30-015-00772

SITE INFORMATION 2RP-1702

Report Type: Closure Report

General Site Information:						
Site:	**Hondo Federal #1**					
Company:	**Lime Rock Resources, II-A, L.P.**					
Section, Township and Range	**Unit G**	**Sec 04**	**T18S**	**R27E**		
Lease Number:	**API-30-015-00772**					
County:	**Eddy County**					
GPS:	**32.77687**			**104.27969**		
Surface Owner:	**Federal**					
Mineral Owner:	Federal					
Directions:	In Loco Hills, Travel west on Hwy 82 to CR 204 (Hilltop Rd) and turn south. Travel on Hilltop Rd for approx. 0.2 miles and turn right (west) and travel for 3.5 miles. Turn north on the lease road and travel 0.2 miles to the location.					

Release Data:	
Date Released:	6/24/2013
Type Release:	Oil
Source of Contamination:	Oil Transporter Tanker Ran Over
Fluid Released:	54 bbls
Fluids Recovered:	24 bbls

RECEIVED
SEP 19 2013
NMOCD ARTESIA

Official Communication:			
Name:	Michael Barrett		Ike Tavarez
Company:	Lime Rock Resources II-2, L.P.		Tetra Tech
Address:	P.O. Box 2147		1910 N. Big Spring
City:	Roswell, New Mexico 88202		Midland, Texas
Phone number:	(575) 623-8424		(432) 682-4559
Fax:			
Email:	mbarrett@limerockresources.com		ike.tavarez@tetratech.com

Ranking Criteria		
Depth to Groundwater:	***Ranking Score***	***Site Data***
<50 ft	20	
50-99 ft	10	
>100 ft.	0	0
WellHead Protection:	***Ranking Score***	***Site Data***
Water Source <1,000 ft., Private <200 ft.	*20*	
Water Source >1,000 ft., Private >200 ft.	0	0
Surface Body of Water:	***Ranking Score***	***Site Data***
<200 ft.	*20*	
200 ft - 1,000 ft.	10	
>1,000 ft.	0	0
Total Ranking Score:	**0**	

Acceptable Soil RRAL (mg/kg)		
Benzene	***Total BTEX***	***TPH***
10	50	5,000

TETRA TECH

August 28, 2013

Mr. Mike Bratcher
Environmental Engineer Specialist
Oil Conservation Division, District 2
811 S. First Street
Artesia, New Mexico 88210

Re: Closure Request for the Lime Rock II-A L.P., Hondo Federal #1 Tank Battery, Unit G, Section 4, Township 18 South, Range 27 East, Eddy County, New Mexico.

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by Lime Rock II-A L.P. (Lime Rock) to assess a spill from the Hondo Federal #1 Tank Battery, located in Unit G, Section 4, Township 18 South, Range 27 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.77687°, W 104.27969°. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the leak was discovered on June 24, 2013, and released approximately fifty four (54) barrels of oil from overfilling an oil transport tanker. Twenty four (24) barrels of oil were recovered. The initial C-141 form is enclosed in Appendix A.

Groundwater

There were no water wells that were listed within Section 4. According to the NMOCD groundwater map, the average depth to groundwater in this area is greater than 100' below surface. The groundwater data is shown in Appendix B.

Regulatory

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases, dated August 13, 1993. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as

Tetra Tech
1910 North Big Spring, Midland, TX 79705
Tel 432.682.4559 Fax 432.682.3946 www.tetratech.com

BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the depth to groundwater, the proposed RRAL for TPH is 5,000 mg/kg.

Soil Assessment and Analytical Results

On September 2, 2013, Tetra Tech personnel inspected the spill site. Prior to sampling, some of the impacted areas were excavated or scraped to remove the heavy stained soil. All of the excavated soil was transported to proper disposal. Once completed, Tetra Tech collected samples for evaluation. A total of eight (8) trenches (T-1 through T-8) were installed using a backhoe to assess the impacted soils.

As discussed with the NMOCD, the spill was a crude oil release from a transport truck overflowing during filling. As approved, the NMOCD requested an area on the spill be sampled for chloride analysis to evaluate the soils and determine if the chloride concentrations were an issue at the site.

Selected samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The sampling results are summarized in Table 1. The trench locations are shown on Figure 3.

Referring to Table 1, all of the trench samples were below the RRAL for benzene. However, trenches (T-1, T-6, T-7 and T-8) exceeded the RRAL for total BTEX. In addition, the trench (T-8) also showed a TPH concentrations above the RRAL at 0-1' below surface at 11,162 mg/kg, but declined below the RRAL at 1-1.5' below surface. All of the trenches were vertically defined and there was not a significant chloride impact detected in the soils.

Site Remediation and Conclusion

On August 8-9, 2013, Tetra Tech personnel supervised the excavation of the impacted soils. In order to remove the soil exceeding the RRAL for BTEX and TPH, the impacted areas were excavated to a depth of 1.0' to 2.0' below surface in the areas of T-1, T-6, T-7 and T-8. The excavated areas and depths are highlighted in Table 1 and shown on Figure 4. Approximately 120 to 140 cubic yards of soil were removed and transported to R360 facility for proper disposal. The site was then backfilled with clean material to surface grade.

TETRA TECH

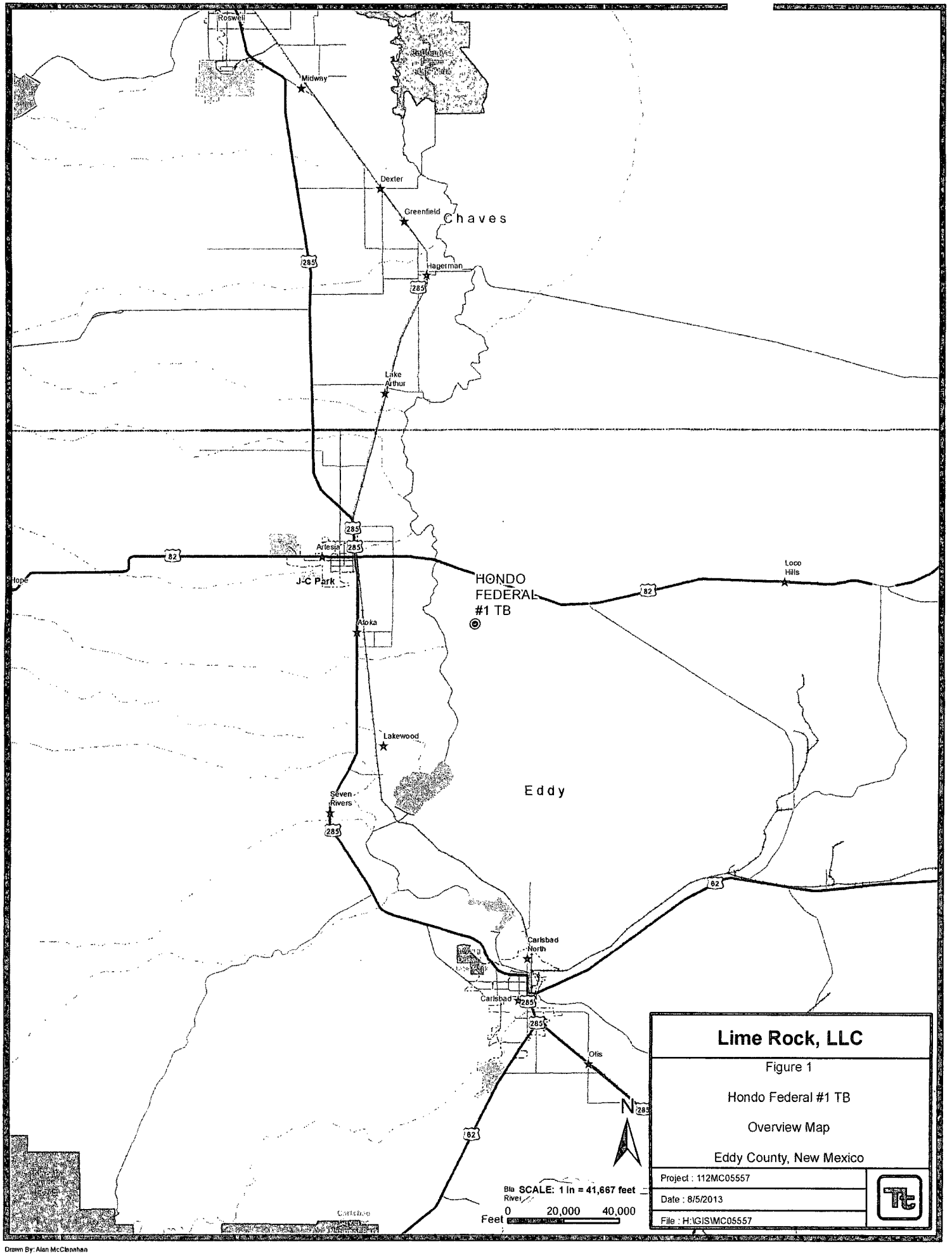
Based on the remediation activities performed at this location, Lime Rock requests closure for this site. The C-141 (Final) is included in Appendix A. If you have any questions or comments concerning the assessment or the remediation activities performed at the site, please call me at (432) 682-4559.

Respectfully submitted,
TETRA TECH

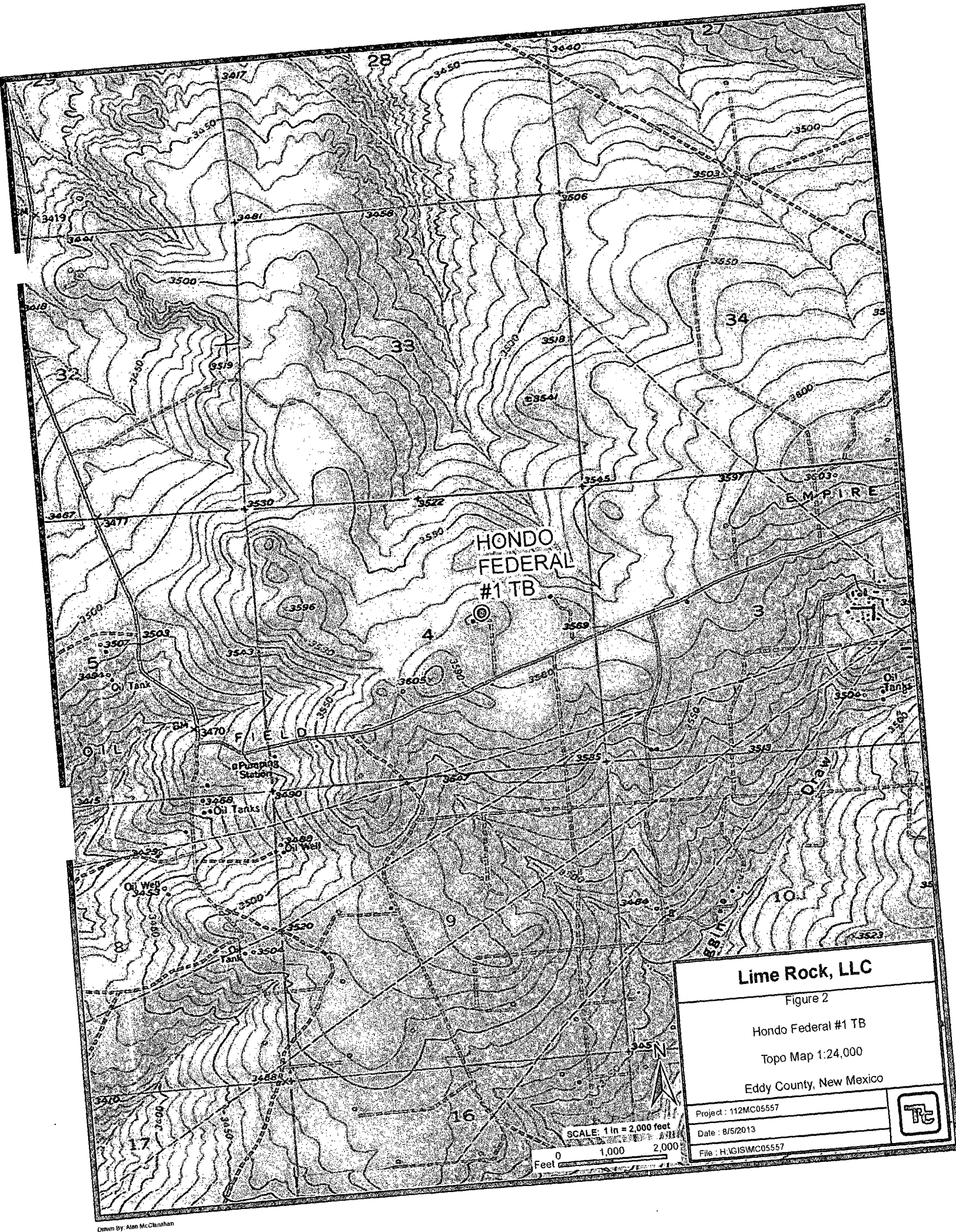
Ike Tavarez
Senior Project Manager

cc: Michael Barrett – Lime Rock
Jeff Robertson - BLM

FIGURES



Drawn By: Alan McClanahan



Lime Rock, LLC

Figure 2

Hondo Federal #1 TB

Topo Map 1:24,000

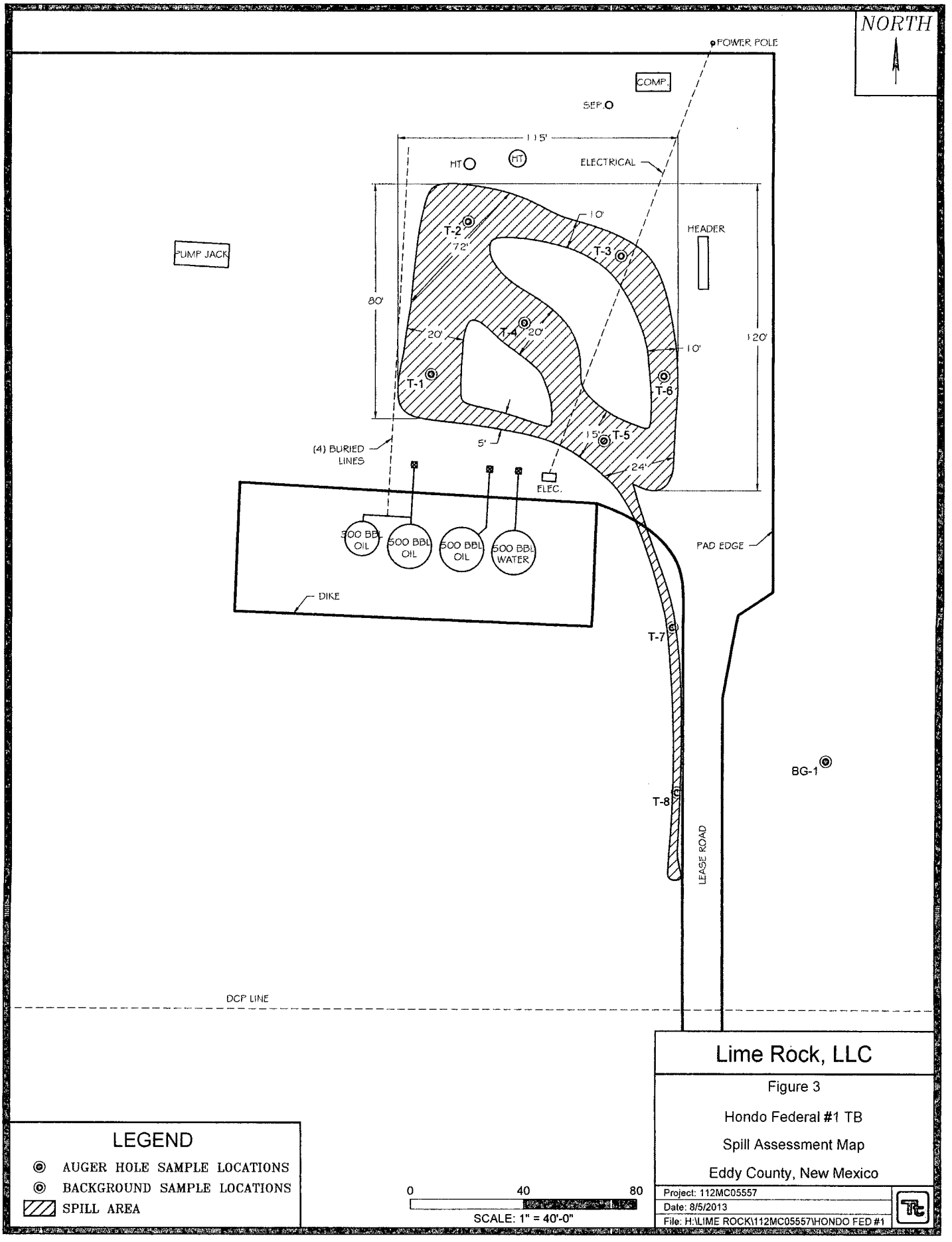
Eddy County, New Mexico

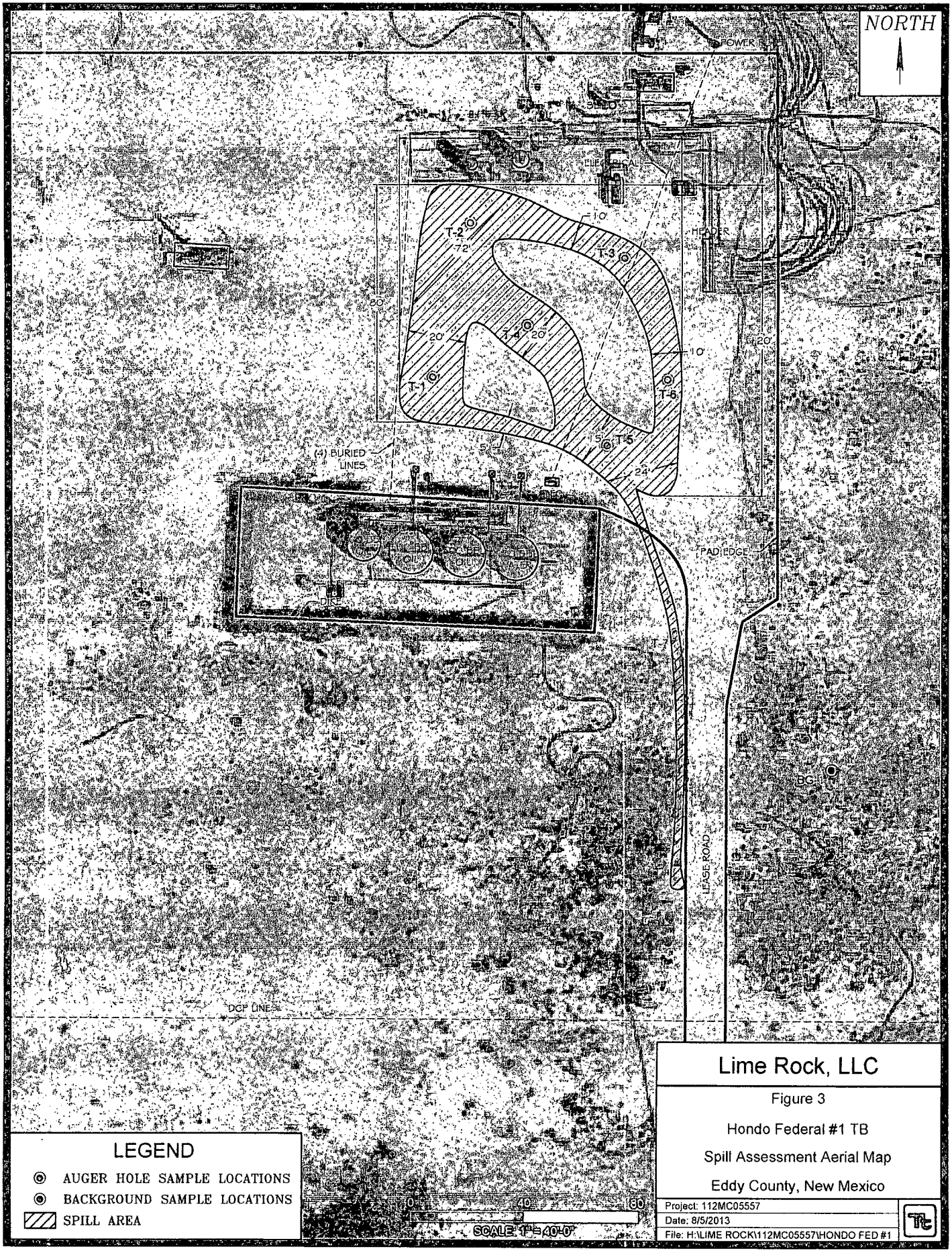
Project : 112MC05557

Date : 8/5/2013

File : H:\GIS\MC05557

Drawn By: Alan McClanahan


NORTH
POWER POLE
COMP.
SEP.
115'
HT
HT
ELECTRICAL
10'
HEADER
T-2
72'
T-3
PUMP JACK
80'
20'
T-4
20'
10'
120'
T-1
T-6
5'
15'
T-5
(4) BURIED LINES
24'
ELEC.
500 BBL OIL
500 BBL OIL
500 BBL OIL
500 BBL WATER
PAD EDGE
DIKE
T-7
BG-1
T-8
LEASE ROAD
DCP LINE
LEGEND
AUGER HOLE SAMPLE LOCATIONS
BACKGROUND SAMPLE LOCATIONS
SPILL AREA
0
40
80
SCALE: 1" = 40'-0"
Lime Rock, LLC
Figure 3
Hondo Federal #1 TB
Spill Assessment Map
Eddy County, New Mexico
Project: 112MC05557
Date: 8/5/2013
File: H:\LIME ROCK\112MC05557\HONDO FED #1



Lime Rock, LLC

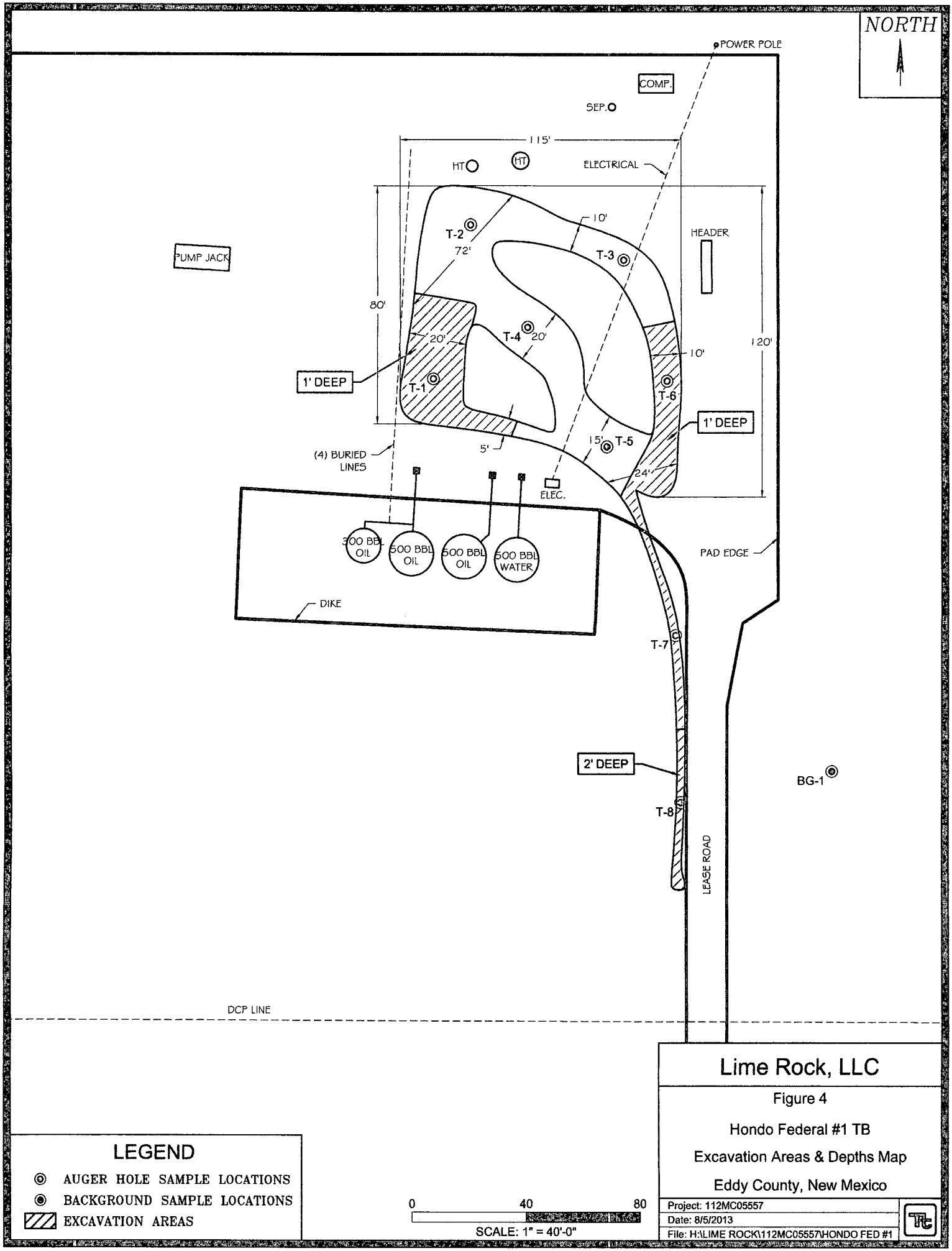
Figure 3

Hondo Federal #1 TB

Spill Assessment Aerial Map

Eddy County, New Mexico

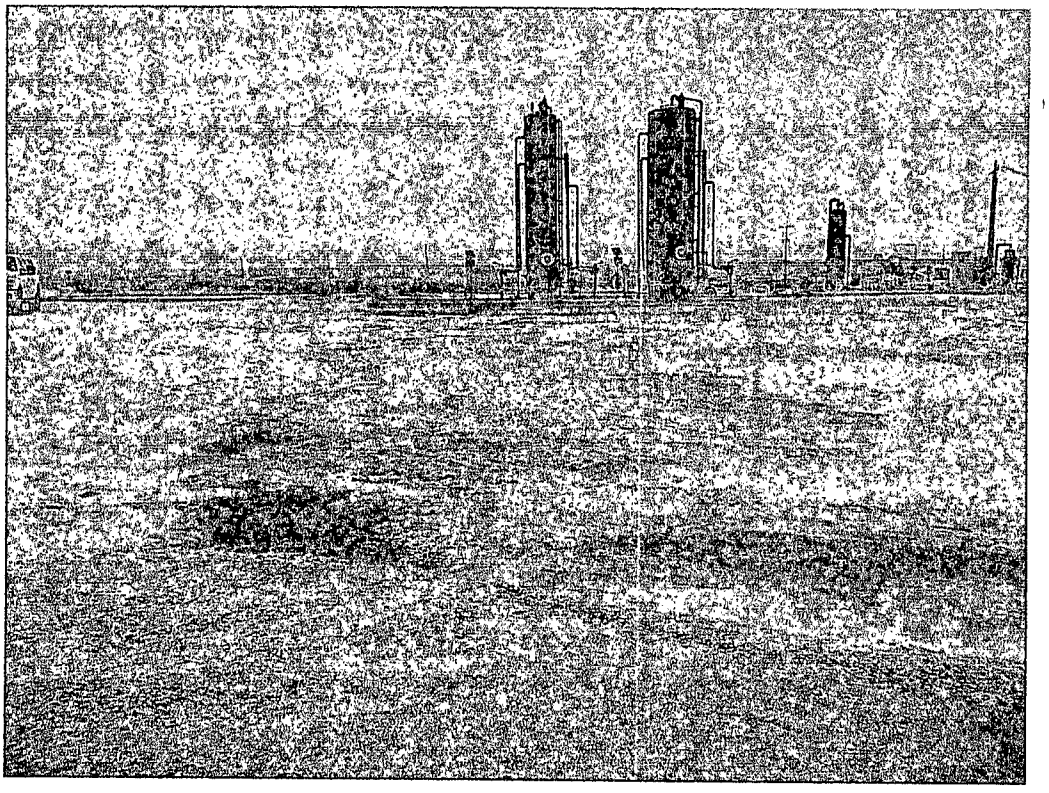
Project: 112MC05557	
Date: 8/5/2013	
File: H:\LIME ROCK\112MC05557\HONDO FED #1	


NORTH
POWER POLE
COMP.
SEP.
115'
HT
HT
ELECTRICAL
10'
T-2
72'
T-3
HEADER
PUMP JACK
80'
20'
T-4
20'
10'
120'
1' DEEP
T-1
T-6
1' DEEP
5'
15'
T-5
(4) BURIED LINES
24'
ELEC.
300 BBL OIL
500 BBL OIL
500 BBL OIL
500 BBL WATER
PAD EDGE
DIKE
T-7
2' DEEP
BG-1
T-8
LEASE ROAD
DCP LINE
LEGEND
AUGER HOLE SAMPLE LOCATIONS
BACKGROUND SAMPLE LOCATIONS
EXCAVATION AREAS
0
40
80
SCALE: 1" = 40'-0"
Lime Rock, LLC
Figure 4
Hondo Federal #1 TB
Excavation Areas & Depths Map
Eddy County, New Mexico
Project: 112MC05557
Date: 8/5/2013
File: H:\LIME ROCK\112MC05557\HONDO FED #1

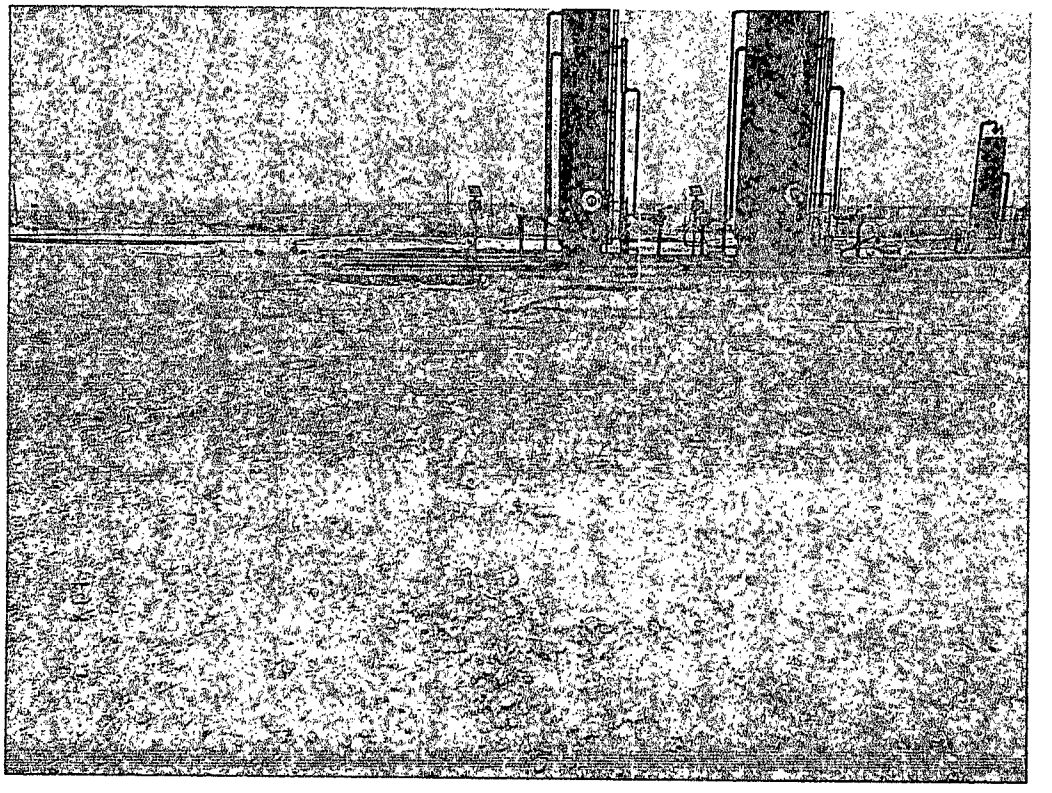
PHOTOGRAPHS

COG Operating LLC
Hondo Federal #1
Eddy County, New Mexico

TETRA TECH



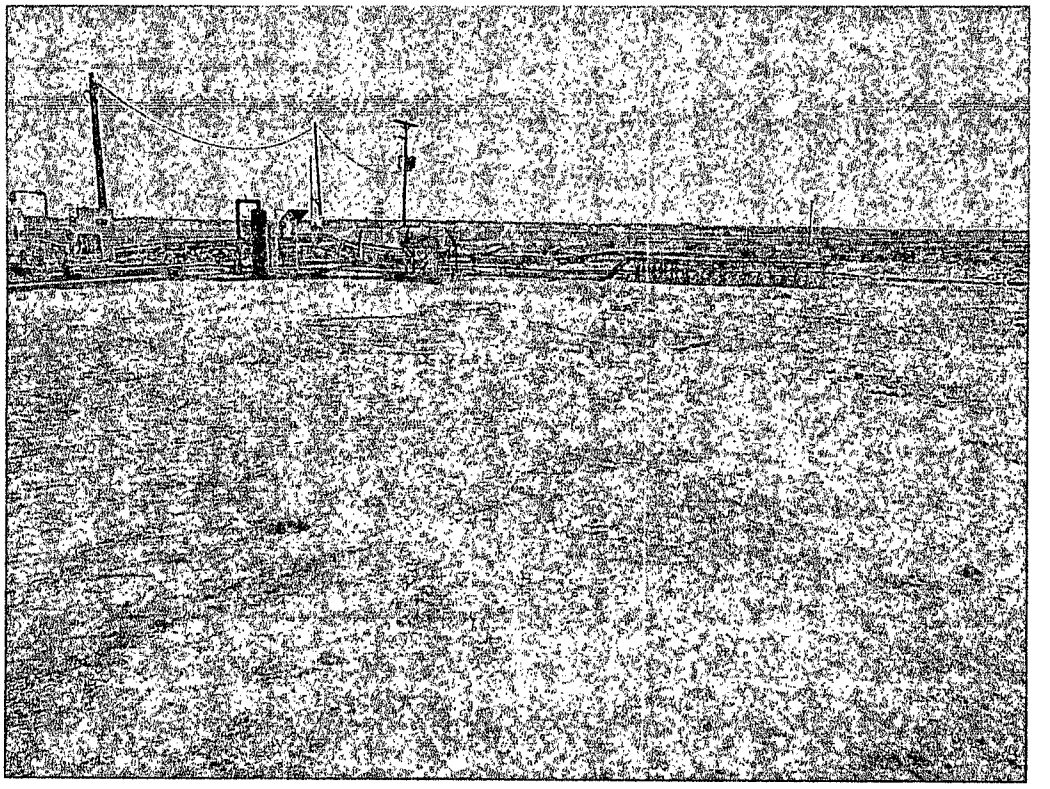
View North– Area of T-1 and T-2.



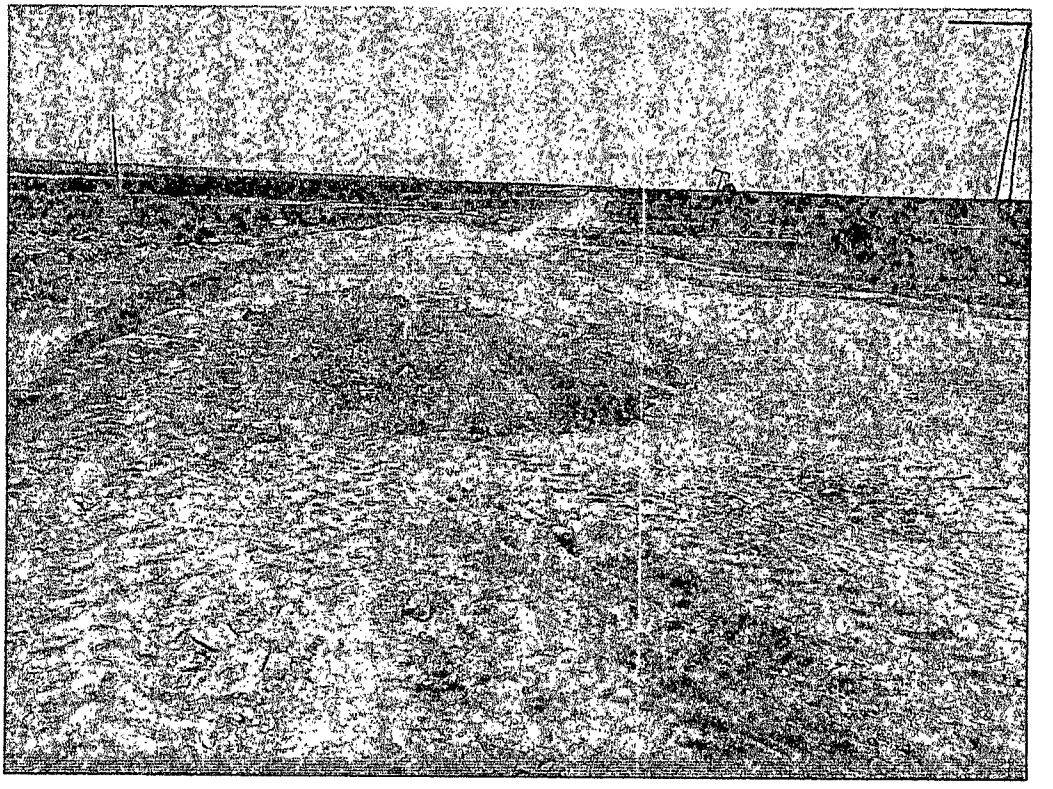
View North – Area of T-2.

COG Operating LLC
Hondo Federal #1
Eddy County, New Mexico

TETRA TECH



View East – Area of T-6.



View South – Area of T-5.

TABLES

Table 1
Tiga Logistics
Lime Rock - Hondo Federal #1
Eddy County, New Mexico

Sample ID	Sample Date	BEB Sample Depth (ft)	Excavation Bottom Depth (ft)	Soil Status		TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	Total						
T-1	7/2/2013	0-1	0		X	2,010	1,510	3,520	<0.100	13.5	30.6	57.0	**101**	-
	"	1-1.5	"	X		-	-	-	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	-
T-2	7/2/2013	0-1	0.5	X		68.6	203	272	<0.0200	0.320	2.43	5.79	8.54	-
T-3	7/2/2013	0-1	0.5	X		11.0	56.6	67.6	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	-
T-4	7/2/2013	0-1	0	X		39.0	87.5	127	<0.0200	0.257	1.19	2.38	3.83	791
	"	1	"	X		-	-	-	-	-	-	-	-	<20.0
	"	2	"	X		-	-	-	-	-	-	-	-	124
T-5	7/2/2013	0-1	0	X		18.4	62.9	81.3	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	-
T-6	7/2/2013	0-1	0		X	1,240	681	1,921	<0.0400	7.91	20.5	42.4	**70.8**	-
	"	1	"	X		-	-	-	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	-
T-7	7/2/2013	0-1	0		X	3,090	1,280	4,370	<0.100	28.3	45.4	91.1	**165**	-
	"	1	"	X		-	-	-	<0.0200	<0.0200	2.65	6.59	9.24	-
T-8	7/2/2013	0-1	0		X	10,400	762	**11,162**	8.28	186	172	295	**661**	-
	"	1			X	1,620	1,310	2,930	<0.100	10.4	28.6	57.7	**96.7**	
	"	2	"	X		-	-	-	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	-

(-) Not Analyzed

(BEB) Below Excavation Bottom

Excavation Depths

APPENDIX A

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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

RECEIVED
SEP 19 2013
NMOCD ARTESIA

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	**Lime Rock Resources II-A, L.P.**	Contact	**Michael Barrett**
Address	P.O. Box 2147, Roswell, New Mexico	Telephone No.	**(575) 623-8424**
Facility Name	**Hondo Federal #001**	Facility Type	Tank Battery

Surface Owner: Unknown	Mineral: Federal	Lease No. (API#)30-015-00772

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	04	18S	27E	2190'	North	1650'	East	Eddy

Latitude N32.77687° **Longitude** W104.27969°

NATURE OF RELEASE

Type of Release: Oil	Volume of Release 54 bbls Oil	Volume Recovered 24 bbls Oil
Source of Release: Oil Transport Ran Over	Date and Hour of Occurrence 06/24/2013	Date and Hour of Discovery 06/24/2013 2:00 PM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom?	
By Whom? Michael Barrett	Date and Hour 06/24/2013 2:00 PM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.* N/A

Describe Cause of Problem and Remedial Action Taken.*

TIGA transport (Oxy) over ran tanker while picking up a load of oil.

Describe Area Affected and Cleanup Action Taken.*

Tetra Tech personnel inspected the site and collected samples to define the spill extents. Soil that exceeded the RRAL was removed and hauled away for proper disposal. The site was then brought up to surface grade with clean backfill material. Tetra Tech prepared a closure report and submitted it to NMOCD for review.

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:	OIL CONSERVATION DIVISION	
Printed Name: Ike Tavarez (agent for Lime Rock)	Approved by District Supervisor:	
Title: Project Manager	Approval Date:	Expiration Date:
E-mail Address: Ike Tavarez@tetratech.com	Conditions of Approval:	Attached ☐
Date: 8-27-13 Phone: (432) 682-4559	2RP-1702	

* Attach Additional Sheets If Necessary

Jeff Kubertson

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 Lime Rock Resources II-A, L.P.	Contact Michael Barrett
Address PO Box 2147, Roswell, NM 88202-2147	Telephone No. 575-623-8424
Facility Name Hondo Federal #1	Facility Type Battery

Surface Owner Unknown	Mineral Owner Federal	API No. 30-015-00772

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	04	18S	27E	2190'	North	1650'	East	Eddy

Latitude 32.77687 **Longitude** 104.27969

NATURE OF RELEASE

Type of Release Oil	Volume of Release 54 bbls	Volume Recovered 24 bbls
Source of Release Oil Transport Ran Over	Date and Hour of Occurrence 6/24/13 2:00 PM	Date and Hour of Discovery 6/24/13 2:00 PM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Left voicemail with both Mike Bratcher w/ OCD & Jim Amos w/ BLM	
By Whom? Michael Barrett	Date and Hour 06-24-2013 2:00 PM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

N/A

Describe Cause of Problem and Remedial Action Taken.*

TIGA transport (Oxy) over ran tanker while picking up a load of oil.
Bermed area and stopped flow.

Describe Area Affected and Cleanup Action Taken.*

Spill was contained on location and lease road (packed caliche).
Picked up standing fluid. TIGA will remove and replace caliche.

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: Michael Barrett	OIL CONSERVATION DIVISION	
Printed Name: Michael Barrett	Approved by Environmental Specialist:	
Title: Production Supervisor	Approval Date:	Expiration Date:
E-mail Address: mbarrett@limerockresources.com	Conditions of Approval:	Attached ☐
Date: 06/25/2013 Phone: 575-623-8424		

* Attach Additional Sheets If Necessary

APPENDIX B

Water Well Data
Average Depth to Groundwater (ft)
Hondo Federal #1
Eddy County, New Mexico

16 South 29 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26 **40**	25
31	32 **80**	33 **150**	34	35 **25**	36

16 South 30 East

6	5 **30**	4	3	2	1
7 **14**	8	9	10	11 **54** **50**	12
18 **111**	17 **90**	16 **175**	15	14	13
19	20	21	22	23 **40**	24
30	29	28	27	26	25
31	32 **140**	33	34	35	36

16 South 31 East

6	5	4	3	2 **28**	1
7	8	9	10	11	12
18	17	16	15	14 **80**	13
19 **224**	20	21	22 **45** **79**	23	24
30	29	28	27	26	25
31	32	33	34	35 **258**	36

18 South 26 East

6 **200**	5 **95**	4 **24**	3 **65**	2 **50** **14**	1
7	8	9 **70**	10 **8** **40**	11	12
18 **56**	17	16 **51**	15	14	13
19	20	21	22 **98**	23	24 **19**
30	29	28 **85**	27	26	25
31	32	33	34	35	36

18 South 27 East

6	5	4 SITE	3	2	1
7	8	9	10 **50**	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28 **100**	27	26	25
31 **65**	32	33	34	35	36

18 South 28 East

6	5	4 **108**	3	2	1
7 **49**	8 **81** **69**	9	10	11	12
18	17	16	15	14	13
19	20	21 **226**	22	23	24
30 **137**	29	28	27	26	25
31	32	33	34	35 **65**	36

19 South 26 East

6	5	4 **70**	3	2	1 **70**
7	8	9	10 **50**	11	12 **24**
18 **69**	17	16	15	14 **67**	13
19	20 **52**	21	22	23 **80**	24
30 **105**	29	28	27 **49**	26	25
31 **95**	32 **95**	33	34	35	36

19 South 27 East

6	5 **20**	4	3	2	1
7	8 **50**	9	10	11	12
18	17	16 **18**	15	1482.4 **107.7**	13 **60.7**
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

19 South 28 East

6	5	4	3	2	1
7	8	9 **246** **265**	10	11	12
18 **91**	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

- New Mexico State Engineers Well Reports
- USGS Well Reports
- Geology and Groundwater Conditions in Southern Eddy, County, NM
- NMOCD - Groundwater Data
- Field water level
- New Mexico Water and Infrastructure Data System

New Mexico Office of the State Engineer

Wells with Well Log Information

No wells found.

PLSS Search:

Section(s): 4 **Township:** 18S **Range:** 27E

APPENDIX C

Summary Report

Ike Tavarez
Tetra Tech
1910 N. Big Spring Street
Midland, TX 79705

Report Date: July 17, 2013

Work Order: 13070812

Project Location: Eddy Co., NM
Project Name: Tiga Logistics/Lime Rock-Hondo Fed.l #1
Project Number: 112MC05557

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
334186	T-1 0-1'	soil	2013-07-02	00:00	2013-07-08
334187	T-1 1'	soil	2013-07-02	00:00	2013-07-08
334188	T-2 0-1' 0.5' EB	soil	2013-07-02	00:00	2013-07-08
334190	T-3 0-1' 0.5' EB	soil	2013-07-02	00:00	2013-07-08
334192	T-4 0-1'	soil	2013-07-02	00:00	2013-07-08
334193	T-4 1'	soil	2013-07-02	00:00	2013-07-08
334194	T-4 2'	soil	2013-07-02	00:00	2013-07-08
334195	T-5 0-1'	soil	2013-07-02	00:00	2013-07-08
334197	T-6 0-1'	soil	2013-07-02	00:00	2013-07-08
334198	T-6 1'	soil	2013-07-02	00:00	2013-07-08
334200	T-7 0-1'	soil	2013-07-02	00:00	2013-07-08
334201	T-7 1'	soil	2013-07-02	00:00	2013-07-08
334205	T-8 0-1'	soil	2013-07-02	00:00	2013-07-08
334206	T-8 1'	soil	2013-07-02	00:00	2013-07-08
334207	T-8 2'	soil	2013-07-02	00:00	2013-07-08

	BTEX				TPH DRO - NEW	TPH GRO
Sample - Field Code	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
334186 - T-1 0-1'	<0.100	**13.5**	**30.6**	**57.0**	**1510** Qs	**2010**
334187 - T-1 1'	<0.0200	<0.0200	<0.0200	<0.0200		
334188 - T-2 0-1' 0.5' EB	<0.0200	**0.320**	**2.43**	**5.79**	**203** Qs	**68.6**
334190 - T-3 0-1' 0.5' EB	<0.0200	<0.0200	<0.0200	<0.0200	**56.6** Qs	**11.0**
334192 - T-4 0-1'	<0.0200	**0.257**	**1.19**	**2.38**	**87.5** Qs	**39.0**
334195 - T-5 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	**62.9** Qs	**18.4**
334197 - T-6 0-1'	<0.0400 [1]	**7.91**	**20.5**	**42.4**	**681** Qs	**1240**
334198 - T-6 1'	<0.0200	<0.0200	<0.0200	<0.0200		

continued ...

[1] Dilution due to hydrocarbons.

... continued

Sample - Field Code	BTEX Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	TPH DRO - NEW DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
334200 - T-7 0-1'	<0.100 [2]	**28.3**	**45.4**	**91.1**	**1280** Qs	**3090**
334201 - T-7 1'	<0.0200	<0.0200	**2.65**	**6.59**		
334205 - T-8 0-1'	**8.28**	**186** Je	**172** Je	**295**	**762** Qs	**10400**
334206 - T-8 1'	<0.100	**10.4**	**28.6**	**57.7**	**1310**	**1620**
334207 - T-8 2'	<0.0200	<0.0200	<0.0200	<0.0200		

Sample: 334192 - T-4 0-1'

Param	Flag	Result	Units	RL
Chloride		**791**	mg/Kg	4

Sample: 334193 - T-4 1'

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 334194 - T-4 2'

Param	Flag	Result	Units	RL
Chloride		**124**	mg/Kg	4

[2]Dilution due to hydrocarbons.

TRACEANALYSIS, INC.

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Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Ike Tavarez
Tetra Tech
1910 N. Big Spring Street
Midland, TX, 79705

Report Date: July 17, 2013

Work Order: 13070812

Project Location: Eddy Co., NM
Project Name: Tiga Logistics/Lime Rock-Hondo Fed.l #1
Project Number: 112MC05557

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
334186	T-1 0-1'	soil	2013-07-02	00:00	2013-07-08
334187	T-1 1'	soil	2013-07-02	00:00	2013-07-08
334188	T-2 0-1' 0.5' EB	soil	2013-07-02	00:00	2013-07-08
334190	T-3 0-1' 0.5' EB	soil	2013-07-02	00:00	2013-07-08
334192	T-4 0-1'	soil	2013-07-02	00:00	2013-07-08
334193	T-4 1'	soil	2013-07-02	00:00	2013-07-08
334194	T-4 2'	soil	2013-07-02	00:00	2013-07-08
334195	T-5 0-1'	soil	2013-07-02	00:00	2013-07-08
334197	T-6 0-1'	soil	2013-07-02	00:00	2013-07-08
334198	T-6 1'	soil	2013-07-02	00:00	2013-07-08
334200	T-7 0-1'	soil	2013-07-02	00:00	2013-07-08
334201	T-7 1'	soil	2013-07-02	00:00	2013-07-08
334205	T-8 0-1'	soil	2013-07-02	00:00	2013-07-08
334206	T-8 1'	soil	2013-07-02	00:00	2013-07-08
334207	T-8 2'	soil	2013-07-02	00:00	2013-07-08

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Report Contents

Case Narrative

Samples for project Tiga Logistics/Lime Rock-Hondo Fed.l #1 were received by TraceAnalysis, Inc. on 2013-07-08 and assigned to work order 13070812. Samples for work order 13070812 were received intact at a temperature of 4.0 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	87303	2013-07-14 at 15:00	103049	2013-07-14 at 18:00
BTEX	S 8021B	87332	2013-07-15 at 16:00	103091	2013-07-16 at 12:00
Chloride (Titration)	SM 4500-Cl B	87260	2013-07-12 at 11:06	103058	2013-07-15 at 14:02
TPH DRO - NEW	S 8015 D	87215	2013-07-12 at 14:00	102954	2013-07-11 at 09:30
TPH DRO - NEW	S 8015 D	87361	2013-07-16 at 14:00	103120	2013-07-17 at 10:56
TPH GRO	S 8015 D	87320	2013-07-14 at 15:00	103073	2013-07-14 at 18:00
TPH GRO	S 8015 D	87334	2013-07-15 at 16:00	103093	2013-07-16 at 12:11

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 13070812 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 334186 - T-1 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	103049	Date Analyzed:	2013-07-14	Analyzed By:	KC
Prep Batch:	87303	Sample Preparation:	2013-07-14	Prepared By:	KC

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	1	<0.100	mg/Kg	5	0.0200
Toluene		1	**13.5**	mg/Kg	5	0.0200
Ethylbenzene		1	**30.6**	mg/Kg	5	0.0200
Xylene		1	**57.0**	mg/Kg	5	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			9.66	mg/Kg	5	10.0	97	70 - 130
4-Bromofluorobenzene (4-BFB)			12.0	mg/Kg	5	10.0	120	70 - 130

Sample: 334186 - T-1 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	102954	Date Analyzed:	2013-07-11	Analyzed By:	CW
Prep Batch:	87215	Sample Preparation:	2013-07-12	Prepared By:	CW

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO	Qs	1	**1510**	mg/Kg	1	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		468	mg/Kg	1	100	468	55.1 - 135.7

Sample: 334186 - T-1 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	103093	Date Analyzed:	2013-07-16	Analyzed By:	KC
Prep Batch:	87334	Sample Preparation:	2013-07-15	Prepared By:	KC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**2010**	mg/Kg	50	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			90.1	mg/Kg	50	100	90	70 - 130
4-Bromofluorobenzene (4-BFB)			94.6	mg/Kg	50	100	95	70 - 130

Sample: 334187 - T-1 1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	103091	Date Analyzed:	2013-07-16	Analyzed By:	KC
Prep Batch:	87332	Sample Preparation:	2013-07-15	Prepared By:	KC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1	<0.0200	mg/Kg	1	0.0200
Toluene	U	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1	<0.0200	mg/Kg	1	0.0200
Xylene	U	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.81	mg/Kg	1	2.00	90	70 - 130
4-Bromofluorobenzene (4-BFB)			1.91	mg/Kg	1	2.00	96	70 - 130

Sample: 334188 - T-2 0-1' 0.5' EB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	103049	Date Analyzed:	2013-07-14	Analyzed By:	KC
Prep Batch:	87303	Sample Preparation:	2013-07-14	Prepared By:	KC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1	<0.0200	mg/Kg	1	0.0200
Toluene		1	**0.320**	mg/Kg	1	0.0200
Ethylbenzene		1	**2.43**	mg/Kg	1	0.0200
Xylene		1	**5.79**	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.99	mg/Kg	1	2.00	100	70 - 130
4-Bromofluorobenzene (4-BFB)			2.29	mg/Kg	1	2.00	114	70 - 130

Sample: 334188 - T-2 0-1' 0.5' EB

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	102954	Date Analyzed:	2013-07-11	Analyzed By:	CW
Prep Batch:	87215	Sample Preparation:	2013-07-12	Prepared By:	CW

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
DRO	Qs	1		**203**	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			101	mg/Kg	1	100	101	55.1 - 135.7

Sample: 334188 - T-2 0-1' 0.5' EB

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	103093	Date Analyzed:	2013-07-16	Analyzed By:	KC
Prep Batch:	87334	Sample Preparation:	2013-07-15	Prepared By:	KC

Parameter	Flag	Cert	Result	RL Result	Units	Dilution	RL
GRO		1		**68.6**	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			3.30	mg/Kg	2	4.00	82	70 - 130
4-Bromofluorobenzene (4-BFB)			3.76	mg/Kg	2	4.00	94	70 - 130

Sample: 334190 - T-3 0-1' 0.5' EB

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	103049	Date Analyzed:	2013-07-14	Analyzed By:	KC
Prep Batch:	87303	Sample Preparation:	2013-07-14	Prepared By:	KC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1	<0.0200	mg/Kg	1	0.0200
Toluene	U	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1	<0.0200	mg/Kg	1	0.0200
Xylene	U	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.93	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			2.00	mg/Kg	1	2.00	100	70 - 130

Sample: 334190 - T-3 0-1' 0.5' EB

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	102954	Date Analyzed:	2013-07-11	Analyzed By:	CW
Prep Batch:	87215	Sample Preparation:	2013-07-12	Prepared By:	CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	B,Q*	1	**56.6**	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			97.1	mg/Kg	1	100	97	55.1 - 135.7

Sample: 334190 - T-3 0-1' 0.5' EB

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	103073	Date Analyzed:	2013-07-14	Analyzed By:	KC
Prep Batch:	87320	Sample Preparation:	2013-07-14	Prepared By:	KC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**11.0**	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.78	mg/Kg	1	2.00	89	70 - 130
4-Bromofluorobenzene (4-BFB)			1.55	mg/Kg	1	2.00	78	70 - 130

Sample: 334192 - T-4 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	103049	Date Analyzed:	2013-07-14	Analyzed By:	KC
Prep Batch:	87303	Sample Preparation:	2013-07-14	Prepared By:	KC

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	1	<0.0200	mg/Kg	1	0.0200
Toluene		1	**0.257**	mg/Kg	1	0.0200
Ethylbenzene		1	**1.19**	mg/Kg	1	0.0200
Xylene		1	**2.38**	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.97	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)			2.46	mg/Kg	1	2.00	123	70 - 130

Sample: 334192 - T-4 0-1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	103058	Date Analyzed:	2013-07-15	Analyzed By:	AR
Prep Batch:	87260	Sample Preparation:	2013-07-12	Prepared By:	AR

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**791**	mg/Kg	5	4.00

Sample: 334192 - T-4 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	102954	Date Analyzed:	2013-07-11	Analyzed By:	CW
Prep Batch:	87215	Sample Preparation:	2013-07-12	Prepared By:	CW

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO	B,Qs	1	**87.5**	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane Qsr	Qsr		178	mg/Kg	1	100	178	55.1 - 135.7

Sample: 334192 - T-4 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	103073	Date Analyzed:	2013-07-14	Analyzed By:	KC
Prep Batch:	87320	Sample Preparation:	2013-07-14	Prepared By:	KC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		ı	**39.0**	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.88	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)			1.93	mg/Kg	1	2.00	96	70 - 130

Sample: 334193 - T-4 1'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	103058	Date Analyzed:	2013-07-15	Analyzed By:	AR
Prep Batch:	87260	Sample Preparation:	2013-07-12	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 334194 - T-4 2'

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	103058	Date Analyzed:	2013-07-15	Analyzed By:	AR
Prep Batch:	87260	Sample Preparation:	2013-07-12	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**124**	mg/Kg	5	4.00

Sample: 334195 - T-5 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	103049	Date Analyzed:	2013-07-14	Analyzed By:	KC
Prep Batch:	87303	Sample Preparation:	2013-07-14	Prepared By:	KC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1	<0.0200	mg/Kg	1	0.0200
Toluene	U	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1	<0.0200	mg/Kg	1	0.0200
Xylene	U	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.94	mg/Kg	1	2.00	97	70 - 130
4-Bromofluorobenzene (4-BFB)			2.28	mg/Kg	1	2.00	114	70 - 130

Sample: 334195 - T-5 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	102954	Date Analyzed:	2013-07-11	Analyzed By:	CW
Prep Batch:	87215	Sample Preparation:	2013-07-12	Prepared By:	CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	B,Q*	1	**62.9**	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			82.0	mg/Kg	1	100	82	55.1 - 135.7

Sample: 334195 - T-5 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	103073	Date Analyzed:	2013-07-14	Analyzed By:	KC
Prep Batch:	87320	Sample Preparation:	2013-07-14	Prepared By:	KC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**18.4**	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.83	mg/Kg	1	2.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)			1.61	mg/Kg	1	2.00	80	70 - 130

Sample: 334197 - T-6 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	103049	Date Analyzed:	2013-07-14	Analyzed By:	KC
Prep Batch:	87303	Sample Preparation:	2013-07-14	Prepared By:	KC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene [1]	U	1	<0.0400	mg/Kg	2	0.0200
Toluene		1	**7.91**	mg/Kg	2	0.0200
Ethylbenzene		1	**20.5**	mg/Kg	2	0.0200
Xylene		1	**42.4**	mg/Kg	2	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			3.93	mg/Kg	2	4.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)			5.00	mg/Kg	2	4.00	125	70 - 130

Sample: 334197 - T-6 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	102954	Date Analyzed:	2013-07-11	Analyzed By:	CW
Prep Batch:	87215	Sample Preparation:	2013-07-12	Prepared By:	CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs	1	**681**	mg/Kg	1	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		227	mg/Kg	1	100	227	55.1 - 135.7

Sample: 334197 - T-6 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	103073	Date Analyzed:	2013-07-14	Analyzed By:	KC
Prep Batch:	87320	Sample Preparation:	2013-07-14	Prepared By:	KC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**1240**	mg/Kg	10	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			17.9	mg/Kg	10	20.0	90	70 - 130
4-Bromofluorobenzene (4-BFB)			24.8	mg/Kg	10	20.0	124	70 - 130

Sample: 334198 - T-6 1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	103091	Date Analyzed:	2013-07-16	Analyzed By:	KC
Prep Batch:	87332	Sample Preparation:	2013-07-15	Prepared By:	KC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1	<0.0200	mg/Kg	1	0.0200
Toluene	U	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1	<0.0200	mg/Kg	1	0.0200
Xylene	U	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.99	mg/Kg	1	2.00	100	70 - 130
4-Bromofluorobenzene (4-BFB)			1.93	mg/Kg	1	2.00	96	70 - 130

Sample: 334200 - T-7 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	103049	Date Analyzed:	2013-07-14	Analyzed By:	KC
Prep Batch:	87303	Sample Preparation:	2013-07-14	Prepared By:	KC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene [2]	U	1	<0.100	mg/Kg	5	0.0200
Toluene		1	**28.3**	mg/Kg	5	0.0200
Ethylbenzene		1	**45.4**	mg/Kg	5	0.0200
Xylene		1	**91.1**	mg/Kg	5	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			9.60	mg/Kg	5	10.0	96	70 - 130
4-Bromofluorobenzene (4-BFB)			9.65	mg/Kg	5	10.0	96	70 - 130

Sample: 334200 - T-7 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	102954	Date Analyzed:	2013-07-11	Analyzed By:	CW
Prep Batch:	87215	Sample Preparation:	2013-07-12	Prepared By:	CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs	1	**1280**	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane Qsr	Qsr		420	mg/Kg	1	100	420	55.1 - 135.7

Sample: 334200 - T-7 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	103093	Date Analyzed:	2013-07-16	Analyzed By:	KC
Prep Batch:	87334	Sample Preparation:	2013-07-15	Prepared By:	KC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**3090**	mg/Kg	50	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			86.3	mg/Kg	50	100	86	70 - 130
4-Bromofluorobenzene (4-BFB)			102	mg/Kg	50	100	102	70 - 130

Sample: 334201 - T-7 1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	103091	Date Analyzed:	2013-07-16	Analyzed By:	KC
Prep Batch:	87332	Sample Preparation:	2013-07-15	Prepared By:	KC

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene	U	1	<0.0200	mg/Kg	1	0.0200
Toluene	U	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene		1	**2.65**	mg/Kg	1	0.0200
Xylene		1	**6.59**	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.94	mg/Kg	1	2.00	97	70 - 130
4-Bromofluorobenzene (4-BFB)			2.58	mg/Kg	1	2.00	129	70 - 130

Sample: 334205 - T-8 0-1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	103049	Date Analyzed:	2013-07-14	Analyzed By:	KC
Prep Batch:	87303	Sample Preparation:	2013-07-14	Prepared By:	KC

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Benzene		1	**8.28**	mg/Kg	20	0.0200
Toluene	Je	1	**186**	mg/Kg	20	0.0200
Ethylbenzene	Je	1	**172**	mg/Kg	20	0.0200
Xylene		1	**295**	mg/Kg	20	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			37.1	mg/Kg	20	40.0	93	70 - 130
4-Bromofluorobenzene (4-BFB)			50.3	mg/Kg	20	40.0	126	70 - 130

Sample: 334205 - T-8 0-1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	102954	Date Analyzed:	2013-07-11	Analyzed By:	CW
Prep Batch:	87215	Sample Preparation:	2013-07-12	Prepared By:	CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs	1	**762**	mg/Kg	1	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		218	mg/Kg	1	100	218	55.1 - 135.7

Sample: 334205 - T-8 0-1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	103073	Date Analyzed:	2013-07-14	Analyzed By:	KC
Prep Batch:	87320	Sample Preparation:	2013-07-14	Prepared By:	KC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**10400**	mg/Kg	100	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			180	mg/Kg	100	200	90	70 - 130
4-Bromofluorobenzene (4-BFB)			223	mg/Kg	100	200	112	70 - 130

Sample: 334206 - T-8 1'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	103091	Date Analyzed:	2013-07-16	Analyzed By:	KC
Prep Batch:	87332	Sample Preparation:	2013-07-15	Prepared By:	KC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1	<0.100	mg/Kg	5	0.0200
Toluene		1	**10.4**	mg/Kg	5	0.0200
Ethylbenzene		1	**28.6**	mg/Kg	5	0.0200
Xylene		1	**57.7**	mg/Kg	5	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			8.42	mg/Kg	5	10.0	84	70 - 130
4-Bromofluorobenzene (4-BFB)			12.8	mg/Kg	5	10.0	128	70 - 130

Sample: 334206 - T-8 1'

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	103120	Date Analyzed:	2013-07-17	Analyzed By:	CW
Prep Batch:	87361	Sample Preparation:	2013-07-16	Prepared By:	CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	**1310**	mg/Kg	1	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		426	mg/Kg	1	100	426	55.1 - 135.7

Sample: 334206 - T-8 1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	103093	Date Analyzed:	2013-07-16	Analyzed By:	KC
Prep Batch:	87334	Sample Preparation:	2013-07-15	Prepared By:	KC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**1620**	mg/Kg	50	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			89.3	mg/Kg	50	100	89	70 - 130
4-Bromofluorobenzene (4-BFB)			91.1	mg/Kg	50	100	91	70 - 130

Sample: 334207 - T-8 2'

Laboratory:	Midland				
Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5035
QC Batch:	103091	Date Analyzed:	2013-07-16	Analyzed By:	KC
Prep Batch:	87332	Sample Preparation:	2013-07-15	Prepared By:	KC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1	<0.0200	mg/Kg	1	0.0200
Toluene	U	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1	<0.0200	mg/Kg	1	0.0200
Xylene	U	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.81	mg/Kg	1	2.00	90	70 - 130
4-Bromofluorobenzene (4-BFB)			1.95	mg/Kg	1	2.00	98	70 - 130

Method Blanks

Method Blank (1) QC Batch: 102954

QC Batch:	102954	Date Analyzed:	2013-07-11	Analyzed By:	CW
Prep Batch:	87215	QC Preparation:	2013-07-12	Prepared By:	CW

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	12.8	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			123	mg/Kg	1	100	123	55.1 - 135.7

Method Blank (1) QC Batch: 103049

QC Batch:	103049	Date Analyzed:	2013-07-14	Analyzed By:	KC
Prep Batch:	87303	QC Preparation:	2013-07-14	Prepared By:	KC

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.00810	mg/Kg	0.02
Toluene		1	<0.00750	mg/Kg	0.02
Ethylbenzene		1	<0.00730	mg/Kg	0.02
Xylene		1	<0.00700	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.90	mg/Kg	1	2.00	95	70 - 130
4-Bromofluorobenzene (4-BFB)			1.90	mg/Kg	1	2.00	95	70 - 130

Method Blank (1) QC Batch: 103058

QC Batch:	103058	Date Analyzed:	2013-07-15	Analyzed By:	AR
Prep Batch:	87260	QC Preparation:	2013-07-12	Prepared By:	AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 103073

QC Batch: 103073 Date Analyzed: 2013-07-14 Analyzed By: KC
Prep Batch: 87320 QC Preparation: 2013-07-14 Prepared By: KC

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	3.36	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.75	mg/Kg	1	2.00	88	70 - 130
4-Bromofluorobenzene (4-BFB)			1.54	mg/Kg	1	2.00	77	70 - 130

Method Blank (1) QC Batch: 103091

QC Batch: 103091 Date Analyzed: 2013-07-16 Analyzed By: KC
Prep Batch: 87332 QC Preparation: 2013-07-15 Prepared By: KC

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.00810	mg/Kg	0.02
Toluene		1	<0.00750	mg/Kg	0.02
Ethylbenzene		1	<0.00730	mg/Kg	0.02
Xylene		1	<0.00700	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.03	mg/Kg	1	2.00	102	70 - 130
4-Bromofluorobenzene (4-BFB)			2.03	mg/Kg	1	2.00	102	70 - 130

Method Blank (1) QC Batch: 103093

QC Batch: 103093 Date Analyzed: 2013-07-16 Analyzed By: KC
Prep Batch: 87334 QC Preparation: 2013-07-15 Prepared By: KC

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	3.72	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.86	mg/Kg	1	2.00	93	70 - 130
4-Bromofluorobenzene (4-BFB)			1.68	mg/Kg	1	2.00	84	70 - 130

Method Blank (1) QC Batch: 103120

QC Batch:	103120	Date Analyzed:	2013-07-17	Analyzed By:	CW
Prep Batch:	87361	QC Preparation:	2013-07-16	Prepared By:	CW

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	20.1	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane Qsr	Qsr		143	mg/Kg	1	100	143	55.1 - 135.7

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 102954 | Date Analyzed: 2013-07-11 | Analyzed By: CW
Prep Batch: 87215 | QC Preparation: 2013-07-12 | Prepared By: CW

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	273	mg/Kg	1	250	12.8	104	66.9 - 119.9

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	232	mg/Kg	1	250	12.8	88	66.9 - 119.9	16	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	140	127	mg/Kg	1	100	140	127	76.8 - 140.2

Laboratory Control Spike (LCS-1)

QC Batch: 103049 | Date Analyzed: 2013-07-14 | Analyzed By: KC
Prep Batch: 87303 | QC Preparation: 2013-07-14 | Prepared By: KC

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.76	mg/Kg	1	2.00	<0.00810	88	70 - 130
Toluene		1	1.83	mg/Kg	1	2.00	<0.00750	92	70 - 130
Ethylbenzene		1	1.94	mg/Kg	1	2.00	<0.00730	97	70 - 130
Xylene		1	5.91	mg/Kg	1	6.00	<0.00700	98	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	1.81	mg/Kg	1	2.00	<0.00810	90	70 - 130	3	20
Toluene		1	1.87	mg/Kg	1	2.00	<0.00750	94	70 - 130	2	20
Ethylbenzene		1	1.96	mg/Kg	1	2.00	<0.00730	98	70 - 130	1	20
Xylene		1	5.99	mg/Kg	1	6.00	<0.00700	100	70 - 130	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.00	1.94	mg/Kg	1	2.00	100	97	70 - 130
4-Bromofluorobenzene (4-BFB)	2.13	2.06	mg/Kg	1	2.00	106	103	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 103058 | Date Analyzed: 2013-07-15 | Analyzed By: AR
Prep Batch: 87260 | QC Preparation: 2013-07-12 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2670	mg/Kg	1	2500	<3.85	107	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2520	mg/Kg	1	2500	<3.85	101	85 - 115	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 103073 | Date Analyzed: 2013-07-14 | Analyzed By: KC
Prep Batch: 87320 | QC Preparation: 2013-07-14 | Prepared By: KC

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	17.7	mg/Kg	1	20.0	<2.32	88	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	18.3	mg/Kg	1	20.0	<2.32	92	70 - 130	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.80	1.79	mg/Kg	1	2.00	90	90	70 - 130
4-Bromofluorobenzene (4-BFB)	1.73	1.78	mg/Kg	1	2.00	86	89	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 103091 | Date Analyzed: 2013-07-16 | Analyzed By: KC
Prep Batch: 87332 | QC Preparation: 2013-07-15 | Prepared By: KC

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.85	mg/Kg	1	2.00	<0.00810	92	70 - 130
Toluene		1	1.91	mg/Kg	1	2.00	<0.00750	96	70 - 130
Ethylbenzene		1	1.99	mg/Kg	1	2.00	<0.00730	100	70 - 130
Xylene		1	6.01	mg/Kg	1	6.00	<0.00700	100	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	1.83	mg/Kg	1	2.00	<0.00810	92	70 - 130	1	20
Toluene		1	1.87	mg/Kg	1	2.00	<0.00750	94	70 - 130	2	20
Ethylbenzene		1	1.93	mg/Kg	1	2.00	<0.00730	96	70 - 130	3	20
Xylene		1	5.85	mg/Kg	1	6.00	<0.00700	98	70 - 130	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.86	1.99	mg/Kg	1	2.00	93	100	70 - 130
4-Bromofluorobenzene (4-BFB)	2.00	2.04	mg/Kg	1	2.00	100	102	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 103093 | Date Analyzed: 2013-07-16 | Analyzed By: KC
Prep Batch: 87334 | QC Preparation: 2013-07-15 | Prepared By: KC

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	19.1	mg/Kg	1	20.0	<2.32	96	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	17.9	mg/Kg	1	20.0	<2.32	90	70 - 130	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

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control spikes continued ...

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.75	1.62	mg/Kg	1	2.00	88	81	70 - 130
4-Bromofluorobenzene (4-BFB)	1.79	1.60	mg/Kg	1	2.00	90	80	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 103120 | Date Analyzed: 2013-07-17 | Analyzed By: CW
Prep Batch: 87361 | QC Preparation: 2013-07-16 | Prepared By: CW

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	263	mg/Kg	1	250	20.1	97	66.9 - 119.9

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	263	mg/Kg	1	250	20.1	97	66.9 - 119.9	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate			LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	Qsr	Qsr	166	161	mg/Kg	1	100	166	161	76.8 - 140.2

Matrix Spike (MS-1) Spiked Sample: 334186

QC Batch: 102954 | Date Analyzed: 2013-07-11 | Analyzed By: CW
Prep Batch: 87215 | QC Preparation: 2013-07-12 | Prepared By: CW

Param		F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	Qs	Qs	1	2300	mg/Kg	1	250	1510	316	36.1 - 147.2

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param		F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	Qs	Qs	1	2350	mg/Kg	1	250	1510	336	36.1 - 147.2	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate			MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	Qsr	Qsr	712	726	mg/Kg	1	100	712	726	78.3 - 131.6

Matrix Spike (MS-1) Spiked Sample: 334134

QC Batch: 103049 | Date Analyzed: 2013-07-14 | Analyzed By: KC
Prep Batch: 87303 | QC Preparation: 2013-07-14 | Prepared By: KC

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.75	mg/Kg	1	2.00	<0.00810	88	70 - 130
Toluene		1	1.80	mg/Kg	1	2.00	<0.00750	90	70 - 130
Ethylbenzene		1	1.84	mg/Kg	1	2.00	<0.00730	92	70 - 130
Xylene		1	5.60	mg/Kg	1	6.00	<0.00700	93	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	1.72	mg/Kg	1	2.00	<0.00810	86	70 - 130	2	20
Toluene		1	1.77	mg/Kg	1	2.00	<0.00750	88	70 - 130	2	20
Ethylbenzene		1	1.83	mg/Kg	1	2.00	<0.00730	92	70 - 130	0	20
Xylene		1	5.50	mg/Kg	1	6.00	<0.00700	92	70 - 130	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.01	1.94	mg/Kg	1	2	100	97	70 - 130
4-Bromofluorobenzene (4-BFB)	2.06	1.97	mg/Kg	1	2	103	98	70 - 130

Matrix Spike (MS-1) Spiked Sample: 334194

QC Batch: 103058 | Date Analyzed: 2013-07-15 | Analyzed By: AR
Prep Batch: 87260 | QC Preparation: 2013-07-12 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2780	mg/Kg	5	2500	124	106	78.9 - 121

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2630	mg/Kg	5	2500	124	100	78.9 - 121	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 334134

QC Batch: 103073 | Date Analyzed: 2013-07-14 | Analyzed By: KC
Prep Batch: 87320 | QC Preparation: 2013-07-14 | Prepared By: KC

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	16.9	mg/Kg	1	20.0	<2.32	84	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	17.1	mg/Kg	1	20.0	<2.32	86	70 - 130	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.61	1.68	mg/Kg	1	2	80	84	70 - 130
4-Bromofluorobenzene (4-BFB)	1.70	1.77	mg/Kg	1	2	85	88	70 - 130

Matrix Spike (MS-1) Spiked Sample: 334198

QC Batch: 103091 | Date Analyzed: 2013-07-16 | Analyzed By: KC
Prep Batch: 87332 | QC Preparation: 2013-07-15 | Prepared By: KC

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.78	mg/Kg	1	2.00	<0.00810	89	70 - 130
Toluene		1	1.84	mg/Kg	1	2.00	<0.00750	92	70 - 130
Ethylbenzene		1	1.91	mg/Kg	1	2.00	<0.00730	96	70 - 130
Xylene		1	5.74	mg/Kg	1	6.00	<0.00700	96	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	1.80	mg/Kg	1	2.00	<0.00810	90	70 - 130	1	20

continued ...

matrix spikes continued ...

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Toluene		1	1.84	mg/Kg	1	2.00	<0.00750	92	70 - 130	0	20
Ethylbenzene		1	1.92	mg/Kg	1	2.00	<0.00730	96	70 - 130	0	20
Xylene		1	5.81	mg/Kg	1	6.00	<0.00700	97	70 - 130	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.80	1.81	mg/Kg	1	2	90	90	70 - 130
4-Bromofluorobenzene (4-BFB)	1.87	1.80	mg/Kg	1	2	94	90	70 - 130

Matrix Spike (MS-1) Spiked Sample: 334198

QC Batch: 103093 | Date Analyzed: 2013-07-16 | Analyzed By: KC
Prep Batch: 87334 | QC Preparation: 2013-07-15 | Prepared By: KC

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	21.8	mg/Kg	1	20.0	<2.32	109	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	22.2	mg/Kg	1	20.0	<2.32	111	70 - 130	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.72	1.66	mg/Kg	1	2	86	83	70 - 130
4-Bromofluorobenzene (4-BFB)	1.45	1.48	mg/Kg	1	2	72	74	70 - 130

Matrix Spike (MS-1) Spiked Sample: 334573

QC Batch: 103120 | Date Analyzed: 2013-07-17 | Analyzed By: CW
Prep Batch: 87361 | QC Preparation: 2013-07-16 | Prepared By: CW

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	268	mg/Kg	1	250	19.3	99	36.1 - 147.2

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	267	mg/Kg	1	250	19.3	99	36.1 - 147.2	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate			MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	Qsr	Qsr	155	157	mg/Kg	1	100	155	157	78.3 - 131.6

Calibration Standards

Standard (CCV-1)

QC Batch: 102954 | Date Analyzed: 2013-07-11 | Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	246	98	80 - 120	2013-07-11

Standard (CCV-2)

QC Batch: 102954 | Date Analyzed: 2013-07-11 | Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	236	94	80 - 120	2013-07-11

Standard (CCV-3)

QC Batch: 102954 | Date Analyzed: 2013-07-11 | Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	217	87	80 - 120	2013-07-11

Standard (CCV-1)

QC Batch: 103049 | Date Analyzed: 2013-07-14 | Analyzed By: KC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0967	97	80 - 120	2013-07-14
Toluene		1	mg/kg	0.100	0.0976	98	80 - 120	2013-07-14

continued ...

standard continued ...

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Ethylbenzene		1	mg/kg	0.100	0.0974	97	80 - 120	2013-07-14
Xylene		1	mg/kg	0.300	0.298	99	80 - 120	2013-07-14

Standard (CCV-2)

QC Batch: 103049 Date Analyzed: 2013-07-14 Analyzed By: KC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.110	110	80 - 120	2013-07-14
Toluene		1	mg/kg	0.100	0.0954	95	80 - 120	2013-07-14
Ethylbenzene		1	mg/kg	0.100	0.0930	93	80 - 120	2013-07-14
Xylene		1	mg/kg	0.300	0.278	93	80 - 120	2013-07-14

Standard (CCV-3)

QC Batch: 103049 Date Analyzed: 2013-07-14 Analyzed By: KC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0954	95	80 - 120	2013-07-14
Toluene		1	mg/kg	0.100	0.0952	95	80 - 120	2013-07-14
Ethylbenzene		1	mg/kg	0.100	0.0926	93	80 - 120	2013-07-14
Xylene		1	mg/kg	0.300	0.278	93	80 - 120	2013-07-14

Standard (CCV-1)

QC Batch: 103058 Date Analyzed: 2013-07-15 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	98.3	98	85 - 115	2013-07-15

Standard (CCV-2)

QC Batch: 103058 Date Analyzed: 2013-07-15 Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	102	102	85 - 115	2013-07-15

Standard (CCV-1)

QC Batch: 103073 Date Analyzed: 2013-07-14 Analyzed By: KC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.872	87	80 - 120	2013-07-14

Standard (CCV-2)

QC Batch: 103073 Date Analyzed: 2013-07-14 Analyzed By: KC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	1.10	110	80 - 120	2013-07-14

Standard (CCV-3)

QC Batch: 103073 Date Analyzed: 2013-07-14 Analyzed By: KC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	1.02	102	80 - 120	2013-07-14

Standard (CCV-1)

QC Batch: 103091 Date Analyzed: 2013-07-16 Analyzed By: KC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0951	95	80 - 120	2013-07-16
Toluene		1	mg/kg	0.100	0.0951	95	80 - 120	2013-07-16
Ethylbenzene		1	mg/kg	0.100	0.0932	93	80 - 120	2013-07-16
Xylene		1	mg/kg	0.300	0.282	94	80 - 120	2013-07-16

Standard (CCV-2)

QC Batch: 103091 Date Analyzed: 2013-07-16 Analyzed By: KC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0933	93	80 - 120	2013-07-16
Toluene		1	mg/kg	0.100	0.0933	93	80 - 120	2013-07-16
Ethylbenzene		1	mg/kg	0.100	0.0902	90	80 - 120	2013-07-16
Xylene		1	mg/kg	0.300	0.271	90	80 - 120	2013-07-16

Standard (CCV-3)

QC Batch: 103091 Date Analyzed: 2013-07-16 Analyzed By: KC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0953	95	80 - 120	2013-07-16
Toluene		1	mg/kg	0.100	0.0970	97	80 - 120	2013-07-16
Ethylbenzene		1	mg/kg	0.100	0.0912	91	80 - 120	2013-07-16
Xylene		1	mg/kg	0.300	0.276	92	80 - 120	2013-07-16

Standard (CCV-1)

QC Batch: 103093 Date Analyzed: 2013-07-16 Analyzed By: KC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	1.09	109	80 - 120	2013-07-16

Standard (CCV-2)

QC Batch: 103093 Date Analyzed: 2013-07-16 Analyzed By: KC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	1.08	108	80 - 120	2013-07-16

Standard (CCV-3)

QC Batch: 103093 Date Analyzed: 2013-07-16 Analyzed By: KC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	1.01	101	80 - 120	2013-07-16

Standard (CCV-1)

QC Batch: 103120 Date Analyzed: 2013-07-17 Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	261	104	80 - 120	2013-07-17

Standard (CCV-2)

QC Batch: 103120 Date Analyzed: 2013-07-17 Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	275	110	80 - 120	2013-07-17

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-12-4	Midland

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Result Comments

1 Dilution due to hydrocarbons.
2 Dilution due to hydrocarbons.

Attachments

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

13076812

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 3

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: Tiga Logistics

SITE MANAGER: Ike Tavarez

PROJECT NO.: 112MC0557

PROJECT NAME: Lime Rock - Hondo Federal #1

Eddy Co NM

LAB I.D. NUMBER	DATE 2013	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
33/186	7/2		S		X	T-1 0-1'	1				X		X	X														
187						1'																						
188						T-2 0-1' 0.5' EB							X	X															
189						1' 0.5' ER																						
190						T-3 0-1' 0.5' EB							X	X														
191						1' 0.5' EB																						
192						T-4 0-1'							X	X														
193						1'																						
194						2'																						
195						T-5 0-1							X	X														

RELINQUISHED BY: (Signature) Date: 7-8-13 Time: 1027 RECEIVED BY: (Signature) Date: 7/8/13 Time: 10:27

SAMPLED BY: (Print & Initial) TF Date: 7-2-13 Time:

RELINQUISHED BY: (Signature) Date: Time: RECEIVED BY: (Signature) Date: Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS AIRBILL #: OTHER:

RELINQUISHED BY: (Signature) Date: Time: RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY: Trace RECEIVED BY: (Signature)
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE: DATE: TIME:

TETRA TECH CONTACT PERSON: Ike

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.0

REMARKS: Run deeper sample if TPH exceeds 5,000 mg/kg or Benzene exceeds 10 mg/kg or Total BTEX exceeds 50 mg/kg. Hold for chlorides pending discussion

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

1307082

Analysis Request of Chain of Custody Record

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME: Tiga Logistics
SITE MANAGER: The Tanner
PROJECT NO.: 112mc05557
PROJECT NAME: Lime Rock - Honda Federal #1 Eddy Co NM

LAB I.D. NUMBER	DATE 2013	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
196	7/2		S		X	T-5 1'	1				X																	
197						T-6 0-1'							X	X														
198						1'																						
199						2'																						
200						T-7 0-1'							X	X														
201						1'																						
202						2'																						
203						3'																						
204						4'																						
205						T-8 0-1'							X	X														

RELINQUISHED BY: (Signature) Date: 7-8-13 Time: 1027
RECEIVED BY: (Signature) Date: 7.8.13 Time: 1027
SAMPLED BY: (Print & Initial) TF Date: 7-2-13 Time:

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS
AIRBILL #:
OTHER:

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:
TETRA TECH CONTACT PERSON: Ike
Results by:

RECEIVING LABORATORY: Trace
ADDRESS:
CITY: Midland STATE: TX ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: TIME:
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.0°
REMARKS:

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

1307812

Analysis Request of Chain of Custody Record

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: Tiga Logistics

SITE MANAGER: Ike Tavarez

PROJECT NO.: 112WR05557

PROJECT NAME: Lime Rock - Hondo Federal #1 Eddy Co NM

LAB I.D. NUMBER	DATE 2013	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
206	7/2		S		X	T-8 1'	1				X	
207						2'						
208						3'						
209						Background 0-1'						
210						1-1.5'						
211						2-2.5'						
212						Surface Road						
213						Surface TB						

ANALYSIS REQUEST (Circle or Specify Method No.)

BTEX 8021B; TPH 8015 MOD; TX1005 (Ext. to C35); PAH 8270; RCRA Metals Ag As Ba Cd Cr Pb Hg Se; TCLP Metals Ag As Ba Cd Vr Pd Hg Se; TCLP Volatiles; TCLP Semi Volatiles; RCI; GC.MS Vol. 8240/8260/624; GC.MS Semi. Vol. 8270/625; PCB's 8080/608; Pest. 808/608; Chloride; Gamma Spec.; Alpha Beta (Air); PLM (Asbestos); Major Anions/Cations, pH, TDS

RELINQUISHED BY: (Signature) Date: 7-8-13 Time: 1027

RECEIVED BY: (Signature) Date: 7/8/13 Time: 10:29

SAMPLED BY: (Print & Initial) TF Date: 7-2-13 Time:

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS (HAND DELIVERED) UPS

AIRBILL #:

OTHER:

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY: Trace

ADDRESS:

CITY: Midland STATE: TX ZIP:

CONTACT: PHONE:

RECEIVED BY: (Signature)

DATE: TIME:

TETRA TECH CONTACT PERSON: Ike

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.0°

REMARKS:

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

13076812

Analysis Request of Chain of Custody Record

PAGE: 1 OF: 3

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

CLIENT NAME: Tiga Logistics

SITE MANAGER: Ike Tavarez

PROJECT NO.: 112MC0557

PROJECT NAME: Lime Rock - Hondo Federal #1 Eddy Co NM

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE 2013	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B	TPH TX1005 (Ext. to C35)	TPH 8015 MOD.	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chlorides	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
33/186	7/2		S		X	T-1 0-1'	1				X		X	X	X															
187						1'																								
188						T-2 0-1' 0.5' EB								X	X	X															
189						1' 0.5' EB																								
190						T-3 0-1' 0.5' EB								X	X	X															
191						1' 0.5' EB																								
192						T-4 0-1'								X	X	X										X					
193						1'																				X				
194						2'																				X				
195						T-5 0-1'								X	X	X															

Chlorides per Thomas 7/9

RELINQUISHED BY: (Signature)	Date: 7-8-13 Time: 1027	RECEIVED BY: (Signature)	Date: 7/8/13 Time: 10:27
SAMPLED BY: (Print & Initial) TF	Date: 7-2-13 Time:		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS	AIRBILL #: OTHER:		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
TETRA TECH CONTACT PERSON: Ike	Results by:		
RECEIVING LABORATORY: Trace ADDRESS: CITY: Midland STATE: TX ZIP: CONTACT: PHONE:	RECEIVED BY: (Signature) DATE: TIME:		RUSH Charges Authorized: Yes No
SAMPLE CONDITION WHEN RECEIVED: 4.0	REMARKS: Run deeper sample if TPH exceeds 5,000 mg/kg or Benzene exceeds 10 mg/kg or Total BTEX exceeds 50 mg/kg. Hold for chlorides pending discussion		

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

AK

1307082

Analysis Request of Chain of Custody Record

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

ANALYSIS REQUEST
(Circle or Specify Method No.)

CLIENT NAME:	SITE MANAGER:
Tiga Logistics	The Tanner

PROJECT NO.:	PROJECT NAME:
11amc05557	Lime Rock - Honda Federal #1 Eddy Co NM

LAB I.D. NUMBER	DATE 2013	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8021B – Added: 7/15/13	TPH 8015 MOD. TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chlorides	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
196	7/2		S	X		T-5 1'	1				X																	
197						T-6 0-1'							X	X	X														
198						1'							X																
199						2'																							
200						T-7 0-1'							X	X	X														
201						1'							X																
202						2'																							
203						3'																							
204						4'																							
205						T-8 0-1'							X	X	X														

RELINQUISHED BY: (Signature)	Date: 7-8-13 Time: 1027	RECEIVED BY: (Signature)	Date: 7/8/13 Time: 1027
SAMPLED BY: (Print & Initial) TF	Date: 7-2-13 Time:		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX HAND DELIVERED BUS UPS	AIRBILL #: OTHER:		
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
TETRA TECH CONTACT PERSON: Ike	Results by: RUSH Charges Authorized: Yes No		
RECEIVING LABORATORY: Trace ADDRESS: CITY: Midland STATE: TX ZIP: CONTACT: PHONE:	RECEIVED BY: (Signature) DATE: TIME:		
SAMPLE CONDITION WHEN RECEIVED: 4.0°	REMARKS:		

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

1307012

Analysis Request of Chain of Custody Record

TETRA TECH
1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 • Fax (432) 682-3946

Added: 7/16/13

Added: 7/15/13

CLIENT NAME: Tiga Logistics

SITE MANAGER: Ike Tavarez

PROJECT NO.: 113MF05557

PROJECT NAME: Lynn Rock - Honda Federal #1
Eddy Co NM

LAB I.D. NUMBER	DATE 2013	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
206	7/2		S		X	T-8 1'	1				X	
207						2'						
208						3'						
209						Background 0-1'						
210						1-1.5'						
211						2-2.5'						
212						Surface Road						
213						Surface TB						

ANALYSIS REQUEST (Circle or Specify Method No.)

BTEX 8021B	TPH 8015 MOD	TX1005 (Ext. to C35)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Vr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Anions/Cations, pH, TDS
X	X																
X																	

RELINQUISHED BY: (Signature) Date: 7-8-13 Time: 1027

RECEIVED BY: (Signature) Date: 7/8/13 Time: 10:27

SAMPLED BY: (Print & Initial) TF Date: 7-2-13 Time:

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS (HAND DELIVERED) UPS

AIRBILL #:

OTHER:

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY: Trace

ADDRESS:

CITY: Midland STATE: TX ZIP:

CONTACT: PHONE:

RECEIVED BY: (Signature)

DATE: TIME:

TETRA TECH CONTACT PERSON: Ike

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.0°

REMARKS:

Please fill out all copies - Laboratory retains Yellow copy - Return Orginal copy to Tetra Tech - Project Manager retains Pink copy - Accounting receives Gold copy.

Summary Report

Ike Tavarez
Tetra Tech
1910 N. Big Spring Street
Midland, TX 79705

Report Date: July 17, 2013

Work Order: 13070812

Project Location: Eddy Co., NM
Project Name: Tiga Logistics/Lime Rock-Hondo Fed.l #1
Project Number: 112MC05557

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
334186	T-1 0-1'	soil	2013-07-02	00:00	2013-07-08
334187	T-1 1'	soil	2013-07-02	00:00	2013-07-08
334188	T-2 0-1' 0.5' EB	soil	2013-07-02	00:00	2013-07-08
334190	T-3 0-1' 0.5' EB	soil	2013-07-02	00:00	2013-07-08
334192	T-4 0-1'	soil	2013-07-02	00:00	2013-07-08
334193	T-4 1'	soil	2013-07-02	00:00	2013-07-08
334194	T-4 2'	soil	2013-07-02	00:00	2013-07-08
334195	T-5 0-1'	soil	2013-07-02	00:00	2013-07-08
334197	T-6 0-1'	soil	2013-07-02	00:00	2013-07-08
334198	T-6 1'	soil	2013-07-02	00:00	2013-07-08
334200	T-7 0-1'	soil	2013-07-02	00:00	2013-07-08
334201	T-7 1'	soil	2013-07-02	00:00	2013-07-08
334205	T-8 0-1'	soil	2013-07-02	00:00	2013-07-08
334206	T-8 1'	soil	2013-07-02	00:00	2013-07-08
334207	T-8 2'	soil	2013-07-02	00:00	2013-07-08

	BTEX				TPH DRO - NEW	TPH GRO
Sample - Field Code	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
334186 - T-1 0-1'	<0.100	**13.5**	**30.6**	**57.0**	**1510** Qs	**2010**
334187 - T-1 1'	<0.0200	<0.0200	<0.0200	<0.0200		
334188 - T-2 0-1' 0.5' EB	<0.0200	**0.320**	**2.43**	**5.79**	**203** Qs	**68.6**
334190 - T-3 0-1' 0.5' EB	<0.0200	<0.0200	<0.0200	<0.0200	**56.6** Qs	**11.0**
334192 - T-4 0-1'	<0.0200	**0.257**	**1.19**	**2.38**	**87.5** Qs	**39.0**
334195 - T-5 0-1'	<0.0200	<0.0200	<0.0200	<0.0200	**62.9** Qs	**18.4**
334197 - T-6 0-1'	<0.0400 [1]	**7.91**	**20.5**	**42.4**	**681** Qs	**1240**
334198 - T-6 1'	<0.0200	<0.0200	<0.0200	<0.0200		

continued ...

[1] Dilution due to hydrocarbons.

... continued

Sample - Field Code	BTEX Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	TPH DRO - NEW DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
334200 - T-7 0-1'	<0.100 [2]	**28.3**	**45.4**	**91.1**	**1280** Qs	**3090**
334201 - T-7 1'	<0.0200	<0.0200	**2.65**	**6.59**		
334205 - T-8 0-1'	**8.28**	**186** Je	**172** Je	**295**	**762** Qs	**10400**
334206 - T-8 1'	<0.100	**10.4**	**28.6**	**57.7**	**1310**	**1620**
334207 - T-8 2'	<0.0200	<0.0200	<0.0200	<0.0200		

Sample: 334192 - T-4 0-1'

Param	Flag	Result	Units	RL
Chloride		**791**	mg/Kg	4

Sample: 334193 - T-4 1'

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	4

Sample: 334194 - T-4 2'

Param	Flag	Result	Units	RL
Chloride		**124**	mg/Kg	4

[2]Dilution due to hydrocarbons.