Benzo(k)fluoranthene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Benzoic acid	ND	200		µg/L	1	7/31/2014 8:37:47 PM	14520
Benzyl alcohol	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Bis(2-chloroethoxy)methane	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Bis(2-chloroethyl)ether	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Bis(2-chloroisopropyl)ether	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Bis(2-ethylhexyl)phthalate	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
4-Bromophenyl phenyl ether	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Butyl benzyl phthalate	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Carbazole	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
4-Chloro-3-methylphenol	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
4-Chloroaniline	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520

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 greater than 2.
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, Inc.
Project: Injection Well 7-28-14 3rd QTR
Lab ID: 1407D12-001 **Matrix:** AQUEOUS

Client Sample ID: Injection Well
Collection Date: 7/28/2014 9:30:00 AM
Received Date: 7/29/2014 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
2-Chloronaphthalene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
2-Chlorophenol	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
4-Chlorophenyl phenyl ether	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Chrysene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Di-n-butyl phthalate	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Di-n-octyl phthalate	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Dibenz(a,h)anthracene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Dibenzofuran	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
1,2-Dichlorobenzene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
1,3-Dichlorobenzene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
1,4-Dichlorobenzene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
3,3´-Dichlorobenzidine	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Diethyl phthalate	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Dimethyl phthalate	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
2,4-Dichlorophenol	ND	200		µg/L	1	7/31/2014 8:37:47 PM	14520
2,4-Dimethylphenol	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
4,6-Dinitro-2-methylphenol	ND	200		µg/L	1	7/31/2014 8:37:47 PM	14520
2,4-Dinitrophenol	ND	200		µg/L	1	7/31/2014 8:37:47 PM	14520
2,4-Dinitrotoluene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
2,6-Dinitrotoluene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Fluoranthene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Fluorene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Hexachlorobenzene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Hexachlorobutadiene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Hexachlorocyclopentadiene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Hexachloroethane	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Indeno(1,2,3-cd)pyrene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Isophorone	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
1-Methylnaphthalene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
2-Methylnaphthalene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
2-Methylphenol	ND	200		µg/L	1	7/31/2014 8:37:47 PM	14520
3+4-Methylphenol	210	100		µg/L	1	7/31/2014 8:37:47 PM	14520
N-Nitrosodi-n-propylamine	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
N-Nitrosodimethylamine	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
N-Nitrosodiphenylamine	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Naphthalene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
2-Nitroaniline	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
3-Nitroaniline	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
4-Nitroaniline	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520

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

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 greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.
Client Sample ID: Injection Well
Project: Injection Well 7-28-14 3rd QTR
Collection Date: 7/28/2014 9:30:00 AM
Lab ID: 1407D12-001 **Matrix:** AQUEOUS **Received Date:** 7/29/2014 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8270C: SEMIVOLATILES						Analyst: **DAM**	
Nitrobenzene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
2-Nitrophenol	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
4-Nitrophenol	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Pentachlorophenol	ND	200		µg/L	1	7/31/2014 8:37:47 PM	14520
Phenanthrene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Phenol	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Pyrene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Pyridine	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
1,2,4-Trichlorobenzene	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
2,4,5-Trichlorophenol	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
2,4,6-Trichlorophenol	ND	100		µg/L	1	7/31/2014 8:37:47 PM	14520
Surr: 2-Fluorophenol	0	12.1-85.8	S	%REC	1	7/31/2014 8:37:47 PM	14520
Surr: Phenol-d5	0	17.7-65.8	S	%REC	1	7/31/2014 8:37:47 PM	14520
Surr: 2,4,6-Tribromophenol	0	26-138	S	%REC	1	7/31/2014 8:37:47 PM	14520
Surr: Nitrobenzene-d5	0	47.5-119	S	%REC	1	7/31/2014 8:37:47 PM	14520
Surr: 2-Fluorobiphenyl	0	48.1-106	S	%REC	1	7/31/2014 8:37:47 PM	14520
Surr: 4-Terphenyl-d14	0	44-113	S	%REC	1	7/31/2014 8:37:47 PM	14520
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
Toluene	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
Ethylbenzene	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
Methyl tert-butyl ether (MTBE)	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
1,2,4-Trimethylbenzene	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
1,3,5-Trimethylbenzene	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
1,2-Dichloroethane (EDC)	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
1,2-Dibromoethane (EDB)	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
Naphthalene	ND	4.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
1-Methylnaphthalene	ND	8.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
2-Methylnaphthalene	ND	8.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
Acetone	85	20		µg/L	2	7/31/2014 1:41:17 PM	R20298
Bromobenzene	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
Bromodichloromethane	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
Bromoform	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
Bromomethane	ND	6.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
2-Butanone	ND	20		µg/L	2	7/31/2014 1:41:17 PM	R20298
Carbon disulfide	ND	20		µg/L	2	7/31/2014 1:41:17 PM	R20298
Carbon Tetrachloride	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
Chlorobenzene	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
Chloroethane	ND	4.0		µg/L	2	7/31/2014 1:41:17 PM	R20298

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

Qualifiers:

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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 greater than 2.
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, Inc.
Client Sample ID: Injection Well
Project: Injection Well 7-28-14 3rd QTR
Collection Date: 7/28/2014 9:30:00 AM
Lab ID: 1407D12-001 **Matrix:** AQUEOUS **Received Date:** 7/29/2014 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Chloroform	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
Chloromethane	ND	6.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
2-Chlorotoluene	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
4-Chlorotoluene	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
cis-1,2-DCE	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
cis-1,3-Dichloropropene	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
1,2-Dibromo-3-chloropropane	ND	4.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
Dibromochloromethane	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
Dibromomethane	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
1,2-Dichlorobenzene	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
1,3-Dichlorobenzene	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
1,4-Dichlorobenzene	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
Dichlorodifluoromethane	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
1,1-Dichloroethane	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
1,1-Dichloroethene	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
1,2-Dichloropropane	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
1,3-Dichloropropane	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
2,2-Dichloropropane	ND	4.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
1,1-Dichloropropene	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
Hexachlorobutadiene	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
2-Hexanone	ND	20		µg/L	2	7/31/2014 1:41:17 PM	R20298
Isopropylbenzene	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
4-Isopropyltoluene	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
4-Methyl-2-pentanone	ND	20		µg/L	2	7/31/2014 1:41:17 PM	R20298
Methylene Chloride	ND	6.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
n-Butylbenzene	ND	6.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
n-Propylbenzene	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
sec-Butylbenzene	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
Styrene	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
tert-Butylbenzene	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
1,1,2,2-Tetrachloroethane	ND	4.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
Tetrachloroethene (PCE)	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
trans-1,2-DCE	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
trans-1,3-Dichloropropene	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
1,2,3-Trichlorobenzene	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
1,2,4-Trichlorobenzene	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
1,1,1-Trichloroethane	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
1,1,2-Trichloroethane	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298

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 greater than 2.
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, Inc.
Client Sample ID: Injection Well
Project: Injection Well 7-28-14 3rd QTR
Collection Date: 7/28/2014 9:30:00 AM
Lab ID: 1407D12-001 **Matrix:** AQUEOUS **Received Date:** 7/29/2014 7:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst:	**DJF**
Trichloroethene (TCE)	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
Trichlorofluoromethane	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
1,2,3-Trichloropropane	ND	4.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
Vinyl chloride	ND	2.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
Xylenes, Total	ND	3.0		µg/L	2	7/31/2014 1:41:17 PM	R20298
Surr: 1,2-Dichloroethane-d4	92.4	70-130		%REC	2	7/31/2014 1:41:17 PM	R20298
Surr: 4-Bromofluorobenzene	95.4	70-130		%REC	2	7/31/2014 1:41:17 PM	R20298
Surr: Dibromofluoromethane	100	70-130		%REC	2	7/31/2014 1:41:17 PM	R20298
Surr: Toluene-d8	93.6	70-130		%REC	2	7/31/2014 1:41:17 PM	R20298
SM2510B: SPECIFIC CONDUCTANCE						Analyst:	**JRR**
Conductivity	1900	0.010		µmhos/cm	1	7/29/2014 12:08:01 PM	R20245
SM4500-H+B: PH						Analyst:	**JRR**
pH	7.10	1.68	H	pH units	1	7/29/2014 12:08:01 PM	R20245
SM2320B: ALKALINITY						Analyst:	**JRR**
Bicarbonate (As CaCO3)	220	20		mg/L CaCO3	1	7/29/2014 12:08:01 PM	R20245
Carbonate (As CaCO3)	ND	2.0		mg/L CaCO3	1	7/29/2014 12:08:01 PM	R20245
Total Alkalinity (as CaCO3)	220	20		mg/L CaCO3	1	7/29/2014 12:08:01 PM	R20245
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst:	**KS**
Total Dissolved Solids	1380	200	*	mg/L	1	7/30/2014 5:19:00 PM	14475

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

Qualifiers:

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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 greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	HALL ENVIRONMENTAL ANALYSIS LAB	**Batch #:**	140730036
Address:	4901 HAWKINS NE SUITE D	**Project Name:**	1407D12
	ALBUQUERQUE, NM 87109		
Attn:	ANDY FREEMAN		

Analytical Results Report

Sample Number	140730036-001	**Sampling Date**	7/28/2014	**Date/Time Received**	7/30/2014 12:25 PM
Client Sample ID	1407D12-001E / INJECTION WELL			**Sampling Time**	9:30 AM
Matrix	Water				
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide (reactive)	ND	mg/L	1	8/12/2014	CRW	SW846 CH7	
Flashpoint	>200	°F		8/5/2014	KFG	EPA 1010	
pH	7.44	ph Units		8/5/2014	AJT	SM 4500pH-B	
Reactive sulfide	ND	mg/L	1	8/1/2014	AJT	SW846 CH7	

Authorized Signature

John Coddington, Lab Manager

MCL	EPA's Maximum Contaminant Level
ND	Not Detected
PQL	Practical Quantitation Limit

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Anatek Labs, Inc.

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: HALL ENVIRONMENTAL ANALYSIS LAB
Address: 4901 HAWKINS NE SUITE D
ALBUQUERQUE, NM 87109
Attn: ANDY FREEMAN

Batch #: 140730036
Project Name: 1407D12

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Reactive sulfide	0.16	mg/L	0.2	80.0	70-130	8/1/2014	8/1/2014
Cyanide (reactive)	0.505	mg/L	0.5	101.0	80-120	8/12/2014	8/12/2014

Lab Control Sample Duplicate

Parameter	LCSD Result	Units	LCSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Reactive sulfide	0.18	mg/L	0.2	90.0	11.8	0-25	8/1/2014	8/1/2014

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
140730036-001	Reactive sulfide	ND	0.22	mg/L	0.2	110.0	70-130	8/1/2014	8/1/2014
140730036-001	Cyanide (reactive)	ND	0.919	mg/L	1	91.9	80-120	8/12/2014	8/12/2014

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Cyanide (reactive)	0.906	mg/L	1	90.6	1.4	0-25	8/12/2014	8/12/2014

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Cyanide (reactive)	ND	mg/L	1	8/12/2014	8/12/2014
Reactive sulfide	ND	mg/L	1	8/1/2014	8/1/2014

AR	Acceptable Range
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1407D12**

15-Aug-14

Client: Western Refining Southwest, Inc.
Project: Injection Well 7-28-14 3rd QTR

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R20236**	RunNo: **20236**
Prep Date:	Analysis Date: **7/29/2014**	SeqNo: **588153** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R20236**	RunNo: **20236**
Prep Date:	Analysis Date: **7/29/2014**	SeqNo: **588154** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	9.7	0.50	10.00	0	97.4	90	110			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R20236**	RunNo: **20236**
Prep Date:	Analysis Date: **7/29/2014**	SeqNo: **588211** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	ND	0.50								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R20236**	RunNo: **20236**
Prep Date:	Analysis Date: **7/29/2014**	SeqNo: **588212** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	9.6	0.50	10.00	0	95.6	90	110			

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R20363**	RunNo: **20363**
Prep Date:	Analysis Date: **8/4/2014**	SeqNo: **592146** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R20363**	RunNo: **20363**
Prep Date:	Analysis Date: **8/4/2014**	SeqNo: **592147** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.2	90	110			

Qualifiers:

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- 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 greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1407D12**

15-Aug-14

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-28-14 3rd QTR

Sample ID **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R20363**	RunNo: **20363**
Prep Date:	Analysis Date: **8/5/2014**	SeqNo: **592208** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R20363**	RunNo: **20363**
Prep Date:	Analysis Date: **8/5/2014**	SeqNo: **592209** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	93.8	90	110			

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 greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1407D12**

15-Aug-14

Client: Western Refining Southwest, Inc.
Project: Injection Well 7-28-14 3rd QTR

Sample ID **5mL rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R20230**	RunNo: **20230**
Prep Date:	Analysis Date: **7/29/2014**	SeqNo: **587928** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.1		10.00		91.3	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		93.2	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.7		10.00		96.7	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R20230**	RunNo: **20230**
Prep Date:	Analysis Date: **7/29/2014**	SeqNo: **587930** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	9.9		10.00		98.6	70	130			
Surr: 4-Bromofluorobenzene	9.5		10.00		95.4	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	9.4		10.00		94.3	70	130			

Sample ID **5ml rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R20298**	RunNo: **20298**
Prep Date:	Analysis Date: **7/31/2014**	SeqNo: **589943** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								

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 greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1407D12**

15-Aug-14

Client: Western Refining Southwest, Inc.
Project: Injection Well 7-28-14 3rd QTR

Sample ID **5ml rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R20298**	RunNo: **20298**
Prep Date:	Analysis Date: **7/31/2014**	SeqNo: **589943** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								

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 greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1407D12**

15-Aug-14

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-28-14 3rd QTR

Sample ID **5ml rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R20298**	RunNo: **20298**
Prep Date:	Analysis Date: **7/31/2014**	SeqNo: **589943** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.8		10.00		88.2	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.9	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.9		10.00		98.9	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R20298**	RunNo: **20298**
Prep Date:	Analysis Date: **7/31/2014**	SeqNo: **589945** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	70	130			
Toluene	21	1.0	20.00	0	107	80	120			
Chlorobenzene	20	1.0	20.00	0	99.3	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	110	82.6	131			
Trichloroethene (TCE)	21	1.0	20.00	0	103	70	130			
Surr: 1,2-Dichloroethane-d4	9.2		10.00		91.6	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.4		10.00		94.3	70	130			

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 greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1407D12**

15-Aug-14

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-28-14 3rd QTR

Sample ID **mb-14520**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **14520**	RunNo: **20300**	
Prep Date: **7/31/2014**	Analysis Date: **7/31/2014**	SeqNo: **590031**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	10								
Acenaphthylene	ND	10								
Aniline	ND	10								
Anthracene	ND	10								
Azobenzene	ND	10								
Benz(a)anthracene	ND	10								
Benzo(a)pyrene	ND	10								
Benzo(b)fluoranthene	ND	10								
Benzo(g,h,i)perylene	ND	10								
Benzo(k)fluoranthene	ND	10								
Benzoic acid	ND	20								
Benzyl alcohol	ND	10								
Bis(2-chloroethoxy)methane	ND	10								
Bis(2-chloroethyl)ether	ND	10								
Bis(2-chloroisopropyl)ether	ND	10								
Bis(2-ethylhexyl)phthalate	ND	10								
4-Bromophenyl phenyl ether	ND	10								
Butyl benzyl phthalate	ND	10								
Carbazole	ND	10								
4-Chloro-3-methylphenol	ND	10								
4-Chloroaniline	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
4-Chlorophenyl phenyl ether	ND	10								
Chrysene	ND	10								
Di-n-butyl phthalate	ND	10								
Di-n-octyl phthalate	ND	10								
Dibenz(a,h)anthracene	ND	10								
Dibenzofuran	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
3,3'-Dichlorobenzidine	ND	10								
Diethyl phthalate	ND	10								
Dimethyl phthalate	ND	10								
2,4-Dichlorophenol	ND	20								
2,4-Dimethylphenol	ND	10								
4,6-Dinitro-2-methylphenol	ND	20								
2,4-Dinitrophenol	ND	20								

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 greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1407D12**

15-Aug-14

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-28-14 3rd QTR

Sample ID **mb-14520**	SampType: **MBLK**	TestCode: **EPA Method 8270C: Semivolatiles**	
Client ID: **PBW**	Batch ID: **14520**	RunNo: **20300**	
Prep Date: **7/31/2014**	Analysis Date: **7/31/2014**	SeqNo: **590031**	Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	20								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	10								
Nitrobenzene	ND	10								
2-Nitrophenol	ND	10								
4-Nitrophenol	ND	10								
Pentachlorophenol	ND	20								
Phenanthrene	ND	10								
Phenol	ND	10								
Pyrene	ND	10								
Pyridine	ND	10								
1,2,4-Trichlorobenzene	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
Surr: 2-Fluorophenol	130		200.0		66.7	12.1	85.8			
Surr: Phenol-d5	95		200.0		47.4	17.7	65.8			
Surr: 2,4,6-Tribromophenol	170		200.0		86.4	26	138			
Surr: Nitrobenzene-d5	84		100.0		83.6	47.5	119			
Surr: 2-Fluorobiphenyl	84		100.0		83.7	48.1	106			
Surr: 4-Terphenyl-d14	94		100.0		94.5	44	113			

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 greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1407D12**

15-Aug-14

Client: Western Refining Southwest, Inc.
Project: Injection Well 7-28-14 3rd QTR

Sample ID **lcs-14520**	SampType: **LCS**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSW**	Batch ID: **14520**	RunNo: **20300**
Prep Date: **7/31/2014**	Analysis Date: **7/31/2014**	SeqNo: **590032** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	87	10	100.0	0	87.0	50.3	109			
4-Chloro-3-methylphenol	200	10	200.0	0	99.0	51.2	113			
2-Chlorophenol	190	10	200.0	0	94.9	48.5	104			
1,4-Dichlorobenzene	80	10	100.0	0	79.5	39.5	106			
2,4-Dinitrotoluene	82	10	100.0	0	82.3	45.4	107			
N-Nitrosodi-n-propylamine	91	10	100.0	0	91.0	50.4	119			
4-Nitrophenol	110	10	200.0	0	53.6	15.5	62.2			
Pentachlorophenol	150	20	200.0	0	72.7	23.5	93.5			
Phenol	110	10	200.0	0	54.8	26.8	65.6			
Pyrene	96	10	100.0	0	95.5	54.4	108			
1,2,4-Trichlorobenzene	78	10	100.0	0	78.0	39.9	106			
Surr: 2-Fluorophenol	140		200.0		72.4	12.1	85.8			
Surr: Phenol-d5	100		200.0		52.5	17.7	65.8			
Surr: 2,4,6-Tribromophenol	170		200.0		87.0	26	138			
Surr: Nitrobenzene-d5	100		100.0		101	47.5	119			
Surr: 2-Fluorobiphenyl	96		100.0		96.0	48.1	106			
Surr: 4-Terphenyl-d14	91		100.0		90.9	44	113			

Sample ID **lcsd-14520**	SampType: **LCSD**	TestCode: **EPA Method 8270C: Semivolatiles**
Client ID: **LCSS02**	Batch ID: **14520**	RunNo: **20300**
Prep Date: **7/31/2014**	Analysis Date: **7/31/2014**	SeqNo: **590033** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	77	10	100.0	0	76.5	50.3	109	12.8	27.2	
4-Chloro-3-methylphenol	190	10	200.0	0	93.8	51.2	113	5.37	25.9	
2-Chlorophenol	170	10	200.0	0	84.4	48.5	104	11.7	22.5	
1,4-Dichlorobenzene	73	10	100.0	0	73.3	39.5	106	8.19	24.6	
2,4-Dinitrotoluene	73	10	100.0	0	73.1	45.4	107	11.9	25.3	
N-Nitrosodi-n-propylamine	85	10	100.0	0	84.9	50.4	119	6.98	23.6	
4-Nitrophenol	110	10	200.0	0	52.7	15.5	62.2	1.69	34.7	
Pentachlorophenol	150	20	200.0	0	72.9	23.5	93.5	0.275	32.8	
Phenol	100	10	200.0	0	51.6	26.8	65.6	6.05	25.5	
Pyrene	89	10	100.0	0	88.8	54.4	108	7.31	31.4	
1,2,4-Trichlorobenzene	68	10	100.0	0	68.4	39.9	106	13.1	25.9	
Surr: 2-Fluorophenol	140		200.0		68.8	12.1	85.8	0	0	
Surr: Phenol-d5	110		200.0		53.9	17.7	65.8	0	0	
Surr: 2,4,6-Tribromophenol	170		200.0		86.5	26	138	0	0	
Surr: Nitrobenzene-d5	88		100.0		88.1	47.5	119	0	0	
Surr: 2-Fluorobiphenyl	90		100.0		89.9	48.1	106	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 greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1407D12**

15-Aug-14

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-28-14 3rd QTR

Sample ID	**lcsd-14520**	SampType: **LCSD**		TestCode: **EPA Method 8270C: Semivolatiles**					
Client ID:	**LCSS02**	Batch ID: **14520**		RunNo: **20300**					
Prep Date:	**7/31/2014**	Analysis Date: **7/31/2014**		SeqNo: **590033**	Units: **µg/L**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Terphenyl-d14	90		100.0		90.0	44	113	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 greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1407D12**

15-Aug-14

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-28-14 3rd QTR

Sample ID	**1407d12-001b dup**	SampType: **DUP**		TestCode: **SM2510B: Specific Conductance**					
Client ID:	**Injection Well**	Batch ID: **R20245**		RunNo: **20245**					
Prep Date:		Analysis Date: **7/29/2014**		SeqNo: **588403**		Units: **µmhos/cm**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	1800	0.010						4.30	20	

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 greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1407D12**

15-Aug-14

Client: Western Refining Southwest, Inc.
Project: Injection Well 7-28-14 3rd QTR

Sample ID	**MB-14571**	SampType: **MBLK**		TestCode: **EPA Method 7470: Mercury**					
Client ID:	**PBW**	Batch ID: **14571**		RunNo: **20345**					
Prep Date:	**8/4/2014**	Analysis Date: **8/4/2014**		SeqNo: **591482**		Units: **mg/L**			

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

Sample ID	**LCS-14571**	SampType: **LCS**		TestCode: **EPA Method 7470: Mercury**					
Client ID:	**LCSW**	Batch ID: **14571**		RunNo: **20345**					
Prep Date:	**8/4/2014**	Analysis Date: **8/4/2014**		SeqNo: **591483**		Units: **mg/L**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	98.9	80	120			

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 greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1407D12**

15-Aug-14

Client: Western Refining Southwest, Inc.
Project: Injection Well 7-28-14 3rd QTR

Sample ID **MB-14549**	SampType: **MBLK**	TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **PBW**	Batch ID: **14549**	RunNo: **20323**
Prep Date: **8/1/2014**	Analysis Date: **8/2/2014**	SeqNo: **590696** 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								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Selenium	ND	0.050								
Silver	ND	0.0050								
Sodium	ND	1.0								

Sample ID **LCS-14549**	SampType: **LCS**	TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **LCSW**	Batch ID: **14549**	RunNo: **20323**
Prep Date: **8/1/2014**	Analysis Date: **8/2/2014**	SeqNo: **590697** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.50	0.020	0.5000	0	101	80	120			
Barium	0.50	0.020	0.5000	0	99.7	80	120			
Cadmium	0.50	0.0020	0.5000	0	99.7	80	120			
Calcium	ND	1.0	50.00	0	0	80	120			S
Chromium	0.50	0.0060	0.5000	0	100	80	120			
Lead	0.50	0.0050	0.5000	0	99.5	80	120			
Magnesium	ND	1.0	50.00	0	0	80	120			S
Potassium	ND	1.0	50.00	0	0	80	120			S
Selenium	0.52	0.050	0.5000	0	105	80	120			
Silver	0.085	0.0050	0.1000	0	84.9	80	120			
Sodium	ND	1.0	50.00	0	0	80	120			S

Sample ID **LCS Cat-14549**	SampType: **LCS**	TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **LCSW**	Batch ID: **14549**	RunNo: **20323**
Prep Date: **8/1/2014**	Analysis Date: **8/2/2014**	SeqNo: **590698** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	51	1.0	50.00	0	102	80	120			
Magnesium	51	1.0	50.00	0	101	80	120			
Potassium	49	1.0	50.00	0	97.3	80	120			
Sodium	50	1.0	50.00	0	101	80	120			

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 greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1407D12**

15-Aug-14

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-28-14 3rd QTR

Sample ID **1407d12-001b dup**	SampType: **DUP**			TestCode: **SM4500-H+B: pH**						
Client ID: **Injection Well**	Batch ID: **R20245**			RunNo: **20245**						
Prep Date:	Analysis Date: **7/29/2014**			SeqNo: **588388**		Units: **pH units**				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	7.11	1.68								H

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 greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1407D12**

15-Aug-14

Client: Western Refining Southwest, Inc.

Project: Injection Well 7-28-14 3rd QTR

Sample ID **mb-1**	SampType: **MBLK**	TestCode: **SM2320B: Alkalinity**							
Client ID: **PBW**	Batch ID: **R20245**	RunNo: **20245**							
Prep Date:	Analysis Date: **7/29/2014**	SeqNo: **588355**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20								

Sample ID **lcs-1**	SampType: **LCS**	TestCode: **SM2320B: Alkalinity**							
Client ID: **LCSW**	Batch ID: **R20245**	RunNo: **20245**							
Prep Date:	Analysis Date: **7/29/2014**	SeqNo: **588356**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	80	20	80.00	0	100	90	110			

Sample ID **mb-2**	SampType: **MBLK**	TestCode: **SM2320B: Alkalinity**							
Client ID: **PBW**	Batch ID: **R20245**	RunNo: **20245**							
Prep Date:	Analysis Date: **7/29/2014**	SeqNo: **588376**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20								

Sample ID **lcs-2**	SampType: **LCS**	TestCode: **SM2320B: Alkalinity**							
Client ID: **LCSW**	Batch ID: **R20245**	RunNo: **20245**							
Prep Date:	Analysis Date: **7/29/2014**	SeqNo: **588377**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	80	20	80.00	0	100	90	110			

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 greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1407D12**

15-Aug-14

Client: Western Refining Southwest, Inc.
Project: Injection Well 7-28-14 3rd QTR

Sample ID **MB-14475**	SampType: **MBLK**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **PBW**	Batch ID: **14475**	RunNo: **20257**
Prep Date: **7/29/2014**	Analysis Date: **7/30/2014**	SeqNo: **588640** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID **LCS-14475**	SampType: **LCS**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **LCSW**	Batch ID: **14475**	RunNo: **20257**
Prep Date: **7/29/2014**	Analysis Date: **7/30/2014**	SeqNo: **588641** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1020	20.0	1000	0	102	80	120			

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 greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

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 Southw Work Order Number: 1407D12 RcptNo: 1

Received by/date: AT 07/29/14

Logged By: Anne Thorne 7/29/2014 7:55:00 AM Anne Thorne

Completed By: Anne Thorne 7/29/2014 Anne Thorne

Reviewed By: MJ 07/29/14

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 ☐
10. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
11. Were any sample containers received broken?	Yes ☐	No ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
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 ☐	

# of preserved bottles checked for pH: 2 (<2 or >12 unless noted)

Adjusted? no

Checked by: CS

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			

Chain-of-Custody Record

Client: Western Refining

Mailing Address: #50 CR 4990
Bloomfield, NM 87413

Phone #: 505-632-4135

email or Fax#:

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

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: 7-28-14
Injection Well 3rd QTR

Project #:

Project Manager:

Sampler: Bob

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

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. 1407D12	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TDS	Back up	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals Ca, Mg, Na, K	Anions (F,Cl,NO3,NO2,PO4,SO4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Ignitability, Corrosivity	Reactivity	Ec, pH, SO4, Alk, Cl	Sulfides	Air Bubbles (Y or N)
7-28-14	9:30	H2O	Injection Well	3-VOA	HCl	001										X						
				1-liter	amber	002											X					
				1-500ml	—	001												X				
				1-500ml	—	001				X										X		
				1-250ml	H2SO4	001					X											
				1-500ml	HNO3	001							X									
				1-500ml	NaOH	001													X			
				1-500ml	ZN ACETATE	001															X	

Date:	Time:	Relinquished by:	Received by:	Date	Time
7-28-14	1452	Robert Krakow	Christine Walls	7/28/14	1452
7/28/14	1724	Christine Walls		07/29/14	0755

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.

envirotech
Analytical Laboratory

Analytical Report

Report Summary

Client: Western Refining Southwest, Inc.
Chain Of Custody Number: 17288
Samples Received: 8/7/2014 3:20:00PM
Job Number: 96012-0115
Work Order: P408024
Project Name/Location: Injection Well

Entire Report Reviewed By: _____ Date: 8/8/14

Tim Cain, Laboratory Manager

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.

envirotech
Analytical Laboratory

Western Refining Southwest, Inc.	Project Name:	Injection Well	
PO Box 159	Project Number:	96012-0115	**Reported:**
Bloomfield NM, 87413	Project Manager:	Kelly Robinson	08-Aug-14 17:39

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Inj. Well	P408024-01A	Aqueous	08/07/14	08/07/14	Voa vial, 40mL, HCl
	P408024-01B	Aqueous	08/07/14	08/07/14	Voa vial, 40mL, HCl
	P408024-01C	Aqueous	08/07/14	08/07/14	Voa vial, 40mL, HCl

envirotech
Analytical Laboratory

Western Refining Southwest, Inc.	Project Name:	Injection Well	
PO Box 159	Project Number:	96012-0115	**Reported:**
Bloomfield NM, 87413	Project Manager:	Kelly Robinson	08-Aug-14 17:39

Inj. Well

P408024-01 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	0.10	mg/L	1	1432028	08/08/14	08/08/14	EPA 8015D	
Diesel Range Organics (C10-C28)	**4.99**	2.37	mg/L	1	1432027	08/08/14	08/08/14	EPA 8015D	
Surrogate: Benzo[a]pyrene		*35.5 %*		*50-200*	*1432027*	*08/08/14*	*08/08/14*	*EPA 8015D*	*Surr2*
Surrogate: Bromochlorobenzene		*98.4 %*		*50-150*	*1432028*	*08/08/14*	*08/08/14*	*EPA 8015D*	

envirotech
Analytical Laboratory

Western Refining Southwest, Inc.	Project Name:	Injection Well	
PO Box 159	Project Number:	96012-0115	**Reported:**
Bloomfield NM, 87413	Project Manager:	Kelly Robinson	08-Aug-14 17:39

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1432027 - Sep Funnel Liquid-Liquid Extraction EPA 3510C										
Blank (1432027-BLK1)				Prepared & Analyzed: 08-Aug-14						
Diesel Range Organics (C10-C28)	ND	2.78	mg/L							
Surrogate: Benzo[a]pyrene	*11.8*		"	*18.0*		*65.6*	*50-200*			
LCS (1432027-BS1)				Prepared & Analyzed: 08-Aug-14						
Diesel Range Organics (C10-C28)	11.4	2.73	mg/L	12.5		91.3	36-132			
Surrogate: Benzo[a]pyrene	*11.3*		"	*18.3*		*61.4*	*50-200*			
Matrix Spike (1432027-MS1)	**Source: P408025-01**			Prepared & Analyzed: 08-Aug-14						
Diesel Range Organics (C10-C28)	1640	268	mg/L	12.5	2960	NR	36-132			SPK1
Surrogate: Benzo[a]pyrene	*14.6*		"	*18.7*		*78.1*	*50-200*			
Matrix Spike Dup (1432027-MSD1)	**Source: P408025-01**			Prepared & Analyzed: 08-Aug-14						
Diesel Range Organics (C10-C28)	1200	250	mg/L	12.5	2960	NR	36-132	31.2	20	D1, SPK1
Surrogate: Benzo[a]pyrene	*10.5*		"	*20.0*		*52.5*	*50-200*			

envirotech
Analytical Laboratory

Western Refining Southwest, Inc.	Project Name:	Injection Well	
PO Box 159	Project Number:	96012-0115	**Reported:**
Bloomfield NM, 87413	Project Manager:	Kelly Robinson	08-Aug-14 17:39

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1432028 - Purge and Trap EPA 5030A										
Blank (1432028-BLK1)				Prepared & Analyzed: 08-Aug-14						
Gasoline Range Organics (C6-C10)	ND	0.10	mg/L							
Surrogate: Bromochlorobenzene	*0.0463*		"	*0.0500*		*92.5*	*50-150*			
Duplicate (1432028-DUP1)		**Source: P408024-01**		Prepared & Analyzed: 08-Aug-14						
Gasoline Range Organics (C6-C10)	ND	0.10	mg/L		ND				200	
Surrogate: Bromochlorobenzene	*0.0496*		"	*0.0500*		*99.3*	*50-150*			
Matrix Spike (1432028-MS1)		**Source: P408024-01**		Prepared & Analyzed: 08-Aug-14						
Gasoline Range Organics (C6-C10)	0.44	0.10	mg/L	0.450	ND	97.3	80-120			
Surrogate: Bromochlorobenzene	*0.0489*		"	*0.0500*		*97.8*	*50-150*			

envirotech
Analytical Laboratory

Western Refining Southwest, Inc.	Project Name:	Injection Well	
PO Box 159	Project Number:	96012-0115	**Reported:**
Bloomfield NM, 87413	Project Manager:	Kelly Robinson	08-Aug-14 17:39

Notes and Definitions

Surr2	Surrogate recovery was below acceptable limits.
SPK1	The spike recovery for this QC sample is outside of control limits.
D1	Duplicates or Matrix Spike Duplicates Relative Percent Difference exceeds control limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

CHAIN OF CUSTODY RECORD

17288

Client:	Project Name / Location:
Western Refining	Injection Well
Email results to:	Sampler Name:
Kelly & Matt	Bob
Client Phone No.:	Client No.: 96012-0115

Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative			ANALYSIS / PARAMETERS														
					HNO_3	HCl		TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	CO Table 910-1	TPH (418.1)	CHLORIDE				Sample Cool	Sample Intact
Inj. well	8-7-14	3:00	PH08024-01	3 x VOA-HCl				X													–	✓

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Robert Krakow	8-7-14	3:20		8/7/14	1520
Relinquished by: (Signature)			Received by: (Signature)		

Sample Matrix

Soil ☐ Solid ☐ Sludge ☐ Aqueous ☒ Other ☐ _____

☐ Sample(s) dropped off after hours to secure drop off area.

RUSH

11.6, 12.6 12.1

envirotech Analytical Laboratory

5795 US Highway 64 • Farmington, NM 87401 • 505-632-0615 • Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301 • laboratory@envirotech-inc

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Western Refining Terminals, LLC.	Contact: Kelly Robinson
Address: 50 Road 4990	Telephone No.: 505-632-4166
Facility Name: Bloomfield Terminal	Facility Type: Products Terminal

Surface Owner: Western Refining Southwest, Inc.	Mineral Owner	API No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	27	29N	11W					

Latitude 36.696870 **Longitude** -107.970785

NATURE OF RELEASE

Type of Release: Denatured Ethanol	Volume of Release: estimated 25-30 bbls	Volume Recovered: approx. 22 bbl
Source of Release: Tank 44 Ethanol Tank	Date and Hour of Occurrence: 11/3/2016 at approx. 9:30pm	Date and Hour of Discovery: 11/3/2016 at approx. 9:35pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Cory Smith (NMOCD-Aztec) Vanessa Fields (NMOCD-Aztec) Carl Chavez (NMED–Santa Fe) Leona Tsinnajinnie (NMED-HWB) Dave Cobrain (NMED-HWB) Neelam Dhawan (NMED-HWB)	
By Whom? : Kelly Robinson	Date and Hour : 11/4/2016 at 2:26pm via e-mail	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

OIL CONS. DIV DIST. 3

NOV 08 2016

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

At approximately 9:30pm on November 3, 2016, a delivery truck inadvertently overfilled Tank 44 resulting in the release of denatured ethanol into the tank secondary containment area. Upon discovery, the truck driver ceased unloading activities and Western Operations Personnel initiated corrective actions which included recovering excess liquids using the on-site vacuum truck. The recovered ethanol was sent through the facility WWTS for recovery and disposal. Preliminary estimates are that the total volume released was approximately 25-30 barrels of denatured ethanol, of which 22 barrels were recovered and processed through the facility WWTS.

Describe Area Affected and Cleanup Action Taken.*

The volume released was contained within the earthen tank secondary containment area. No surface liquids were released from the facility boundary. Western is contracting with Envirotech to initiate excavation clean-up activities. Confirmation samples will be collected in the field and compared to applicable clean-up standards pursuant to the NMOCD "Guidelines for Remediation of Leaks, Spills, and Releases" dated August 13, 1993. In addition, this event occurred in an area previously investigated under the active Consent Order issued through the New Mexico Hazardous Waste Bureau (NMED-HWB). Western will be coordinating with the NMED-HWB on implementing corrective actions pursuant to the conditions of the Consent Order.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Kelly Robinson	OIL CONSERVATION DIVISION
Printed Name: Kelly Robinson	Appro
Title: Environmental Supervisor	Appr
E-mail Address: Kelly.robinson@wnr.com	Conditions of Approval:
Date: 11/4/2016 Phone: (505) 632-4166	...ched ☐

* Attach Additional Sheets If Necessary

WESTERN REFINING
BLOOMFIELD TERMINAL

O = TANK 44 (Denatured Ethanol)

LAT/LONG: 36.696870 , -107.970785

NESE Sect: 27 / T 29N / R11W

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☒ Final Report

Name of Company: Western Refining Southwest, Inc.	Contact: Kelly Robinson
Address: 50 Road 4990	Telephone No.: 505-632-4166
Facility Name: Bloomfield Terminal	Facility Type: Bulk Storage Terminal

Surface Owner: Western Refining Southwest, Inc.	Mineral Owner	API No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	27	29N	11W					

OIL CONS. DIV DIST. 3

Latitude 36.700351 **Longitude** -107.972744

NOV 10 2016

NATURE OF RELEASE

Type of Release: Recovered Groundwater	Volume of Release: 3-5 bbls	Volume Recovered: 5-10 bbls
Source of Release: Recovered groundwater	Date and Hour of Occurrence: Uncertain	Date and Hour of Discovery: 10/26/2016 at 7:15pm
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom?	
By Whom? :	Date and Hour :	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

At approximately 7:15pm, Bloomfield Terminal Operations discovered that the variable drive (VFD) on the discharge pump of Tank 38 failed, causing Tank 38 to fill and run over into the tank secondary containment area. Tank 38 captures groundwater from East Outfall #1. Operations personnel quickly used the on-site vacuum truck to pull down the level in the tank, and thus stopping the discharge to ground. The vacuum truck was also used to recover excess liquids within the tank secondary containment. All fluids recovered were transported to the on-site wastewater treatment system.

The event resulted in the release of approximately 5-10 barrels of recovered groundwater, of which approximately 2-4 barrels were recovered from the secondary containment. No surface water were impacted. The liquids did not exhibit a sheen and did not exhibit any odors.

Describe Area Affected and Cleanup Action Taken.*

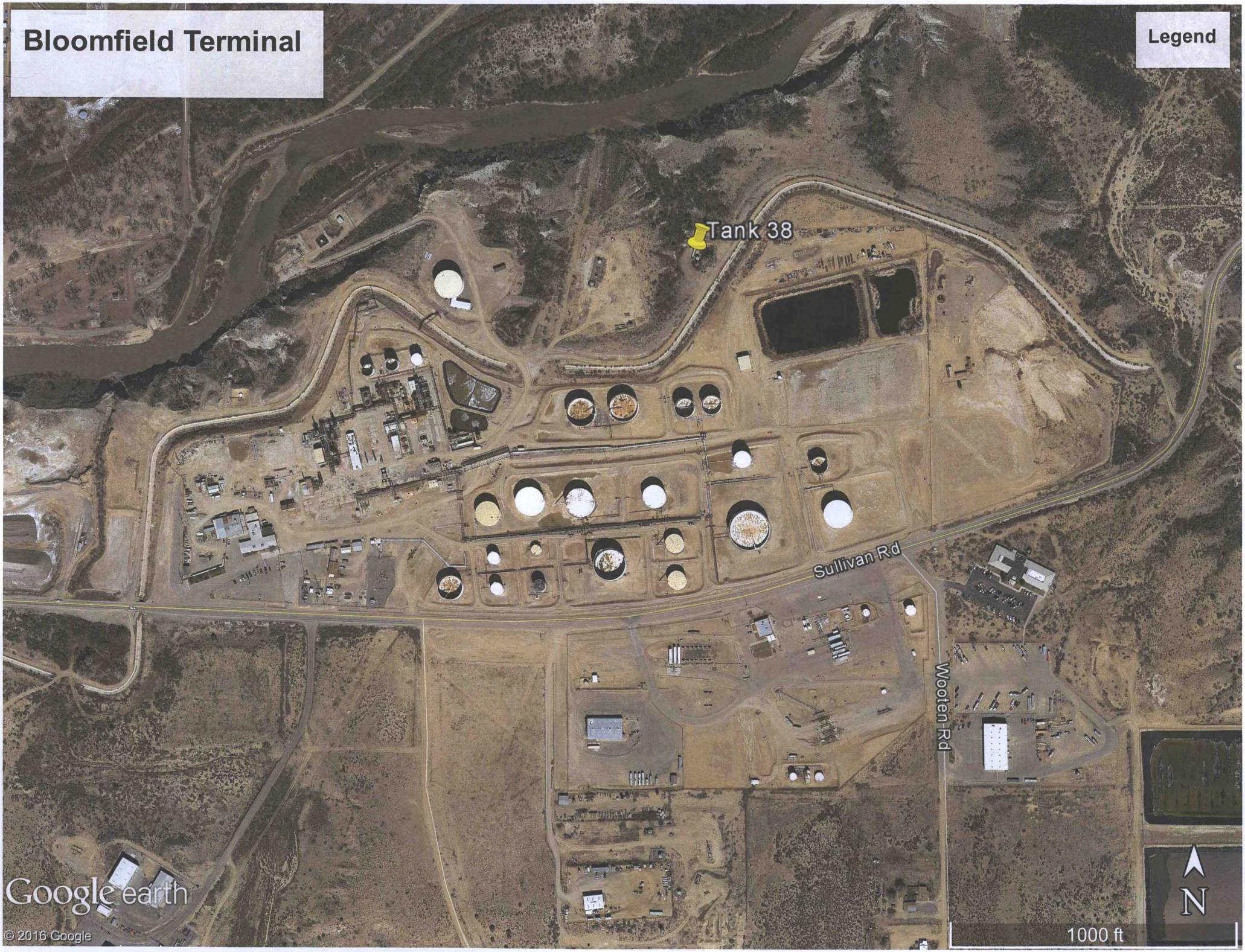
Tank 38 was originally put into service to collect groundwater from East Outfall #1 when there was a concern of groundwater impacts in the area during the time wen the facility operated as a Refinery. For the past several years, the water at this location no longer exhibits characteristics of being impacted. No odor was detected in the water released to ground, and no sheen was visible.

To demonstrate the quality of liquids released in this event, Western collected a sample of the water from Tank 38 and submitted the sample to Hall Laboratory for analysis. The sample was analyzed for total petroleum hydrocarbons (TPH), Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX). The results show that the liquids do not exhibit any detectable concentrations of TPH or BTEX, therefore Western is requesting a No Further Corrective Action designation for this event.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Kelly Robinson	OIL CONSERVATION DIVISION
Printed Name: Kelly Robinson	Approved by E
Title: Environmental Supervisor	Approval Date
E-mail Address: Kelly.Robinson@wnr.com	Conditions of Approval: Attached ☐
Date: 11-9-16 Phone: (505)632-4166	

* Attach Additional Sheets If Necessary


Bloomfield Terminal
Legend
Tank 38
Sullivan Rd
Wooten Rd
Google earth
© 2016 Google
1000 ft
N

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

November 07, 2016

Kelly Robinson
Western Refining Southwest, Inc.
#50 CR 4990
Bloomfield, NM 87413
TEL: (505) 632-4135
FAX (505) 632-3911

RE: Tank 38 OrderNo.: 1611108

Dear Kelly Robinson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 11/2/2016 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 **1611108**
Date Reported: **11/7/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Inc.
Project: Tank 38
Lab ID: 1611108-001 **Matrix:** AQUEOUS

Client Sample ID: TK 38 Water
Collection Date: 10/26/2016 8:00:00 PM
Received Date: 11/2/2016 10:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH						Analyst: **MAB**	
Petroleum Hydrocarbons, TR	ND	1.0	H	mg/L	1	11/3/2016	28445
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	1.0		µg/L	1	11/4/2016 9:20:20 AM	B38456
Toluene	ND	1.0		µg/L	1	11/4/2016 9:20:20 AM	B38456
Ethylbenzene	ND	1.0		µg/L	1	11/4/2016 9:20:20 AM	B38456
Xylenes, Total	ND	2.0		µg/L	1	11/4/2016 9:20:20 AM	B38456
Surr: 4-Bromofluorobenzene	99.8	87.9-146		%Rec	1	11/4/2016 9:20:20 AM	B38456

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
D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1611108**

07-Nov-16

Client: Western Refining Southwest, Inc.
Project: Tank 38

Sample ID **MB-28445**	SampType: **MBLK**	TestCode: **EPA Method 418.1: TPH**
Client ID: **PBW**	Batch ID: **28445**	RunNo: **38438**
Prep Date: **11/3/2016**	Analysis Date: **11/3/2016**	SeqNo: **1200230** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	1.0								

Sample ID **LCS-28445**	SampType: **LCS**	TestCode: **EPA Method 418.1: TPH**
Client ID: **LCSW**	Batch ID: **28445**	RunNo: **38438**
Prep Date: **11/3/2016**	Analysis Date: **11/3/2016**	SeqNo: **1200231** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	5.8	1.0	5.000	0	117	79.2	126			

Sample ID **LCSD-28445**	SampType: **LCSD**	TestCode: **EPA Method 418.1: TPH**
Client ID: **LCSS02**	Batch ID: **28445**	RunNo: **38438**
Prep Date: **11/3/2016**	Analysis Date: **11/3/2016**	SeqNo: **1200232** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	5.5	1.0	5.000	0	110	79.2	126	6.07	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1611108**

07-Nov-16

Client: Western Refining Southwest, Inc.
Project: Tank 38

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBW**	Batch ID: **B38456**	RunNo: **38456**
Prep Date:	Analysis Date: **11/4/2016**	SeqNo: **1201592** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	21		20.00		105	87.9	146			

Sample ID **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSW**	Batch ID: **B38456**	RunNo: **38456**
Prep Date:	Analysis Date: **11/4/2016**	SeqNo: **1201593** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	80	120			
Toluene	20	1.0	20.00	0	99.0	80	120			
Ethylbenzene	18	1.0	20.00	0	90.7	80	120			
Xylenes, Total	53	2.0	60.00	0	88.1	80	120			
Surr: 4-Bromofluorobenzene	20		20.00		100	87.9	146			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	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	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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 Southw** Work Order Number: **1611108** RcptNo: **1**

Received by/date: RC 11/02/16

Logged By: **Ashley Gallegos** **11/2/2016 10:15:00 AM** AG

Completed By: **Ashley Gallegos** **11/2/2016 12:20:29 PM** AG

Reviewed By: IO 11/02/16

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?	UPS		

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 ☐
10. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
11. Were any sample containers received broken?	Yes ☐	No ☑	# of preserved bottles checked for pH: ____ (<2 or >12 unless noted)
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	Adjusted? ____
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
14. Is it clear what analyses were requested?	Yes ☑	No ☐	Checked by: ____
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

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	1.3	Good	Yes			

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Client: Western Refining

Mailing Address: 111 CR 4990 Bloomfield, NM 87413

Phone #: 505-632-4166

Email or Fax#: Kelly.Robinson@WNR.com

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

Accreditation: ☒ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time: ☐ Standard ☒ Rush ASAP

Project Name: TANK 38

Project #:

Project Manager: Kelly Robinson

Sampler: Kelly Robinson

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.3

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1101611108	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)	BTEX - 8021				Air Bubbles (Y or N)
9/16	20:00	Water	TK 38 Water	3 VOAs	HCl	-001												X				
↓	↓	↓	↓	2 [illegible]mL	None					X												

Date: 11-1-16 Time: 1610 Relinquished by: Kelly Robinson Received by: Lindsey Concha Date: 11/02/16 Time: 1015

Date: Time: Relinquished by: Received by: Date: Time:

Remarks: P.O. 12615528

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.

Western Refining

WNR LISTED NYSE

August 29, 2016

OIL CONS. DIV DIST. 3
SEP 01 2016

Carl Chavez
New Mexico Energey, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Frances Drive
Santa Fe, New Mexico 87505

UPS Tracking #:	1Z 881 839 01 4279 6114	(OCD – Santa Fe)
Certified Mailer #:	7015 0640 0005 8540 2704	(OCD – Aztec)
UPS Tracking #:	1Z 881 839 01 4194 7122	(NMED-HWB)

Re: August 4th, 2016 Sump Overflow Incident
Response to Corrective Action Report Request
Western Refining Southwest, Inc. – Bloomfield Terminal
EPA ID# NMD089416416

Dear Mr. Chavez:

On August 4th, 2016, Western Refining Southwest Inc. - Bloomfield Terminal ("Western") provided notification to the New Mexico Oil Conservation Division ("NMOCD") and the New Mexico Environment Department Hazardous Waste Bureau ("NMED-HWB") regarding a sump overflow event that occurred near the Bloomfield Terminal Product Loading Rack Area. Figures showing the approximate location of the release are attached. The cause of the incident was the result of a malfunction of the fire suppression system at the Product Loading Rack, which resulted in a large volume of water to drain to the sump during a short period of time, thus causing the sump to overflow. Corrective actions were initiated upon immediate notification of the event, which included the shutdown of the Loading Rack and the removal of surface fluids using the on-site vacuum truck. The release was contained to within the earthen berm area around the sump.

Western has contracted with LT Environmental to oversee the removal of visually impacted soils within the release area to the extent that the soils removal does not compromise the integrity of the containment berm for this sump area and adjacent loading rack. Excavated soils will be replaced with clean soil so as to re-establish the containment area sufficient for daily operations.

The area in which this overflow occurred has been previously investigated under an active Consent Order issued through NMED-HWB. Previous investigation results indicate concentrations within the surrounding soils that will require further investigation and corrective actions once the area is no longer in-service and is accessible to implement corrective action activities. With this said, Western is requesting approval from the NMOCD to defer closure of this area until such time that the area is no longer part of facility operations. In addition, Western is requesting that future corrective actions for this area be conducted pursuant to the conditions of the active Consent Order under the coordination

with NMED-HWB. To reflect this request, Western has enclosed a revised C-141 Initial Report indicating that on-going corrective actions, as it pertains to this release area, will be coordinated with NMED-HWB pursuant to the Consent Order dated July 27, 2007.

If you have any questions or would like to discuss this topic, please feel free to contact me at (505) 632-4171 or Randy.Schmaltz@wnr.com.

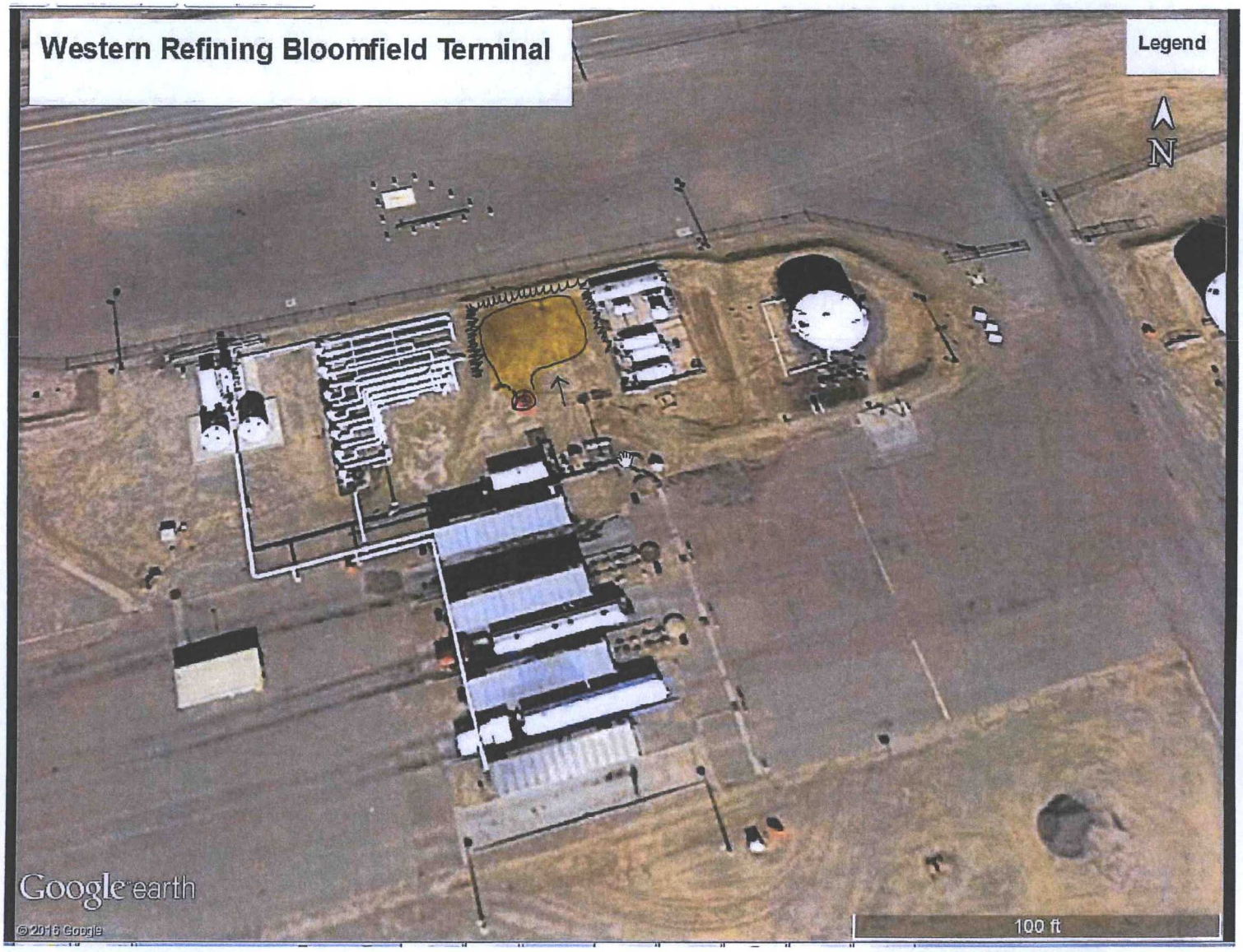
Sincerely,

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

cc: D. Cobrain (NMED-HWB)
N. Dhawan (NMED-HWB)
K. Van Horn (NMED-HWB)
L. Tsinnajinnie (NMED-HWB)
C. Smith (OCD – Aztec)
A. Hains (WNR)
K. Robinson (WNR)

Site Location


Western Refining Bloomfield Terminal
Legend
SUMP AREA
Sullivan Rd
Wooten Rd
Google earth
© 2016 Google
1000 ft
N



= Top of sump; source of overflow release.

= Area of impact.

↑ = Showing direction of surface flow due to surface gradient.

= Symbol of existing earthen berm.

Thursday, August 11, 2016 11:42:29 AM -

C-141 Initial Report (Revised August 29, 2016)

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report (revised 8/29/2016) ☐ Final Report

Name of Company: Western Refining Southwest, Inc.	Contact: Kelly Robinson
Address: 50 Road 4990	Telephone No.: 505-632-4166
Facility Name: Bloomfield Terminal	Facility Type: Products Terminal

Surface Owner: Western Refining Southwest, Inc.	Mineral Owner	API No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	27	29N	11W					

Latitude 36.696775 **Longitude** -107.971133

NATURE OF RELEASE

Type of Release: Product/Water mixture	Volume of Release: estimated 150 bbl	Volume Recovered: approx. 140 bbl
Source of Release: Unloading Rack Sump	Date and Hour of Occurrence: 8/4/2016 at approx. 6am	Date and Hour of Discovery: 8/4/2016 at approx. 6am
Was Immediate Notice Given? ☒ Yes ☐ No ☒ Not Required	If YES, To Whom? Cory Smith (NMOCD-Aztec) Carl Chavez (NMED–Santa Fe) Leona Tsinnajinnie (NMED-HWB) Dave Cobrain (NMED-HWB) Neelam Dhawan (NMED-HWB)	
By Whom? : Kelly Robinson	Date and Hour : 8/4/2016 at 3:54pm via e-mail	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

At approximately 6am on August 4, 2016, a malfunction of the fire suppression system at the Western Refining Bloomfield Terminal ("Western") product loading rack resulted in the overfill of the loading rack sump. The event involved the unexpected activation of the fire suppression system, resulting in a large volume of fresh water to drain through the loading rack drains and into the loading rack sump. This event lasted only a few minutes, but the volume of fresh water release was more than the sump could manage in a short period of time. The overflow material from the product sump was a mixture of fresh water and the finished product residuals that remained in the sump.

Describe Area Affected and Cleanup Action Taken.*

All of the overflow material was contained within the boundary of the Bloomfield Terminal and was localized within the earthen bermed area around the loading rack sump. Upon immediate observation of the event Operations manually turned off the fire system, stopping the flow of water to the sump.

Western estimates that approximately 150 bbls of water/product mixture overflowed from the sump, all of which remained within the containment area. A large portion of the released volume was recovered using an on-site vacuum truck.

This product/water release occurred in an area previously investigated under an active Consent Order issued through the New Mexico Hazarous Waste Bureau (NMED-HWB). Western will be coordinating with the NMED-HWB on implementing corrective action pursuant to the condition of the Consent Order.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Kelly Robinson	OIL CONSERVATION DIVISION
Printed Name: Kelly Robinson	Approved by: District Copy For Scanning Only Has NOT been processed.
Title: Environmental Supervisor	Approval Date:
E-mail Address: Kelly.Robinson@ewnr.com	Conditions of Approval: Attached ☐
Date: 8-29-16 Phone: 505-632-4166	

* Attach Additional Sheets If Necessary

District I
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State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

OIL CONS. DIV DIST. 3
JUN 29 2015

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☒ Final Report

Name of Company: Western Refining Southwest, Inc.	Contact: Matthew Krakow
Address: 50 Road 4990	Telephone No.: 505-632-4169
Facility Name: Bloomfield Terminal	Facility Type: Products Terminal

Surface Owner: Western Refining Southwest, Inc.	Mineral Owner	API No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	27	29N	11W					

Latitude 36° 41' 55"N **Longitude** 107° 58' 26" W

NATURE OF RELEASE

Type of Release: Water	Volume of Release: 45 barrels	Volume Recovered: 40-45 barrels
Source of Release: Sump overflow	Date and Hour of Occurrence: 6/10/15 at 10:15 am MT	Date and Hour of Discovery: 6/10/15 at 10:15 am MT
Was Immediate Notice Given? ☒ Yes ☐ No ☒ Not Required	If YES, To Whom? Cory Smith NMOCD	
By Whom? : Matthew Krakow	Date and Hour : 6/11/2015 at 8:30 am MT	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Storm water runoff from a severe rain event overwhelmed the terminal's products rack sump and it overtopped. The water collected in a containment area around the sump and did not leave the property.

Describe Area Affected and Cleanup Action Taken.*
The water that collected in the containment area was removed with a vacuum truck and disposed of through the facilities wastewater treatment system. This spill took place in an area previously investigated under an active Consent Order issued through New Mexico Hazardous Waste Bureau. Western is working with the Hazardous Waste Bureau for the corrective actions pursuant to the condition of the Consent Order.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Matthew Krakow	OIL CONSERVATION DIVISION
Printed Name: Matthew Krakow	Approved by Envir
Title: Environmental Coordinator	Approval Date:
E-mail Address: Matt.Krakow@WNR.com	Conditions of Approval: Attached ☐
Date: 6/24/15 Phone: 505-632-4169	

District Copy
For Scanning Only
Has NOT been processed.

* Attach Additional Sheets If Necessary