GW - 001

C-141s
(3 of 7)

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.	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 **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.	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 **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.
- 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-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.	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 **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

Completed By: Anne Thorne 7/29/2014

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) 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: 1.6°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1407012	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TDS	Backup	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals Ca, Mg, Na, K	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Ignitability, Corrosivity	Reactivity	Ec, pH, SO_4, Alk, Cl	Sulfides	Air Bubbles (Y or N)
7-28-14	9:30	H_2O	Injection Well	3-VOA	HCl	001										X						
				1-liter	amber	002											X					
				1-500ml	—	003												X				
				1-500ml	—	004				X										X		
				1-250ml	H_2SO_4	005					X											
				1-500ml	HNO_3	006							X									
				1-500ml	NaOH	007													X			
				1-500ml	Zn Acetate	008															X	

Date:	Time:	Relinquished by:	Received by:	Date	Time
7-28-14	1452	Robert Krakow	Christy Walker	7/28/14	1452
7/28/14	1724	Christy Walker		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

5796 US Highway 64, Farmington, NM 87401 Ph (505) 632-0615 Fx (505) 632-1865
Three Springs - 65 Mercado Street, Suite 115, Durango, CO 81301 Ph (970) 259-0615 Fr (800) 362-1879
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laboratory@envirotech-inc.com

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

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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*	

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*			

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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*			

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envirotech-inc.com
laboratory@envirotech-inc.com

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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

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envirotech-inc.com
laboratory@envirotech-inc.com

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			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
					HNO_3	HCl		ANALYSIS / PARAMETERS														
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

12.6, 12.6 12.1

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Chavez, Carl J, EMNRD

From: Robinson, Kelly <Kelly.Robinson@wnr.com>
Sent: Wednesday, December 18, 2013 10:51 AM
To: Chavez, Carl J, EMNRD; Kelly, Jonathan, EMNRD
Cc: Tsinnajinnie, Leona, NMENV; Schmaltz, Randy
Subject: C-141 Final Report for Tank 44 Ethanol Release
Attachments: C-141 Notification_Tank 44 Ethanol Release_Final Report.pdf

Good Morning Gentlemen,

Attached is the C-141 Final Report documenting the Corrective Actions completed that pertain to the ethanol release which occurred at the Bloomfield Terminal earlier this month. If you have any questions regarding this event, please do not hesitate to contact me at your convenience. A hard copy will be sent to you via certified mail for your convenience.

Thank you for your time and Happy Holidays!

Kelly R. Robinson
Environmental Supervisor

Western Refining Southwest, Inc.
111 County Road 4990
Bloomfield, NM87413

(o) 505-632-4166
(c) 505-801-5616
(f) 505-632-4024
(e) kelly.robinson@wnr.com

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: Ron Weaver
Address: 50 Road 4990	Telephone No.: 505-632-4185
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
NESE	27	29N	11W					

Latitude 36° 41' 48.52"N Longitude 107° 58' 14.78" W

NATURE OF RELEASE

Type of Release: Ethanol	Volume of Release: greater than 10 barrels	Volume Recovered: Estimated 2 barrels
Source of Release: Overflow of Tank 44	Date and Hour of Occurrence: 12/2/2013 7:30pm	Date and Hour of Discovery: 12/2/2013 7:30pm
Was Immediate Notice Given? Yes, upon discovery of discharge volume ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? 1) Carl Chavez with NMOCD – Santa Fe Office 2) Jonathan Kelly with NMOCD – Aztec Office	
By Whom? : Kelly Robinson	Date and Hour : 1) 3:30 pm 12/4/2013 to Carl Chavez (NMOCD) via e-mail 2) 3:30 pm on 12/4/2013 to Jonathan Kelly (NMOCD) via e-mail	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*
No water course has been impacted.

Describe Cause of Problem and Remedial Action Taken.*

On Monday December 2nd, 2013 at approximately 7:30pm a truck of Ethanol was unloading into Tank 44 at the Bloomfield Terminal. At the time the truck was un-loading, the auto gauge on the Tank read 18'-4," indicating that there was sufficient room in the tank to unload the truck. During unloading activities, it was noticed in the field that Ethanol was discharging from the tank top vents. Unloading activities immediately ceased. The Ethanol that spilled from the tank top vents was contained within the tank's secondary containment.

The on-shift Terminal operator utilized the on-site vacuum truck to quickly recover as much Ethanol that spilled on to the ground as possible. Initial estimates of the total volume lost through the tank vents were reported as less than 5 barrels. However on December 4th, 2013 after further investigation into the incident, it was determined that the total volume of Ethanol lost was over 10 barrels. The investigation into the event also determined that the cause of the tank overflow was a calibration issue with the tank auto gauge. The gauge on the tank has since been replaced and calibrated to prevent future happenings.

Describe Area Affected and Cleanup Action Taken.*

The volume of ethanol released to ground was contained within the secondary containment of Tank 44. On December 3th, 2013, Western contracted with Envirotech to excavate the impacted soil material around the tank perimeter for off-site disposal. Approximately 30 cubic yards of soil was excavated. The excavated material was transported to the Envirotech Landfarm south of Bloomfield, New Mexico.

Following excavation activities, Western collected a five point composite sample of the excavated base. The sample was submitted to Hall Laboratories for laboratory analysis. The sample was analyzed for benzene, toluene, ethylbenzene, xylenes (BTEX), total petroleum hydrocarbons (TPH) – gasoline range organics, and TPH – diesel range organics as required under the New Mexico Oil Conservation Division *Guidelines for Remediation of Leaks, Spills, and Releases* dated August 13, 1993. A summary of the final confirmation samples is as follows:

	Sample ID: Base Final (mg/kg)	OCD Screening Levels (1) (ppm)
Benzene	<0.05	10
Toluene	<0.05	---
Ethylbenzene	<0.05	---
Total Xylenes	<0.05	---
Total BTEX	<0.30	50
TPH-GRO	<5.0	---
TPH -DRO	<30.0	---
Total TPH	<35	100

Notes:
(1) Based on most conservative clean-up levels per the OCD Guidelines for Remediation of Leaks, Spills, and Releases dated August 13, 1993.

A copy of the analytical report is attached for reference. Based on the analytical results, Western is requesting that a "No Further Corrective Action Required" designation be approved 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 Environmental Specialist:	
Title: Environmental Supervisor	Approval Date:	Expiration Date:
E-mail Address: Kelly.robinson@wnr.com	Conditions of Approval:	Attached ☐
Date: 12/18/2013 Phone: (505) 632-4166		

* Attach Additional Sheets If Necessary

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Analytical Laboratory

Analytical Report

Report Summary

Client: Western Refining-Bloomfield
Chain Of Custody Number: 15948
Samples Received: 12/9/2013 3:55:00PM
Job Number: 96012-0115
Work Order: P312043
Project Name/Location: Tank 44-BLM Term

Entire Report Reviewed By: _____ Date: 12/11/13

Tim Cain, Laboratory Manager

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Analytical Laboratory

Western Refining-Bloomfield	Project Name:	Tank 44-BLM Term	
PO Box 159	Project Number:	96012-0115	Reported:
Bloomfield NM, 87413	Project Manager:	Kelly Robinson	11-Dec-13 14:31

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Western Refining	P312043-01A	Soil	12/09/13	12/09/13	Glass Jar, 8 oz.

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Analytical Laboratory

Western Refining-Bloomfield	Project Name:	Tank 44-BLM Term	
PO Box 159	Project Number:	96012-0115	**Reported:**
Bloomfield NM, 87413	Project Manager:	Kelly Robinson	11-Dec-13 14:31

Western Refining

P312043-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1350001	12/10/13	12/10/13	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1350001	12/10/13	12/10/13	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1350001	12/10/13	12/10/13	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1350001	12/10/13	12/10/13	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1350001	12/10/13	12/10/13	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1350001	12/10/13	12/10/13	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1350001	12/10/13	12/10/13	EPA 8021B	
Surrogate: Bromochlorobenzene		*93.8 %*		*80-120*	*1350001*	*12/10/13*	*12/10/13*	*EPA 8021B*	
Surrogate: 1,3-Dichlorobenzene		*90.7 %*		*80-120*	*1350001*	*12/10/13*	*12/10/13*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1350001	12/10/13	12/10/13	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1350002	12/09/13	12/09/13	EPA 8015D	
GRO and DRO Combined Fractions	ND	5.00	mg/kg		[CALC]	12/10/13	12/10/13	EPA 8015D	

Western Refining-Bloomfield	Project Name:	Tank 44-BLM Term	
PO Box 159	Project Number:	96012-0115	**Reported:**
Bloomfield NM, 87413	Project Manager:	Kelly Robinson	11-Dec-13 14:31

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1350001 - Purge and Trap EPA 5030A										
Blank (1350001-BLK1)			Prepared & Analyzed: 09-Dec-13							
Benzene	ND	0.05	mg/kg							
Toluene	ND	0.05	"							
Ethylbenzene	ND	0.05	"							
p,m-Xylene	ND	0.05	"							
o-Xylene	ND	0.05	"							
Total Xylenes	ND	0.05	"							
Total BTEX	ND	0.05	"							
Surrogate: 1,3-Dichlorobenzene	*48.7*		*ug/L*	*50.0*		*97.3*	*80-120*			
Surrogate: Bromochlorobenzene	*50.6*		"	*50.0*		*101*	*80-120*			
Duplicate (1350001-DUP1)	**Source: P312038-01**		Prepared: 09-Dec-13 Analyzed: 10-Dec-13							
Benzene	ND	0.05	mg/kg		ND				30	
Toluene	ND	0.05	"		ND				30	
Ethylbenzene	ND	0.05	"		ND				30	
p,m-Xylene	ND	0.05	"		ND				30	
o-Xylene	ND	0.05	"		ND				30	
Surrogate: 1,3-Dichlorobenzene	*46.8*		*ug/L*	*50.0*		*93.5*	*80-120*			
Surrogate: Bromochlorobenzene	*49.7*		"	*50.0*		*99.4*	*80-120*			
Matrix Spike (1350001-MS1)	**Source: P312038-01**		Prepared: 09-Dec-13 Analyzed: 10-Dec-13							
Benzene	37.2		ug/L	50.0	ND	74.4	39-150			
Toluene	51.4		"	50.0	ND	103	46-148			
Ethylbenzene	51.6		"	50.0	ND	103	32-160			
p,m-Xylene	102		"	100	ND	102	46-148			
o-Xylene	50.6		"	50.0	ND	101	46-148			
Surrogate: 1,3-Dichlorobenzene	*50.2*		"	*50.0*		*100*	*80-120*			
Surrogate: Bromochlorobenzene	*52.4*		"	*50.0*		*105*	*80-120*			

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Analytical Laboratory

Western Refining-Bloomfield	Project Name:	Tank 44-BLM Term	
PO Box 159	Project Number:	96012-0115	**Reported:**
Bloomfield NM, 87413	Project Manager:	Kelly Robinson	11-Dec-13 14:31

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 1350001 - Purge and Trap EPA 5030A										
Blank (1350001-BLK1)				Prepared & Analyzed: 09-Dec-13						
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg							
Duplicate (1350001-DUP1)		Source: P312038-01		Prepared: 09-Dec-13 Analyzed: 10-Dec-13						
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg		ND				30	
Matrix Spike (1350001-MS1)		Source: P312038-01		Prepared: 09-Dec-13 Analyzed: 10-Dec-13						
Gasoline Range Organics (C6-C10)	0.48		mg/L	0.450	0.07	91.1	75-125			

Western Refining-Bloomfield	Project Name:	Tank 44-BLM Term	
PO Box 159	Project Number:	96012-0115	**Reported:**
Bloomfield NM, 87413	Project Manager:	Kelly Robinson	11-Dec-13 14:31

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 1350002 - DRO Extraction EPA 3550C										
Blank (1350002-BLK1)				Prepared & Analyzed: 09-Dec-13						
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg							
Duplicate (1350002-DUP1)		Source: P312038-01		Prepared & Analyzed: 09-Dec-13						
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg		ND				30	
Matrix Spike (1350002-MS1)		Source: P312038-01		Prepared & Analyzed: 09-Dec-13						
Diesel Range Organics (C10-C28)	167	31.6	mg/kg	263	ND	63.6	75-125			SPK1

Western Refining-Bloomfield	Project Name:	Tank 44-BLM Term	
PO Box 159	Project Number:	96012-0115	**Reported:**
Bloomfield NM, 87413	Project Manager:	Kelly Robinson	11-Dec-13 14:31

Notes and Definitions

SPK1	The spike recovery for this QC sample is outside of 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

RUSH

CHAIN OF CUSTODY RECORD

15948

Client:	Project Name / Location:
Western Refining	TANK 44 - BLM TERM
Email results to: Kelly.Robinson@wnr.com	Sampler Name: Kelly Robinson
Client Phone No.: (505) 801-5616	Client No.: 96012-0115

ANALYSIS / PARAMETERS

Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative HNO3	Preservative HCl	TPH (Method 8015) - DRO, GRO	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
BASE - FINAL	12/9/13	11:00 AM	P312043-01	(1) 8 oz			X	X												Y	Y

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Kelly Robinson	12/9/13	15:55		12/9/13	1555
Relinquished by: (Signature)			Received by: (Signature)		

Sample Matrix: Soil [X] Solid [ ] Sludge [ ] Aqueous [ ] Other [ ]

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

RUSH

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Analytical Laboratory

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Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Wednesday, October 24, 2012 9:19 AM
To: 'Robinson, Kelly'
Cc: Tsinnajinnie, Leona, NMENV; VonGonten, Glenn, EMNRD
Subject: RE: Tank 35 Leak Detection System Release Notification - Western Refining Southwest, Inc. - Bloomfield Refinery

Kelly:

OCD is allowing a 90-day period (on/or before 1/16/2013) to investigate and resolve (Final C-141 with attached corrective action(s)) the Tank 35 leak.

OCD requires tank repairs to comply with applicable API and/or ASTM Methods. Also, please be advised of the OCD Discharge Permit condition(s) related to retrofitting old tanks to current permit requirements. As the OCD discussed with Western on 10/16 the tank inspection and tracking system in place for the refinery and should reflect the inspection and repair work.

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Department
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Drive, Santa Fe, New Mexico 87505
Office: (505) 476-3490
E-mail: CarlJ.Chavez@State.NM.US
Website: http://www.emnrd.state.nm.us/ocd/
"Why Not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward With the Rest of the Nation?" To see how, please go to: "Pollution Prevention & Waste Minimization" at
http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental

---

From: Robinson, Kelly [mailto:Kelly.Robinson@wnr.com]
Sent: Thursday, October 18, 2012 11:22 AM
To: Chavez, Carl J, EMNRD
Subject: RE: Tank 35 Leak Detection System Release Notification - Western Refining Southwest, Inc. - Bloomfield Refinery

Thank you, Sir!

I will be in-touch with up-dates as information and scheduling becomes available.
Have a great day!

Kelly R. Robinson
Environmental Supervisor

Western Refining Southwest, Inc.
111 County Road 4990
Bloomfield, NM87413

(o) 505-632-4166
(c) 505-801-5616
(f) 505-632-4024

(e) kelly.robinson@wnr.com

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Thursday, October 18, 2012 9:16 AM
To: Robinson, Kelly
Subject: RE: Tank 35 Leak Detection System Release Notification - Western Refining Southwest, Inc. - Bloomfield Refinery

Kelly:

Received. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Department
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Drive, Santa Fe, New Mexico 87505
Office: (505) 476-3490
E-mail: CarlJ.Chavez@State.NM.US
Website: http://www.emnrd.state.nm.us/ocd/
"Why Not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward With the Rest of the Nation?" To see how, please go to: "Pollution Prevention & Waste Minimization" at
http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental

---

From: Robinson, Kelly [mailto:Kelly.Robinson@wnr.com]
Sent: Wednesday, October 17, 2012 12:14 PM
To: Chavez, Carl J, EMNRD
Cc: Cobrain, Dave, NMENV; Tsinnajinnie, Leona, NMENV; Schmaltz, Randy; Weaver, Ron
Subject: Tank 35 Leak Detection System Release Notification - Western Refining Southwest, Inc. - Bloomfield Refinery

Good Morning Carl,

I appreciated you taking the time to talk with Randy and I yesterday regarding the issue at the Bloomfield Refinery pertaining to the leak detection system at Tank 35. As we discussed during our conference call with you yesterday morning, crude oil was found dripping from one area of the leak detection system at Tank 35 on Monday morning (October 15, 2012). Western has implemented procedures that include capturing the fluids from the leak detection system and transporting those fluids to the on-site wastewater treatment system. In addition, we have minimized the release of oil from the leak detection system by adding a layer of fresh water to the oil tank. The addition of water keeps the oil from being in-contact with the tank floor, and thus impedes further oil from dripping through the Tank's leak detection system.

As we indicated during our earlier conversation with you, we estimate the leak rate to be approximately one quart per hour. Based on this rate, we are collecting approximately 6 gallons per day from the leak detection system. Based on this rate, the amount released through the leak detection system is currently less than the State reportable amount of 5 barrels. However, pursuant to Condition 9 of the facility's Discharge Permit (GW-001), we wanted to inform OCD that we suspect there is a leak at Tank 35 and are working expediently to correct the situation.

As you requested, attached is an initial C-141 Report that documents this event based on the information we have been able to obtain thus far. We do not yet have a set schedule as to when we will be able to completely remove Tank 35 from service. Operation of this Tank at this time is necessary due to the high crude storage demand and until such time that our Gallup Refinery has returned to full operation following their recent maintenance turnaround activities. Western's priority is to remove Tank 35 from service as quickly as possible so as to be able to inspect the tank and make any necessary repairs. Once a schedule is set to accomplish this, Western will provide OCD with that schedule.

We appreciate your time! If there are any questions, please don't hesitate to contact either Randy or I at your convenience.

Sincerely,

Kelly R. Robinson
Environmental Supervisor

Western Refining Southwest, Inc.
111 County Road 4990
Bloomfield, NM87413

(o) 505-632-4166
(c) 505-801-5616
(f) 505-632-4024
(e) kelly.robinson@wnr.com

Chavez, Carl J, EMNRD

From: Robinson, Kelly <Kelly.Robinson@wnr.com>
Sent: Wednesday, October 17, 2012 12:14 PM
To: Chavez, Carl J, EMNRD
Cc: Cobrain, Dave, NMENV; Tsinnajinnie, Leona, NMENV; Schmaltz, Randy; Weaver, Ron
Subject: Tank 35 Leak Detection System Release Notification - Western Refining Southwest, Inc. - Bloomfield Refinery
Attachments: C-141_WNR_Tank 35 Leak Detection.pdf

Good Morning Carl,

I appreciated you taking the time to talk with Randy and I yesterday regarding the issue at the Bloomfield Refinery pertaining to the leak detection system at Tank 35. As we discussed during our conference call with you yesterday morning, crude oil was found dripping from one area of the leak detection system at Tank 35 on Monday morning (October 15, 2012). Western has implemented procedures that include capturing the fluids from the leak detection system and transporting those fluids to the on-site wastewater treatment system. In addition, we have minimized the release of oil from the leak detection system by adding a layer of fresh water to the oil tank. The addition of water keeps the oil from being in-contact with the tank floor, and thus impedes further oil from dripping through the Tank's leak detection system.

As we indicated during our earlier conversation with you, we estimate the leak rate to be approximately one quart per hour. Based on this rate, we are collecting approximately 6 gallons per day from the leak detection system. Based on this rate, the amount released through the leak detection system is currently less than the State reportable amount of 5 barrels. However, pursuant to Condition 9 of the facility's Discharge Permit (GW-001), we wanted to inform OCD that we suspect there is a leak at Tank 35 and are working expediently to correct the situation.

As you requested, attached is an initial C-141 Report that documents this event based on the information we have been able to obtain thus far. We do not yet have a set schedule as to when we will be able to completely remove Tank 35 from service. Operation of this Tank at this time is necessary due to the high crude storage demand and until such time that our Gallup Refinery has returned to full operation following their recent maintenance turnaround activities. Western's priority is to remove Tank 35 from service as quickly as possible so as to be able to inspect the tank and make any necessary repairs. Once a schedule is set to accomplish this, Western will provide OCD with that schedule.

We appreciate your time! If there are any questions, please don't hesitate to contact either Randy or I at your convenience.

Sincerely,

Kelly R. Robinson
Environmental Supervisor

Western Refining Southwest, Inc.
111 County Road 4990
Bloomfield, NM87413

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(c) 505-801-5616
(f) 505-632-4024
(e) kelly.robinson@wnr.com

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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: Ron Weaver
Address: 50 Road 4990	Telephone No.: 505-632-4185
Facility Name: Bloomfield Refinery	Facility Type: Oil Refinery

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: Crude Oil	Volume of Release: 5 gallons	Volume Recovered: 5 gallons
Source of Release: Tank 35 leak detection system	Date and Hour of Occurrence: 10/15/2012 7:15am	Date and Hour of Discovery: 10/15/2012 7:15am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? 1) Carl Chavez with NMOCD – Santa Fe Office	
By Whom? : Randy Schmaltz and Kelly Robinson	Date and Hour : 1) 9:39 am on 10/16/2012 to Carl Chavez (NMOCD)	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*
No water course has been impacted.

Describe Cause of Problem and Remedial Action Taken.*

On Monday, October 15th, 2012 Western personnel identified crude oil dripping out of the leak detection system under Tank 35. Currently all fluids are being captured in a trough. The leak rate is estimated to be approximately one quart per hour. All fluids are being transferred to the on-site wastewater treatment system via vacuum truck.

Describe Area Affected and Cleanup Action Taken.*

Fresh water has been introduced into the bottom of the tank to stop the seeping of oil, and to serve as a barrier. By placing and maintaining a layer of water in the tank, any further release will be water and not crude oil. All fluids are being captured in a trough and are being transferred to the on-site wastewater treatment system. Western is currently in the process of determining the quickest means of taking the tank out of service in order to investigate possible cause of the problem. Western will notify OCD as soon as a schedule is made for removing Tank 35 from service.

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: Ron Weaver	OIL CONSERVATION DIVISION	
Printed Name: Ron Weaver	Approved by Environmental Specialist:	
Title: Regional Terminals Manager	Approval Date:	Expiration Date:
E-mail Address: ron.weaver@wnr.com	Conditions of Approval:	Attached ☐
Date: 10-16-12 Phone: 505-632-4185		

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Thursday, May 24, 2012 12:09 PM
To: Ed.Riege@wnr.com
Subject: Western Refining Southwest Refineries: GW-001 and AP-116

Ed:

FYI, the OCD is now logging spills/releases at refineries into its OCD Online system "Spills" (click here).

Please contact me if you have questions. Thank you.

xc: OCD Online "C-141s" thumbnail

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Department
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Drive, Santa Fe, New Mexico 87505
Office: (505) 476-3490
E-mail: CarlJ.Chavez@State.NM.US
Website: http://www.emnrd.state.nm.us/ocd/
"Why Not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward With the Rest of the Nation?" To see how, please go to: "Pollution Prevention & Waste Minimization" at
http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental

Chavez, Carl J, EMNRD

From: Donnelly, Patti [Patti.Donnelly@wnr.com]
Sent: Thursday, January 19, 2012 8:29 AM
To: Chavez, Carl J, EMNRD
Cc: Robinson, Kelly; Schmaltz, Randy
Subject: Crude release at Bloomfield Refinery
Attachments: Release Notification and Corrective Action 1-18-12.pdf

Good morning! A copy of this report will be mailed to Brandon Powell but as a courtesy we wanted to also keep you informed. If you have any questions please don't hesitate to contact either Kelly Robinson or Randy Schmaltz.

Thank you,
Patti Donnelly

Patti Donnelly
Logistics, HSER
Western Refining
111 CR 4990
Bloomfield, NM 87413
(505) 632-4005
patti.donnelly@wnr.com

District I
1625 N. French Dr., Hobbs, NM 88240
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811 S. First St., Artesia, NM 88210
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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

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: Victor McDaniel
Address: 50 Road 4990	Telephone No.: 505-632-4146
Facility Name: Bloomfield Refinery	Facility Type: Oil Refinery

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: Crude Oil	Volume of Release: 300 barrels	Volume Recovered: 280 barrels
Source of Release: Pipe flange connection	Date and Hour of Occurrence: 1/14/2012	Date and Hour of Discovery: 1/14/2012 at 4:30pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? 1) Brandon Powell with NMOCD – Aztec Office, 2) Dave Cobrain with NMED Haz Waste Bureau; 3) Carl Chavez with NMOCD – Santa Fe Office	
By Whom? : Randy Schmaltz and Kelly Robinson	Date and Hour : 1) 11:13 am on 1/15/2012 to Brandon Powell (NMOCD) 2) 11:15 am on 1/15/2012 to Dave Cobrain (NMHWB) 3) 3:25 pm on 1/16/2012 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.*

On Saturday, January 14th, Refinery personnel were working to complete the installation of a new crude pipeline located within the Tank Farm of the Bloomfield Refinery. Following placment the new line into service, it was noticed that one of the flange connections along the new pipeline was not tightly secured, resulting in a release of crude within the Tank 11 containment dike. Upon discovery of the release, Operations isolated the line and tightly secured the bolts on the flange, thus eliminating the leak.

Describe Area Affected and Cleanup Action Taken.*

The area impacted includes a small portion of the containment dike where Tank 11 is located. Upon discovery of the release, Operations quickly isolated the line to eliminate the leak and Western personnel used the on-site vacuum truck to vacuum up the oil. The highly compacted soil within the tank dike prevented the crude oil from penetrating deep into the soil. Envirotech Inc. mobilized to the Refinery to excavate the impacted soil. The excavated material was stock-piled on secondary containment pending approval and coordination of disposal activities. The total amount of crude-impacted soil was estimated to be approximately 300 cubic yards.

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: Victor R McDaniel	OIL CONSERVATION DIVISION	
Printed Name: Victor R McDaniel	Approved by Environmental Specialist:	
Title: facility Manager	Approval Date:	Expiration Date:
E-mail Address: VIC.mcdaniel@wnr.com	Conditions of Approval:	Attached ☐
Date: 1-18-2012 Phone: 505 632 4146		

* Attach Additional Sheets If Necessary

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1625 N. French Dr., Hobbs, NM 88240
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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.

RECEIVED OCD
2011 OCT 11 P 11:45

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company: Western Refining Southwest, Inc.	Contact: Victor McDaniel
Address: # 50 Road 4990, Bloomfield, NM, 874136	Telephone No.: (505) 632-4146
Facility Name: Bloomfield Refinery	Facility Type: Oil Refinery

Surface Owner	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' 57" N **Longitude** 107° 58' 19" W

NATURE OF RELEASE

Type of Release Recovered Groundwater	Volume of Release 80 barrels	Volume Recovered
Source of Release: discharge piping from Tank 38	Date and Hour of Occurrence 10/02/2011 at 10am	Date and Hour of Discovery 10/02/2011 at 10am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mr. Glen von Gotten, Acting Bureau Chief, NMOCD Brandon Powell, NMOCD Aztec Office	
By Whom? Kelly Robinson, Environmental Supervisor	Date and Hour: 10/03/2011 at 2:30pm	
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.*
Increased back-pressure in the Tank 38 discharge line caused one of the line joints to break apart. Refinery Operators identified the pipe-break, isolated the line from operation, and notified the Operation Supervisor of the incident. Operators used the on-site vacuum truck to recover the water released. Maintenance personnel were called-out to the Refinery to quickly repair the line.

Describe Area Affected and Cleanup Action Taken.*

The volume of recovered water released was contained within the facility property. The affected area was within a non-vegetative area. The majority of the spill accumulated in low-lying areas just north and east of the containment dike for Tanks 13 and 14. Soils in the area where was release occurred were already saturated due to prior rain events. The saturated soils caused the majority of the released water to pond, thus minimizing infiltration into the soil and allowing for easier recovery of the released water.

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: VR McDaniel	OIL CONSERVATION DIVISION
Printed Name: Victor McDaniel	Approved by Environmental Specialist:
Title: Site Manager	Approval Date: / Expiration Date:
E-mail Address: Vic.mcdaniel@wnr.com	Conditions of Approval: / Attached ☐

Western Refining

WNR LISTED NYSE

RECEIVED OCD

2011 FEB 14 P 1:09

February 11, 2011

Ms. Hope Monzeglio
New Mexico Environmental Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303

Mr. Carl Chavez
State of New Mexico Oil Conservation Division
1220 South Saint Francis Drive
Santa Fe, NM 87505

Certified Mail: 7010 1870 0000 0709 4594
7010 1870 0000 0709 4600

Re: Western Refining Southwest, Inc. – Bloomfield Refinery
Newly Surfaced Groundwater Data Summary

Dear Ms. Monzeglio and Mr. Chavez:

Western Refining Southwest, Inc. – Bloomfield Refinery (Bloomfield) is providing New Mexico Environmental Department (NMED) and New Mexico Oil Conservation Division (NMOCD) a summary of the activities performed and data collected to date that pertains to the newly surfaced groundwater location identified in May 2010.

Discovery Summary

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

A sample of the surface water was collected on the day of discovery and analyzed for benzene, toluene, ethylbenzene, and xylene (BTEX) and methyl tert-butyl ether (MTBE) by EPA method 8260. The results were received on May 26, 2010 and indicated a detected benzene concentration of 110 ug/L. All other analytes were non-detect. Bloomfield collected confirmation split samples on May 26, 2010 which were sent to Envirotech Analytical Laboratory (Envirotech) and Hall Environmental Analysis Laboratory (HEAL) for BTEX analysis. The split samples from Envirotech and HEAL detected benzene concentrations of 167 ug/L and 120 ug/L, respectively. All other analytes for the two split samples were non-detect.

On June 1, 2010 following receipt of the confirmation sample results, Bloomfield notified NMED Hazardous Waste Bureau and NMOCD via e-mail of the recent developments regarding discovery of the new surface water in the East Fork area and immediate actions taken upon discovery.

Response Action Taken

Immediately following confirmation of the benzene results, Bloomfield installed a catchment system to catch the surfacing groundwater at the East Fork area. The system consists of a trough and pump, which transports the captured groundwater to the Refinery's waste water treatment system. The catchment system remained operational from the first week of June 2010 until after receipt of the NMED letter dated July 30, 2010 that granted approval to cease pumping.

Surfaced groundwater samples were collected at the East Fork area on a weekly basis from May 26, 2010 through July 8, 2010. The samples were analyzed for BTEX and MTBE by EPA Method 8260. At NMED's request as stated in an e-mail from Hope Monzeglio dated June 3, 2010, samples collected on June 3, 2010 were also analyzed for diesel range organics (TPH-DRO), gasoline range organics (TPH-GRO), and motor oil range organics (TPH-MRO) by EPA Method 8015B.

In compliance with the NMED letter dated July 30, 2010, Western personnel collected one surface water sample the week before the irrigation ditch company turned off the water to the Hammond Ditch; as well as collected one surface water sample at two, six, and ten weeks after the irrigation ditch company discontinued releasing water to the Hammond Ditch. Samples were analyzed for BTEX and MTBE using EPA Method 8260 and General Chemistry EPA Method 300.0 (major cations/anions, nitrates/nitrites, carbonate). The surface water sample collected at the six week interval included analysis for GRO, DRO, and MRO using EPA Method 8015. **Table 1** provides a summary of the analytical results collected to-date. A copy of the respective analytical reports is provided in **Attachment A**.

In addition, Western personnel collected groundwater elevation measurements from monitoring wells MW-1, MW-50, and MW-51 at the specified intervals. Elevation measurements can be found in **Table 2.** A synopsis of the elevation measurements is presented in **Figure 2.** This data demonstrates that the groundwater elevation of the upgradient wells show little fluctuation relative to Hammond Ditch operations.

The source of the surfaced groundwater at the East Fork area is still not explicitly known. During visual inspection of the possible sources in the area, cracks were evident in the concrete lining of the Hammond Ditch. It is possible that these cracks in the ditch liner may be a significant hydraulic contributor to groundwater in this area.

By using a graduated cylinder and stopwatch, Western personnel measured the flow from the East Fork catchment the day before the irrigation ditch company turned off the water to the Hammond Ditch and again twelve days after canal shut off occurred. On October 14, 2010 the flow was at 1000 mls per 11 seconds or 1.4 gpm. On October 27, 2010 the flow was recorded at 1000mls per 11 seconds or 1.4 gpm. This

data illustrates in that 12 day time period the East Fork is not affected by Hammond Ditch operations.

Using the same measurement methods, Western personnel determined the flow from Outfall #3 the day before the irrigation ditch company shut off the canal (October 14, 2010)and again three days after canal shut off (October 18, 2010). Flows decreased from 75 gpm on October 14, 2010 to 5 gpm on October 18, 2010.

By comparing the data from Outfall #3 and the East Fork, there is a direct correlation to Hammond Ditch operation and flow at Outfall #3 and possibly to the East Fork. Outfall #3 is taking the water directly from a pipe connected to the French Drain underneath Hammond Ditch whereas water flowing to the East Fork must travel through the soil profile before daylighting.

Proposed Actions

The benzene concentrations at the newly identified groundwater surface location (East Fork area) have progressively decreased since May 26, 2010. Detected benzene concentrations have been below the WQCC screening level of 10 ug/L since June 3rd, 2010, and below the EPA Maximum Contaminant Level (MCL) of 5 ug/L since June 16th, 2010 (Refer to **Table 1** for the analytical summary trend).

Bloomfield proposes to collect one surface water sample from the East Fork and flow measurements from Outfall #3 and the East Fork one week before water is let into Hammond Ditch and a follow up sample and flow measurements six weeks after ditch operations commence. Samples will be analyzed for BTEX and MTBE using EPA Method 8260 and for gasoline range organics (GRO), diesel range organics (DRO), and motor oil range organics (MRO) using EPA Method 8015.

If you have any questions or would like to further discuss this topic, please contact me at (505) 632-4171.

Sincerely,

James R. Schmaltz
Environmental Manager
Western Refining Southwest, Inc.
Bloomfield Refinery

cc: Allen Hains – Western Refining El Paso

FIGURES

Figure 1

East Fork and Outfall #3 Location Map

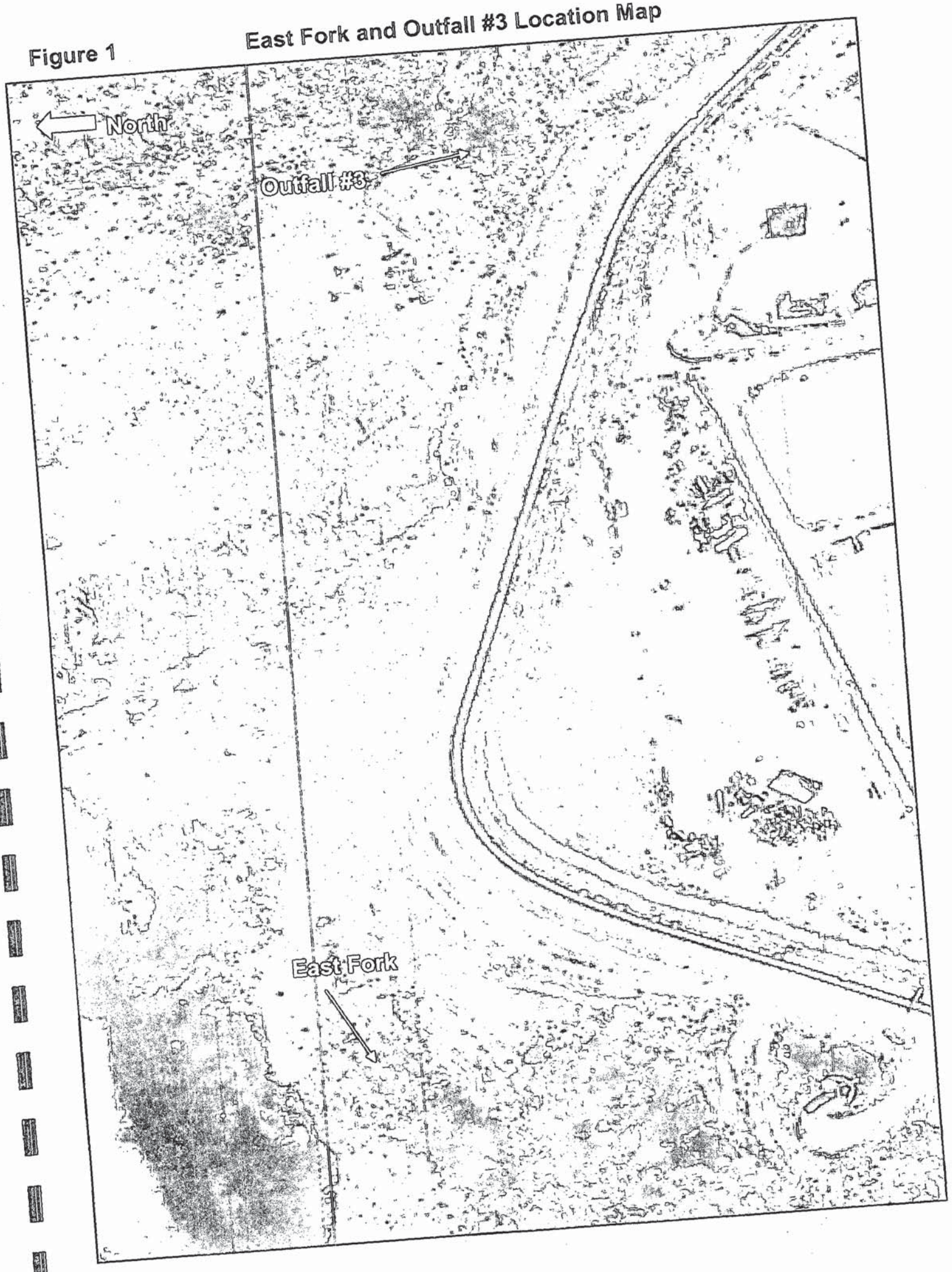
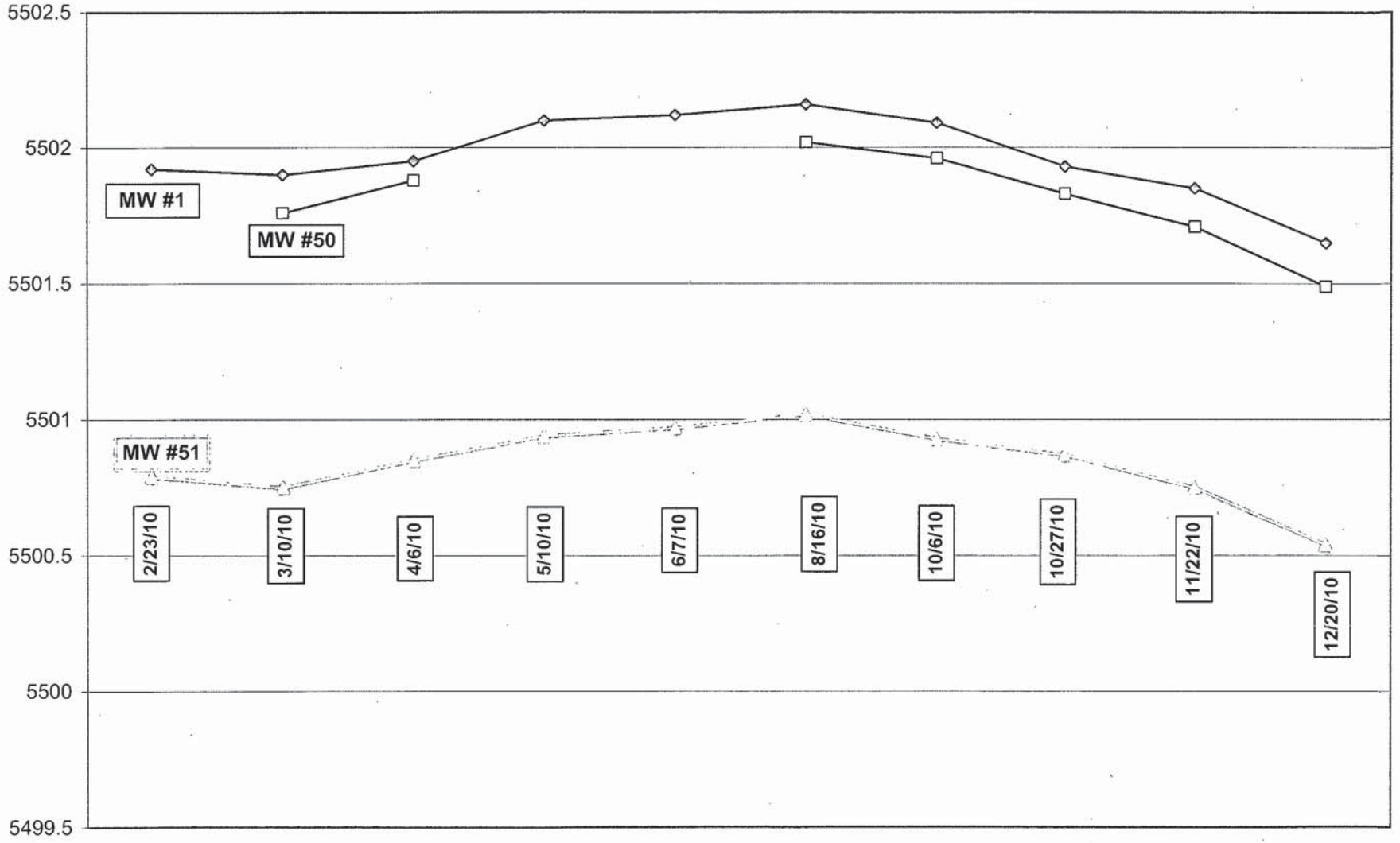


Figure 2
Groundwater Elevation - Near the East Fork - 2010



TABLES

Table 1
East Fork Analytical Monitoring

Screening Level (mg/L)	0.005 (2)	0.75 (3)	0.7 (2)	0.62 (3)	0.012 (1)	0.2 (4)			1.6 (3)	250 (3)				600 (3)						
Sampling Event	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylene (mg/L)	MTBE (mg/L)	DRO (mg/L)	GRO (mg/L)	MRO (mg/L)	Fluoride (mg/L)	Chloride (mg/L)	Bromide (mg/L)	Nitrate/ Nitrite (mg/L)	P (mg/L)	Sulfate (mg/L)	Calcium (mg/L)	Mg (mg/L)	K (mg/L)	Sodium (mg/L)	CO2 (mg/L)	ALK (mg/L)
12/20/2010 (10 wks after shut off)	<0.001	<0.001	<0.001	<0.002	<0.001	NA	NA	NA	0.41	12	NA	<1.0	<0.50	74	63	17	1.8	53	250	250
11/22/2010 (6 wks after shut off)	<0.001	<0.001	<0.001	<0.002	<0.001	<0.20	<0.05	<2.5	0.44	12	0.14	<1.0	<0.50	75	65	17	1.4	53	250	250
10/27/2010 (2 wks after shut off)	<0.001	<0.001	<0.001	<0.0015	<0.001	NA	NA	NA	0.45	12	NA	<1.0	<0.50	90	69	18	1.9	55	250	250
10/06/2010 (1 wk before shut off)	<0.001	<0.001	<0.001	<0.002	<0.001	NA	NA	NA	0.47	13	0.11	<1.0	<0.50	110	73	19	1.9	57	250	250
7/8/2010	0.002	<0.001	<0.001	<0.002	<0.001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7/1/2010	0.0023	<0.001	<0.001	<0.002	<0.001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/25/2010	0.0016	<0.001	<0.001	<0.002	<0.001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/16/2010	0.0034	<0.001	<0.001	<0.002	<0.001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/8/2010	0.0052	<0.001	<0.001	<0.002	<0.001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/3/2010	0.0096	<0.001	<0.001	<0.002	<0.001	<0.20	<0.05	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5/26/2010 (5)	0.167	<0.002	<0.002	<0.002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5/26/2010	0.12	<0.001	<0.001	<0.002	<0.001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5/19/2010	0.11	<0.001	<0.001	<0.002	<0.001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

(1) EPA Regional Screening Level (April 2009) - EPA Regional Screening Level Tap Water
(2) EPA - Regional Screening Level (April 2009) - MCL
(3) NMED WQCC Standards - Title 20 Chapter 6 Part 2 - 20.6.2.3101 Standards for Groundwater of 10,000 mg/L TDS Concentration or Less.
(4) NMED TPH Screening Guidelines October 2006 - unknown oil.
(5) Split sample analyzed by Envirotech Analytical Labororatory.
NA - No Analysis

TABLE 2
Groundwater Elevation Measurement Summary - Near East Fork Area

Well ID	Monitoring Event	Date	Measuring Point Elevation	Total Well Depth	Depth To Product (DTP)	Depth To Water (DTW)	Corrected Groundwater Elevation	
MW-1	10 weeks after S/O	12/20/2010	5519.21	21.56	NPP	17.56	5501.65	Hammond Ditch Shut Off
	6 weeks after S/O	11/22/2010	5519.21	21.56	NPP	17.36	5501.85	
	2 weeks after S/O	10/27/2010	5519.21	21.56	NPP	17.28	5501.93	
	1 week before S/O	10/6/2010	5519.21	21.56	NPP	17.12	5502.09	Hammond Ditch Operating
	3rd QTR	8/16/2010	5519.21	21.56	NPP	17.05	5502.16	
	5th Month	6/7/2010	5519.21	21.56	NPP	17.09	5502.12	
	4th Month	5/10/2010	5519.21	21.56	NPP	17.11	5502.10	
	2nd QTR (3rd M)	4/6/2010	5519.21	21.56	NPP	17.26	5501.95	Hammond Ditch Shut Off
	1st QTR (2nd M)	3/10/2010	5519.21	21.56	NPP	17.31	5501.90	
	1st Month	2/23/2010	5519.21	21.56	NPP	17.29	5501.92	
MW-50	10 weeks after S/O	12/20/2010	5518.79	22.14	NPP	17.30	5501.49	Hammond Ditch Shut Off
	6 weeks after S/O	11/22/2010	5518.79	22.14	NPP	17.08	5501.71	
	2 weeks after S/O	10/27/2010	5518.79	22.14	NPP	16.96	5501.83	
	1 week before S/O	10/6/2010	5518.79	22.14	NPP	16.83	5501.96	Hammond Ditch Operating
	3rd QTR	8/16/2010	5518.79	22.14	NPP	16.77	5502.02	
	5th Month	NA	5518.79	22.14	NA	NA	NA	
	4th Month	NA	5518.79	22.14	NA	NA	NA	
	2nd QTR (3rd M)	4/6/2010	5518.79	22.14	NPP	16.91	5501.88	Hammond Ditch Shut Off
	1st QTR (2nd M)	3/10/2010	5518.79	22.14	NPP	17.03	5501.76	
	1st Month	NA	5518.79	22.14	NA	NA	NA	
MW-51	10 weeks after S/O	12/20/2010	5515.58	22.18	NPP	15.04	5500.54	Hammond Ditch Shut Off
	6 weeks after S/O	11/22/2010	5515.58	22.18	NPP	14.83	5500.75	
	2 weeks after S/O	10/27/2010	5515.58	22.18	NPP	14.71	5500.87	
	1 week before S/O	10/6/2010	5515.58	22.18	NPP	14.65	5500.93	Hammond Ditch Operating
	3rd QTR	8/16/2010	5515.58	22.18	NPP	14.56	5501.02	
	5th Month	6/7/2010	5515.58	22.18	NPP	14.61	5500.97	
	4th Month	5/10/2010	5515.58	22.18	NPP	14.64	5500.94	
	2nd QTR (3rd M)	4/6/2010	5515.58	22.18	NPP	14.73	5500.85	Hammond Ditch Shut Off
	1st QTR (2nd M)	3/10/2010	5515.58	22.18	NPP	14.83	5500.75	
	1st Month	2/23/2010	5515.58	22.18	NPP	14.79	5500.79	

S/O - Shut Off of Hammond Ditch
NA - not applicable - not part of the 5 month Fluid Collection Activities

ATTACHMENT A
Analytical Reports

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

Tuesday, May 25, 2010

Cindy Hurtado
Western Refining Southwest, Inc.
#50 CR 4990
Bloomfield, NM 87413

TEL: (505) 632-4161
FAX (505) 632-3911

RE: 5-19-10 Drainage North of TK#38

Order No.: 1005560

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory, Inc. received 2 sample(s) on 5/20/2010 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology.

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

Sincerely,

FOR Andy Freeman, Laboratory Manager

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

Hall Environmental Analysis Laboratory, Inc.

Date: *25-May-10*

CLIENT: Western Refining Southwest, Inc.
Project: 5-19-10 Drainage North of TK#38

Lab Order: 1005560

Lab ID: 1005560-01
Client Sample ID: West Fork

Collection Date: 5/19/2010 2:15:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: HL
Benzene	ND	1.0		µg/L	1	5/20/2010 5:23:50 PM
Toluene	ND	1.0		µg/L	1	5/20/2010 5:23:50 PM
Ethylbenzene	ND	1.0		µg/L	1	5/20/2010 5:23:50 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/20/2010 5:23:50 PM
Xylenes, Total	ND	2.0		µg/L	1	5/20/2010 5:23:50 PM

Lab ID: 1005560-02
Client Sample ID: East Fork

Collection Date: 5/19/2010 2:25:00 PM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: HL
Benzene	110	5.0		µg/L	5	5/21/2010 6:03:59 PM
Toluene	ND	1.0		µg/L	1	5/20/2010 6:52:11 PM
Ethylbenzene	ND	1.0		µg/L	1	5/20/2010 6:52:11 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/20/2010 6:52:11 PM
Xylenes, Total	ND	2.0		µg/L	1	5/20/2010 6:52:11 PM

Qualifiers:

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

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Inc.
Project: 5-19-10 Drainage North of TK#38 **Work Order:** 1005560

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8260: Volatiles Short List											
Sample ID: 1005560-01a msd		*MSD*				Batch ID: **R38830**		Analysis Date:		5/20/2010 6:22:54 PM	
Benzene	20.31	µg/L	1.0	20	0	102	72.4	126	0.138	20	
Toluene	21.54	µg/L	1.0	20	0	108	79.2	115	1.72	20	
Sample ID: 5ml rb		*MBLK*				Batch ID: **R38830**		Analysis Date:		5/20/2010 8:45:56 AM	
Benzene	ND	µg/L	1.0								
Toluene	ND	µg/L	1.0								
Ethylbenzene	ND	µg/L	1.0								
Methyl tert-butyl ether (MTBE)	ND	µg/L	1.0								
Xylenes, Total	ND	µg/L	2.0								
Sample ID: 5ml rb		*MBLK*				Batch ID: **R38844**		Analysis Date:		5/21/2010 8:57:02 AM	
Benzene	ND	µg/L	1.0								
Toluene	ND	µg/L	1.0								
Ethylbenzene	ND	µg/L	1.0								
Methyl tert-butyl ether (MTBE)	ND	µg/L	1.0								
Xylenes, Total	ND	µg/L	2.0								
Sample ID: 5ml rb		*MBLK*				Batch ID: **R38830**		Analysis Date:		5/20/2010 8:45:56 AM	
Benzene	ND	µg/L	1.0								
Toluene	ND	µg/L	1.0								
Ethylbenzene	ND	µg/L	1.0								
Methyl tert-butyl ether (MTBE)	ND	µg/L	1.0								
Xylenes, Total	ND	µg/L	2.0								
Sample ID: 100ng lcs		*LCS*				Batch ID: **R38830**		Analysis Date:		5/20/2010 10:54:22 AM	
Benzene	20.06	µg/L	1.0	20	0	100	82.4	116			
Toluene	22.33	µg/L	1.0	20	0	112	89.5	123			
Sample ID: 100ng lcs		*LCS*				Batch ID: **R38844**		Analysis Date:		5/21/2010 10:19:50 AM	
Benzene	18.82	µg/L	1.0	20	0	94.1	82.4	116			
Toluene	21.74	µg/L	1.0	20	0	109	89.5	123			
Sample ID: 100ng lcs		*LCS*				Batch ID: **R38830**		Analysis Date:		5/20/2010 10:54:22 AM	
Benzene	20.06	µg/L	1.0	20	0	100	82.4	116			
Toluene	22.33	µg/L	1.0	20	0	112	89.5	123			
Sample ID: 1005560-01a ms		*MS*				Batch ID: **R38830**		Analysis Date:		5/20/2010 5:53:38 PM	
Benzene	20.28	µg/L	1.0	20	0	101	72.4	126			
Toluene	21.91	µg/L	1.0	20	0	110	79.2	115			

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **WESTERN REFINING SOUT** Date Received: **5/20/2010**

Work Order Number **1005560** Received by: **TLS**

Checklist completed by: _____ 5/20/10 Sample ID labels checked by: _____

Signature Date Initials

Matrix: Carrier name: UPS

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
Container/Temp Blank temperature?	**4.0°**	*<6° C Acceptable* If given sufficient time to cool.		

Number of preserved bottles checked for pH: _____

<2 >12 unless noted below.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Chain-of-Custody Record

Client: Western Refining

Mailing Address: #50 CR 4990
Bloomfield, NM 87413

Phone #: 505-632-4161

email or Fax#: 505-632-3911

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

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: 5-19-10
DRAINAGE North of TK# 38

Project #:

Project Manager:

Sampler: Cindy & Bob

On Ice: ☒ Yes ☐ No

Sample Temperature: 10

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. 1005260	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA) BTEX, MTBE only	8270 (Semi-VOA)					Air Bubbles (Y or N)
5-19-10	2:15	H_2O	West Fork	3-VOA	HCl	1										X						
5-19-10	2:25	H_2O	East Fork	3-VOA	HCl	2										X						

Date:	Time:	Relinquished by:	Received by:	Date	Time
5-19-10	3:00	Robert Knabon			
Date:	Time:	Relinquished by:	Received by:	5/20/10	1013

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.

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

Wednesday, June 02, 2010

Cindy Hurtado
Western Refining Southwest, Inc.
#50 CR 4990
Bloomfield, NM 87413

TEL: (505) 632-4161
FAX (505) 632-3911

RE: Drainage North of TK#38 5-26-10

Order No.: 1005835

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory, Inc. received 4 sample(s) on 5/27/2010 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology.

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

Sincerely,

Andy Freeman, Laboratory Manager

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

Hall Environmental Analysis Laboratory, Inc.

Date: *02-Jun-10*

CLIENT: Western Refining Southwest, Inc.
Project: Drainage North of TK#38 5-26-10

Lab Order: 1005835

Lab ID: 1005835-01 **Collection Date:** 5/26/2010 1:05:00 PM
Client Sample ID: West Fork **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **DAM**
Benzene	ND	1.0		µg/L	1	5/28/2010 10:37:23 AM
Toluene	ND	1.0		µg/L	1	5/28/2010 10:37:23 AM
Ethylbenzene	ND	1.0		µg/L	1	5/28/2010 10:37:23 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/28/2010 10:37:23 AM
Xylenes, Total	ND	2.0		µg/L	1	5/28/2010 10:37:23 AM

Lab ID: 1005835-02 **Collection Date:** 5/26/2010 12:50:00 PM
Client Sample ID: East Fork **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **DAM**
Benzene	120	10		µg/L	10	5/28/2010 11:05:28 AM
Toluene	ND	1.0		µg/L	1	5/28/2010 11:33:35 AM
Ethylbenzene	ND	1.0		µg/L	1	5/28/2010 11:33:35 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/28/2010 11:33:35 AM
Xylenes, Total	ND	2.0		µg/L	1	5/28/2010 11:33:35 AM

Lab ID: 1005835-03 **Collection Date:** 5/26/2010 12:30:00 PM
Client Sample ID: Outfall #2 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **DAM**
Benzene	ND	1.0		µg/L	1	5/28/2010 12:30:03 PM
Toluene	ND	1.0		µg/L	1	5/28/2010 12:30:03 PM
Ethylbenzene	ND	1.0		µg/L	1	5/28/2010 12:30:03 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/28/2010 12:30:03 PM
Xylenes, Total	ND	2.0		µg/L	1	5/28/2010 12:30:03 PM

Lab ID: 1005835-04 **Collection Date:** 5/26/2010 12:15:00 PM
Client Sample ID: MW-51 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **DAM**
Benzene	6400	100		µg/L	100	5/28/2010 9:24:16 PM
Toluene	220	100		µg/L	100	5/28/2010 9:24:16 PM
Ethylbenzene	250	100		µg/L	100	5/28/2010 9:24:16 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	5/28/2010 12:57:13 PM
Xylenes, Total	1800	200		µg/L	100	5/28/2010 9:24:16 PM

Qualifiers:

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

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Inc.
Project: Drainage North of TK#38 5-26-10 **Work Order:** 1005835

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8260: Volatiles Short List											
Sample ID: 5ml rb		*MBLK*				Batch ID:	**R38998**	Analysis Date:	5/28/2010 8:44:54 AM		
Benzene	ND	µg/L	1.0								
Toluene	ND	µg/L	1.0								
Ethylbenzene	ND	µg/L	1.0								
Methyl tert-butyl ether (MTBE)	ND	µg/L	1.0								
Xylenes, Total	ND	µg/L	2.0								
Sample ID: 100ng lcs		*LCS*				Batch ID:	**R38998**	Analysis Date:	5/28/2010 9:41:09 AM		
Benzene	21.46	µg/L	1.0	20	0	107	82.4	116			
Toluene	23.42	µg/L	1.0	20	0	117	89.5	123			

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **WESTERN REFINING SOUT** Date Received: **5/27/2010**

Work Order Number **1005835** Received by: **ARS**

Checklist completed by: _____ 5/27/10 Sample ID labels checked by: _____

Signature Date Initials

Matrix: Carrier name: UPS

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
Container/Temp Blank temperature?	6.7°	<6° C Acceptable If given sufficient time to cool.		

Number of preserved bottles checked for pH: _____

<2 >12 unless noted below.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

_____

_____

_____

_____

Corrective Action _____

_____

_____

Chain-of-Custody Record

Client: Western Refining

Mailing Address: #50 CR 4990
Bloomfield, NM 87413

Phone #: 505-632-4161

email or Fax#: 505-632-3911

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name:
5-26-10
DRAINage North of TK#38

Project #:

Project Manager:

Sampler: Bob

On Ice: ☒ Yes ☐ No

Sample Temperature: 6.7

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. 1005835	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA) BTEX, MTBE and	8270 (Semi-VOA)					Air Bubbles (Y or N)
5-26-10	1:05	H_2O	West Fork	3-VOA	HCl	1										X						
	12:50		East Fork	3-VOA	HCl	2										X						
	12:30		outfall #2	3-VOA	HCl	3										X						
	12:15		MW-51	3-VOA	HCl	4										X						

Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
5-26-10	3:00	Robert Krakow		5/27/10	1045	Please Cc Results to Kelly Robinson
Date:	Time:	Relinquished by:	Received by:	Date	Time	
				5/26/10	15:45	

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

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Western Refining	Project #:	96012-0009
Sample ID:	West Fork	Date Reported:	05-31-10
Chain of Custody:	9482	Date Sampled:	05-26-10
Laboratory Number:	54454	Date Received:	05-26-10
Sample Matrix:	Aqueous	Date Analyzed:	05-27-10
Preservative:	Cool	Analysis Requested:	BTEX
Condition:	Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	**1.9**	**1**	**0.2**
Toluene	**ND**	**1**	**0.2**
Ethylbenzene	**ND**	**1**	**0.2**
p,m-Xylene	**ND**	**1**	**0.2**
o-Xylene	**ND**	**1**	**0.1**
Total BTEX	**1.9**		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	fluorobenzene	**107 %**
	1,4-difluorobenzene	**98.3 %**
	4-bromochlorobenzene	**97.7 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: **Drainage North of TK #38**

Analyst

Review

5796 US Highway 64, Farmington, NM 87401 | Ph (505) 632-0615 Fr (800) 362-1879 Fx (505) 632-1865 lab@envirotech-inc.com envirotech-inc.com

envirotech
Analytical Laboratory

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Western Refining	Project #:	96012-0009
Sample ID:	East Fork	Date Reported:	05-31-10
Chain of Custody:	9482	Date Sampled:	05-26-10
Laboratory Number:	54455	Date Received:	05-26-10
Sample Matrix:	Aqueous	Date Analyzed:	05-27-10
Preservative:	Cool	Analysis Requested:	BTEX
Condition:	Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	**167**	**1**	**0.2**
Toluene	**ND**	**1**	**0.2**
Ethylbenzene	**ND**	**1**	**0.2**
p,m-Xylene	**ND**	**1**	**0.2**
o-Xylene	**ND**	**1**	**0.1**
Total BTEX	**167**		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	fluorobenzene	**113 %**
	1,4-difluorobenzene	**101 %**
	4-bromochlorobenzene	**122 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: **Drainage North of TK #38**

Analyst

Review

5796 US Highway 64, Farmington, NM 87401 | Ph (505) 632-0615 Fr (800) 362-1879 Fx (505) 632-1865 lab@envirotech-inc.com envirotech-inc.com

envirotech
Analytical Laboratory

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS
QUALITY ASSURANCE REPORT

Client:	N/A	Project #:	N/A
Sample ID:	0528BBLK QA/QC	Date Reported:	05-20-10
Laboratory Number:	54454	Date Sampled:	N/A
Sample Matrix:	Aqueous	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	05-27-10
Condition:	N/A	Analysis:	BTEX

Calibration and Detection Limits (ug/L)	I-Cal RF:	C-Cal RF:	%Diff. Accept. Range 0 - 15%	Blank Conc	Detect. Limit
Benzene	1.2445E+006	1.2483E+006	0.30%	ND	0.2
Toluene	8.0034E+005	8.0275E+005	0.30%	ND	0.2
Ethylbenzene	6.5663E+005	6.5860E+005	0.30%	ND	0.2
p,m-Xylene	1.8965E+006	1.9022E+006	0.30%	ND	0.2
o-Xylene	6.2516E+005	6.2705E+005	0.30%	ND	0.1

Duplicate Conc. (ug/L)	Sample	Duplicate	%Diff.	Accept Limit
Benzene	1.9	1.8	0.0%	0 - 30%
Toluene	ND	ND	0.0%	0 - 30%
Ethylbenzene	ND	ND	0.0%	0 - 30%
p,m-Xylene	ND	ND	0.0%	0 - 30%
o-Xylene	ND	ND	0.0%	0 - 30%

Spike Conc. (ug/L)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Limits
Benzene	1.9	50.0	55.7	107%	39 - 150
Toluene	ND	50.0	56.2	112%	46 - 148
Ethylbenzene	ND	50.0	52.4	105%	32 - 160
p,m-Xylene	ND	100	118	118%	46 - 148
o-Xylene	ND	50.0	53.8	108%	46 - 148

ND - Parameter not detected at the stated detection limit.

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: **QA/QC for Samples 54454 and 54455.**

Analyst

Review

5796 US Highway 64, Farmington, NM 87401 | Ph (505) 632-0615 Fr (800) 362-1879 Fx (505) 632-1865 lab@envirotech-inc.com envirotech-inc.com

CHAIN OF CUSTODY RECORD

09482

Client:	Project Name / Location:
Western Refining	Drainage North of TK# 38
Client Address:	Sampler Name: Bob
Client Phone No.:	Client No.: 96012 - 0009

ANALYSIS / PARAMETERS

Sample No./ Identification	Sample Date	Sample Time	Lab No.	Sample Matrix	No./Volume of Containers	Preservative $HgCl_2$	Preservative HCl	TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	PAH	TPH (418.1)	CHLORIDE				Sample Cool	Sample Intact
West Fork	5-26-10	1:05	54454	Soil Solid Sludge (Aqueous)	3-VOA		X		X												X	X
East Fork	5-26-10	12:50	54455	Soil Solid Sludge (Aqueous)	3-VOA		X		X												X	X
				Soil Solid Sludge Aqueous																		
				Soil Solid Sludge Aqueous																		
				Soil Solid Sludge Aqueous																		
				Soil Solid Sludge Aqueous																		
				Soil Solid Sludge Aqueous																		
				Soil Solid Sludge Aqueous																		
				Soil Solid Sludge Aqueous																		
				Soil Solid Sludge Aqueous																		
				Soil Solid Sludge Aqueous																		

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Robert Krakow	5-26-10	4:05	[signature]	4:05	5-26-10
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

envirotech
Analytical Laboratory

5796 US Highway 64 • Farmington, NM 87401 • 505-632-0615 • lab@envirotech-inc.com

ACCENT Printing • Form 28-0807

6/14

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

Friday, June 11, 2010

Cindy Hurtado
Western Refining Southwest, Inc.
#50 CR 4990
Bloomfield, NM 87413

TEL: (505) 632-4161
FAX (505) 632-3911

RE: Drainage North of TK#38 6/3/10

Order No.: 1006193

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory, Inc. received 1 sample(s) on 6/4/2010 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology.

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

Sincerely,

Andy Freeman, Laboratory Manager

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

Hall Environmental Analysis Laboratory, Inc.

Date: *11-Jun-10*

CLIENT:	Western Refining Southwest, Inc.	**Client Sample ID:**	East Fork
Lab Order:	1006193	**Collection Date:**	6/3/2010 1:20:00 PM
Project:	Drainage North of TK#38 6/3/10	**Date Received:**	6/4/2010
Lab ID:	1006193-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JB
Diesel Range Organics (DRO)	ND	0.20		mg/L	1	6/10/2010 12:59:10 PM
Motor Oil Range Organics (MRO)	ND	2.5		mg/L	1	6/10/2010 12:59:10 PM
Surr: DNOP	137	82-162		%REC	1	6/10/2010 12:59:10 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	6/10/2010 1:27:25 PM
Surr: BFB	93.0	55.2-107		%REC	1	6/10/2010 1:27:25 PM
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: HL
Benzene	9.6	1.0		µg/L	1	6/8/2010 2:57:30 PM
Toluene	ND	1.0		µg/L	1	6/8/2010 2:57:30 PM
Ethylbenzene	ND	1.0		µg/L	1	6/8/2010 2:57:30 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/8/2010 2:57:30 PM
Xylenes, Total	ND	2.0		µg/L	1	6/8/2010 2:57:30 PM
Surr: 1,2-Dichloroethane-d4	85.0	54.6-141		%REC	1	6/8/2010 2:57:30 PM
Surr: 4-Bromofluorobenzene	99.3	60.1-133		%REC	1	6/8/2010 2:57:30 PM
Surr: Dibromofluoromethane	91.3	78.5-130		%REC	1	6/8/2010 2:57:30 PM
Surr: Toluene-d8	102	79.5-126		%REC	1	6/8/2010 2:57:30 PM

Qualifiers:

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

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Inc.
Project: Drainage North of TK#38 6/3/10 **Work Order:** 1006193

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8015B: Diesel Range											
Sample ID: MB-22560		*MBLK*				Batch ID:	**22560**	Analysis Date:		6/10/2010 9:35:54 AM	
Diesel Range Organics (DRO)	ND	mg/L	0.20								
Motor Oil Range Organics (MRO)	ND	mg/L	2.5								
Sample ID: LCS-22560		*LCS*				Batch ID:	**22560**	Analysis Date:		6/10/2010 10:09:45 AM	
Diesel Range Organics (DRO)	3.750	mg/L	0.20	2.5	0.1779	143	74	157			
Sample ID: LCSD-22560		*LCSD*				Batch ID:	**22560**	Analysis Date:		6/10/2010 10:43:52 AM	
Diesel Range Organics (DRO)	3.569	mg/L	0.20	2.5	0.1779	136	74	157	4.96	23	
Method: EPA Method 8015B: Gasoline Range											
Sample ID: 5ML RB		*MBLK*				Batch ID:	**R39200**	Analysis Date:		6/10/2010 9:35:51 AM	
Gasoline Range Organics (GRO)	ND	mg/L	0.050								
Sample ID: 2.5UG GRO LCS		*LCS*				Batch ID:	**R39200**	Analysis Date:		6/10/2010 6:45:23 PM	
Gasoline Range Organics (GRO)	0.4882	mg/L	0.050	0.5	0	97.6	77.8	124			
Method: EPA Method 8260: Volatiles Short List											
Sample ID: 5ml rb		*MBLK*				Batch ID:	**R39141**	Analysis Date:		6/8/2010 8:42:02 AM	
Benzene	ND	µg/L	1.0								
Toluene	ND	µg/L	1.0								
Ethylbenzene	ND	µg/L	1.0								
Methyl tert-butyl ether (MTBE)	ND	µg/L	1.0								
Xylenes, Total	ND	µg/L	2.0								
Sample ID: 100ng lcs		*LCS*				Batch ID:	**R39141**	Analysis Date:		6/8/2010 9:53:19 AM	
Benzene	18.99	µg/L	1.0	20	0	94.9	82.4	116			
Toluene	21.58	µg/L	1.0	20	0	108	89.5	123			

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **WESTERN REFINING SOUT** Date Received: **6/4/2010**

Work Order Number **1006193** Received by: **TLS**

Checklist completed by: _____ Signature 6/4/10 Date

Sample ID labels checked by: AT Initials

Matrix: Carrier name: UPS

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☑	No ☐	N/A ☐	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
Container/Temp Blank temperature?	9.5°	*<6° C Acceptable* If given sufficient time to cool.		

Number of preserved bottles checked for pH: _____

<2 >12 unless noted below.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

_____

_____

_____

_____

Corrective Action _____

_____

_____

Chain-of-Custody Record

Client: Western Refining

Mailing Address: #50 CR 4990
Bloomfield, NM 87413

Phone #: 505-632-4161

email or Fax#: 505-632-3911

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

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: 6-3-10
DRAINAGE North of TK#38

Project #:

Project Manager:

Sampler: Bob

On Ice: ☒ Yes ☐ No

Sample Temperature: 9.5

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. 1000193	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA) BTEX, MTBE	8270 (Semi-VOA)					Air Bubbles (Y or N)
6-3-10	1:20	H_2O	EAST FORK	3-VOA	HCl	1										X						
6-3-10	1:20	H_2O	EAST FORK	1-250	Amber	2			X														

Date:	Time:	Relinquished by:	Received by:	Date	Time
6-3-10	3:00	Robert Knabow			
Date:	Time:	Relinquished by:	Received by:	6/4/10	

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.

6/9

HALL ENVIRONMENTAL ANALYSIS LABORATORY

COVER LETTER

Wednesday, June 16, 2010

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

RE: Drainage North of TK#38 6-8-10

Order No.: 1006309

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory, Inc. received 3 sample(s) on 6/9/2010 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology.

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

Sincerely,

Andy Freeman, Laboratory Manager

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

Hall Environmental Analysis Laboratory, Inc.

Date: *16-Jun-10*

CLIENT: Western Refining Southwest, Inc. **Lab Order:** 1006309
Project: Drainage North of TK#38 6-8-10

Lab ID: 1006309-01 **Collection Date:** 6/8/2010 2:25:00 PM
Client Sample ID: MW-1 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **BDH**
Benzene	ND	1.0		µg/L	1	6/10/2010 7:47:50 PM
Toluene	ND	1.0		µg/L	1	6/10/2010 7:47:50 PM
Ethylbenzene	ND	1.0		µg/L	1	6/10/2010 7:47:50 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/10/2010 7:47:50 PM
Xylenes, Total	ND	2.0		µg/L	1	6/10/2010 7:47:50 PM

Lab ID: 1006309-02 **Collection Date:** 6/8/2010 2:40:00 PM
Client Sample ID: Fresh Water Pond **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **BDH**
Benzene	ND	1.0		µg/L	1	6/10/2010 8:16:06 PM
Toluene	ND	1.0		µg/L	1	6/10/2010 8:16:06 PM
Ethylbenzene	ND	1.0		µg/L	1	6/10/2010 8:16:06 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/10/2010 8:16:06 PM
Xylenes, Total	ND	2.0		µg/L	1	6/10/2010 8:16:06 PM

Lab ID: 1006309-03 **Collection Date:** 6/8/2010 2:50:00 PM
Client Sample ID: East Fork **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: **MMS**
Benzene	5.2	1.0		µg/L	1	6/11/2010 2:29:29 PM
Toluene	ND	1.0		µg/L	1	6/11/2010 2:29:29 PM
Ethylbenzene	ND	1.0		µg/L	1	6/11/2010 2:29:29 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/11/2010 2:29:29 PM
Xylenes, Total	ND	2.0		µg/L	1	6/11/2010 2:29:29 PM

Qualifiers:

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

QA/QC SUMMARY REPORT

Client: Western Refining Southwest, Inc.
Project: Drainage North of TK#38 6-8-10 **Work Order:** 1006309

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8260: Volatiles Short List											
Sample ID: b2		*MBLK*				Batch ID: **R39204**		Analysis Date:	6/10/2010 11:34:40 AM		
Benzene	ND	µg/L	1.0								
Toluene	ND	µg/L	1.0								
Ethylbenzene	ND	µg/L	1.0								
Methyl tert-butyl ether (MTBE)	ND	µg/L	1.0								
Xylenes, Total	ND	µg/L	2.0								
Sample ID: 100ng lcs		*LCS*				Batch ID: **R39204**		Analysis Date:	6/10/2010 11:06:25 AM		
Benzene	19.88	µg/L	1.0	20	0	99.4	82.4	116			
Toluene	19.09	µg/L	1.0	20	0	95.5	89.5	123			

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name **WESTERN REFINING SOUT** Date Received: **6/9/2010**

Work Order Number **1006309** Received by: **ARS**

Checklist completed by: _____ 6/9/10 Sample ID labels checked by: _____

Signature Date Initials

Matrix: Carrier name: UPS

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☑	No ☐	N/A ☐	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		Number of preserved bottles checked for pH:
Water - VOA vials have zero headspace? No VOA vials submitted ☐		Yes ☑	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	*<2 >12 unless noted below.*
Container/Temp Blank temperature?	**8.3°**	*<6° C Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

_____

_____

_____

_____

Corrective Action _____

_____

_____

Chain-of-Custody Record

Client: Western Refining

Mailing Address: #50 CR 4990
Bloomfield, NM 87413

Phone #: 505-632-4161

email or Fax#: 505-632-3911

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: 6-8-10 DRAINAGE North of TK#38

Project #:

Project Manager:

Sampler: Bob

On Ice: ☒ Yes ☐ No

Sample Temperature: 8.3

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. 1003600	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA) BTEX, MTBE	8270 (Semi-VOA)	Air Bubbles (Y or N)
6-8-10	2:25	H_2O	MW-1	3-VOA	HCl	1										X		
"	2:40	H_2O	Fresh water POND	3-VOA	HCl	2										X		
"	2:50	H_2O	EAST FORK	3-VOA	HCl	3										X		

Date:	Time:	Relinquished by:	Received by:	Date	Time
6-8-10	3:00	Robert Krakow			
Date:	Time:	Relinquished by:	Received by:	6/9/10	10:15

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.

6/17

HALL ENVIRONMENTAL ANALYSIS LABORATORY

COVER LETTER

Friday, June 25, 2010

Cindy Hurtado
Western Refining Southwest, Inc.
#50 CR 4990
Bloomfield, NM 87413

TEL: (505) 632-4161
FAX (505) 632-3911

RE: Drainage North of TK#38 6/16/10

Order No.: 1006609

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory, Inc. received 1 sample(s) on 6/17/2010 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology.

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

Sincerely,

Andy Freeman, Laboratory Manager

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

Hall Environmental Analysis Laboratory, Inc.

Date: *25-Jun-10*

CLIENT:	Western Refining Southwest, Inc.	**Client Sample ID:**	East Fork
Lab Order:	1006609	**Collection Date:**	6/16/2010 3:10:00 PM
Project:	Drainage North of TK#38 6/16/10	**Date Received:**	6/17/2010
Lab ID:	1006609-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260: VOLATILES SHORT LIST						Analyst: HL
Benzene	3.4	1.0		µg/L	1	6/23/2010 8:53:52 PM
Toluene	ND	1.0		µg/L	1	6/23/2010 8:53:52 PM
Ethylbenzene	ND	1.0		µg/L	1	6/23/2010 8:53:52 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	6/23/2010 8:53:52 PM
Xylenes, Total	ND	2.0		µg/L	1	6/23/2010 8:53:52 PM

Qualifiers:

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