

**3R-1011**

**Release Report/ General  
Correspondence**

**Enterprise SJ**

**Date: Jul-Sept 2014**

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

Form C-141  
Revised August 8, 2011

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

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

AUG 07 2014

**Release Notification and Corrective Action**

**OPERATOR**

Initial Report  Final Report

Name of Company: Enterprise Field Services LLC	Contact: Thomas Long
Address: c/o Environmental P.O. Box 4324, Houston TX	Telephone No. 505-599-2286
Facility Name: Rachael #2	Facility Type: Well Site

Surface Owner: NAPI/Navajo Tribal	Mineral Owner: NAPI/Navajo Tribal	API No. 30-045-22285
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**LOCATION OF RELEASE**

Unit Letter J	Section 34	Township 26N	Range 12W	Feet from the 1458	North/South Line	Feet from the 1010	East/West Line	County San Juan
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Latitude 36.441434 Longitude -108.093404

**NATURE OF RELEASE**

Type of Release: Natural Gas, Produced Water, and Condensate	Volume of Release: Estimated 2-3 bbls of fluids; Estimated 5 MCF gas release	Volume Recovered: <b>Unknown</b>
Source of Release: Equipment Damage	Date and Hour of Occurrence: 5/30/2014 @ 11:43 a.m.	Date and Hour of Discovery: 5/30/2014 @ 12:00 p.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Cory Smith – NMOCD, Eric Trevizo – NAPI Safety, Steve Austin – NNEPA, Mike Freeman – NAPI Management	
By Whom? Thomas Long	Date and Hour 5/30/2014 @ 3:01 p.m. phone call and email	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* At 11:43 a.m. on May 30, 2014, a NAPI contractor (Wilbur-Ellis Company) was spraying herbicide at the NAPI 467A field when the contractor stuck the meter house and meter run located at the Rachel #2 well site with the sprayer attached to the tractor. As a result of the collision, the drip on the meter run was broken and the meter house was significantly damaged. Natural gas, condensate and water were released. The meter run was shut in and lock out tag out was applied. An area of approximately fifty (50) feet by thirty (30) was affected. No fire or injuries resulted from the incident.

Describe Area Affected and Cleanup Action Taken.\* An area of approximately fifty (50) feet by thirty (30) feet was affected. Remediation activities were completed on June 16, 2014. The two excavations dimensions measured approximately ten (10) feet long and ten (10) feet wide by 0.5 feet deep and ten (10) feet long by five (5) wide and up to 1.5 feet deep. Approximately eight (8) cubic yards of impacted soil was excavated and transported to a NMOCD approved land farm facility. A third party environmental contractor corrective action report is included with this "final" c-141

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.

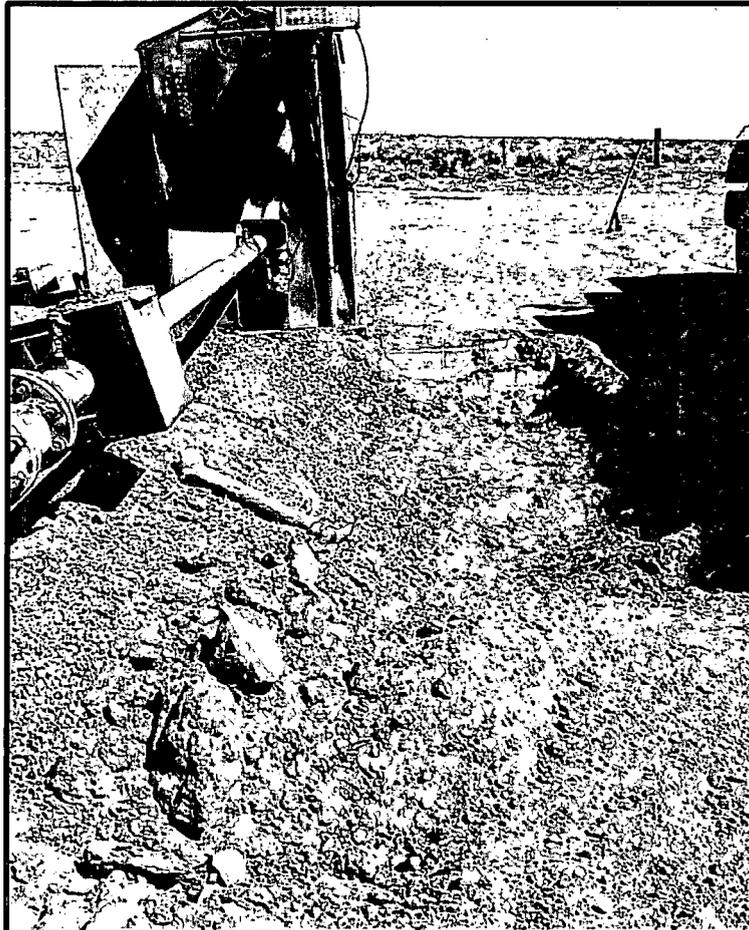
Signature:	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Ivan W. Zirbes	Approved by Environmental Specialist:	
Title: Sr. Director, Environmental	Approval Date: 11/4/14	Expiration Date:
E-mail Address: snolan@eprod.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 8-1-2014	Phone: (713) 381-6595	

\* Attach Additional Sheets If Necessary

#NCS 1430841973

34

**Enterprise Products  
Rachel #2 Meter Run Release  
Latitude North 36.441389°, Longitude West -108.093382°  
Unit I Section 34 T26N R12W  
San Juan County, New Mexico  
July 9, 2014**



**Submitted To:**

Enterprise Products  
Field Environmental-San Juan Basin  
614 Reilly Avenue  
Farmington, NM 87401

**Submitted By:**

Souder, Miller & Associates  
401 West Broadway  
Farmington, NM 87401  
(505) 325-7535



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### 1.0 Executive Summary

On June 13 and 16, 2014, Souder, Miller & Associates (SMA) responded to a hydrocarbon release associated with the Rachel #2 meter run release. The table below summarizes information about the release and remediation activities.

TABLE 1: RELEASE INFORMATION				
Name	Rachel # 2 Meter Run Release			
Location	Latitude/Longitude		Section, Township, Range	
	36.441389°	-108.093382°	(NE ¼ /SE ¼ ) Unit I Section 34	T 26N, R 12W
Date Reported	May 30, 2014			
Reported by	Tom Long			
Land Owner	Navajo Agricultural Products Industry			
Reported To	New Mexico Oil Conservation Division (NMOCD) and NAPI			
Diameter of Pipeline	N/A			
Source of Release	Incident/Equipment Damage of Meter Run			
Release Contents	Natural Gas/Condensate			
Release Volume: Natural Gas	5.0 MCF			
Release Volume: Liquids/Condensate	Unknown			
Nearest Waterway	Tributary of Gallegos Wash			
Depth to Groundwater	Less than 100 feet			
Nearest Domestic Water Source	Greater than 1,000 feet			
NMOCD Ranking	10			
SMA Response Dates	June 13 and June 16, 2014			
Subcontractors	West States Energy (WSEC)			
Disposal Facility	Envirotech Landfarm			
Yd <sup>3</sup> Contaminated Soil Excavated and Disposed	8			

## 2.0 Introduction

On behalf of Enterprise Products Operating, LLC. (Enterprise), SMA has prepared this report that describes remediation of a hydrocarbon release associated with the Rachel #2 meter run release. The release was due to equipment damage by a large agricultural pesticide sprayer hitting the Rachel #2 meter house and meter run, breaking off the 1/2" drip pot for condensate storage and the pipe fitting. A separate leak on the meter run, close to the meter house was also created due to impact. Approximately 5.0 thousand cubic feet (MCF) of natural gas was lost. The amount of liquids/condensate released is unknown. The release was reported on May 30, 2014 and was located in (NE 1/4 /SE 1/4 ) Unit I, Section 34, Township 26 North, Range 12 West, 36.441389°, -108.093382°, San Juan County, New Mexico. Figure 1, Vicinity Map, illustrates the location of the release.

## 3.0 Site Ranking and Land Jurisdiction

The release site is located approximately 650 feet north of an unnamed tributary of the Gallegos Wash on land owned by NAPI with an elevation of approximately 6,260 feet above sea level. After evaluation of the site using aerial photography and topographic maps, depth to groundwater is estimated to be less than 100 feet below ground surface (bgs).

SMA searched the New Mexico State Engineer's Office online water well data base for water wells in the vicinity of the release. No recorded wells were located within 1,000 feet or a 1 mile radius of the site.

The physical location of this release is within the jurisdiction of Navajo Agricultural Products Inc. (NAPI) and NMOCD. This release location has been assigned a NMOCD ranking of 10, which requires a soil remediation standard of 10 parts per million (ppm) benzene, 50 ppm total benzene, toluene, ethyl-benzene, and total xylenes (BTEX), and 1,000 ppm total petroleum hydrocarbons (TPH). Table 2 illustrates site ranking rationale.

## 4.0 Summary of Field Activities

On June 13, 2014 SMA mobilized to the release site to delineate the release area through field screening using a calibrated photoionization detector (PID) and collected surface samples by hand. On June 16, 2014, SMA provided oversight and guidance of excavation activities of West States Energy Contractors (WSEC). WSEC used a rubber tired backhoe for surface excavation. During the excavation event, soil samples were

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collected for field screening to determine the extent of the release. Table 3 summarizes the field screening results. Field notes are included in Appendix A.

The final excavation, on the west side of the meter run, measured approximately 10 feet long by 10 feet wide with maximum excavation depth of approximately 0.5 feet below ground surface. The final excavation, on the east side of the meter run, measured approximately 10 feet long by 5 feet wide with depths of 1.0 -1.5 feet. Field screening of the excavated material determined that the soils removed were not suitable for use as backfill material. The impacted soil was transported for disposal to Envirotech Landfarm on Hilltop near Bloomfield, NM. Bills of lading are included in Appendix C.

All laboratory soil samples were field screened with a calibrated PID. Samples meeting field screening criteria were submitted for laboratory analysis per United States Environmental Protection Agency Method 8021 BTEX, and 8015 Diesel Range Organics (DRO) and Gasoline Range Organics (GRO) to Hall Environmental Analysis Laboratory of Albuquerque, New Mexico. Figure 3 illustrates the extent of the excavation and laboratory results.

## **5.0 Conclusions and Recommendations**

As noted in Section 3.0 of this report, NMOCD Guidelines for Remediation of Leaks, Spills, and Releases have established the following action levels for contaminants of concern with a site ranking of 10: 10 ppm benzene, 50 ppm total BTEX, and 1,000 ppm TPH. Laboratory analysis of the excavation for benzene, total BTEX, and TPH (GRO/DRO) were at concentrations below the NMOCD Guidelines for all samples. The impacted soil was hauled off site for disposal. Soil contaminant concentrations are illustrated in Figure 3. A summary of laboratory analysis is included in Table 4. Laboratory report is included in Appendix D.

SMA recommends no further action at this site.

## **6.0 Closure and Limitations**

The scope of our services consisted of the performance of a preliminary spill assessment, regulatory liaison, contractor oversight and control of remediation operations, disposal arrangements and documentation, project management and preparation of this summary report. All work has been performed in accordance with generally accepted professional environmental consulting practices.

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If there are any questions regarding this report, please contact either Steve Moskal or Reid Allan at 505-325-7535.

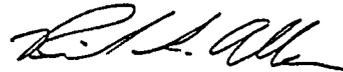
Submitted by:

Reviewed by:

SOUDER, MILLER & ASSOCIATES

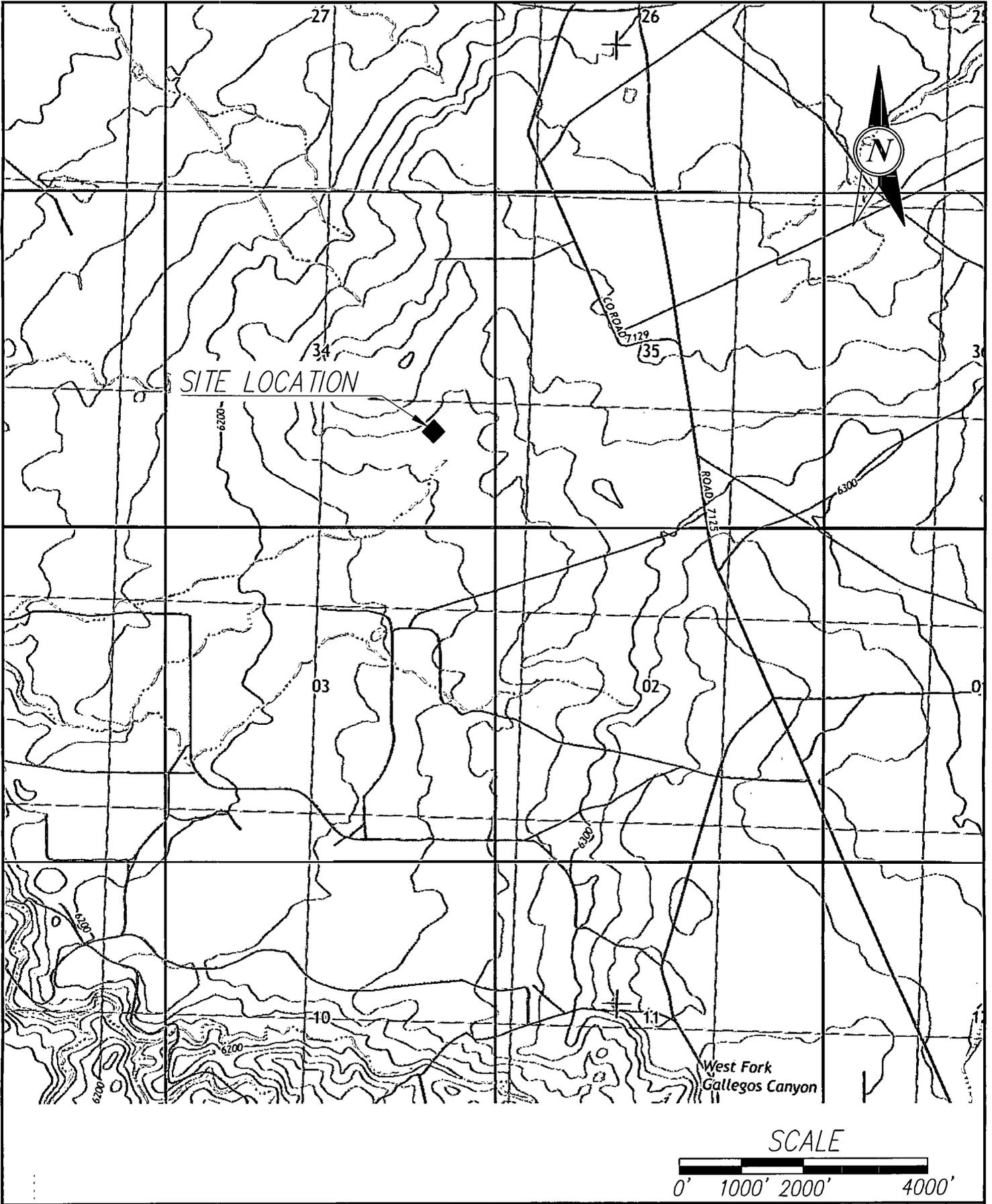


Steve Moskal  
Project Scientist



Reid S. Allan, PG  
Principal Scientist

## FIGURES



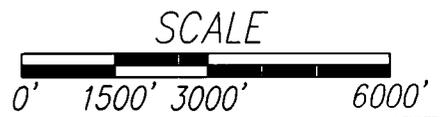
SITE LOCATION

West Fork Gallegos Canyon

SCALE



 <p><b>SMA</b> Engineering Environmental Surveying</p>	<p><b>SOUDER, MILLER &amp; ASSOCIATES</b> 401 W. BROADWAY FARMINGTON, NM 87401 Phone (505) 325-7535 Toll-Free (800) 519-0098 Fax (505) 325-0045 www.soudermiller.com Serving the Southwest &amp; Rocky Mountains Albuquerque, Farmington, Las Cruces, Roswell, Santa Fe, NM - El Paso, TX Cortez - Grand Junction - Montrose, CO - Silverdale, AZ - Moab, UT</p>	<p>ENTERPRISE FARMINGTON, NEW MEXICO</p>	<table border="1"> <tr> <td>Designed SM</td> <td>Drawn BLB</td> <td>Checked RSA</td> </tr> <tr> <td colspan="3">Date: 6/23/2014</td> </tr> <tr> <td colspan="3">Scale: Horiz: 1"=2000' Vert: N/A</td> </tr> <tr> <td colspan="3">Project No: 5122855</td> </tr> <tr> <td colspan="3">Sheet: 1</td> </tr> </table>	Designed SM	Drawn BLB	Checked RSA	Date: 6/23/2014			Scale: Horiz: 1"=2000' Vert: N/A			Project No: 5122855			Sheet: 1		
	Designed SM	Drawn BLB	Checked RSA															
	Date: 6/23/2014																	
	Scale: Horiz: 1"=2000' Vert: N/A																	
Project No: 5122855																		
Sheet: 1																		
<p>VICINITY MAP RACHEL #2 SECTION 34, T26N, R12W</p>		<p>SAN JUAN COUNTY, NEW MEXICO</p>																
<p>© Copyright 2014 Souder, Miller &amp; Associates - All Rights Reserved</p>		<p>P:\S-Enterprise MSA (2014) 5122855\BG24 - Rachel #2\CAD\Civil\LOCATION MAP.dwg, BLB, 6/27/2014 9:06 AM</p>																
<p>10</p>																		



**SOUDER, MILLER & ASSOCIATES**  
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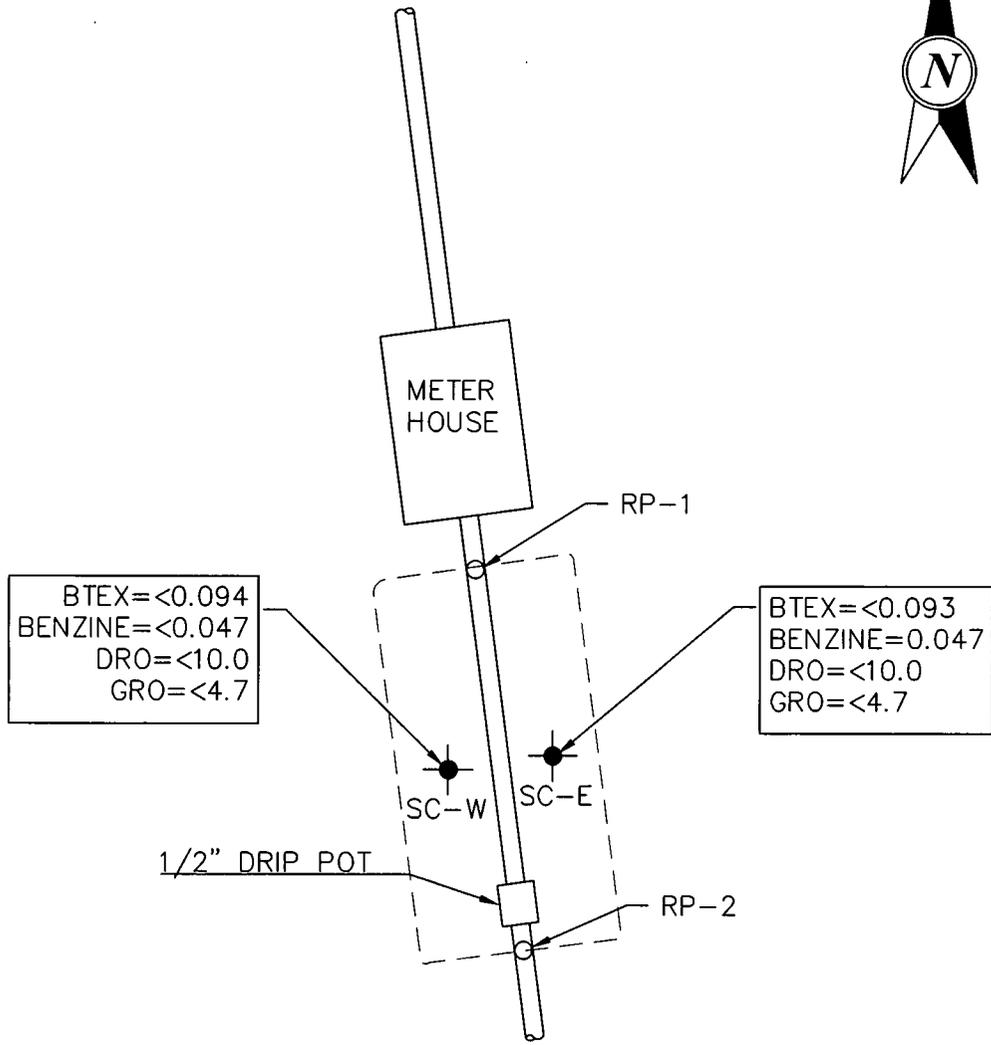
ENTERPRISE FARMINGTON, NEW MEXICO

**SITE LOCATION MAP**  
**RACHEL #2**  
**SECTION 34, T26N, R12W**

SAN JUAN COUNTY, NEW MEXICO

Designed SM	Drawn BLB	Checked RSA
Date: 6/23/2014		
Scale: Horiz: 1"=3000' Vert: N/A		
Project No: 5122855		
Sheet: 2		

COMPRESSOR

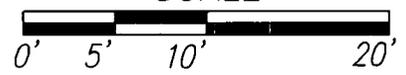


BTEX=<0.094  
 BENZINE=<0.047  
 DRO=<10.0  
 GRO=<4.7

BTEX=<0.093  
 BENZINE=0.047  
 DRO=<10.0  
 GRO=<4.7

LABORATORY RESULTS  
 REPORTED IN mg/kg ON  
 06/25/2014

● SOIL SAMPLE LOCATION  
 SCALE



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ENTERPRISE FARMINGTON, NEW MEXICO  
**SOIL CONTAMINANT CONCENTRATION MAP**  
**RACHEL #2**  
**SECTION 34, T26N, R12W**  
 SAN JUAN COUNTY, NEW MEXICO

Designed SM	Drawn BLB	Checked RSA
Date: 6/24/2014		
Scale: Horiz: 1"=10' Vert: N/A		
Project No: 5122855		
Sheet: 3		

## TABLES

Enterprise Products  
Table 2: Site Ranking

Rachel # 2  
Meter Run Release  
7/9/2014

Depth to Groundwater	NMOCD Numeric Rank for this Site	Source for Ranking	Notes
< 50 BGS = 20	10	Verified using Google Earth and topo maps: field verified	Groundwater is assumed to be between 50 and 99 feet below ground surface
50' to 99' = 10			
>100' = 0			
Ranking Criteria for Horizontal Distance to Nearest Surface Water	NMOCD Numeric Rank for this Site	Source for Ranking	Notes
< 200' = 20	10	Verified using Petroleum Recovery Research Center Map; field verified.	A tributary of the Gallegos Wash is located 650 feet north of the site.
200' - 1000' = 10			
>1000' = 0			
Ranking Criteria for Horizontal Distance to a Water Well or Water Source	NMOCD Numeric Rank for this Site	Source for Ranking	Notes
<1000' from a water source? <200' from a private domestic water source? YES OR NO to BOTH. YES = 20, NO = 0	0	New Mexico State Engineer's Office online water well data base	There are no recorded wells within 1000' of the release site.
<b>Total Site Ranking</b>	<b>20</b>		
<b>Soil Remediation Standards</b>	0 to 9	10 to 19	<b>&gt;19</b>
<b>Benzene</b>	10 PPM	10 PPM	<b>10 PPM</b>
<b>BTEX</b>	50 PPM	50 PPM	<b>50 PPM</b>
<b>TPH</b>	5000 PPM	1000 PPM	<b>100 PPM</b>



Enterprise Productions  
 Table 3: Summary of Excavation Field Screening Results

Rachel # 2  
 Meter Run Release  
 7/9/2014

<b>FIELD SCREENING RESULTS SUMMARY</b>					
Date	Time	Field Screening Reference	Sample Depth (Feet BGS)	PID Reading	Lab Sample Collected Y/N
6/13/2014	1419	RP-1 @ 5' E	0	5.1	N
6/13/2014	1420	RP-1 @ 10' E	0	2.2	N
6/13/2014	1421	RP-1 @ 15' E	0	6.9	N
6/13/2014	1422	RP-1 @ 20' E	0	1.8	N
6/13/2014	1416	RP-1 @ 5' W	0	10.2	N
6/13/2014	1417	RP-1 @ 10'W	0	2.4	N
6/13/2014	1418	RP-1 @15' W	0	0.7	N
6/13/2014	1419	RP-1 @ 20' W	0	0.6	N
6/13/2014	1455	RP-1 @ 1' bgs	1	115.4	N
6/13/2014	1423	RP-2 @ 5' E	0	1.1	N
6/13/2014	1424	RP-2 @ 10' E	0	0.5	N
6/13/2014	1425	RP-2 @ 15' E	0	0.6	N
6/13/2014	1426	RP-2 @ 20' E	0	0.9	N
6/13/2014	1429	RP-2 @ 5' W	0	1.4	N
6/13/2014	1428	RP-2 @ 10' W	0	4.4	N
6/13/2014	1427	RP-2 @ 15' W	0	0.8	N
6/13/2014	1426	RP-2 @ 20' W	0	0.7	N
6/13/2014	1455	RP-2 @ 1' bgs	1	26.4	N
6/16/2014	1040	RP-1 @ pipe	1	3.0	N
6/16/2014	1040	RP-1@ 2'E	1.5	4.1	N
6/16/2014	1041	RP-1@ 5' E	1	4.3	N
6/16/2014	1058	RP-1 @ 2'W	0.5	6.9	N
6/16/2014	1058	RP-1 @ 5'W	0.5	7.3	N
6/16/2014	1059	RP-2 @5' W	0.5	5.0	N
6/16/2014	1115	West Composite	0.5	6.0	Y
6/16/2014	1115	East Composite	1	4.9	Y



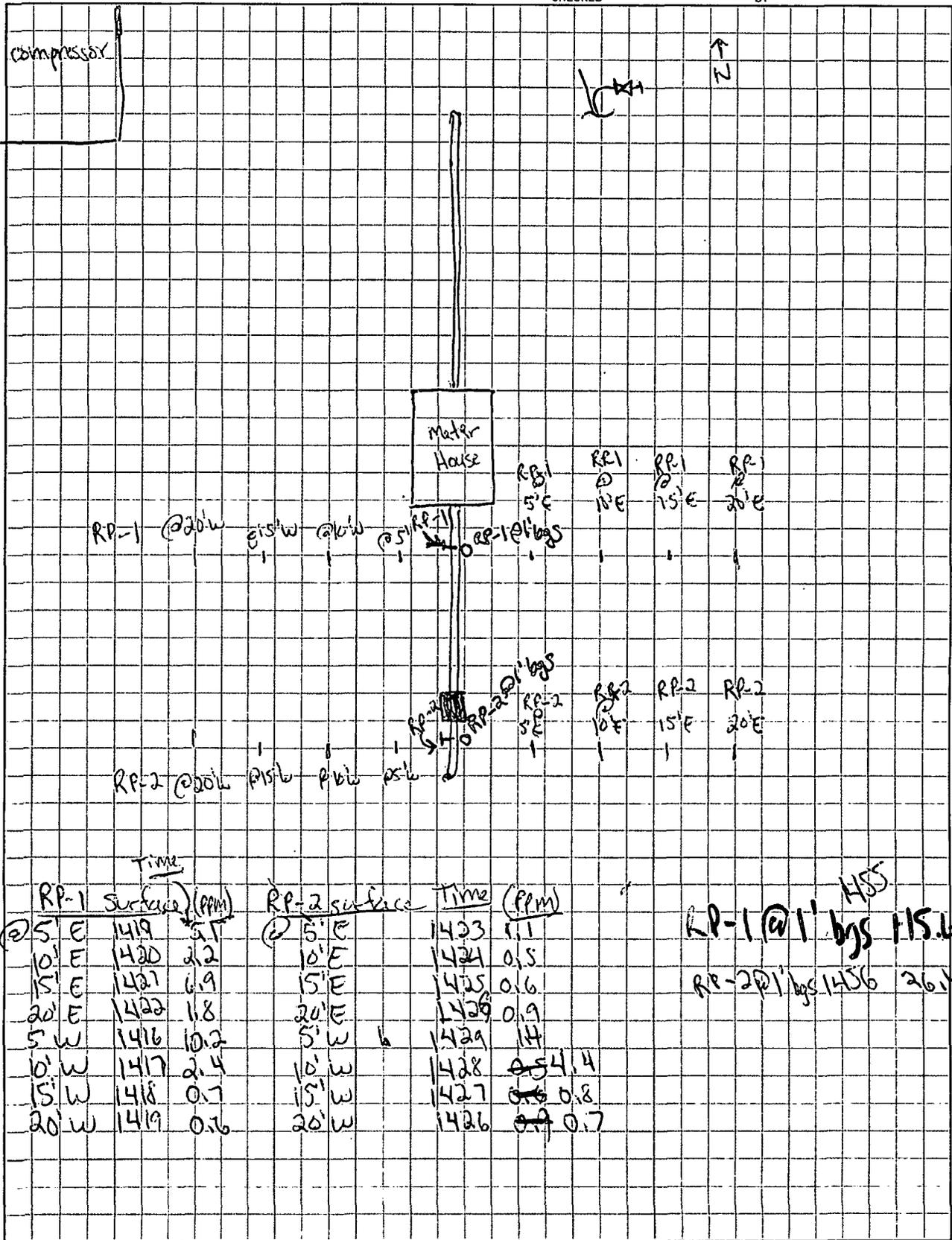
Table 4: Summary of Laboratory Analysis

Results in mg/Kg

Date	Time	Sample ID	Sample Depth (Feet BGS)	Method 8015 GRO	Method 8015 DRO	Method 8021 Benzene	Method 8021 BTEX
NMOCD Guidelines		NMOCD Site Ranking: 20		100 ppm		10 ppm	50 ppm
6/16/2014	1115	West Composite	0.5	<4.7	<10.0	<0.047	<0.094
6/16/2014	1115	East Composite	1	<4.7	<10.0	<0.047	<0.093



**APPENDIX A**  
**FIELD NOTES**



RP-1	Surface	Time	RP-2	Surface	Time
5' E	1419	2.1	5' E	1423	1.1
10' E	1420	2.2	10' E	1424	0.5
15' E	1421	1.9	15' E	1425	0.6
20' E	1422	1.8	20' E	1426	0.9
5' W	1416	10.2	5' W	1429	1.4
10' W	1417	2.4	10' W	1428	2.4, 1.4
15' W	1418	0.7	15' W	1427	0.8, 0.8
20' W	1419	0.6	20' W	1426	0.7, 0.7

RP-1 @ 1' bgs 1455 115.4  
 RP-2 @ 1' bgs 1456 26.4

6-16-14  
Sprague  
S. Chubbuck

10:00

# Release Information

<b>Name</b>	Rachel #2
<b>Location</b>	<b>Latitude/Longitude</b>
	<b>Section, Township, Range</b>
<b>Reported To</b>	
<b>Area Supervisor</b>	Dave Harrison (360-5705)
<b>Diameter of Pipeline</b>	12" House
<b>Source of Release</b>	
<b>Release Contents</b>	
<b>Release Volume</b>	
<b>Subcontractor</b>	WSEC
<b>Disposal Facility</b>	Envirotech
<b>Yd<sup>3</sup> Contam. Soil</b>	
<b>PO/WO/AFE</b>	

Notes:

# Field Screening

Location Name				Date	
Rachel #2				6-16-14	
Location Name	Description	Depth (Feet BGS)	Time Collected	Time Screened	PID Reading (ppm)
Rachel #2	RP-1 @ pipe	1	1020	1040	3.0
	RP-2 @ 8'E	1.5	1030	1040	4.1
	RP-1 @ 5'E	1	1035	1041	4.3
	RP-1 @ 2'W	0.5	1045	1058	6.9
	RP-1 @ 5'W	0.5	1050	1058	7.3
	RP-2 @ 5'W	0.5	1055	1059	85.0
	West Composite	0.5	1100	1115	6.0
	East Composite	1.0	1105	1115	4.9

**APPENDIX B**  
**SITE PHOTOGRAPHY**

Site Photographs  
Enterprise Products Rachel #2 Meter Run Release

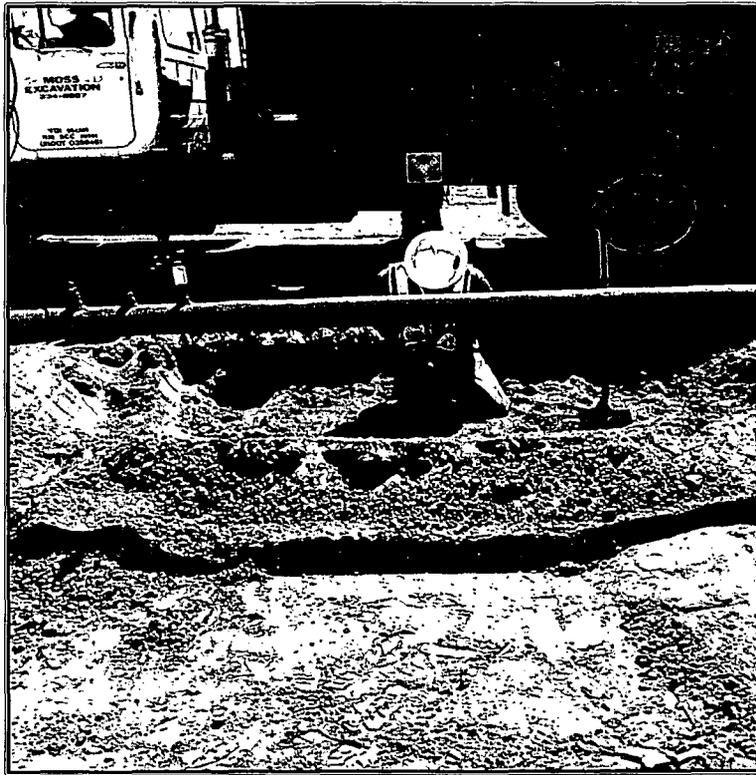


Photo 1: Field screening of the surface excavation east and west of meter run.



Photo 2: Excavation east of meter run at Rachel #2.

**Site Photographs**  
**Enterprise Products Rachel #2 Meter Run Release**



Photo 3: Final excavation east of meter run at Rachel #2.

**APPENDIX C**  
**SOIL DISPOSAL DOCUMENTATION**





# Bill of Lading

PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

MANIFEST # 47124  
DATE 6.16.14 JOB # 97057-0642

NO.	DESCRIPTION	QUANTITY	UNIT	WEIGHT	VOLUME	HAULER	DATE	TIME	DRIVER	SEAL NO.	ORIGIN
1	envirotech Enterprise Clean	—	g	—	—	MOSS	5	12:30	[Signature]		
	Cache #2										
											

By signing as the driver/transporter, I certify the material hauled from the above location has not been added to or tampered with. I certify the material is from the above mentioned Generator/Point of Origin and that no additional material has been added or mixed into the load.

TRANSPORTER CO. MOSS NAME Nathan B. McKinney SIGNATURE [Signature]  
 COMPANY CONTACT Jason Senechal PHONE \_\_\_\_\_ DATE 6.16.14

Signatures required prior to distribution of the legal document.

**APPENDIX D**  
**LABORATORY ANALYTICAL REPORTS**



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

June 20, 2014

Steve Moskal  
Souder, Miller and Associates  
401 W. Broadway  
Farmington, NM 87401  
TEL: (505) 325-5667  
FAX (505) 327-1496

RE: Rachel #2

OrderNo.: 1406721

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/17/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: West Composite@.5'

Project: Rachel #2

Collection Date: 6/16/2014 11:00:00 AM

Lab ID: 1406721-001

Matrix: SOIL

Received Date: 6/17/2014 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/18/2014 7:06:02 PM	13738
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/18/2014 7:06:02 PM	13738
Surr: DNOP	97.0	57.9-140		%REC	1	6/18/2014 7:06:02 PM	13738
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/18/2014 2:45:35 PM	13743
Surr: BFB	97.5	80-120		%REC	1	6/18/2014 2:45:35 PM	13743
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.047		mg/Kg	1	6/18/2014 2:45:35 PM	13743
Toluene	ND	0.047		mg/Kg	1	6/18/2014 2:45:35 PM	13743
Ethylbenzene	ND	0.047		mg/Kg	1	6/18/2014 2:45:35 PM	13743
Xylenes, Total	ND	0.094		mg/Kg	1	6/18/2014 2:45:35 PM	13743
Surr: 4-Bromofluorobenzene	112	80-120		%REC	1	6/18/2014 2:45:35 PM	13743

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Souder, Miller and Associates

**Client Sample ID:** East Composite@1'

**Project:** Rachel #2

**Collection Date:** 6/16/2014 11:05:00 AM

**Lab ID:** 1406721-002

**Matrix:** SOIL

**Received Date:** 6/17/2014 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/18/2014 7:35:52 PM	13738
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/18/2014 7:35:52 PM	13738
Surr: DNOP	108	57.9-140		%REC	1	6/18/2014 7:35:52 PM	13738
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/18/2014 4:16:00 PM	13743
Surr: BFB	98.9	80-120		%REC	1	6/18/2014 4:16:00 PM	13743
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.047		mg/Kg	1	6/18/2014 4:16:00 PM	13743
Toluene	ND	0.047		mg/Kg	1	6/18/2014 4:16:00 PM	13743
Ethylbenzene	ND	0.047		mg/Kg	1	6/18/2014 4:16:00 PM	13743
Xylenes, Total	ND	0.093		mg/Kg	1	6/18/2014 4:16:00 PM	13743
Surr: 4-Bromofluorobenzene	111	80-120		%REC	1	6/18/2014 4:16:00 PM	13743

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

<b>Qualifiers:</b>	* 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#: 1406721

20-Jun-14

**Client:** Souder, Miller and Associates  
**Project:** Rachel #2

Sample ID <b>MB-13738</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>13738</b>	RunNo: <b>19312</b>								
Prep Date: <b>6/17/2014</b>	Analysis Date: <b>6/17/2014</b>	SeqNo: <b>558311</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.6		10.00		86.1	57.9	140			

Sample ID <b>LCS-13738</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>13738</b>	RunNo: <b>19312</b>								
Prep Date: <b>6/17/2014</b>	Analysis Date: <b>6/17/2014</b>	SeqNo: <b>558312</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Diesel Range Organics (DRO)	63	10	50.00	0	126	60.8	145			
Surr: DNOP	4.4		5.000		87.9	57.9	140			

Sample ID <b>MB-13755</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>13755</b>	RunNo: <b>19341</b>								
Prep Date: <b>6/18/2014</b>	Analysis Date: <b>6/18/2014</b>	SeqNo: <b>559117</b>	Units: <b>%REC</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Surr: DNOP	8.4		10.00		84.0	57.9	140			
------------	-----	--	-------	--	------	------	-----	--	--	--

Sample ID <b>LCS-13755</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>13755</b>	RunNo: <b>19341</b>								
Prep Date: <b>6/18/2014</b>	Analysis Date: <b>6/18/2014</b>	SeqNo: <b>559118</b>	Units: <b>%REC</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Surr: DNOP	4.3		5.000		85.2	57.9	140			
------------	-----	--	-------	--	------	------	-----	--	--	--

**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#: 1406721

20-Jun-14

**Client:** Souder, Miller and Associates

**Project:** Rachel #2

Sample ID	<b>MB-13743 MK</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R19352</b>	RunNo:	<b>19352</b>					
Prep Date:		Analysis Date:	<b>6/18/2014</b>	SeqNo:	<b>559936</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	890		1000		89.0	80	120			

Sample ID	<b>LCS-13743 MK</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R19352</b>	RunNo:	<b>19352</b>					
Prep Date:		Analysis Date:	<b>6/18/2014</b>	SeqNo:	<b>559937</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		106	80	120			

Sample ID	<b>MB-13743</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>13743</b>	RunNo:	<b>19352</b>					
Prep Date:	<b>6/17/2014</b>	Analysis Date:	<b>6/18/2014</b>	SeqNo:	<b>559944</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	890		1000		89.0	80	120			

Sample ID	<b>LCS-13743</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>13743</b>	RunNo:	<b>19352</b>					
Prep Date:	<b>6/17/2014</b>	Analysis Date:	<b>6/18/2014</b>	SeqNo:	<b>559946</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	98.6	71.7	134			
Surr: BFB	1100		1000		106	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#: 1406721

20-Jun-14

**Client:** Souder, Miller and Associates  
**Project:** Rachel #2

Sample ID <b>MB-13743 MK</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>R19352</b>		RunNo: <b>19352</b>							
Prep Date:	Analysis Date: <b>6/18/2014</b>		SeqNo: <b>559977</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID <b>LCS-13743 MK</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>R19352</b>		RunNo: <b>19352</b>							
Prep Date:	Analysis Date: <b>6/18/2014</b>		SeqNo: <b>559979</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.2		1.000		115	80	120			

Sample ID <b>MB-13743</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>13743</b>		RunNo: <b>19352</b>							
Prep Date: <b>6/17/2014</b>	Analysis Date: <b>6/18/2014</b>		SeqNo: <b>559985</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID <b>LCS-13743</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>13743</b>		RunNo: <b>19352</b>							
Prep Date: <b>6/17/2014</b>	Analysis Date: <b>6/18/2014</b>		SeqNo: <b>559986</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.050	1.000	0	96.1	80	120			
Toluene	0.94	0.050	1.000	0	93.5	80	120			
Ethylbenzene	0.94	0.050	1.000	0	94.4	80	120			
Xylenes, Total	3.0	0.10	3.000	0	98.7	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		115	80	120			

Sample ID <b>1406721-001AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>West Composite@.5</b>	Batch ID: <b>13743</b>		RunNo: <b>19352</b>							
Prep Date: <b>6/17/2014</b>	Analysis Date: <b>6/18/2014</b>		SeqNo: <b>559988</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.047	0.9461	0	97.3	77.4	142			
Toluene	0.92	0.047	0.9461	0	96.8	77	132			
Ethylbenzene	0.95	0.047	0.9461	0	100	77.6	134			
Xylenes, Total	3.0	0.095	2.838	0	105	77.4	132			

**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#: 1406721  
20-Jun-14

Client: Souder, Miller and Associates  
Project: Rachel #2

Sample ID	1406721-001AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	West Composite@.5	Batch ID:	13743	RunNo:	19352					
Prep Date:	6/17/2014	Analysis Date:	6/18/2014	SeqNo:	559988	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		0.9461		121	80	120			S

Sample ID	1406721-001AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	West Composite@.5	Batch ID:	13743	RunNo:	19352					
Prep Date:	6/17/2014	Analysis Date:	6/18/2014	SeqNo:	559989	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.047	0.9434	0	95.5	77.4	142	2.19	20	
Toluene	0.90	0.047	0.9434	0	95.5	77	132	1.72	20	
Ethylbenzene	0.93	0.047	0.9434	0	98.6	77.6	134	2.07	20	
Xylenes, Total	2.9	0.094	2.830	0	103	77.4	132	2.26	20	
Surr: 4-Bromofluorobenzene	1.1		0.9434		118	80	120	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 |  |

**Sample Log-In Check List**

Client Name: SMA-FARM

Work Order Number: 1406721

RcptNo: 1

Received by/date: LM 06/17/14

Logged By: **Celina Sessa** 6/17/2014 7:45:00 AM *Celina Sessa*

Completed By: **Celina Sessa** 6/17/2014 9:06:15 AM *Celina Sessa*

Reviewed By: JO 06/17/2014

**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? Yes  No   
(Note discrepancies on chain of custody)
- 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? Yes  No   
(If no, notify customer for authorization.)

# of preserved bottles checked for pH: \_\_\_\_\_  
 (<2 or >12 unless noted)  
 Adjusted? \_\_\_\_\_  
 Checked by: \_\_\_\_\_

**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	1.8	Good	Yes			



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: Enterprise Field Services LLC	Contact: Thomas Long
Address: 614 Reilly Ave, Farmington, NM 87401	Telephone No. 505-599-2286
Facility Name: Lateral 2B-28	Facility Type: Natural Gas Gathering Line

Surface Owner: Privately Owned/BLM Managed	Mineral Owner: BLM	API No.
---	--------------------	---------

RCVD SEP 29 '14  
OIL CONS. DIV.

**LOCATION OF RELEASE**

Unit Letter M	Section 25	Township 29N	Range 10W	Feet from the 905	North/South Line	Feet from the 842	East/West Line	County San Juan
------------------	---------------	-----------------	--------------	-------------------------	---------------------	-------------------------	-------------------	--------------------

DIST. 3

Latitude 36.692349 Longitude -107.842714

**NATURE OF RELEASE**

Type of Release: Natural Gas	Volume of Release: 11.2 MCF	Volume Recovered: None
Source of Release: Internal corrosion	Date and Hour of Occurrence: 7/7/2014 @ 4:30 p.m.	Date and Hour of Discovery: 7/7/2014 @ 6:30 p.m.
Was Immediate Notice Given? Required <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not	If YES, To Whom? Notification to NMOCD – Cory Smith,	
By Whom? Thomas Long	Date and Hour Notification 7/8/2014 @ 9:00 a.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action: On 7/7/2014, Enterprise personnel responded to a possible line leak on lateral 2B-28, a Class II Jurisdictional pipeline. The Enterprise technicians on site isolated the pipeline and applied lock out tag out was applied and conducted an overnight pressure test and the leak was verified the following day. The excavation and repairs were completed on August 14, 2104.

Describe Area Affected and Cleanup Action Taken.\*: Enterprise personnel responded to a possible line leak on lateral 2B-28, a Class II Jurisdictional area. The Enterprise technicians on site isolated the pipeline and applied lock out tag out was applied. No liquids were visible on the ground surface. The excavation and repairs were completed on August 14, 2104. The final excavation dimensions measured approximately forty (40) feet long by sixteen (16) feet wide by five (5) feet deep. Approximately 58 cubic yards of hydrocarbon impacted soil was excavated and transported to a NMOCD approved land farm facility. A third party corrective action report is included with this "final" c-141.

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.

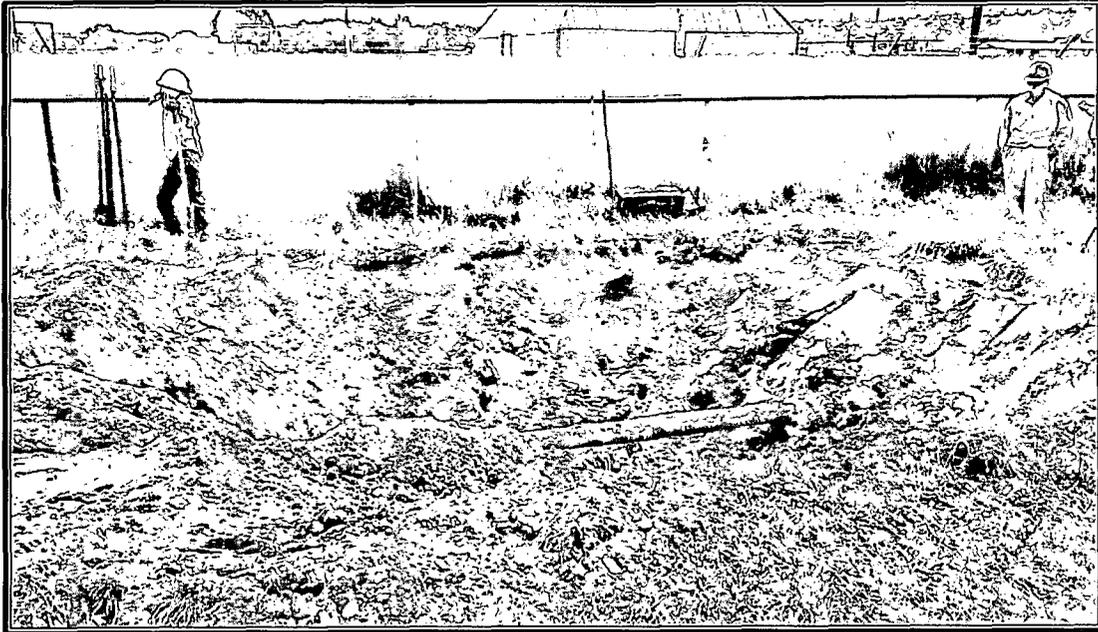
Signature: <i>Jon Fields</i>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Jon Fields	Approved by Environmental Specialist: <i>[Signature]</i>	
Title: Director, Environmental	Approval Date: 11/13/14	Expiration Date:
E-mail Address: jefields@eprod.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 9-24-2014 Phone: (713)381-6684		

\* Attach Additional Sheets If Necessary

#NCS 1431736015

(48)

**Enterprise Products**  
**Lateral 2B-28 Pipeline Release**  
**Latitude North 36.692349°, Longitude West -107.842714°**  
**SW/SW (Unit M) Section 25 T29N R10W**  
**San Juan County, New Mexico**  
**September 8, 2014**



**Submitted To:**  
Enterprise Products  
Field Environmental-San Juan Basin  
614 Reilly Avenue  
Farmington, NM 87401

**Submitted By:**  
Souder, Miller & Associates  
401 West Broadway  
Farmington, NM 87401  
(505)325-7535



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- Figure 1: Vicinity Map
- Figure 2: Site Map
- Figure 3: Soil Contaminant Concentration Map

### Tables:

- Table 1: Release Information
- Table 2: Site Ranking
- Table 3: Summary of Laboratory Analysis

### Appendices:

- Appendix A: Photographic Documentation
- Appendix B: Soil Disposal Documentation
- Appendix C: Laboratory Analytical Reports

## 1.0 Executive Summary

On August 13 and 14, 2014 Souder, Miller & Associates (SMA) responded to oversee the excavation repairs of hydrocarbon release associated with the Lateral 2B-28 pipeline initially reported on July 7, 2014. However, due to restricted private property access, the pipeline excavation was delayed until permissible access could be obtained on August 13, 2014. The table below summarizes information about the pipeline repair and remediation activities.

TABLE 1: RELEASE INFORMATION					
Name	Lateral 2B-28 Pipeline Release				
Location	Latitude/Longitude		Section, Township, Range		
		36.692349°	-107.842714°	Unit M	Section 25
Date Reported	July 7, 2014				
Reported to	Tom Long				
Land Owner	Private				
Reported To	NM Oil Conservation Division (NMOCD)/Bureau of Land Management (BLM)				
Diameter of Pipeline	8 inches				
Source of Release	Internal Corrosion				
Release Contents	Natural Gas Liquids/Condensate				
Release Volume	11.2 MCF				
Nearest Waterway	Unnamed Tributary Wash to Armenta Canyon Wash				
Depth to Groundwater	Assumed to be less than 50 feet				
Nearest Domestic Water Source	Less than 1,000 feet				
NMOCD Ranking	50				
SMA Response Dates	8/13-14/2014				
Subcontractors	West States Energy Contractors (WSEC)				
Disposal Facility	Envirotech Landfarm				
Yd <sup>3</sup> Contaminated Soil Excavated and Disposed	58 (Reported on Completed Form C-138)				

## 2.0 Introduction

On behalf of Enterprise Products Operating, LLC. (Enterprise), SMA has prepared this report that describes remediation of a hydrocarbon release associated with the Lateral 2B-28 pipeline. The Lateral 2B-28 pipeline release was a result of internal corrosion of the 8-inch, steel pipeline. The release was initially reported on July 7, 2014. The pipeline is located in Unit M, Section 25, Township 29 North, Range 10 West; 36.692349°, -107.842714°, San Juan County, New Mexico. Figure 1, Vicinity Map, illustrates the location of the release.

## 3.0 Site Ranking and Land Jurisdiction

The release site is located approximately 950 feet east of Armenta Canyon Wash and 625 feet south of an irrigation canal on privately owned land with an elevation of approximately 5,570

feet above sea level. After evaluation of the site using aerial photography and topographic maps, depth to groundwater is estimated to be less than 50 feet below ground surface (bgs). Figure 1 depicts the site vicinity and Figure 2 depicts the site location.

SMA searched the New Mexico State Engineer's Office online water well data base for water wells in the vicinity of the release. No wells were located within 1,000 feet of the site. However, 6 wells were located within a 1 mile radius of the site. The physical location of this release is within the jurisdiction of the NMOCD.

This release location has been assigned a NMOCD ranking of 50 which requires a soil remediation standard of 10 parts per million (ppm) benzene, 50 ppm combined benzene, toluene, ethyl-benzene, and total xylenes (BTEX), and 100 ppm total petroleum hydrocarbons (TPH). Table 2 illustrates site ranking rationale.

#### **4.0 Summary of Field Activities**

On August 13, 2014, through August 14, 2014, SMA mobilized to the release site to oversee excavation activities during the repair of the pipeline and remediation activities. SMA guided the excavation activities by collecting soil samples for field screening with a calibrated photo-ionization detector (PID). Representatives from Enterprise, NMOCD and BLM were present during all remediation activities and witnessed all soil samples collected by SMA.

Soil samples were initially field screened with a calibrated PID. Samples suspected of having hydrocarbon contamination concentrations below regulatory standards were submitted for confirmation laboratory analysis per United States Environmental Protection Agency Methods: 8021 for benzene, toluene, ethylbenzene, and xylenes (BTEX); 8015 for diesel and gasoline range organics (DRO/GRO) and; Method 300.0 Anions for total chlorides. All samples were analyzed by Hall Environmental Analytical Laboratory in Albuquerque, New Mexico. Figure 3 illustrates the extent of the excavation and composite soil sample locations and laboratory results.

The final excavation dimensions were approximately 40 feet long by a maximum of 16 feet wide and a maximum of 5 feet deep, covering an area of approximately 580 square feet. In total, approximately 58 cubic yards of material were excavated and hauled to Envirotech Landfarm near Bloomfield, New Mexico for proper disposal and replaced with clean backfill material. In addition, approximately 475 linear feet along the access right-of-way were repaired with clean backfill material, for a total of 132 cubic yards of clean fill and topsoil used at the Lateral 2B-28 site. Soil disposal documentation is included in Appendix B.

#### **5.0 Conclusions and Recommendations**

NMOCD Guidelines for Remediation of Leaks, Spills, and Releases have established the following action levels for contaminants of concern with a site ranking of 50: 10 ppm benzene, 50 ppm total BTEX, and 100 ppm TPH.

Laboratory analytical results for a sample collected on August 13, 2014 from the superficial topsoil of the excavation area was below NMOCD Guidelines. The topsoil was segregated and used for backfill. The remaining samples collected during the final excavation on August 14,

2014 were below laboratory detection limits and NMOCD Guidelines for benzene, BTEX, GRO/DRO and total chlorides.

Soil contaminant concentrations are illustrated in Figure 3. A summary of laboratory analysis is included in Table 3. Laboratory reports are included in Appendix B.

SMA recommends no further activities at the Lateral 2B-28 site.

## 6.0 Closure and Limitations

The scope of our services consisted of the performance of a preliminary spill assessment, verification of release stabilization, regulatory liaison, oversight and control of remediation operations, disposal arrangements and documentation, project management, and preparation of this summary report. All work has been performed in accordance with generally accepted professional environmental consulting practices.

If there are any questions regarding this report, please contact either Steve Moskal or Reid Allan at 505-325-7535.

Submitted by:

Reviewed by:

SOUDER, MILLER & ASSOCIATES

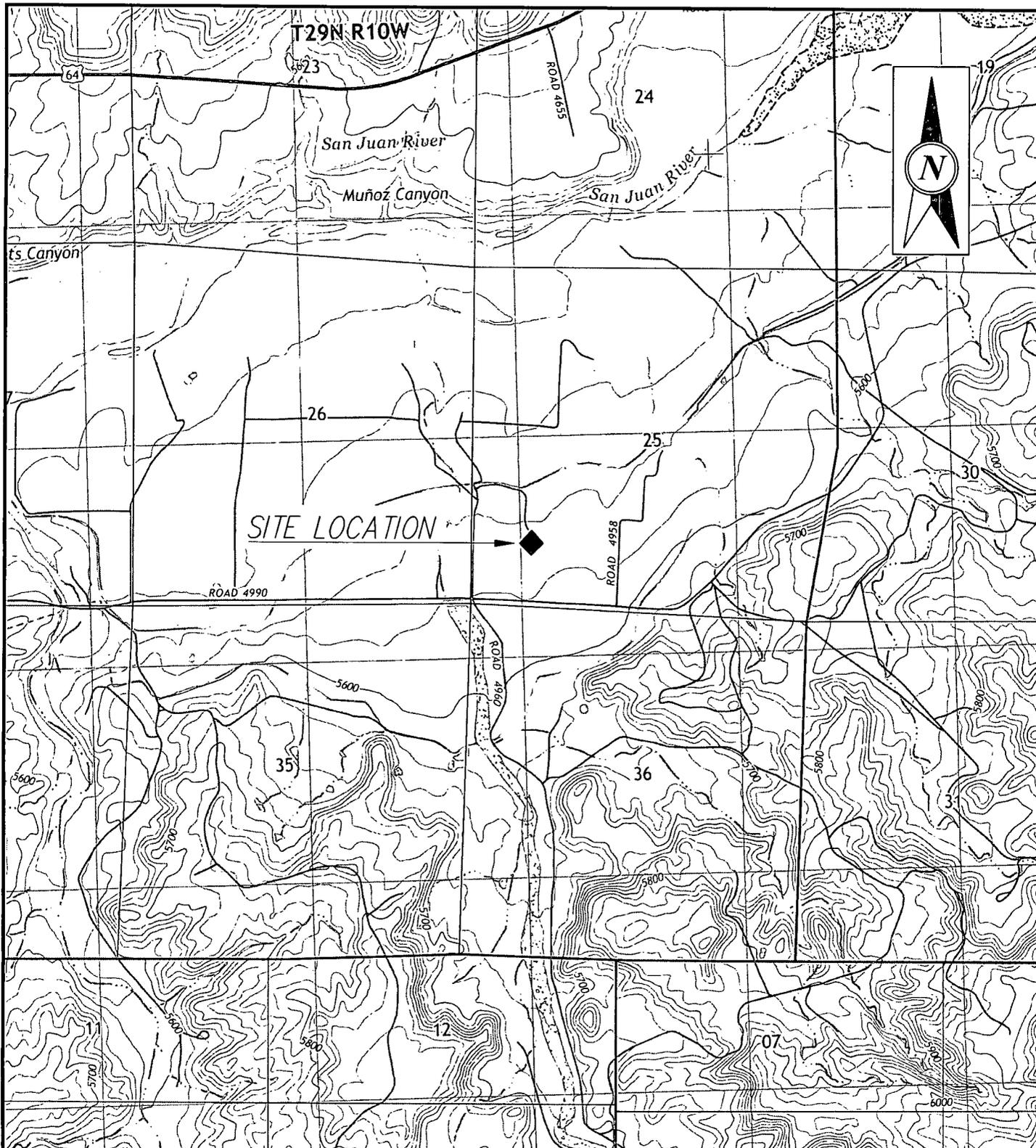


Steve Moskal  
Project Scientist



Reid S. Allan, PG  
Principal Scientist

## Figures



 <b>SMA</b> <i>Engineering Environmental Surveying</i>	<b>SOUDER, MILLER &amp; ASSOCIATES</b> 401 W. BROADWAY FARMINGTON, NM 87401 Phone (505) 325-7535 Toll-Free (800) 519-0098 Fax (505) 325-0045 <a href="http://www.soudermiller.com">www.soudermiller.com</a> Serving the Southwest & Rocky Mountains Albuquerque, Farmington, Las Cruces, Roswell, Santa Fe, NM - El Paso, TX Coraz - Grand Junction - Montrose, CO - Safford, AZ - Moab, UT	<b>ENTERPRISE</b> FARMINGTON, NEW MEXICO  <b>VICINITY MAP</b> <b>LATERAL 2B-28</b> <b>SECTION 25, T29N, R10W</b> SAN JUAN COUNTY, NEW MEXICO	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: small;">Designed</td> <td style="font-size: small;">Drawn</td> <td style="font-size: small;">Checked</td> </tr> <tr> <td style="font-size: x-small;">SM</td> <td style="font-size: x-small;">DJB</td> <td style="font-size: x-small;">RSA</td> </tr> <tr> <td colspan="3" style="font-size: x-small;">Date: 8/22/2014</td> </tr> <tr> <td colspan="3" style="font-size: x-small;">Scale: Horiz: 1"=2000'</td> </tr> <tr> <td colspan="3" style="font-size: x-small;">Vert: N/A</td> </tr> <tr> <td colspan="3" style="font-size: x-small;">Project No: 5122855</td> </tr> <tr> <td colspan="3" style="font-size: x-small;">Sheet: 1</td> </tr> </table>	Designed	Drawn	Checked	SM	DJB	RSA	Date: 8/22/2014			Scale: Horiz: 1"=2000'			Vert: N/A			Project No: 5122855			Sheet: 1		
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	Date: 8/22/2014																							
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**SOUDER, MILLER & ASSOCIATES**  
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ENTERPRISE

FARMINGTON, NEW MEXICO

Designed SM	Drawn DJB	Checked RSA
----------------	--------------	----------------

Date: 8/22/2014

Scale: Horiz: 1"=80'  
 Vert: N/A

Project No: 5122855

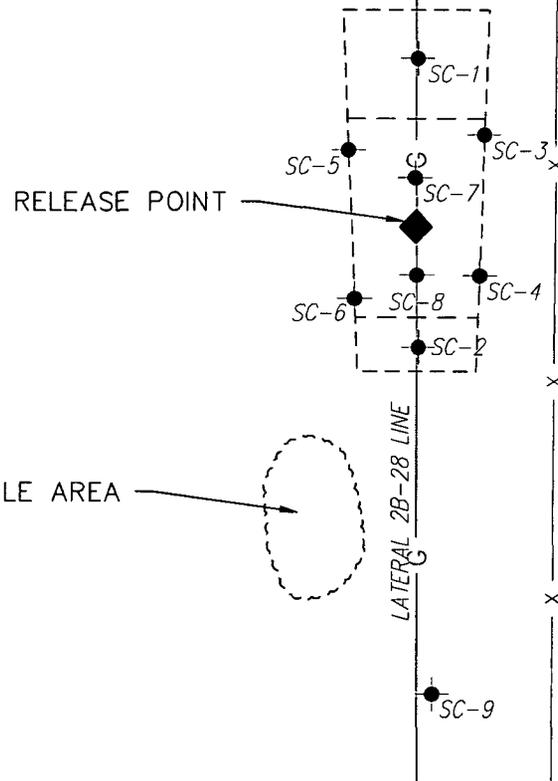
Sheet: 2

**SITE LOCATION MAP**  
**LATERAL 2B-28**  
**SECTION 25, T29N, R10W**

SAN JUAN COUNTY, NEW MEXICO

LABORATORY ANALYTICAL SUMMARY

Date	Time	Sample ID	Sample Depth (Feet BGS)	Method 8015 GRO	Method 8015 DRO	Method 8021 Benzene	Method 8021 BTEX	Method 300.0 Chlorides
NMOCD Guidelines		NMOCD Site Ranking: 50		100 ppm		10 ppm	50 ppm	500 ppm
8/13/2014	10:10	SC-1 Topsoil	0-0.5	<3.6	<10	<0.036	<0.071	<30
8/14/2014	14:20	SC-1 North Wall	0-5	<3.3	<10	<0.033	<0.066	<30
8/14/2014	14:25	SC-2 South Wall	0-5	<3.4	<10	<0.034	<0.067	<30
8/14/2014	14:30	SC-3 East Wall-N	0-5	<3.3	<10	<0.033	<0.066	<30
8/14/2014	14:35	SC-4 East Wall-S	0-5	<3.1	<9.8	<0.031	<0.062	<30
8/14/2014	14:40	SC-5 West Wall-N	0-5	<3.3	<9.8	<0.033	<0.065	<30
8/14/2014	14:45	SC-6 West Wall-S	0-5	<3.3	<9.9	<0.033	<0.065	<30
8/14/2014	14:50	SC-7 Base-N	5	<3.3	<10	<0.033	<0.067	<30
8/14/2014	14:55	SC-8 Base-S	5	<3.4	<10	<0.034	<0.069	<30
8/14/2014	15:00	SC-9 Background	0	<3.5	<9.8	<0.035	<0.069	<30



LEGEND

● SOIL SAMPLE LOCATION  
RESULTS IN mg/kg REPORTED 4-1-14



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ENTERPRISE

FARMINGTON, NEW MEXICO

SITE LOCATION MAP  
LATERAL 2B-28  
SECTION 25, T29N, R10W

SAN JUAN COUNTY, NEW MEXICO

Designed SM	Drawn DJB	Checked RSA
Date: 8/22/2014		
Scale: Horiz: 1"=20' Vert: N/A		
Project No: 5122855		
Sheet: 3		

## **Tables**

Depth to Groundwater	NMOCD Numeric Rank for this Site	Source for Ranking	Notes
< 50 BGS = 20	20	Field verification that release is located near Armenta Canyon Wash.	Groundwater is assumed to be less than 50 feet below ground surface.
50' to 99' = 10			
>100' = 0			
Ranking Criteria for Horizontal Distance to Nearest Surface Water	NMOCD Numeric Rank for this Site	Source for Ranking	Notes
< 200' = 20	10	Field verification that release is located 175 feet to the west of Armenta Canyon Wash.	Release is located within 1,000 feet of an irrigation canal.
200'-1000' = 10			
>1000' = 0			
Ranking Criteria for Horizontal Distance to a Water Well or Water Source	NMOCD Numeric Rank for this Site	Source for Ranking	Notes
<1000' from a water source? <200' for a private domestic water source? YES OR NO to BOTH. YES = 20, NO = 0	20	NM State Engineer Water Well Database	No recorded water wells located with 1000', 6 wells located within a 1 mile radius.
<b>Total Site Ranking</b>	<b>50</b>		
<b>Soil Remediation Standards</b>	0 to 9	10 to 19	>19
<b>Benzene</b>	10 PPM	10 PPM	<b>10 PPM</b>
<b>BTEX</b>	50 PPM	50 PPM	<b>50 PPM</b>
<b>TPH</b>	5000 PPM	1000 PPM	<b>100 PPM</b>



**LABORATORY ANALYTICAL SUMMARY**

Date	Time	Sample ID	Sample Depth (Feet BGS)	Method 8015 GRO	Method 8015 DRO	Method 8021 Benzene	Method 8021 BTEX	Method 300.0 Chlorides
NMOCD Guidelines		NMOCD Site Ranking: 50		100 ppm		10 ppm	50 ppm	500 ppm
8/13/2014	10:10	SC-1 Topsoil	0-0.5	<3.6	<10	<0.036	<0.071	<30
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8/14/2014	15:00	SC-9 Background	0	<3.5	<9.8	<0.035	<0.069	<30



**Appendix A**  
**Soil Disposal Documentation**

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

97057-0651

Form C-138  
Revised 08/01/11

\*Surface Waste Management Facility Operator  
and Generator shall maintain and make this  
documentation available for Division inspection.

### REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

**1. Generator Name and Address:**

Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

Aug. '14

**2. Originating Site: Lateral 2B-28 Release Site**

**3. Location of Material (Street Address, City, State or ULSTR):**

Unit Letter M Section 25 T 29N R 10W, GPS 36.692349, -107.842714, San Juan County, NM

**4. Source and Description of Waste:**

Source: Natural Gas Pipeline Release

Description: Exempt petroleum affected soil from clean-up efforts at pipeline release.

Estimated Volume 50 yd<sup>3</sup> Known Volume (to be entered by the operator at the end of the haul) 58 yd<sup>3</sup>

**5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Thomas Long, representative or authorized agent for Enterprise Field Services, LLC do hereby  
**Generator Signature**

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. **Operator Use Only: Waste Acceptance Frequency**  Monthly  Weekly  Per Load

RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

MSDS Information  RCRA Hazardous Waste Analysis  Process Knowledge  Other (Provide description in Box 4)

**GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS**

I, Thomas Long, 8-11-14, representative for Enterprise Field Services, LLC authorize Envirotech, Inc. to complete  
**Generator Signature**

the required testing/sign the Generator Waste Testing Certification.

I, \_\_\_\_\_, representative for \_\_\_\_\_ do hereby certify that  
**Representative/Agent Signature**

representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

**5. Transporter: ~~West States Energy Contractors~~ Envirotech, Riehl, B+B Excavating**

**OCD Permitted Surface Waste Management Facility**

Name and Facility Permit #: **Envirotech, Inc. Soil Remediation Facility \* Permit #: NM 01-0011**  
Address of Facility: **Hilltop, NM**

**Method of Treatment and/or Disposal:**

Evaporation  Injection  Treating Plant  Landfarm  Landfill  Other

**Waste Acceptance Status:**

**APPROVED**

**DENIED (Must Be Maintained As Permanent Record)**

PRINT NAME: Greg Galbreath  
SIGNATURE: \_\_\_\_\_  
Surface Waste Management Facility Authorized Agent

TITLE: Environmental Manager DATE: 8/13/14  
TELEPHONE NO.: 505-632-0615



# Bill of Lading

MANIFEST # 47994

DATE 8-13-14 JOB # 97057-0651

PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

LOAD NO.	COMPLETE DESCRIPTION OF SHIPMENT						TRANSPORTING COMPANY			
	POINT OF ORIGIN	DESTINATION	MATERIAL	GRID	YDS	BBLs	COMPANY	TRK#	TIME	DRIVER SIGNATURE
<u>1</u>	<u>Enterprise Lateral</u> <u>28-28 LINE</u>	<u>LFI-4</u>	<u>CONT</u> <u>SOIL</u>	<u>A-1</u>	<u>12</u>	<u>-</u>	<u>BBB</u> <u>exc</u>	<u>02</u>	<u>11:15</u>	<u>Wes Byler</u>
<u>2</u>	<u>LEAK</u>	<u>" "</u>	<u>" "</u>	<u>D-1</u>	<u>12</u>	<u>-</u>	<u>" "</u>	<u>02</u>	<u>13:00</u>	<u>Wes Byler</u>
					<u>24</u>					
RESULTS:		LANDFARM EMPLOYEE: <u>EL</u> <u>Wes Byler</u>	NOTES:							
<u>4287</u>	CHLORIDE TEST   <u>1</u>									
	PAINT FILTER TEST   <u>1</u>									
Certification of above receipt & placement										

By signing as the driver/transporter, I certify the material hauled from the above location has not been added to or tampered with. I certify the material is from the above mentioned Generator/Point of Origin and that no additional material has been added or mixed into the load.

TRANSPORTER CO. B.B. Excavating NAME Wes Byler SIGNATURE Wes Byler  
 COMPANY CONTACT Wes Byler PHONE 505-716-3112 DATE 8-13-14

Signatures required prior to distribution of the legal document.



# Bill of Lading

MANIFEST # 47996

DATE 8-13-14 JOB # 97057-065

PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

LOAD NO.	COMPLETE DESCRIPTION OF SHIPMENT						TRANSPORTING COMPANY			
	POINT OF ORIGIN	DESTINATION	MATERIAL	GRID	YDS	BBLs	COMPANY	TRK#	TIME	DRIVER SIGNATURE
2	Enterprise Lateral 2B 28 line bak	LF# 4	cont soil	A-1	12	-	Riehl	03	11:35	Curtis A. Riehl
2	"	"	"	D-1	12	-	"	03	14:25	Curtis A. Riehl
					<u>24</u>					
RESULTS:		LANDFARM EMPLOYEE:		EL		NOTES:				
287	CHLORIDE TEST	1	Certification of above receipt & placement							
	PAINT FILTER TEST	1								

By signing as the driver/transporter, I certify the material hauled from the above location has not been added to or tampered with. I certify the material is from the above mentioned Generator/Point of Origin and that no additional material has been added or mixed into the load.

TRANSPORTER CO. Riehl Trucking LLC NAME Curtis Riehl SIGNATURE Curtis A. Riehl  
 COMPANY CONTACT Charlie Dean PHONE 505 330 4089 DATE 8-13-14

Signatures required prior to distribution of the legal document.











# Bill of Lading

MANIFEST # 48251

DATE 8/15/14 JOB # 97057-0651

PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

LOAD NO.	COMPLETE DESCRIPTION OF SHIPMENT						TRANSPORTING COMPANY			
	POINT OF ORIGIN	DESTINATION	MATERIAL	GRID	YDS	BBLs	COMPANY	TRK#	TIME	DRIVER SIGNATURE
1	Topsoil FARM	<del>Enterprise</del> LATECAL 28-28	Topsoil		10		Richl Truck	03	4:00	<i>[Signature]</i>
2	" "	" "	" "		10		BBB	02	4:15	<i>[Signature]</i>
3					10		Envirotech	615	4:30	<i>[Signature]</i>
					<u>30</u>					
RESULTS:		LANDFARM EMPLOYEE: <u>Jimmy Michel</u> <i>EL</i>				NOTES: <u>\$12<sup>00</sup> Per YARD</u>				
<input checked="" type="checkbox"/>	CHLORIDE TEST	Certification of above receipt & placement								
<input checked="" type="checkbox"/>	PAINT FILTER TEST									

By signing as the driver/transporter, I certify the material hauled from the above location has not been added to or tampered with. I certify the material is from the above mentioned Generator/Point of Origin and that no additional material has been added or mixed into the load.

TRANSPORTER CO. ENVIROTECH NAME Jimmy Michel SIGNATURE *[Signature]*  
 COMPANY CONTACT DPO PHONE 486-0898 DATE 8/15/14

Signatures required prior to distribution of the legal document.



# Bill of Lading

MANIFEST # 48252

DATE 8/18/14 JOB # 97057-0651

PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

LOAD NO.	COMPLETE DESCRIPTION OF SHIPMENT						TRANSPORTING COMPANY			
	POINT OF ORIGIN	DESTINATION	MATERIAL	GRID	YDS	BBLs	COMPANY	TRK#	TIME	DRIVER SIGNATURE
1	Topsoil Farm	LATKAL	Topsoil		10		Envirotech	615	8:00	[Signature]
2	" "	2B-28	"		10		Richel Trnty	03	8:15	[Signature]
3	" "	" "	"		10		B&B	02	8:30	[Signature]
4	" "	" "	"		10		Envirotech	615	12:15	[Signature]
5	" "	" "	"		10		B&B	02	12:20	[Signature]
6	" "	" "	"		10		Richel Trucking	03	12:35	[Signature]
7	" "	" "	"		12 WTL		<del>B&amp;B</del>	02	14:00	[Signature]
					72					
RESULTS:		LANDFARM EMPLOYEE: Jimmy Michelh EL				NOTES: # 12 <sup>00</sup> Fee YARD				
<input checked="" type="checkbox"/>	CHLORIDE TEST	Certification of above receipt & placement								
<input checked="" type="checkbox"/>	PAINT FILTER TEST									

By signing as the driver/transporter, I certify the material hauled from the above location has not been added to or tampered with. I certify the material is from the above mentioned Generator/Point of Origin and that no additional material has been added or mixed into the load.

TRANSPORTER CO. Envirotech NAME Jimmy Michelh SIGNATURE [Signature]  
 COMPANY CONTACT DPO PHONE 486-0898 DATE 8/18/14

Signatures required prior to distribution of the legal document.

**Appendix C**  
**Laboratory Analytical Reports**



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

August 18, 2014

Steve Moskal  
Souder, Miller and Associates  
401 W. Broadway  
Farmington, NM 87401  
TEL: (505) 325-5667  
FAX

RE: BG33A Lateral 2B-28

OrderNo.: 1408688

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/14/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Souder, Miller and Associates

**Client Sample ID:** SC-1

**Project:** BG33A Lateral 2B-28

**Collection Date:** 8/13/2014 10:10:00 AM

**Lab ID:** 1408688-001

**Matrix:** MEOH (SOIL)

**Received Date:** 8/14/2014 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/14/2014 11:16:27 AM	14764
Surr: DNOP	101	57.9-140		%REC	1	8/14/2014 11:16:27 AM	14764
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	8/14/2014 12:12:20 PM	R20580
Surr: BFB	92.0	80-120		%REC	1	8/14/2014 12:12:20 PM	R20580
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.036		mg/Kg	1	8/14/2014 12:12:20 PM	R20580
Toluene	ND	0.036		mg/Kg	1	8/14/2014 12:12:20 PM	R20580
Ethylbenzene	ND	0.036		mg/Kg	1	8/14/2014 12:12:20 PM	R20580
Xylenes, Total	ND	0.071		mg/Kg	1	8/14/2014 12:12:20 PM	R20580
Surr: 4-Bromofluorobenzene	100	80-120		%REC	1	8/14/2014 12:12:20 PM	R20580
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	8/14/2014 11:29:52 AM	14769

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

<b>Qualifiers:</b>	* 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#: 1408688

18-Aug-14

Client: Souder, Miller and Associates

Project: BG33A Lateral 2B-28

Sample ID	<b>MB-14769</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>14769</b>	RunNo:	<b>20595</b>					
Prep Date:	<b>8/14/2014</b>	Analysis Date:	<b>8/14/2014</b>	SeqNo:	<b>599159</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	<b>LCS-14769</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>14769</b>	RunNo:	<b>20595</b>					
Prep Date:	<b>8/14/2014</b>	Analysis Date:	<b>8/14/2014</b>	SeqNo:	<b>599160</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	270	30	15.00	0	1810	90	110			S

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

**QC SUMMARY REPORT**  
**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1408688

18-Aug-14

**Client:** Souder, Miller and Associates

**Project:** BG33A Lateral 2B-28

Sample ID <b>MB-14764</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>14764</b>	RunNo: <b>20602</b>								
Prep Date: <b>8/14/2014</b>	Analysis Date: <b>8/14/2014</b>	SeqNo: <b>599330</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	9.3		10.00		93.3	57.9	140			

Sample ID <b>LCS-14764</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>14764</b>	RunNo: <b>20602</b>								
Prep Date: <b>8/14/2014</b>	Analysis Date: <b>8/14/2014</b>	SeqNo: <b>599331</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	103	68.6	130			
Surr: DNOP	4.9		5.000		97.2	57.9	140			

**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#: 1408688  
 18-Aug-14

**Client:** Souder, Miller and Associates  
**Project:** BG33A Lateral 2B-28

Sample ID <b>MB-14756 MK</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>PBS</b>	Batch ID: <b>R20580</b>	RunNo: <b>20580</b>								
Prep Date:	Analysis Date: <b>8/14/2014</b>	SeqNo: <b>598844</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	860		1000		86.3	80	120			

Sample ID <b>LCS-14756 MK</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Gasoline Range</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>R20580</b>	RunNo: <b>20580</b>								
Prep Date:	Analysis Date: <b>8/14/2014</b>	SeqNo: <b>598845</b>	Units: <b>mg/Kg</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	98.3	65.8	139			
Surr: BFB	940		1000		94.5	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#: 1408688

18-Aug-14

**Client:** Souder, Miller and Associates

**Project:** BG33A Lateral 2B-28

Sample ID	<b>MB-14756 MK</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R20580</b>	RunNo:	<b>20580</b>					
Prep Date:		Analysis Date:	<b>8/14/2014</b>	SeqNo:	<b>598868</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		99.6	80	120			

Sample ID	<b>LCS-14756 MK</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R20580</b>	RunNo:	<b>20580</b>					
Prep Date:		Analysis Date:	<b>8/14/2014</b>	SeqNo:	<b>598869</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.050	1.000	0	86.2	80	120			
Toluene	0.85	0.050	1.000	0	84.6	80	120			
Ethylbenzene	0.87	0.050	1.000	0	86.9	80	120			
Xylenes, Total	2.7	0.10	3.000	0	91.6	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		105	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

**Sample Log-In Check List**

Client Name: SMA-FARM

Work Order Number: 1408688

RcptNo: 1

Received by/date: LM 08/14/14

Logged By: Michelle Garcia 8/14/2014 8:15:00 AM *Michelle Garcia*

Completed By: Michelle Garcia 8/14/2014 8:29:38 AM *Michelle Garcia*

Reviewed By: *[Signature]* 08/14/14

**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 or >12 unless noted)  
 Adjusted? \_\_\_\_\_  
 Checked by: \_\_\_\_\_

**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	3.4	Good	Yes			

# Chain-of-Custody Record

Client: SMA

Mailing Address: 401 W Broadway Farmington, NM 87401

Phone #: 505 325 7535

email or Fax#: shawna.chubbuck@soudemiller.com

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

Accreditation  
 NELAP       Other \_\_\_\_\_  
 EDD (Type) \_\_\_\_\_

Turn-Around Time:  
 Standard       Rush Same Day

Project Name: BG33A Latrod 2B-2B

Project #: 5122855

Project Manager: Steve Moskai

Sampler: J. Sprowe

On Ice:  Yes       No

Sample Temperature: 5.4



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

### Analysis Request

BTEX + MTBE + <del>EMTS</del> '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 <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	300.1 Chlorides
X		X									X

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEALS No.
8/13/14	1010	Soil	SC-1	1 4oz Jar	—	14036889

Date: 8/13/14 Time: 1625 Relinquished by: [Signature]

Date: 8/13/14 Time: 1745 Relinquished by: [Signature]

Received by: [Signature] Date: 8/13/14 Time: 1625

Received by: [Signature] Date: 08/14/14 Time: 0815

Remarks: invoice to Enterprise

Please Copy Alicia.pattoson@soudemiller.com & Steven.Moskai@soudemiller.com

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  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

August 19, 2014

Steve Moskal  
Souder, Miller and Associates  
401 W. Broadway  
Farmington, NM 87401  
TEL: (505) 325-5667  
FAX

RE: BG33A Lateral 2B-28

OrderNo.: 1408757

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 9 sample(s) on 8/15/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Souder, Miller and Associates **Client Sample ID:** SC-1 North Wall  
**Project:** BG33A Lateral 2B-28 **Collection Date:** 8/14/2014 2:20:00 PM  
**Lab ID:** 1408757-001 **Matrix:** MEOH (SOIL) **Received Date:** 8/15/2014 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/15/2014 11:23:03 AM	14777
Surr: DNOP	74.8	57.9-140		%REC	1	8/15/2014 11:23:03 AM	14777
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	8/15/2014 10:38:23 AM	R20606
Surr: BFB	92.9	80-120		%REC	1	8/15/2014 10:38:23 AM	R20606
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.033		mg/Kg	1	8/15/2014 10:38:23 AM	R20606
Toluene	ND	0.033		mg/Kg	1	8/15/2014 10:38:23 AM	R20606
Ethylbenzene	ND	0.033		mg/Kg	1	8/15/2014 10:38:23 AM	R20606
Xylenes, Total	ND	0.066		mg/Kg	1	8/15/2014 10:38:23 AM	R20606
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	8/15/2014 10:38:23 AM	R20606
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	8/15/2014 11:34:53 AM	14788

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

Qualifiers:		
*	Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E	Value above quantitation range	H Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Souder, Miller and Associates

Client Sample ID: SC-2 South Wall

Project: BG33A Lateral 2B-28

Collection Date: 8/14/2014 2:25:00 PM

Lab ID: 1408757-002

Matrix: MEOH (SOIL)

Received Date: 8/15/2014 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/15/2014 11:53:14 AM	14777
Surr: DNOP	83.0	57.9-140		%REC	1	8/15/2014 11:53:14 AM	14777
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	8/15/2014 11:07:04 AM	R20606
Surr: BFB	93.6	80-120		%REC	1	8/15/2014 11:07:04 AM	R20606
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.034		mg/Kg	1	8/15/2014 11:07:04 AM	R20606
Toluene	ND	0.034		mg/Kg	1	8/15/2014 11:07:04 AM	R20606
Ethylbenzene	ND	0.034		mg/Kg	1	8/15/2014 11:07:04 AM	R20606
Xylenes, Total	ND	0.067		mg/Kg	1	8/15/2014 11:07:04 AM	R20606
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	8/15/2014 11:07:04 AM	R20606
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	8/15/2014 11:47:17 AM	14788

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

<b>Qualifiers:</b>	*	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		

Analytical Report

Lab Order 1408757

Date Reported: 8/19/2014

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Souder, Miller and Associates

Client Sample ID: SC-3 East Wall-N

Project: BG33A Lateral 2B-28

Collection Date: 8/14/2014 2:30:00 PM

Lab ID: 1408757-003

Matrix: MEOH (SOIL)

Received Date: 8/15/2014 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/15/2014 12:23:18 PM	14777
Surr: DNOP	82.7	57.9-140		%REC	1	8/15/2014 12:23:18 PM	14777
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	8/15/2014 11:35:44 AM	R20606
Surr: BFB	94.8	80-120		%REC	1	8/15/2014 11:35:44 AM	R20606
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.033		mg/Kg	1	8/15/2014 11:35:44 AM	R20606
Toluene	ND	0.033		mg/Kg	1	8/15/2014 11:35:44 AM	R20606
Ethylbenzene	ND	0.033		mg/Kg	1	8/15/2014 11:35:44 AM	R20606
Xylenes, Total	ND	0.066		mg/Kg	1	8/15/2014 11:35:44 AM	R20606
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	8/15/2014 11:35:44 AM	R20606
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	8/15/2014 11:59:41 AM	14788

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Souder, Miller and Associates

Client Sample ID: SC-4 East Wall-S

Project: BG33A Lateral 2B-28

Collection Date: 8/14/2014 2:35:00 PM

Lab ID: 1408757-004

Matrix: MEOH (SOIL)

Received Date: 8/15/2014 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/15/2014 12:53:20 PM	14777
Surr: DNOP	83.2	57.9-140		%REC	1	8/15/2014 12:53:20 PM	14777
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.1		mg/Kg	1	8/15/2014 12:04:23 PM	R20606
Surr: BFB	95.6	80-120		%REC	1	8/15/2014 12:04:23 PM	R20606
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.031		mg/Kg	1	8/15/2014 12:04:23 PM	R20606
Toluene	ND	0.031		mg/Kg	1	8/15/2014 12:04:23 PM	R20606
Ethylbenzene	ND	0.031		mg/Kg	1	8/15/2014 12:04:23 PM	R20606
Xylenes, Total	ND	0.062		mg/Kg	1	8/15/2014 12:04:23 PM	R20606
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	8/15/2014 12:04:23 PM	R20606
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	8/15/2014 12:12:06 PM	14788

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 4 of 13
	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			

Analytical Report

Lab Order 1408757

Date Reported: 8/19/2014

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Souder, Miller and Associates

Client Sample ID: SC-5 West Wall-N

Project: BG33A Lateral 2B-28

Collection Date: 8/14/2014 2:40:00 PM

Lab ID: 1408757-005

Matrix: MEOH (SOIL)

Received Date: 8/15/2014 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/15/2014 12:02:55 PM	14777
Surr: DNOP	135	57.9-140		%REC	1	8/15/2014 12:02:55 PM	14777
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	8/15/2014 12:32:58 PM	R20606
Surr: BFB	94.6	80-120		%REC	1	8/15/2014 12:32:58 PM	R20606
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.033		mg/Kg	1	8/15/2014 12:32:58 PM	R20606
Toluene	ND	0.033		mg/Kg	1	8/15/2014 12:32:58 PM	R20606
Ethylbenzene	ND	0.033		mg/Kg	1	8/15/2014 12:32:58 PM	R20606
Xylenes, Total	ND	0.065		mg/Kg	1	8/15/2014 12:32:58 PM	R20606
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	8/15/2014 12:32:58 PM	R20606
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	8/15/2014 12:24:31 PM	14788

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

<b>Qualifiers:</b>	* 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	Page 5 of 13
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Souder, Miller and Associates

Client Sample ID: SC-6 West Wall-S

Project: BG33A Lateral 2B-28

Collection Date: 8/14/2014 2:45:00 PM

Lab ID: 1408757-006

Matrix: MEOH (SOIL)

Received Date: 8/15/2014 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/15/2014 12:24:24 PM	14777
Surr: DNOP	135	57.9-140		%REC	1	8/15/2014 12:24:24 PM	14777
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	8/15/2014 1:01:40 PM	R20606
Surr: BFB	94.8	80-120		%REC	1	8/15/2014 1:01:40 PM	R20606
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.033		mg/Kg	1	8/15/2014 1:01:40 PM	R20606
Toluene	ND	0.033		mg/Kg	1	8/15/2014 1:01:40 PM	R20606
Ethylbenzene	ND	0.033		mg/Kg	1	8/15/2014 1:01:40 PM	R20606
Xylenes, Total	ND	0.065		mg/Kg	1	8/15/2014 1:01:40 PM	R20606
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	8/15/2014 1:01:40 PM	R20606
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	8/15/2014 12:36:56 PM	14788

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

<b>Qualifiers:</b>	*	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		

Analytical Report

Lab Order 1408757

Date Reported: 8/19/2014

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Souder, Miller and Associates

Client Sample ID: SC-7 Base-N

Project: BG33A Lateral 2B-28

Collection Date: 8/14/2014 2:50:00 PM

Lab ID: 1408757-007

Matrix: MEOH (SOIL)

Received Date: 8/15/2014 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/15/2014 12:45:43 PM	14777
Surr: DNOP	136	57.9-140		%REC	1	8/15/2014 12:45:43 PM	14777
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	8/15/2014 1:30:24 PM	R20606
Surr: BFB	97.0	80-120		%REC	1	8/15/2014 1:30:24 PM	R20606
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.033		mg/Kg	1	8/15/2014 1:30:24 PM	R20606
Toluene	ND	0.033		mg/Kg	1	8/15/2014 1:30:24 PM	R20606
Ethylbenzene	ND	0.033		mg/Kg	1	8/15/2014 1:30:24 PM	R20606
Xylenes, Total	ND	0.067		mg/Kg	1	8/15/2014 1:30:24 PM	R20606
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	8/15/2014 1:30:24 PM	R20606
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	8/15/2014 12:49:21 PM	14788

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Souder, Miller and Associates

Client Sample ID: SC-8 Base-S

Project: BG33A Lateral 2B-28

Collection Date: 8/14/2014 2:55:00 PM

Lab ID: 1408757-008

Matrix: MEOH (SOIL)

Received Date: 8/15/2014 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/15/2014 1:07:03 PM	14777
Surr: DNOP	134	57.9-140		%REC	1	8/15/2014 1:07:03 PM	14777
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	8/15/2014 1:59:09 PM	R20606
Surr: BFB	95.0	80-120		%REC	1	8/15/2014 1:59:09 PM	R20606
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.034		mg/Kg	1	8/15/2014 1:59:09 PM	R20606
Toluene	ND	0.034		mg/Kg	1	8/15/2014 1:59:09 PM	R20606
Ethylbenzene	ND	0.034		mg/Kg	1	8/15/2014 1:59:09 PM	R20606
Xylenes, Total	ND	0.069		mg/Kg	1	8/15/2014 1:59:09 PM	R20606
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	8/15/2014 1:59:09 PM	R20606
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	8/15/2014 1:01:46 PM	14788

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Souder, Miller and Associates      **Client Sample ID:** SC-9 Background  
**Project:** BG33A Lateral 2B-28      **Collection Date:** 8/14/2014 3:00:00 PM  
**Lab ID:** 1408757-009      **Matrix:** MEOH (SOIL)      **Received Date:** 8/15/2014 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/15/2014 1:28:26 PM	14777
Surr: DNOP	134	57.9-140		%REC	1	8/15/2014 1:28:26 PM	14777
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	8/15/2014 2:27:51 PM	R20606
Surr: BFB	95.4	80-120		%REC	1	8/15/2014 2:27:51 PM	R20606
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.035		mg/Kg	1	8/15/2014 2:27:51 PM	R20606
Toluene	ND	0.035		mg/Kg	1	8/15/2014 2:27:51 PM	R20606
Ethylbenzene	ND	0.035		mg/Kg	1	8/15/2014 2:27:51 PM	R20606
Xylenes, Total	ND	0.069		mg/Kg	1	8/15/2014 2:27:51 PM	R20606
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	8/15/2014 2:27:51 PM	R20606
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	8/15/2014 1:39:01 PM	14788

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

Qualifiers:		
*	Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E	Value above quantitation range	H Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1408757

19-Aug-14

Client: Souder, Miller and Associates

Project: BG33A Lateral 2B-28

Sample ID	MB-14788	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	14788	RunNo:	20611					
Prep Date:	8/15/2014	Analysis Date:	8/15/2014	SeqNo:	599565	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-14788	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	14788	RunNo:	20611					
Prep Date:	8/15/2014	Analysis Date:	8/15/2014	SeqNo:	599566	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.1	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#: 1408757  
 19-Aug-14

**Client:** Souder, Miller and Associates  
**Project:** BG33A Lateral 2B-28

Sample ID <b>MB-14777</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>14777</b>		RunNo: <b>20599</b>							
Prep Date: <b>8/14/2014</b>	Analysis Date: <b>8/15/2014</b>		SeqNo: <b>599319</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	7.8		10.00		78.4	57.9	140			

Sample ID <b>LCS-14777</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>14777</b>		RunNo: <b>20599</b>							
Prep Date: <b>8/14/2014</b>	Analysis Date: <b>8/15/2014</b>		SeqNo: <b>599320</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	96.6	68.6	130			
Surr: DNOP	3.9		5.000		78.6	57.9	140			

**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#: 1408757

19-Aug-14

Client: Souder, Miller and Associates

Project: BG33A Lateral 2B-28

Sample ID	<b>5ML RB</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R20606</b>	RunNo:	<b>20606</b>					
Prep Date:		Analysis Date:	<b>8/15/2014</b>	SeqNo:	<b>599729</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	920		1000		92.3	80	120			

Sample ID	<b>2.5UG GRO LCS</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R20606</b>	RunNo:	<b>20606</b>					
Prep Date:		Analysis Date:	<b>8/15/2014</b>	SeqNo:	<b>599730</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	25.00	0	118	65.8	139			
Surr: BFB	1000		1000		103	80	120			

Sample ID	<b>1408757-001AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>SC-1 North Wall</b>	Batch ID:	<b>R20606</b>	RunNo:	<b>20606</b>					
Prep Date:		Analysis Date:	<b>8/15/2014</b>	SeqNo:	<b>599732</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	3.3	16.40	0	122	71.8	132			
Surr: BFB	690		656.2		105	80	120			

Sample ID	<b>1408757-001AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>SC-1 North Wall</b>	Batch ID:	<b>R20606</b>	RunNo:	<b>20606</b>					
Prep Date:		Analysis Date:	<b>8/15/2014</b>	SeqNo:	<b>599733</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	3.3	16.40	0	126	71.8	132	3.23	20	
Surr: BFB	700		656.2		107	80	120	0	0	

**Qualifiers:**

- \* : Value exceeds Maximum Contaminant Level.
- E : Value above quantitation range
- J : Analyte detected below quantitation limits
- O : RSD is greater than RSDlimit
- R : RPD outside accepted recovery limits
- S : Spike Recovery outside accepted recovery limits
- B : Analyte detected in the associated Method Blank
- H : Holding times for preparation or analysis exceeded
- ND : Not Detected at the Reporting Limit
- P : Sample pH greater than 2.
- RL : Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1408757  
19-Aug-14

**Client:** Souder, Miller and Associates  
**Project:** BG33A Lateral 2B-28

Sample ID	<b>5ML RB</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R20606</b>	RunNo:	<b>20606</b>					
Prep Date:		Analysis Date:	<b>8/15/2014</b>	SeqNo:	<b>599744</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID	<b>100NG BTEX LCS</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R20606</b>	RunNo:	<b>20606</b>					
Prep Date:		Analysis Date:	<b>8/15/2014</b>	SeqNo:	<b>599745</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	109	80	120			
Toluene	1.1	0.050	1.000	0	108	80	120			
Ethylbenzene	1.1	0.050	1.000	0	109	80	120			
Xylenes, Total	3.3	0.10	3.000	0	109	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		113	80	120			

Sample ID	<b>1408757-002AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>SC-2 South Wall</b>	Batch ID:	<b>R20606</b>	RunNo:	<b>20606</b>					
Prep Date:		Analysis Date:	<b>8/15/2014</b>	SeqNo:	<b>599748</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.71	0.034	0.6748	0	105	77.4	142			
Toluene	0.72	0.034	0.6748	0	106	77	132			
Ethylbenzene	0.73	0.034	0.6748	0	108	77.6	134			
Xylenes, Total	2.2	0.067	2.024	0	108	77.4	132			
Surr: 4-Bromofluorobenzene	0.76		0.6748		112	80	120			

Sample ID	<b>1408757-002AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>SC-2 South Wall</b>	Batch ID:	<b>R20606</b>	RunNo:	<b>20606</b>					
Prep Date:		Analysis Date:	<b>8/15/2014</b>	SeqNo:	<b>599749</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.73	0.034	0.6748	0	107	77.4	142	1.88	20	
Toluene	0.72	0.034	0.6748	0	107	77	132	0.644	20	
Ethylbenzene	0.74	0.034	0.6748	0	109	77.6	134	1.15	20	
Xylenes, Total	2.2	0.067	2.024	0	109	77.4	132	0.584	20	
Surr: 4-Bromofluorobenzene	0.76		0.6748		113	80	120	0	0	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

**Sample Log-In Check List**

Client Name: SMA-FARM Work Order Number: 1408757 RcptNo: 1

Received by/date:

*[Signature]*

08/15/14

Logged By: Lindsay Mangin

8/15/2014 8:00:00 AM

*[Signature]*

Completed By: Lindsay Mangin

8/15/2014 8:08:26 AM

*[Signature]*

Reviewed By:

TO

08/15/14

**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 or >12 unless noted)  
Adjusted?  
Checked by:

**Special Handling (if applicable)**

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

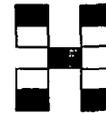
Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_  
By Whom: \_\_\_\_\_ Via:  eMail  Phone  Fax  In Person  
Regarding: \_\_\_\_\_  
Client Instructions: \_\_\_\_\_

17. Additional remarks:

**18. Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Not Present			

# Chain-of-Custody Record



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Client: SMA

Address: 401 W Broadway Farmington, NM 87401

Phone #: 505-325-7535

email or Fax#: stewen.moskal@SMA.com

QA/QC Package:

Standard  Level 4 (Full Validation)

Other \_\_\_\_\_

EDD (Type) \_\_\_\_\_

Turn-Around Time:

Standard  Rush Same Day

Project Name: BG33A Latrod ZB-Z8

Project #: 5122855

Project Manager: Steve Moskal

Sampler: J. Sprague

Office: X

Sample temperature: 1.3

### Analysis Request

Date	Time	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8260)	8310 (PNA or PAH)	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	300.1 Chlorides	Air Bubbles (Y or N)
8/14/14	1420	SC-1 North wall	1 4oz	-	1408757 -001	X	X	X									X	
8/14/14	1425	SC-2 South wall	1 4oz	-	-002	X	X	X									X	
8/14/14	1430	SC-3 East wall-D	1 4oz	-	-003	X	X	X									X	
8/14/14	1435	SC-4 East wall-S	1 4oz	-	-004	X	X	X									X	
8/14/14	1440	SC-5 West wall-D	1 4oz	-	-005	X	X	X									X	
8/14/14	1445	SC-6 West wall-S	1 4oz	-	-006	X	X	X									X	
8/14/14	1450	SC-7 Base - N	1 4oz	-	-007	X	X	X									X	
8/14/14	1455	SC-8 Base - S	1 4oz	-	-008	X	X	X									X	
8/14/14	1500	SC-9 Background	1 4oz	-	-009	X	X	X									X	

Date: 8/14/14 Time: 1715 Relinquished by: [Signature] Received by: [Signature] 8/14/14 1715

Date: 8/14/14 Time: 1815 Relinquished by: [Signature] Received by: [Signature] 08/15/14 0800

Remarks: Invoice Enterprise

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.

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: Enterprise Field Services LLC	Contact: Thomas Long
Address: 614 Reilly Ave, Farmington, NM 87401	Telephone No. 505-599-2286
Facility Name: <b>Santa Rosa 4#1</b>	Facility Type: <b>Natural Gas Gathering Line</b>

Surface Owner: <b>Private</b>	Mineral Owner: <b>BLM</b>	API No.
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**LOCATION OF RELEASE**

RCVD SEP 29 '14

Unit Letter <b>A</b>	Section <b>4</b>	Township <b>29N</b>	Range <b>9W</b>	Feet from the <b>640</b>	<del>North</del> South Line	Feet from the <b>802</b>	<del>East</del> West Line	County <b>San Juan</b>
-------------------------	---------------------	------------------------	--------------------	--------------------------------	--------------------------------	--------------------------------	------------------------------	---------------------------

Latitude 36.759124 Longitude -107.779142

OIL CONS. DIV.

DIST. 3

**NATURE OF RELEASE**

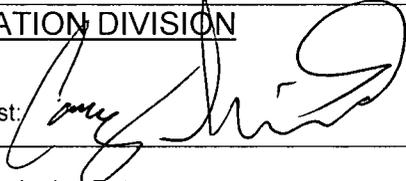
Type of Release: Natural Gas	Volume of Release: <b>93.6 MCF</b>	Volume Recovered: <b>None</b>
Source of Release: Internal corrosion	Date and Hour of Occurrence: <b>7/9/2014 @ 2:30 p.m.</b>	Date and Hour of Discovery: <b>7/9/2014 @ 3:19 p.m.</b>
Was Immediate Notice Given? Required <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not	If YES, To Whom? Notification to NMOCD – Cory Smith,	
By Whom? Thomas Long	Date and Hour Notification <b>7/9/2014 @ 5:15 p.m.</b>	
Was a Watercourse Reached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse: There were no fluids observed on the ground surface within the dry wash.	

If a Watercourse was Impacted, Describe Fully.\* There were no fluids observed on the ground surface within the dry wash.

Describe Cause of Problem and Remedial Action: On July 9, 2014, Enterprise personnel responded to a possible line leak on the Santa Rosa 4 #1. Enterprise technicians verified the leak and initiated notification procedures. The line was isolated, blown down, depressurized and lock out tag out was applied. There were no fluids observed on the ground surface.

Describe Area Affected and Cleanup Action Taken: On July 9, 2014, Enterprise personnel responded to a possible line leak on the Santa Rosa 4 #1. Enterprise technicians verified the leak and initiated notification procedures. The line was isolated, blown down, depressurized and lock out tag out was applied. There were no fluids observed on the ground surface. The excavation and repairs were completed on August 14, 2104. The final excavation dimensions measured approximately ten (10) feet long by seven (7) feet wide by six (6) feet deep. No hydrocarbon impacted soils were observed within the subsurface. A third party corrective action report is included with this "final" c-141.

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: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Jon Fields	Approved by Environmental Specialist: 	
Title: Director, Environmental	Approval Date: <u>11/13/14</u>	Expiration Date:
E-mail Address: jefields@eprod.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: <u>9-24-2014</u> Phone: (713)381-6684		

\* Attach Additional Sheets If Necessary

#NS 143 173 7581

(27)



**CORRECTIVE ACTION REPORT**

Property:

**Santa Rosa 4 #1 Well Tie Release  
NE 1/4, S4 T29N R9W  
San Juan County, New Mexico**

September 9, 2014  
Apex Project No. 7030414G027

Prepared for:

**Enterprise Field Services LLC  
614 Reilly Avenue  
Farmington, NM 87401  
Attn: Mr. Thomas Long**

Prepared by:

Handwritten signature of Heather M. Woods in black ink.

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Heather M. Woods, P.G.  
Senior Project Manager

Handwritten signature of Elizabeth Scaggs in black ink.

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Elizabeth Scaggs, P.G.  
Senior Program Manager

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## **CORRECTIVE ACTION REPORT**

### **Santa Rosa 4 #1 Well Tie Release**

NE 1/4, S4 T29N R9W

San Juan County, New Mexico

**Apex Project No. 7030414G027**

## **1.0 INTRODUCTION**

### **1.1 Site Description & Background**

The Santa Rosa 4 #1 Well Tie Release Site is located within the Enterprise Field Services LLC (Enterprise) pipeline right-of-way (ROW) in the northeast (NE) ¼ of Section 4 in Township 29 North and Range 9 West in rural San Juan County, New Mexico (36.75924N, 107.77893W), referred to hereinafter as the "Site" or "subject Site". The Site is located approximately 350 feet northeast of the Santa Rosa 4 #1 well pad, on private land. The Site is surrounded by native vegetation rangeland periodically interrupted with oil and gas production and gathering facilities, including the Enterprise natural gas gathering pipeline which traverses the area from approximately southwest to northeast.

On July 30, 2014, Enterprise shut in the Santa Rosa 4 #1 well tie pipeline and initiated excavation activities at the Site in an effort to locate and repair a subsurface leak. The leak was subsequently identified and repaired. An unknown quantity of apparently dry natural gas was released from the pipeline as a result of internal corrosion. The leak was identified by a release of natural gas at the ground surface characterized by a vent hole at the release location.

A topographic map depicting the location of the Site is included as Figure 1, and a Site Vicinity Map is included as Figure 2 in Appendix A.

### **1.2 Project Objective**

The primary objective of the corrective actions was to reduce the concentration of constituents of concern (COCs) in the on-Site soils to below the New Mexico Energy, Minerals, and Natural Resources Department (EMNRD), Oil Conservation Division (OCD) *Remediation Action Levels* using the New Mexico EMNRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases* as guidance.

## **2.0 SITE RANKING**

In accordance with the New Mexico ENMRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases*, Apex TITAN, Inc. (Apex) utilized the general site characteristics obtained during the completion of corrective action activities and information available from the Office of the New Mexico Office of the State Engineer to determine the appropriate "ranking" for the Site. The ranking criteria and associated scoring are provided in the following table:



Ranking Criteria			Ranking Score
Depth to Groundwater	<50 feet	20	<b>20*</b>
	50 to 99 feet	10	
	>100 feet	0	
Wellhead Protection Area • <1,000 feet from a water source, or; <200 feet from private domestic water source.	Yes	20	<b>0</b>
	No	0	
Distance to Surface Water Body	<200 feet	20	<b>10</b>
	200 to 1,000 feet	10	
	>1,000 feet	0	
<b>Total Ranking Score</b>			<b>30</b>

\*Based on anticipated groundwater depth at <50 feet below grade surface (bgs).

Based on Apex's evaluation of the scoring criteria, the Site would have a maximum Total Ranking Score of "30". This ranking is based on the following:

- Depth to groundwater is anticipated to be less than 50 feet bgs based on shallow depth to groundwater measurements reported in nearby water wells identified on the Office of the State Engineer (OSE) website database.
- No water source wells (municipal/community wells) were identified within 1,000 feet of the Site. A private water well was identified on the OSE website database approximately 660 feet west of the Site, which is greater than the 200 foot ranking distance for private domestic water sources, resulting in a wellhead protection ranking of "0". The San Juan River, a potential drinking water source, is located approximately 700 feet south of the Site, and is considered under the "Distance to Surface Water" ranking in the following bullet.
- The Site is approximately 215 feet southwest of the wash in Caballo Canyon and 560 feet north of the Citizens Irrigation Canal. The San Juan River is located approximately 140 feet south of the Citizens Irrigation Canal (700 feet south of the Site). Based on this proximity, a ranking for distance to surface water was assigned at "10".

### 3.0 RESPONSE ACTIONS

#### 3.1 Soil Excavation Activities

On July 30, 2014, Enterprise shut in the Santa Rosa 4 #1 well tie pipeline and initiated excavation activities at the Site in an effort to locate and repair a potential leak. An unknown quantity of apparently dry natural gas was released from the pipeline as a result of internal corrosion. The leak was identified by a release of natural gas at the ground surface characterized by a vent hole at the release location. During the corrective action activities, Halo Services, Inc. provided heavy equipment and labor support, and Heather Woods, an Apex environmental professional, provided environmental support.

Soil samples (S-1 through S-5) and stockpile samples (SP-1 and SP-2) were collected subsequent to the pipeline repair activities. Analytical results for the confirmation and stockpile samples indicate that adversely affected soils were not identified at the Site. The excavation was backfilled with the stockpiled soil and contoured to surrounding grade.

The surface expression of the initial excavation measured approximately 10 feet long by 7 feet wide, with a total depth of approximately 6 feet bgs. The excavation was later expanded to accommodate the replacement of an entire length (40 feet) of pipeline.

The lithology encountered during the completion of corrective action activities consisted primarily of unconsolidated sands, silty-sands, and clayey-sands.

Figure 3 is a site map that indicates the approximate location of the excavated area in relation to pertinent land features (Appendix A). Photographic documentation of the field activities is included in Appendix C.

### 3.2 Soil Sampling Program

Apex screened head-space samples of Site soils with a photoionization detector (PID) fitted with a 10.6 eV lamp.

Apex's soil sampling program included the collection of five (5) final confirmation samples (S-1 through S-5), from the excavation for laboratory analysis. Additionally, two (2) composite samples (SP-1 and SP-2) were collected from stockpiled soils to determine the potential to reuse these soils as excavation backfill. Figure 3 depicts the approximate location of the excavated areas and shows the final confirmation sample locations in relation to the final excavation dimensions (Appendix A).

The confirmation soil samples were collected and placed in laboratory prepared glassware, labeled/sealed using the laboratory supplied labels, and placed on ice in a cooler, which was secured with a custody seal. The sample cooler and completed chain-of-custody form were relinquished to Hall Environmental Analysis Laboratory in Farmington, New Mexico, for rush analysis.

### 3.3 Laboratory Analytical Methods

The confirmation soil samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) utilizing EPA SW-846 Method #8021, and total petroleum hydrocarbons (TPH) gasoline range organics (GRO) and diesel range organics (DRO) utilizing EPA SW-846 Method #8015.

Laboratory results are summarized in Table 1, included in Appendix C. The executed chain-of-custody form and laboratory data sheets are provided in Appendix D.

## 4.0 DATA EVALUATION

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. To address activities related to condensate releases, the New Mexico EMNRD OCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the OCD rules, specifically NMAC 19.15.30 *Remediation*. These guidance documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

### 4.1 Confirmation Soil Samples

Apex compared the BTEX and TPH concentrations or reporting limits associated with the final confirmation samples (S-1 through S-5) collected from the excavated area and stockpile samples (SP-1 and SP-2) to the OCD *Remediation Action Levels* (RALs) for sites having a total ranking score of "30".

- The laboratory analyses of confirmation samples collected from soils remaining in place do not indicate benzene concentrations above the laboratory reporting limits, which are below the OCD *Remediation Action Level*.

- The laboratory analyses of the confirmation samples collected from soils remaining in place do not indicate total BTEX concentrations above the laboratory reporting limits, which are below the *OCD Remediation Action Level*.
- The laboratory analyses of the confirmation samples collected from soils remaining in place indicate combined TPH GRO/DRO concentrations ranging from below the laboratory reporting limits to 28 milligrams per Kilogram (mg/Kg), which are below the *OCD Remediation Action Levels* for a Site ranking of "30".
- The laboratory analyses of the stockpile samples (SP-1 and SP-2) do not indicate benzene, total BTEX, or TPH GRO/DRO concentrations above the *OCD Remediation Action Levels* for a Site ranking of "30".

Confirmation sample results are provided in Table 1 in Appendix C.

## 5.0 FINDINGS AND RECOMMENDATIONS

The Santa Rosa 4 #1 Well Tie Release Site is located within the Enterprise pipeline ROW in the NE ¼ of Section 4 in Township 29 North and Range 9 West in rural San Juan County, New Mexico, (36.75912N, 107.77916W). The Site is located approximately 350 feet northeast of the Santa Rosa 4 #1 well pad, on private land. The Site is surrounded by native vegetation rangeland periodically interrupted with oil and gas production and gathering facilities, including the Enterprise natural gas gathering pipeline which traverses the area from approximately southwest to northeast.

On July 30, 2014, Enterprise shut in the Santa Rosa 4 #1 well tie pipeline and initiated excavation activities at the Site in an effort to locate and repair a subsurface leak. The leak was subsequently identified and repaired. An unknown quantity of dry natural gas was released from the pipeline as a result of internal corrosion. The leak was identified by a release of natural gas at the ground surface characterized by a vent hole at the release location.

- The primary objective of the corrective actions was to reduce the concentration of COCs in the on-Site soils to below the New Mexico EMNRD OCD RALs using the New Mexico EMNRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases* as guidance.
- The lithology encountered during the completion of corrective action activities consisted primarily of unconsolidated sands, silty sands, and clayey sands.
- The surface expression of the initial excavation measured approximately 10 feet long by 7 feet wide, with a total depth of approximately 6 feet bgs. The excavation was later expanded to accommodate the replacement of an entire length (40 feet) of pipeline.
- Prior to backfilling, five (5) final confirmation samples were collected from the resulting excavation for laboratory analyses. Based on analytical results, soils remaining in place do not exhibit COC concentrations above the *OCD Remediation Action Levels* for a Site ranking of "30".
- Stockpiled soils were used to backfill the excavation based on analytical results which indicated that the stockpiled soils do not exhibit COC concentrations above the *OCD Remediation Action Levels* for a Site ranking of "30". The area was contoured to surrounding grade following backfilling activities.



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**Based on field observations and laboratory analytical results, no additional investigation or corrective action appears warranted at this time.**

## **6.0 STANDARD OF CARE, LIMITATIONS, AND RELIANCE**

Apex's services were performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. Apex makes no warranties, expressed or implied, as to the services performed hereunder. Additionally, Apex does not warrant the work of third parties supplying information used in the report (e.g. laboratories, regulatory agencies, or other third parties). This scope of services was performed in accordance with the scope of work agreed with the client.

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-Site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, or not present during these services, and Apex cannot represent that the Site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this scope of services. Environmental conditions at other areas or portions of the Site may vary from those encountered at actual sample locations. Apex's findings and recommendations are based solely upon data available to Apex at the time of these services.

This report has been prepared for the exclusive use of Enterprise, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the expressed written authorization of Enterprise and Apex. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the proposal, the report, and Apex's Agreement. The limitation of liability defined in the agreement is the aggregate limit of Apex's liability to the client.





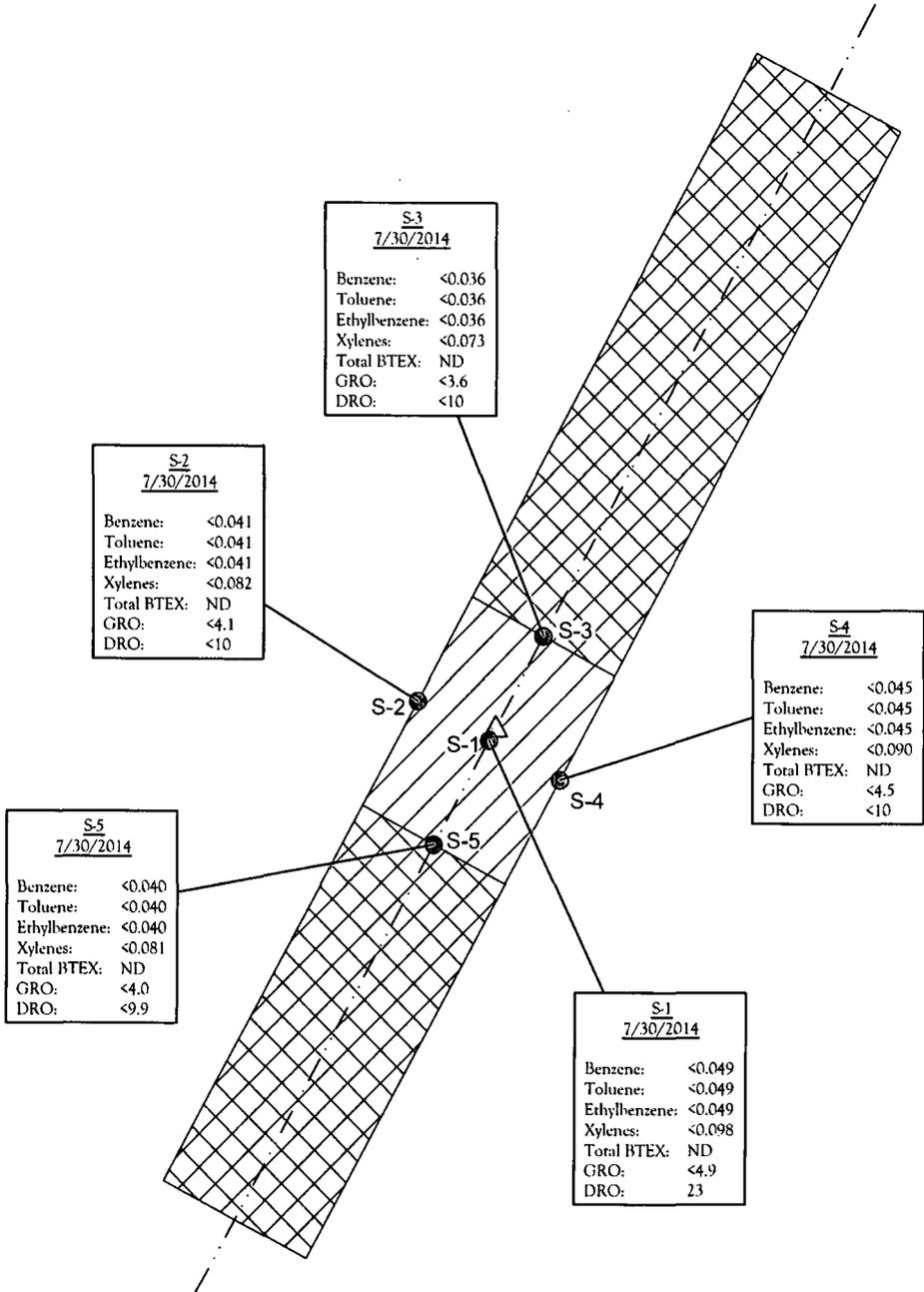
**Santa Rosa 4 # 1 Well Tie  
Pipeline Release**  
NW $\frac{1}{4}$  S4 T29N R9W  
Rural San Juan County, NM  
36.75924N, 107.77893W

Project No. 7030414G027



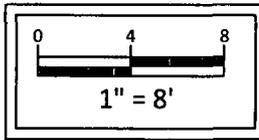
**Apex TITAN, Inc.**  
606 S. Rio Grande, Suite A  
Aztec, New Mexico 87410  
Phone: (505) 334-5200  
[www.apexcos.com](http://www.apexcos.com)  
A Subsidiary of Apex Companies, LLC

**FIGURE 2**  
**Site Vicinity Map**  
**2013 Aerial Photograph**



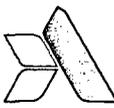
**LEGEND:**

- PIPELINE
- SAMPLE LOCATION
- △ RELEASE POINT
- ▨ EXTENT OF EXCAVATION
- ▩ AREA OVER-EXCAVATED FOR PIPELINE REPAIR



**Santa Rosa 4 # 1 Well Tie Pipeline Release**  
 NW¼ S4 T29N R9W  
 Rural San Juan County, NM  
 36.75924N, 107.77893W

Project No. 7030414G027



**Apex TITAN, Inc.**  
 606 S. Rio Grande, Suite A  
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 A Subsidiary of Apex Companies, LLC

**FIGURE 3**  
**Site Map with Sample Locations**

**Photograph 1**

View of excavation at the release source during excavation and pipeline repair activities, facing southeast.



**Photograph 2**

View of final pipeline repair access excavation, facing southwest.





**TABLE 1**  
**Santa Rosa 4 #1 Well Tie Pipeline Release**  
**SOIL ANALYTICAL SUMMARY**

Sample I.D.	Date	Sample Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)
New Mexico Entergy, Mineral & Natural Resources Department, Oil Conservation Division, Remediation Action Level			10	NE	NE	NE	50	100	
<b>Stockpile Confirmation Samples</b>									
SP-1	7/30/2014	Stockpile	<0.048	<0.048	<0.048	<0.096	ND	<4.8	28
SP-2	7/30/2014	Stockpile	<0.057	<0.057	<0.057	<0.11	ND	<5.7	15
<b>Final Confirmation Samples</b>									
S-1	7/30/2014	6	<0.049	<0.049	<0.049	<0.098	ND	<4.9	23
S-2	7/30/2014	5 to 6	<0.041	<0.041	<0.041	<0.082	ND	<4.1	<10
S-3	7/30/2014	5 to 6	<0.036	<0.036	<0.036	<0.073	ND	<3.6	<10
S-4	7/30/2014	5 to 6	<0.045	<0.045	<0.045	<0.090	ND	<4.5	<10
S-5	7/30/2014	5 to 6	<0.040	<0.040	<0.040	<0.081	ND	<4.0	<9.9

Note: Concentrations in bold and yellow exceed the applicable OCD Remediation Action Level

NE = Not Established

ND = Not Detected above Laboratory Reporting Limits



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

August 04, 2014

Heather Woods  
Enterprise Field Services  
614 Reilly Ave.  
Farmington, NM 87401  
TEL: (505) 599-2141  
FAX

RE: Santa Rosa 4 #1

OrderNo.: 1407E30

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 7 sample(s) on 7/31/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Enterprise Field Services

**Client Sample ID:** S-1

**Project:** Santa Rosa 4 #1

**Collection Date:** 7/30/2014 10:19:00 AM

**Lab ID:** 1407E30-001

**Matrix:** MEOH (SOIL)

**Received Date:** 7/31/2014 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	23	10		mg/Kg	1	7/31/2014 12:00:50 PM	14526
Surr: DNOP	102	57.9-140		%REC	1	7/31/2014 12:00:50 PM	14526
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/31/2014 11:32:29 AM	R20285
Surr: BFB	93.0	80-120		%REC	1	7/31/2014 11:32:29 AM	R20285
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.049		mg/Kg	1	8/2/2014 1:44:50 AM	R20318
Toluene	ND	0.049		mg/Kg	1	8/2/2014 1:44:50 AM	R20318
Ethylbenzene	ND	0.049		mg/Kg	1	8/2/2014 1:44:50 AM	R20318
Xylenes, Total	ND	0.098		mg/Kg	1	8/2/2014 1:44:50 AM	R20318
Surr: 4-Bromofluorobenzene	95.4	80-120		%REC	1	8/2/2014 1:44:50 AM	R20318

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Enterprise Field Services

**Client Sample ID:** S-2

**Project:** Santa Rosa 4 #1

**Collection Date:** 7/30/2014 10:23:00 AM

**Lab ID:** 1407E30-002

**Matrix:** MEOH (SOIL)

**Received Date:** 7/31/2014 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/31/2014 12:22:19 PM	14526
Surr: DNOP	108	57.9-140		%REC	1	7/31/2014 12:22:19 PM	14526
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	7/31/2014 12:01:04 PM	R20285
Surr: BFB	91.9	80-120		%REC	1	7/31/2014 12:01:04 PM	R20285
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.041		mg/Kg	1	8/2/2014 2:14:48 AM	R20318
Toluene	ND	0.041		mg/Kg	1	8/2/2014 2:14:48 AM	R20318
Ethylbenzene	ND	0.041		mg/Kg	1	8/2/2014 2:14:48 AM	R20318
Xylenes, Total	ND	0.082		mg/Kg	1	8/2/2014 2:14:48 AM	R20318
Surr: 4-Bromofluorobenzene	94.7	80-120		%REC	1	8/2/2014 2:14:48 AM	R20318

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Enterprise Field Services

Client Sample ID: S-3

Project: Santa Rosa 4 #1

Collection Date: 7/30/2014 10:26:00 AM

Lab ID: 1407E30-003

Matrix: MEOH (SOIL)

Received Date: 7/31/2014 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/31/2014 12:43:57 PM	14526
Surr: DNOP	101	57.9-140		%REC	1	7/31/2014 12:43:57 PM	14526
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	7/31/2014 12:29:37 PM	R20285
Surr: BFB	93.4	80-120		%REC	1	7/31/2014 12:29:37 PM	R20285
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.036		mg/Kg	1	8/2/2014 2:44:55 AM	R20318
Toluene	ND	0.036		mg/Kg	1	8/2/2014 2:44:55 AM	R20318
Ethylbenzene	ND	0.036		mg/Kg	1	8/2/2014 2:44:55 AM	R20318
Xylenes, Total	ND	0.073		mg/Kg	1	8/2/2014 2:44:55 AM	R20318
Surr: 4-Bromofluorobenzene	88.2	80-120		%REC	1	8/2/2014 2:44:55 AM	R20318

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

Qualifiers:		
*	Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E	Value above quantitation range	H Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
 Lab Order 1407E30  
 Date Reported: 8/4/2014

**CLIENT:** Enterprise Field Services

**Client Sample ID:** S-4

**Project:** Santa Rosa 4 #1

**Collection Date:** 7/30/2014 10:30:00 AM

**Lab ID:** 1407E30-004

**Matrix:** MEOH (SOIL)

**Received Date:** 7/31/2014 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/31/2014 10:20:16 AM	14526
Surr: DNOP	99.0	57.9-140		%REC	1	7/31/2014 10:20:16 AM	14526
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	7/31/2014 12:58:20 PM	R20285
Surr: BFB	94.1	80-120		%REC	1	7/31/2014 12:58:20 PM	R20285
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.045		mg/Kg	1	8/2/2014 3:14:58 AM	R20318
Toluene	ND	0.045		mg/Kg	1	8/2/2014 3:14:58 AM	R20318
Ethylbenzene	ND	0.045		mg/Kg	1	8/2/2014 3:14:58 AM	R20318
Xylenes, Total	ND	0.090		mg/Kg	1	8/2/2014 3:14:58 AM	R20318
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1	8/2/2014 3:14:58 AM	R20318

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Enterprise Field Services

**Client Sample ID:** S-5

**Project:** Santa Rosa 4 #1

**Collection Date:** 7/30/2014 10:32:00 AM

**Lab ID:** 1407E30-005

**Matrix:** MEOH (SOIL)

**Received Date:** 7/31/2014 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/31/2014 10:50:35 AM	14526
Surr: DNOP	96.3	57.9-140		%REC	1	7/31/2014 10:50:35 AM	14526
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	7/31/2014 1:26:57 PM	R20285
Surr: BFB	94.3	80-120		%REC	1	7/31/2014 1:26:57 PM	R20285
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.040		mg/Kg	1	8/2/2014 3:45:04 AM	R20318
Toluene	ND	0.040		mg/Kg	1	8/2/2014 3:45:04 AM	R20318
Ethylbenzene	ND	0.040		mg/Kg	1	8/2/2014 3:45:04 AM	R20318
Xylenes, Total	ND	0.081		mg/Kg	1	8/2/2014 3:45:04 AM	R20318
Surr: 4-Bromofluorobenzene	92.5	80-120		%REC	1	8/2/2014 3:45:04 AM	R20318

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	



**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Enterprise Field Services

**Client Sample ID:** SP-2

**Project:** Santa Rosa 4 #1

**Collection Date:** 7/30/2014 10:45:00 AM

**Lab ID:** 1407E30-007

**Matrix:** MEOH (SOIL)

**Received Date:** 7/31/2014 7:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	15	10		mg/Kg	1	7/31/2014 11:51:18 AM	14526
Surr: DNOP	96.5	57.9-140		%REC	1	7/31/2014 11:51:18 AM	14526
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.7		mg/Kg	1	7/31/2014 2:24:12 PM	R20285
Surr: BFB	94.6	80-120		%REC	1	7/31/2014 2:24:12 PM	R20285
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.057		mg/Kg	1	8/2/2014 4:45:04 AM	R20318
Toluene	ND	0.057		mg/Kg	1	8/2/2014 4:45:04 AM	R20318
Ethylbenzene	ND	0.057		mg/Kg	1	8/2/2014 4:45:04 AM	R20318
Xylenes, Total	ND	0.11		mg/Kg	1	8/2/2014 4:45:04 AM	R20318
Surr: 4-Bromofluorobenzene	92.0	80-120		%REC	1	8/2/2014 4:45:04 AM	R20318

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

<b>Qualifiers:</b>	* 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#: 1407E30

04-Aug-14

Client: Enterprise Field Services

Project: Santa Rosa 4 #1

Sample ID	MB-14526	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	14526	RunNo:	20268					
Prep Date:	7/31/2014	Analysis Date:	7/31/2014	SeqNo:	589335	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	9.3		10.00		92.7	57.9	140			

Sample ID	LCS-14526	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	14526	RunNo:	20268					
Prep Date:	7/31/2014	Analysis Date:	7/31/2014	SeqNo:	589336	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	94.5	68.6	130			
Surr: DNOP	4.5		5.000		89.6	57.9	140			

### 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#: 1407E30

04-Aug-14

**Client:** Enterprise Field Services

**Project:** Santa Rosa 4 #1

Sample ID	<b>MB-14511 MK</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R20285</b>	RunNo:	<b>20285</b>					
Prep Date:		Analysis Date:	<b>7/31/2014</b>	SeqNo:	<b>589940</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	900		1000		90.4	80	120			

Sample ID	<b>LCS-14511 MK</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R20285</b>	RunNo:	<b>20285</b>					
Prep Date:		Analysis Date:	<b>7/31/2014</b>	SeqNo:	<b>589941</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics (GRO)	32	5.0	25.00	0	127	71.7	134			
Surr: BFB	1000		1000		103	80	120			

Sample ID	<b>MB-14534 MK</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R20318</b>	RunNo:	<b>20318</b>					
Prep Date:		Analysis Date:	<b>8/1/2014</b>	SeqNo:	<b>590802</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Surr: BFB	890		1000		88.5	80	120			
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Sample ID	<b>LCS-14534 MK</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R20318</b>	RunNo:	<b>20318</b>					
Prep Date:		Analysis Date:	<b>8/1/2014</b>	SeqNo:	<b>590803</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Surr: BFB	910		1000		91.5	80	120			
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Sample ID	<b>MB-14534</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>14534</b>	RunNo:	<b>20318</b>					
Prep Date:	<b>7/31/2014</b>	Analysis Date:	<b>8/1/2014</b>	SeqNo:	<b>590808</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Surr: BFB	890		1000		88.5	80	120			
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Sample ID	<b>LCS-14534</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>14534</b>	RunNo:	<b>20318</b>					
Prep Date:	<b>7/31/2014</b>	Analysis Date:	<b>8/1/2014</b>	SeqNo:	<b>590809</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Surr: BFB	910		1000		91.5	80	120			
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**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#: 1407E30

04-Aug-14

Client: Enterprise Field Services

Project: Santa Rosa 4 #1

Sample ID	<b>MB-14534 MK</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R20318</b>	RunNo:	<b>20318</b>					
Prep Date:		Analysis Date:	<b>8/1/2014</b>	SeqNo:	<b>590821</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Sample ID	<b>LCS-14534 MK</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R20318</b>	RunNo:	<b>20318</b>					
Prep Date:		Analysis Date:	<b>8/1/2014</b>	SeqNo:	<b>590822</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.050	1.000	0	83.7	80	120			
Toluene	0.83	0.050	1.000	0	82.8	80	120			
Ethylbenzene	0.85	0.050	1.000	0	84.6	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.1	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID	<b>MB-14534</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>14534</b>	RunNo:	<b>20318</b>					
Prep Date:	<b>7/31/2014</b>	Analysis Date:	<b>8/1/2014</b>	SeqNo:	<b>590827</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Sample ID	<b>LCS-14534</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>14534</b>	RunNo:	<b>20318</b>					
Prep Date:	<b>7/31/2014</b>	Analysis Date:	<b>8/1/2014</b>	SeqNo:	<b>590828</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID	<b>MB-14511 MK</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R20318</b>	RunNo:	<b>20318</b>					
Prep Date:		Analysis Date:	<b>8/1/2014</b>	SeqNo:	<b>590838</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								

### 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#: 1407E30

04-Aug-14

**Client:** Enterprise Field Services

**Project:** Santa Rosa 4 #1

Sample ID	<b>MB-14511 MK</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R20318</b>	RunNo:	<b>20318</b>					
Prep Date:		Analysis Date:	<b>8/1/2014</b>	SeqNo:	<b>590838</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.99		1.000		99.0	80	120			

Sample ID	<b>LCS-14511 MK</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R20318</b>	RunNo:	<b>20318</b>					
Prep Date:		Analysis Date:	<b>8/1/2014</b>	SeqNo:	<b>590839</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.050	1.000	0	95.2	80	120			
Toluene	0.94	0.050	1.000	0	93.7	80	120			
Ethylbenzene	0.96	0.050	1.000	0	96.2	80	120			
Xylenes, Total	3.0	0.10	3.000	0	101	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	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

**Sample Log-In Check List**

Client Name: **Enterprise** Work Order Number: **1407E30** RcptNo: **1**

Received by/date: *[Signature]* **07/31/14**  
 Logged By: **Lindsay Mangin** 7/31/2014 7:50:00 AM  
 Completed By: **Lindsay Mangin** 7/31/2014 8:06:47 AM  
 Reviewed By: *mg* **07/31/14**

*[Signature]*  
*[Signature]*

**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? Yes  No  # of preserved bottles checked for pH: ( <2 or >12 unless noted )
- 13. Are matrices correctly identified on Chain of Custody? Yes  No  Adjusted?
- 14. Is it clear what analyses were requested? Yes  No
- 15. Were all holding times able to be met? Yes  No  Checked by:

**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	1.8	Good	Yes			

# Chain-of-Custody Record

Client: Enterprise Field Services LLC

Mailing Address: 614 Reilly Avenue  
Farmington, NM 87401

Phone #: 505-716-2787

email or Fax#:

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

Accreditation  
 NELAP  Other \_\_\_\_\_

EDD (Type) \_\_\_\_\_

Project Name: Santa Rosa 4 #1  
Project #: \_\_\_\_\_  
Project Manager: Heather Woods

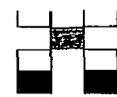
Sampler: HW  
Office:  Yes  No

Sample Temperature: 8

Container Type and #  
Preservative Type

HEALING  
14071230

MeOH Kit  
4oz  
cold



## 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	HEALING	BTEX + MTBE + TPH (Gas only)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / <del>MSD</del> )	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)	
7/30/14	1019	Soil	S-1	MeOH Kit 4oz	cold	-001	X	X											
7/30/14	1023	Soil	S-2	I	I	-002	X	X											
7/30/14	1026	Soil	S-3	I	I	-003	X	X											
7/30/14	1030	Soil	S-4	I	I	-004	X	X											
7/30/14	1032	Soil	S-5	I	I	-005	X	X											
7/30/14	1035	Soil	SP-1	I	I	-006	X	X											
7/30/14	1045	Soil	SP-2	I	I	-007	X	X											

Date: 7/30/14 Time: 1245 Relinquished by: Heather M. Woods  
Received by: Christine Whetson Date: 7/30/14 Time: 1245

Date: 8/2/14 Time: 1847 Relinquished by: Christine Whetson  
Received by: [Signature] Date: 07/31/14 Time: 0750

Remarks: Direct Bill Enterprise Field Services  
Please call for Paykey Code

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.

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: Enterprise Field Services LLC	Contact: Thomas Long
Address: 614 Reilly Ave, Farmington, NM 87401	Telephone No. 505-599-2286
Facility Name: Trunk K – Five Release Sites	Facility Type: Natural Gas Gathering Line
Surface Owner: BLM	Mineral Owner: BLM
API No.	

**LOCATION OF RELEASE**

Unit Letter N, B, H	Section 26/27	Township 27N	Range 8W	Feet from the 2577	North South Line	Feet from the 85	East West Line	County San Juan
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Latitude 36.54359 Longitude -107.64265 RCVD SEP 2 '14

**NATURE OF RELEASE**

OIL CONS. DIV.

Type of Release: Natural Gas and Natural Gas Liquids	Volume of Release: <b>Unknown</b>	Volume Recovered: <b>Unknown</b>
Source of Release: Internal Corrosion	Date and Hour of Occurrence: 8/18/2014 @ 10:00 a.m.	Date and Hour of Discovery: 8/18/2014 @ 4:00 p.m.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? Courtesy Notification to NMOCD – Cory Smith, BLM – Shari Ketchum DIST. 2	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action: A third party reported a possible line leak on an Enterprise Right of Way. Technicians were dispatched to the location and the leak was confirmed. The line was isolated and de-pressurized and lock out tag out was applied. Four subsequent release sites were discovered along the Trunk K pipeline. The release sites are located in Unit Letter N Section 25 and Unit Letter B, H Section 26 Township 27 North Range 8 West. The GPS locations for each site are the following: 36.54958, -107.65009, 36.54730, -107.64737, 36.54540, -107.64504, 36.54473, -107.64408 and 36.53830, -107.63703.

Describe Area Affected and Cleanup Action Taken: A third party reported a possible line leak on an Enterprise Right of Way. Technicians were dispatched to the location and the leak was confirmed. The line was isolated and de-pressurized and lock out tag out was applied. Four subsequent release sites were discovered along the Trunk K pipeline. The release sites are located in Unit Letter N Section 25 and Unit Letter B, H Section 26 Township 27 North Range 8 West. The GPS locations for each site are the following: 36.54958, -107.65009, 36.54730, -107.64737, 36.54540, -107.64504, 36.54473, -107.64408 and 36.53830, -107.63703. A third party environmental contractor will oversee excavation activities and collect closure sample during repair activities. A "final" c-141 will be submitted upon receipt of the third party environmental contractor corrective action report.

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: <i>Jon Fields</i>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Jon Fields	Approved by Environmental Specialist: <i>[Signature]</i>	
Title: Director, Environmental	Approval Date: <u>11/17/14</u>	Expiration Date:
E-mail Address: jefields@eprod.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: <u>8-28-2014</u> Phone: (713)381-6684		

\* Attach Additional Sheets If Necessary

#NCS 143 214 7925

①

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

Form C-141  
Revised August 8, 2011

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

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

**Release Notification and Corrective Action**

**OPERATOR**

Initial Report  Final Report

Name of Company: Enterprise Field Services LLC	Contact: Thomas Long
Address: 614 Reilly Ave, Farmington, NM 87401	Telephone No. 505-599-2286
Facility Name: Lateral 3B-3	Facility Type: Natural Gas Gathering Line

Surface Owner: BLM	Mineral Owner: BLM	API No.
--------------------	--------------------	---------

**LOCATION OF RELEASE**

RCVD SEP 2 '14

Unit Letter	Section	Township	Range	Feet from the	North South Line	Feet from the	East West Line	County
D	35	30N	11W	1269		437		San Juan

Latitude 36.772307

Longitude -107.967842

OIL CONS. DIV.

DIST. 3

**NATURE OF RELEASE**

Type of Release: Natural Gas and Natural Gas Liquids	Volume of Release: Unknown	Volume Recovered: Unknown
Source of Release: Internal Corrosion	Date and Hour of Occurrence: 8/17/2014 @ 12:30 p.m.	Date and Hour of Discovery: 8/17/2014 @ 2:00 p.m.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action: A third party reported a possible line leak along the Lateral 3B-3 pipeline. Technicians were dispatched to and confirmed the leak. The pipeline was isolated, blown down, locked out and tagged out. A third party environmental contractor will oversee excavation activities and collect closure sample during repair activities.

Describe Area Affected and Cleanup Action Taken: A third party reported a possible line leak along the Lateral 3B-3 pipeline. Technicians were dispatched and confirmed the leak. The pipeline was isolated, blown down, locked out and tagged out. A third party environmental contractor will oversee excavation activities and collect closure sample during repair activities. A "final" c-141 will be submitted upon receipt of the third party environmental contractor corrective action report.

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: <i>Jon Fields</i>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Jon Fields	Approved by Environmental Specialist:	
Title: Director, Environmental	Approval Date:	Expiration Date:
E-mail Address: jefields@eprod.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 8-28-2014	Phone: (713)381-6684	

\* Attach Additional Sheets If Necessary

H/NCs 143214 8225

①

District I  
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State of New Mexico  
Energy Minerals and Natural  
Resources

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

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: Enterprise Field Services LLC	Contact: Thomas Long
Address: 614 Reilly Ave, Farmington, NM 87401	Telephone No. 505-599-2286
Facility Name: Lateral 3D-4	Facility Type: Natural Gas Gathering Line

Surface Owner: NAPI/Navajo Tribal	Mineral Owner: NAPI/Navajo Tribal	API No.
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**LOCATION OF RELEASE**

Unit Letter J	Section 36	Township 28N	Range 12W	Feet from the 2533	North/ <del>South</del> Line	Feet from the 1153	<del>East</del> /West Line	County San Juan
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Latitude 36.61842 Longitude -108.05799 RCVD SEP 2 '14

**NATURE OF RELEASE**

**OIL CONS. DIV.**

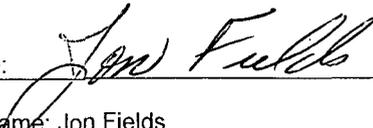
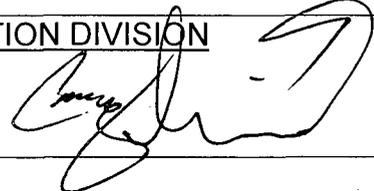
Type of Release: Natural Gas	Volume of Release: 82 MCF	Volume Recovered: Unknown
Source of Release: Suspected internal corrosion	Date and Hour of Occurrence: 6/6/2014 @ 11:15 a.m.	Date and Hour of Discovery: 6/6/2014 @ 12:15 p.m.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	DIST. 3
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken: Enterprise personnel responded to a possible line leak report on Lateral 3D-4, a class 1 non-jurisdictional pipeline. Enterprise personnel verified leak. The pipeline was blown down and lock out tag out was applied. Repair activities were complete on July 9, 2014. The final excavation dimension measured approximately forty-one (41) feet long by thirteen (13) wide by eight (8) feet deep. No soils were impacted from the release.

Describe Area Affected and Cleanup Action Taken.\* Repair activities were complete on July 9, 2014. The final excavation dimension measured approximately forty-one (41) feet long by thirteen (13) wide by eight (8) feet deep. No soils were impacted from the release. A third party corrective action report is included with this "final" c-141.

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: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Jon Fields	Approved by Environmental Specialist: 	
Title: Director, Environmental	Approval Date: 11/19/14	Expiration Date:
E-mail Address: jefields@eprod.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 8-28-2014 Phone: (713)381-6684		

\* Attach Additional Sheets If Necessary

#NCS 1432331534





## CORRECTIVE ACTION REPORT

Property:

**Lateral 3D-4 Pipeline Release  
SE 1/4, S36 T28N R12W  
San Juan County, New Mexico**

July 31, 2014

Apex Project No. 7030414G023

Prepared for:

**Enterprise Field Services LLC  
614 Reilly Avenue  
Farmington, NM 87401  
Attn: Mr. Thomas Long**

Prepared by:

Handwritten signature of Heather M. Woods in black ink.

---

Heather M. Woods, P.G.  
Senior Project Manager

Handwritten signature of Elizabeth Scaggs in black ink.

---

Elizabeth Scaggs, P.G.  
Senior Program Manager

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### LIST OF APPENDICES

<b>Appendix A:</b>	Figure 1 – Topographic Map Figure 2 – Site Vicinity Map Figure 3 – Site Map with Soil Analytical Results
<b>Appendix B:</b>	Photographic Documentation
<b>Appendix C:</b>	Tables
<b>Appendix D:</b>	Laboratory Analytical Reports & Chain of Custody Documentation

## **CORRECTIVE ACTION REPORT**

**Lateral 3D-4 Pipeline Release**  
SE 1/4, S36 T28N R12W  
San Juan County, New Mexico

**Apex Project No. 7030414G023**

### **1.0 INTRODUCTION**

#### **1.1 Site Description & Background**

The Lateral 3D-4 Pipeline Release Site is located within the Enterprise Field Services LLC (Enterprise) pipeline right-of-way (ROW) in the southeast (SE) ¼ of Section 36 in Township 28 North and Range 12 West in San Juan County, New Mexico (36.618420N 108.057990W), referred to hereinafter as the "Site" or "subject Site". The Site is located on cultivated land owned by the Navajo Nation, and operated by the Navajo Agricultural Products Industry (NAPI). The property surrounding the Site is primarily agricultural, with occasional oil and gas gathering facilities, including one (1) Enterprise natural gas gathering pipeline which traverses the area from east to west.

On June 6, 2014, Enterprise shut in the Lateral 3D-4 pipeline and on June 18, 2013, initiated excavation activities at the Site in an effort to locate and repair a subsurface leak. The leak was subsequently identified and repaired. An unknown quantity of natural gas was released from the pipeline as a result of internal corrosion. The leak was identified by vapor monitoring at the ground surface. No surface expression of the release was evident.

A topographic map depicting the location of the Site is included as Figure 1, and a Site Vicinity Map is included as Figure 2 in Appendix A.

#### **1.2 Project Objective**

The primary objective of the corrective actions was to reduce the concentration of constituents of concern (COCs) in the on-Site soils to below the New Mexico Energy, Minerals, and Natural Resources Department (EMNRD), Oil Conservation Division (OCD) *Remediation Action Levels* using the New Mexico EMNRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases* as guidance.

### **2.0 SITE RANKING**

The Site is subject to regulatory oversight by the Navajo Nation Environmental Protection Agency (NNEPA). Due to the absence of published NNEPA regulatory guidance, Apex TITAN, Inc. (Apex) utilized the available New Mexico ENMRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases*. Apex utilized the general site characteristics obtained during the completion of corrective action activities to determine the appropriate "ranking" for the Site. The ranking criteria and associated scoring are provided in the following table:



Ranking Criteria			Ranking Score
Depth to Groundwater	<50 feet	20	<b>20*</b>
	50 to 99 feet	10	
	>100 feet	0	
Wellhead Protection Area • <1,000 feet from a water source, or; <200 feet from private domestic water source.	Yes	20	<b>0</b>
	No	0	
Distance to Surface Water Body	<200 feet	20	<b>10</b>
	200 to 1,000 feet	10	
	>1,000 feet	0	
<b>Total Ranking Score</b>			<b>30</b>

\*Based on anticipated groundwater depth of <50 feet below grade surface (bgs).

Based on Apex's evaluation of the scoring criteria, the Site would have a maximum Total Ranking Score of "30". This ranking is based on the following:

- The Site is approximately 400 feet south and east-southeast from the heads of two small un-named ephemeral washes, resulting in a ranking of "10" for distance to potential surface water.
- No water wells were identified on the Office of the State Engineer website database within the search radius. However, increased moisture content was observed in the base of the excavation at approximately 9.5 feet bgs, resulting in a ranking of "20" for depth to groundwater.
- No water sources were identified within the search radius.

### 3.0 RESPONSE ACTIONS

#### 3.1 Soil Excavation Activities

On June 6, 2014, Enterprise shut in the Lateral 3D-4 pipeline and on June 18, 2014, initiated excavation activities at the Site in an effort to locate and repair a subsurface leak. The leak was subsequently identified and repaired. An unknown quantity of natural gas was released from the pipeline as a result of internal corrosion. The leak was identified by vapor monitoring at the ground surface. No surface expression of the release was evident. During the corrective action activities, West States Energy Contractors provided heavy equipment and labor support, and Aaron Bryant and Heather Woods, Apex environmental professionals, provided environmental support.

Excavation activities associated with the pipeline repair were completed on June 20, 2014. Soil samples (Conf-1 through Conf-7) and stockpile samples (N-SP, E-SP, and W-SP) were collected subsequent to the pipeline repair activities. Analytical results for the confirmation and stockpile soil samples indicate that adversely affected soils were not identified at the Site. The excavation was backfilled with the stockpiled soil and contoured to surrounding grade.

The overall surface expression of the final excavation measured approximately 41 feet long by 13 feet wide, with a total depth of approximately 8 feet bgs.

The lithology encountered during the completion of corrective action activities consisted primarily of unconsolidated sands, silty sands, and silty clays.

Figure 3 is a site map that indicates the approximate location of the excavated area in relation to pertinent land features (Appendix A). Photographic documentation of the field activities is included in Appendix B.

### 3.2 Soil Sampling Program

Apex screened head-space samples of Site soils with a photoionization detector (PID) fitted with a 10.6 eV lamp.

Apex's soil sampling program included the collection of ten (10) final confirmation samples (Conf - 1 through Conf-7) and stockpile samples (N-SP, E-SP, and W-SP) from the resulting excavation for laboratory analysis. Figure 3 depicts the approximate location of the excavated areas and shows the final confirmation sample locations in relation to the final excavation dimensions (Appendix A).

The samples were collected and placed in laboratory prepared glassware, labeled/sealed using the laboratory supplied labels, and placed on ice in a cooler, which was secured with a custody seal. The sample cooler and completed chain-of-custody forms were relinquished to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico, for analysis.

### 3.3 Laboratory Analytical Methods

The confirmation soil samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA SW-846 Method #8021, and total petroleum hydrocarbons (TPH) gasoline range organics (GRO) and diesel range organics (DRO) using EPA SW-846 Method #8015.

Laboratory results are summarized in Table 1, included in Appendix C. The executed chain-of-custody form and laboratory data sheets are provided in Appendix D.

## 4.0 DATA EVALUATION

The Site is subject to regulatory oversight by the NNEPA. Due to the absence of published NNEPA regulatory guidance, Apex utilized the available New Mexico EMNRD OCD guidance and rules. To address activities related to condensate releases, the New Mexico EMNRD OCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the OCD rules, specifically NMAC 19.15.30 *Remediation*. These guidance documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

### 4.1 Confirmation Soil Samples

Apex compared the BTEX and TPH concentrations or reporting limits (RLs) associated with the final confirmation samples collected from the excavated area to the OCD *Remediation Action Levels* (RALs) for sites having a total ranking score of "30".

- The laboratory analyses of confirmation samples collected from soils remaining in place do not indicate benzene concentrations above laboratory RLs, which are below the OCD RAL.

- The laboratory analyses of the confirmation samples collected from soils remaining in place indicate total BTEX concentrations ranging from below the laboratory RLs to 1.7 milligrams per Kilogram (mg/Kg), which are below the OCD RAL.
- The laboratory analyses of the confirmation sample collected from soils remaining in place indicate combined TPH GRO/DRO concentrations ranging from below the laboratory detection limits to 30 mg/Kg which are below the OCD RAL.

Confirmation sample results are provided in Table 1 in Appendix D.

## 5.0 FINDINGS AND RECOMMENDATIONS

The Lateral 3D-4 Pipeline Release Site is located within the Enterprise pipeline ROW in the SE ¼ of Section 36 in Township 28 North and Range 12 West in San Juan County, New Mexico. The Site is located on cultivated land owned by the Navajo Nation, and operated by NAPI. The property surrounding the Site is primarily agricultural, with occasional oil and gas gathering facilities, including one (1) Enterprise natural gas gathering pipeline which traverses the area from east to west.

On June 6, 2014, Enterprise shut in the Lateral 3D-4 pipeline and on June 18, 2014, initiated excavation activities at the Site in an attempt to locate and repair a subsurface leak. The leak was subsequently identified and repaired. An unknown quantity of natural gas was released from the pipeline as a result of internal corrosion. The leak was identified by vapor monitoring at the ground surface. No surface expression of the release was evident.

- The primary objective of the corrective actions was to reduce the concentration of COCs in the on-Site soils to below the New Mexico EMNRD OCD RALs using the New Mexico EMNRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases* as guidance.
- The lithology encountered during the completion of corrective action activities consisted primarily of unconsolidated sands, silty sands, and silty clays.
- The overall surface expression of the final excavation measured approximately 41 feet long by 13 feet wide, with a total depth of approximately 8 feet bgs.
- Prior to backfilling, ten (10) final excavation confirmation and stockpile samples were collected for laboratory analyses. Based on analytical results, soils remaining in place do not exhibit COC concentrations above the OCD RALs for a Site ranking of "30".
- Stockpiled soils were used to backfill the excavation based on analytical results which indicated that the stockpiled soils did not exhibit COC concentrations above the OCD RALs for a site ranking of "30". The area was contoured to surrounding grade following backfilling activities.

**Based on the laboratory analytical results, no additional investigation or corrective action appears warranted at this time.**

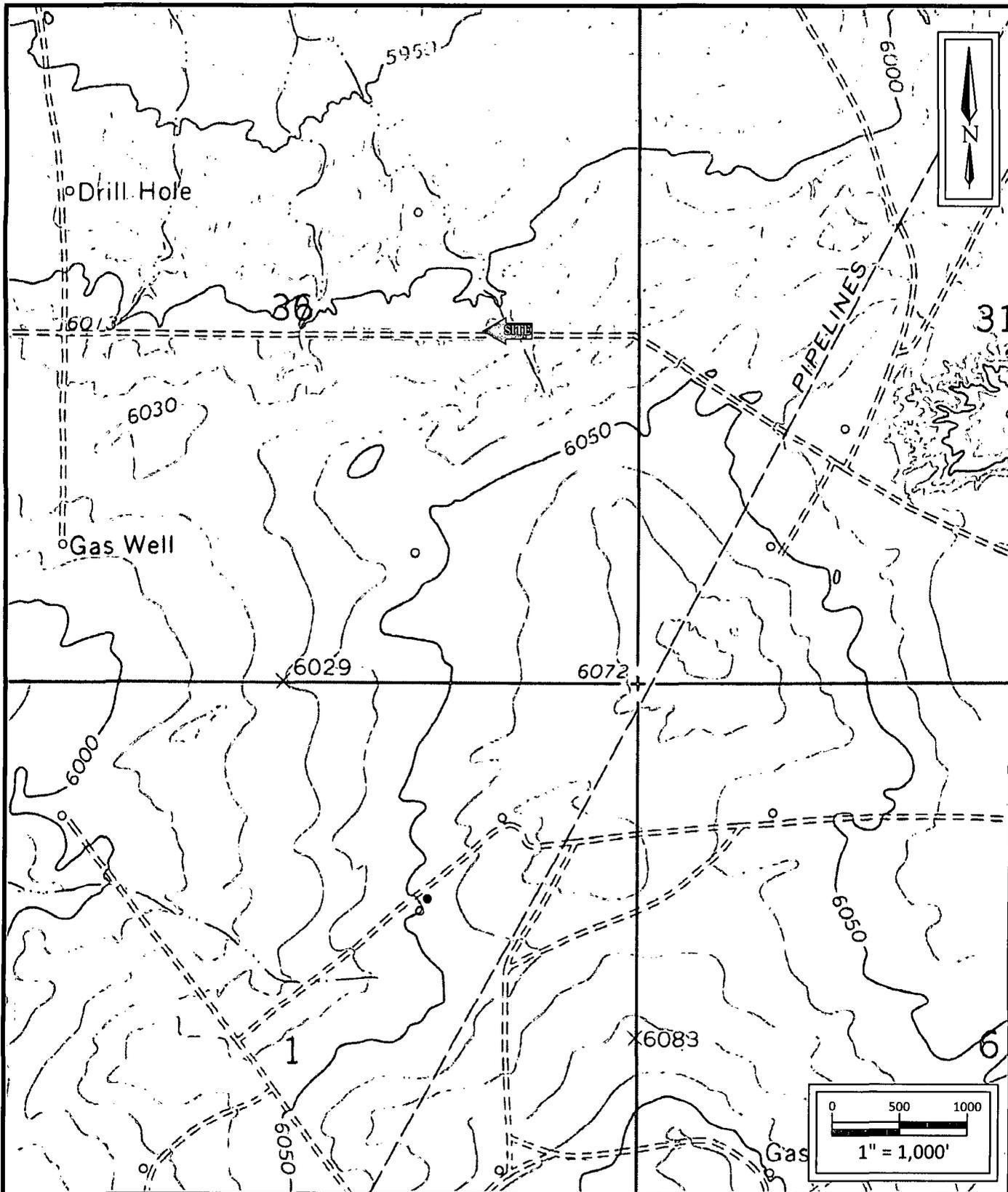
## 6.0 STANDARD OF CARE, LIMITATIONS, AND RELIANCE

Apex's services were performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. Apex makes no warranties, expressed or implied, as to the services performed hereunder. Additionally, Apex

does not warrant the work of third parties supplying information used in the report (e.g. laboratories, regulatory agencies, or other third parties). This scope of services was performed in accordance with the scope of work agreed with the client.

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-Site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, or not present during these services, and Apex cannot represent that the Site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this scope of services. Environmental conditions at other areas or portions of the Site may vary from those encountered at actual sample locations. Apex's findings and recommendations are based solely upon data available to Apex at the time of these services.

This report has been prepared for the exclusive use of Enterprise, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the expressed written authorization of Enterprise and Apex. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the proposal, the report, and Apex's Agreement. The limitation of liability defined in the agreement is the aggregate limit of Apex's liability to the client.



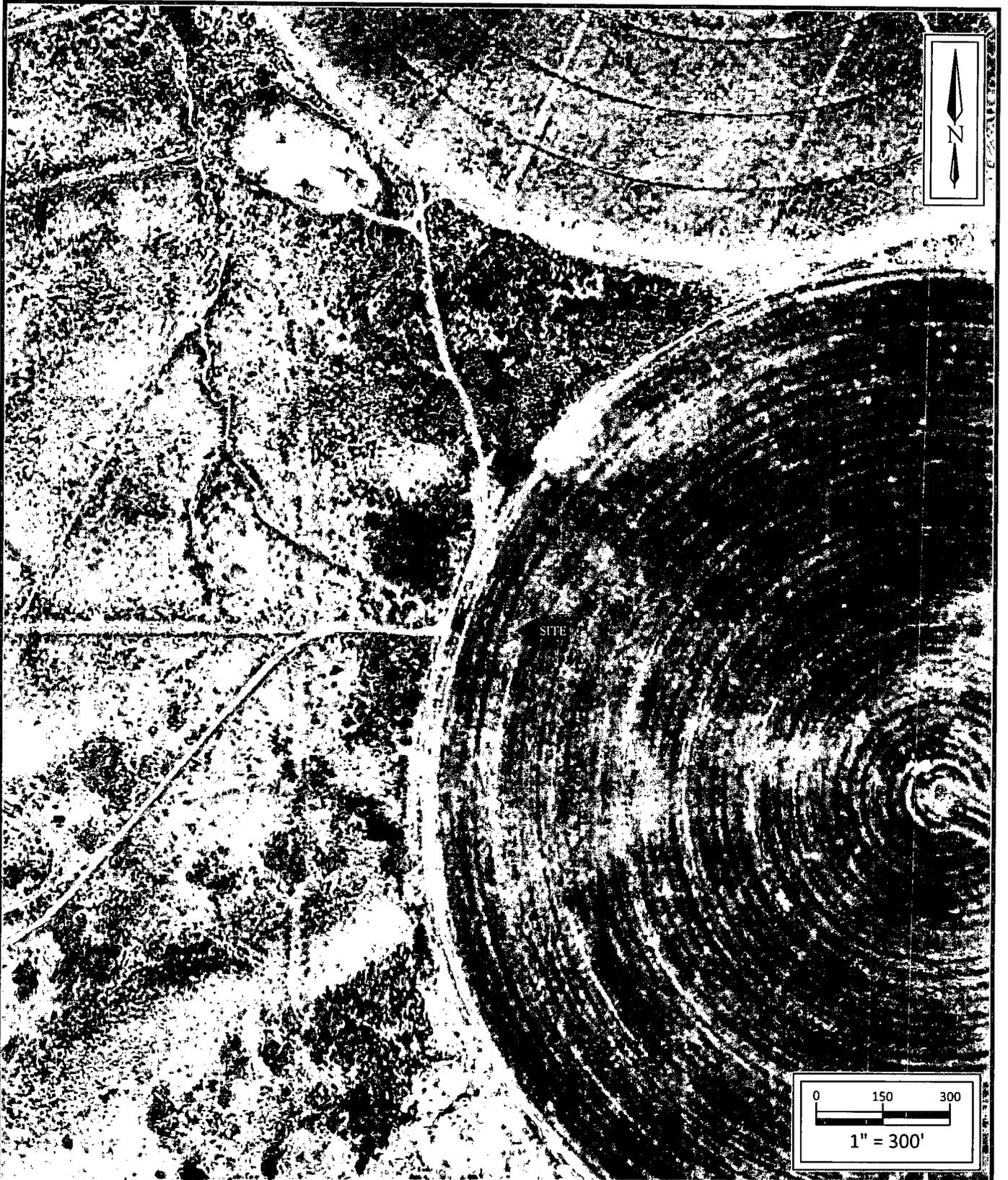
**Lateral 3D-4 Pipeline Release**  
 SE 1/4, Sec 36 T28N R12W  
 San Juan County, NM  
 36.618420N, 108.057990W

Project No. 7030414G023



**Apex TITAN, Inc.**  
 606 S. Rio Grande, Suite A  
 Aztec, New Mexico 87410  
 Phone: (505) 334-5200  
[www.apexcos.com](http://www.apexcos.com)  
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**FIGURE 1**  
**Topographic Map**  
 Gallegos Trading Post, NM Quadrangle  
 1965



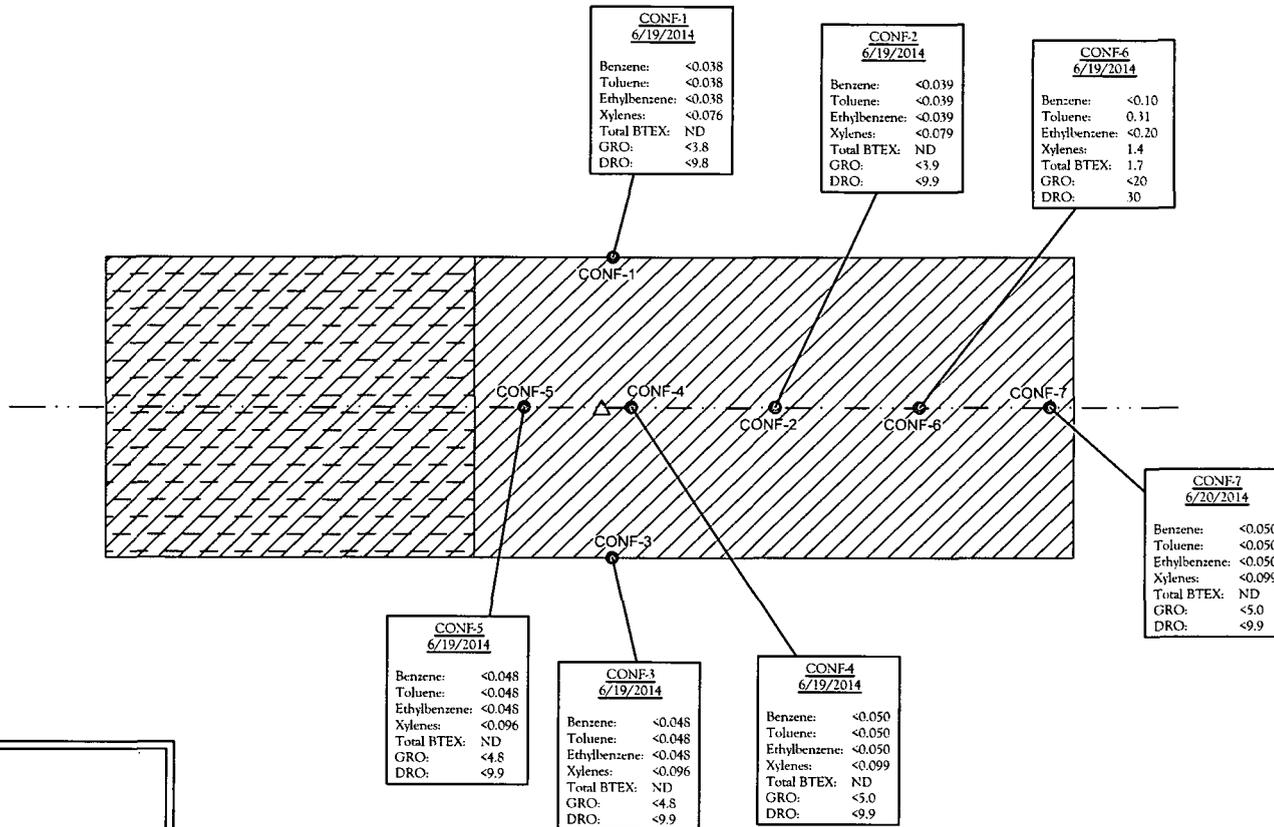
**Lateral 3D-4 Pipeline Release**  
 SE  $\frac{1}{4}$ , Sec 36 T28N R12W  
 San Juan County, NM  
 36.618420N, 108.057990W

Project No. 7030414G023



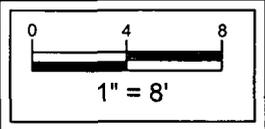
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**FIGURE 2**  
**Site Vicinity Map**  
 2013 Aerial Photograph



**LEGEND:**

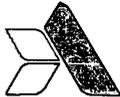
- PIPELINE
- △ RELEASE POINT
- SAMPLE LOCATION
- ▨ EXTENT OF EXCAVATION
- ▩ OVER-EXCAVATED FOR PIPELINE ACCESS



**Lateral 3D-4 Pipeline Release**

SE 1/4, Sec 36 T28N R12W  
 San Juan County, NM  
 36.618420N, 108.057990W

Project No. 7030414G023



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**FIGURE 3**  
**Site Map with**  
**Soil Analytical Results**

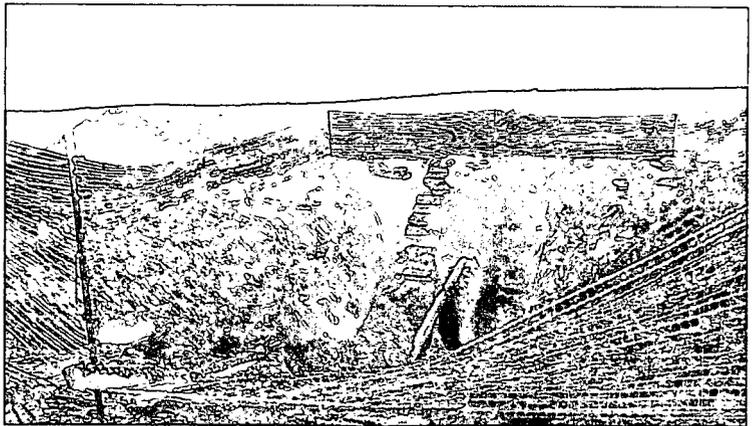
**Photograph 1**

View of site prior to excavation activities, facing west.



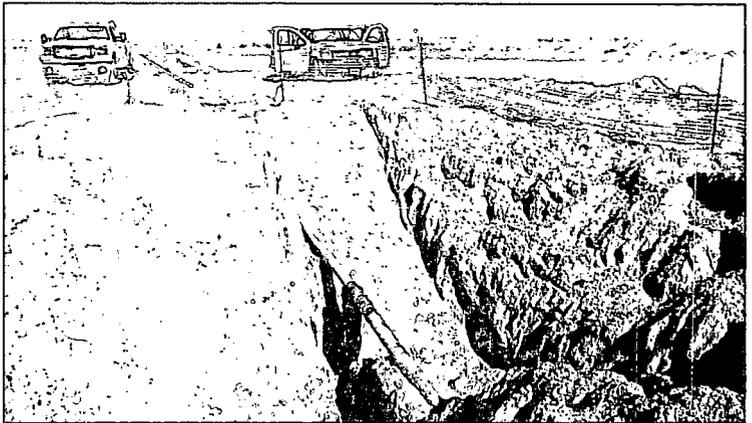
**Photograph 2**

View of initial excavation to locate the source of the release, facing east.



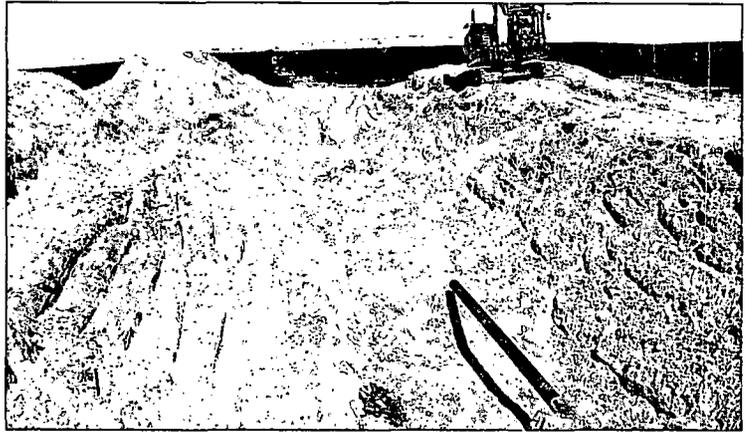
**Photograph 3**

View of initial excavation to locate the source of the release, facing west.



**Photograph 4**

General overview of the final excavation prepared for the installation of replacement pipeline, facing east.





**TABLE 1**  
**Lateral 3D-4 Pipeline Release**  
**SOIL ANALYTICAL SUMMARY**

Sample I.D.	Date	Sample Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)
New Mexico Entergy, Mineral & Natural Resources Department, Oil Conservation Division, Remediation Action Level			10	NE	NE	NE	50	100	
Final Confirmation Samples									
CONF-1	6/19/2014	6 to 8	<0.038	<0.038	<0.038	<0.076	ND	<3.8	<9.8
CONF-2	6/19/2014	8	<0.039	<0.039	<0.039	<0.079	ND	<3.9	<9.9
CONF-3	6/19/2014	6 to 8	<0.048	<0.048	<0.048	<0.096	ND	<4.8	<9.9
CONF-4	6/19/2014	8	<0.050	<0.050	<0.050	<0.099	ND	<5.0	<9.9
CONF-5	6/19/2014	6 to 8	<0.048	<0.048	<0.048	<0.096	ND	<4.8	<9.9
CONF-6	6/19/2014	8	<0.10	0.31	<0.20	1.4	1.7	<20	30
CONF-7	6/20/2014	6 to 8	<0.050	<0.050	<0.050	<0.099	ND	<5.0	<9.9
N-SP	6/19/2014	Stockpile	<0.042	<0.042	<0.042	<0.083	ND	<4.2	<10
E-SP	6/19/2014	Stockpile	<0.041	<0.041	<0.041	<0.082	ND	<4.1	<9.8
S-SP	6/19/2014	Stockpile	<0.043	<0.043	<0.043	<0.087	ND	<4.3	<10

Note: Concentrations in bold and yellow exceed the applicable OCD Remediation Action Level  
 NE = Not Established  
 ND = Not Detected



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

June 23, 2014

Kyle Summers  
Apex Titan, Inc.  
606 S. Rio Grande Unit A  
Aztec, NM 87410  
TEL: (903) 821-5603  
FAX (214) 350-2914

RE: 3D-4

OrderNo.: 1406958

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 9 sample(s) on 6/20/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Apex Titan, Inc.

Client Sample ID: CONF-1

Project: 3D-4

Collection Date: 6/19/2014 8:10:00 AM

Lab ID: 1406958-001

Matrix: MEOH (SOIL)

Received Date: 6/20/2014 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/20/2014 12:01:12 PM	13803
Surr: DNOP	122	57.9-140		%REC	1	6/20/2014 12:01:12 PM	13803
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	6/20/2014 9:48:44 AM	R19403
Surr: BFB	93.2	80-120		%REC	1	6/20/2014 9:48:44 AM	R19403
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.038		mg/Kg	1	6/20/2014 9:48:44 AM	R19403
Toluene	ND	0.038		mg/Kg	1	6/20/2014 9:48:44 AM	R19403
Ethylbenzene	ND	0.038		mg/Kg	1	6/20/2014 9:48:44 AM	R19403
Xylenes, Total	ND	0.076		mg/Kg	1	6/20/2014 9:48:44 AM	R19403
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	6/20/2014 9:48:44 AM	R19403

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Apex Titan, Inc.

**Client Sample ID:** CONF-2

**Project:** 3D-4

**Collection Date:** 6/19/2014 8:15:00 AM

**Lab ID:** 1406958-002

**Matrix:** MEOH (SOIL)

**Received Date:** 6/20/2014 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/20/2014 12:23:10 PM	13803
Surr: DNOP	120	57.9-140		%REC	1	6/20/2014 12:23:10 PM	13803
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	6/20/2014 10:17:25 AM	R19403
Surr: BFB	94.4	80-120		%REC	1	6/20/2014 10:17:25 AM	R19403
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.039		mg/Kg	1	6/20/2014 10:17:25 AM	R19403
Toluene	ND	0.039		mg/Kg	1	6/20/2014 10:17:25 AM	R19403
Ethylbenzene	ND	0.039		mg/Kg	1	6/20/2014 10:17:25 AM	R19403
Xylenes, Total	ND	0.079		mg/Kg	1	6/20/2014 10:17:25 AM	R19403
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1	6/20/2014 10:17:25 AM	R19403

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

<b>Qualifiers:</b>	* 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	Page 2 of 12
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Apex Titan, Inc.

Client Sample ID: CONF-3

Project: 3D-4

Collection Date: 6/19/2014 8:20:00 AM

Lab ID: 1406958-003

Matrix: MEOH (SOIL)

Received Date: 6/20/2014 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/20/2014 12:45:05 PM	13803
Surr: DNOP	118	57.9-140		%REC	1	6/20/2014 12:45:05 PM	13803
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/20/2014 10:46:07 AM	R19403
Surr: BFB	93.1	80-120		%REC	1	6/20/2014 10:46:07 AM	R19403
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.048		mg/Kg	1	6/20/2014 10:46:07 AM	R19403
Toluene	ND	0.048		mg/Kg	1	6/20/2014 10:46:07 AM	R19403
Ethylbenzene	ND	0.048		mg/Kg	1	6/20/2014 10:46:07 AM	R19403
Xylenes, Total	ND	0.096		mg/Kg	1	6/20/2014 10:46:07 AM	R19403
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1	6/20/2014 10:46:07 AM	R19403

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

Qualifiers:		
*	Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E	Value above quantitation range	H Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Apex Titan, Inc.

Client Sample ID: CONF-4

Project: 3D-4

Collection Date: 6/19/2014 8:25:00 AM

Lab ID: 1406958-004

Matrix: MEOH (SOIL)

Received Date: 6/20/2014 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/20/2014 1:07:10 PM	13803
Surr: DNOP	123	57.9-140		%REC	1	6/20/2014 1:07:10 PM	13803
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/20/2014 11:14:48 AM	R19403
Surr: BFB	94.2	80-120		%REC	1	6/20/2014 11:14:48 AM	R19403
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.050		mg/Kg	1	6/20/2014 11:14:48 AM	R19403
Toluene	ND	0.050		mg/Kg	1	6/20/2014 11:14:48 AM	R19403
Ethylbenzene	ND	0.050		mg/Kg	1	6/20/2014 11:14:48 AM	R19403
Xylenes, Total	ND	0.099		mg/Kg	1	6/20/2014 11:14:48 AM	R19403
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	6/20/2014 11:14:48 AM	R19403

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Apex Titan, Inc.

**Client Sample ID:** CONF-5

**Project:** 3D-4

**Collection Date:** 6/19/2014 8:30:00 AM

**Lab ID:** 1406958-005

**Matrix:** MEOH (SOIL)

**Received Date:** 6/20/2014 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/20/2014 1:28:58 PM	13803
Surr: DNOP	113	57.9-140		%REC	1	6/20/2014 1:28:58 PM	13803
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/20/2014 11:43:25 AM	R19403
Surr: BFB	93.6	80-120		%REC	1	6/20/2014 11:43:25 AM	R19403
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.048		mg/Kg	1	6/20/2014 11:43:25 AM	R19403
Toluene	ND	0.048		mg/Kg	1	6/20/2014 11:43:25 AM	R19403
Ethylbenzene	ND	0.048		mg/Kg	1	6/20/2014 11:43:25 AM	R19403
Xylenes, Total	ND	0.096		mg/Kg	1	6/20/2014 11:43:25 AM	R19403
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1	6/20/2014 11:43:25 AM	R19403

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Apex Titan, Inc.

Client Sample ID: CONF-6

Project: 3D-4

Collection Date: 6/19/2014 8:35:00 AM

Lab ID: 1406958-006

Matrix: MEOH (SOIL)

Received Date: 6/20/2014 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	30	10		mg/Kg	1	6/20/2014 2:13:53 PM	13803
Surr: DNOP	91.5	57.9-140		%REC	1	6/20/2014 2:13:53 PM	13803
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	20		mg/Kg	5	6/20/2014 12:12:10 PM	R19403
Surr: BFB	113	80-120		%REC	5	6/20/2014 12:12:10 PM	R19403
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.10		mg/Kg	5	6/20/2014 12:12:10 PM	R19403
Toluene	0.31	0.20		mg/Kg	5	6/20/2014 12:12:10 PM	R19403
Ethylbenzene	ND	0.20		mg/Kg	5	6/20/2014 12:12:10 PM	R19403
Xylenes, Total	1.4	0.40		mg/Kg	5	6/20/2014 12:12:10 PM	R19403
Surr: 4-Bromofluorobenzene	107	80-120		%REC	5	6/20/2014 12:12:10 PM	R19403

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Apex Titan, Inc.

Client Sample ID: N-SP

Project: 3D-4

Collection Date: 6/19/2014 8:40:00 AM

Lab ID: 1406958-007

Matrix: MEOH (SOIL)

Received Date: 6/20/2014 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/20/2014 2:12:40 PM	13803
Surr: DNOP	111	57.9-140		%REC	1	6/20/2014 2:12:40 PM	13803
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	6/20/2014 12:40:52 PM	R19403
Surr: BFB	97.3	80-120		%REC	1	6/20/2014 12:40:52 PM	R19403
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.042		mg/Kg	1	6/20/2014 12:40:52 PM	R19403
Toluene	ND	0.042		mg/Kg	1	6/20/2014 12:40:52 PM	R19403
Ethylbenzene	ND	0.042		mg/Kg	1	6/20/2014 12:40:52 PM	R19403
Xylenes, Total	ND	0.083		mg/Kg	1	6/20/2014 12:40:52 PM	R19403
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1	6/20/2014 12:40:52 PM	R19403

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Apex Titan, Inc.

Client Sample ID: E-SP

Project: 3D-4

Collection Date: 6/19/2014 8:45:00 AM

Lab ID: 1406958-008

Matrix: MEOH (SOIL)

Received Date: 6/20/2014 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/20/2014 2:34:28 PM	13803
Surr: DNOP	117	57.9-140		%REC	1	6/20/2014 2:34:28 PM	13803
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	6/20/2014 1:09:35 PM	R19403
Surr: BFB	96.0	80-120		%REC	1	6/20/2014 1:09:35 PM	R19403
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.041		mg/Kg	1	6/20/2014 1:09:35 PM	R19403
Toluene	ND	0.041		mg/Kg	1	6/20/2014 1:09:35 PM	R19403
Ethylbenzene	ND	0.041		mg/Kg	1	6/20/2014 1:09:35 PM	R19403
Xylenes, Total	ND	0.082		mg/Kg	1	6/20/2014 1:09:35 PM	R19403
Surr: 4-Bromofluorobenzene	106	80-120		%REC	1	6/20/2014 1:09:35 PM	R19403

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Apex Titan, Inc.

Client Sample ID: S-SP

Project: 3D-4

Collection Date: 6/19/2014 8:50:00 AM

Lab ID: 1406958-009

Matrix: MEOH (SOIL)

Received Date: 6/20/2014 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/20/2014 2:56:12 PM	13803
Surr: DNOP	115	57.9-140		%REC	1	6/20/2014 2:56:12 PM	13803
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	6/20/2014 1:38:18 PM	R19403
Surr: BFB	97.3	80-120		%REC	1	6/20/2014 1:38:18 PM	R19403
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.043		mg/Kg	1	6/20/2014 1:38:18 PM	R19403
Toluene	ND	0.043		mg/Kg	1	6/20/2014 1:38:18 PM	R19403
Ethylbenzene	ND	0.043		mg/Kg	1	6/20/2014 1:38:18 PM	R19403
Xylenes, Total	ND	0.087		mg/Kg	1	6/20/2014 1:38:18 PM	R19403
Surr: 4-Bromofluorobenzene	107	80-120		%REC	1	6/20/2014 1:38:18 PM	R19403

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

Qualifiers:		
*	Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E	Value above quantitation range	H Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1406958

23-Jun-14

Client: Apex Titan, Inc.

Project: 3D-4

Sample ID	<b>MB-13803</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>13803</b>	RunNo:	<b>19402</b>					
Prep Date:	<b>6/20/2014</b>	Analysis Date:	<b>6/20/2014</b>	SeqNo:	<b>561328</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	8.3		10.00		83.4	57.9	140			

Sample ID	<b>LCS-13803</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>13803</b>	RunNo:	<b>19402</b>					
Prep Date:	<b>6/20/2014</b>	Analysis Date:	<b>6/20/2014</b>	SeqNo:	<b>561594</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	100	60.8	145			
Surr: DNOP	3.4		5.000		68.9	57.9	140			

### 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#: 1406958

23-Jun-14

Client: Apex Titan, Inc.

Project: 3D-4

Sample ID	<b>5ML RB</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R19403</b>	RunNo:	<b>19403</b>					
Prep Date:		Analysis Date:	<b>6/20/2014</b>	SeqNo:	<b>561855</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	960		1000		96.1	80	120			

Sample ID	<b>2.5UG GRO LCS</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R19403</b>	RunNo:	<b>19403</b>					
Prep Date:		Analysis Date:	<b>6/20/2014</b>	SeqNo:	<b>561856</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	112	71.7	134			
Surr: BFB	1100		1000		106	80	120			

Sample ID	<b>1406958-001AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>CONF-1</b>	Batch ID:	<b>R19403</b>	RunNo:	<b>19403</b>					
Prep Date:		Analysis Date:	<b>6/20/2014</b>	SeqNo:	<b>561858</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	3.8	19.00	0	113	71.8	132			
Surr: BFB	810		759.9		107	80	120			

Sample ID	<b>1406958-001AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>CONF-1</b>	Batch ID:	<b>R19403</b>	RunNo:	<b>19403</b>					
Prep Date:		Analysis Date:	<b>6/20/2014</b>	SeqNo:	<b>561859</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	3.8	19.00	0	117	71.8	132	4.07	20	
Surr: BFB	820		759.9		109	80	120	0	0	

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1406958

23-Jun-14

**Client:** Apex Titan, Inc.

**Project:** 3D-4

Sample ID	<b>5ML RB</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R19403</b>	RunNo:	<b>19403</b>					
Prep Date:		Analysis Date:	<b>6/20/2014</b>	SeqNo:	<b>561870</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Sample ID	<b>100NG BTEX LCS</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R19403</b>	RunNo:	<b>19403</b>					
Prep Date:		Analysis Date:	<b>6/20/2014</b>	SeqNo:	<b>561871</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	105	80	120			
Toluene	1.0	0.050	1.000	0	103	80	120			
Ethylbenzene	1.0	0.050	1.000	0	104	80	120			
Xylenes, Total	3.1	0.10	3.000	0	103	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		114	80	120			

Sample ID	<b>1406958-002AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>CONF-2</b>	Batch ID:	<b>R19403</b>	RunNo:	<b>19403</b>					
Prep Date:		Analysis Date:	<b>6/20/2014</b>	SeqNo:	<b>561874</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.039	0.7880	0.006123	109	77.4	142			
Toluene	0.85	0.039	0.7880	0.02518	105	77	132			
Ethylbenzene	0.85	0.039	0.7880	0.008503	106	77.6	134			
Xylenes, Total	2.6	0.079	2.364	0.04146	108	77.4	132			
Surr: 4-Bromofluorobenzene	0.94		0.7880		119	80	120			

Sample ID	<b>1406958-002AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>CONF-2</b>	Batch ID:	<b>R19403</b>	RunNo:	<b>19403</b>					
Prep Date:		Analysis Date:	<b>6/20/2014</b>	SeqNo:	<b>561875</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.039	0.7880	0.006123	106	77.4	142	3.20	20	
Toluene	0.83	0.039	0.7880	0.02518	102	77	132	2.68	20	
Ethylbenzene	0.83	0.039	0.7880	0.008503	104	77.6	134	2.33	20	
Xylenes, Total	2.6	0.079	2.364	0.04146	106	77.4	132	1.61	20	
Surr: 4-Bromofluorobenzene	0.97		0.7880		123	80	120	0	0	S

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

**Sample Log-In Check List**

Client Name: Southwest Geoscience Work Order Number: 1406958 RcptNo: 1

Received by/date: *[Signature]* 06/20/14  
 Logged By: Lindsay Mangin 6/20/2014 8:00:00 AM *[Signature]*  
 Completed By: Lindsay Mangin 6/20/2014 8:31:53 AM *[Signature]*  
 Reviewed By: *mg* 06/20/14

**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? Yes  No  # of preserved bottles checked for pH: \_\_\_\_\_  
(Note discrepancies on chain of custody) (<2 or >12 unless noted)
- 13. Are matrices correctly identified on Chain of Custody? Yes  No  Adjusted? \_\_\_\_\_
- 14. Is it clear what analyses were requested? Yes  No
- 15. Were all holding times able to be met? Yes  No  Checked by: \_\_\_\_\_  
(If no, notify customer for authorization.)

**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	1.8	Good	Yes			

CHAIN OF CUSTODY RECORD

Apex TITAN, Inc. <b>Southwest<sup>TM</sup></b> GEOSCIENCE Environmental & Hydrogeologic Consultants		Laboratory: <u>HALL</u>		ANALYSIS REQUESTED										Lab use only Due Date:									
		Address: <u>ABQ</u>												Temp. of coolers when received (C°): <u>1.8</u>									
Office Location: <u>AZTEC, NM</u>		Contact: <u>FREEMAN</u>		BTEX 8021 TPH 8015										Page <u>1</u> of <u>1</u>									
Project Manager: <u>KYLE SUMMERS</u>		Phone: _____												PO/ISO #: <u>70304146023</u>					1.8				
Sampler's Name: <u>AARON BRYANT HEATHER WOODS</u>		Sampler's Signature: <u>[Signature]</u> <u>Heather M. Woods</u>		BTEX 8021 TPH 8015										Lab Sample ID (Lab Use Only)									
Project No.: <u>70304146023</u>		Project Name: <u>3D-4</u>												No/Type of Containers <u>1 x 4oz</u>									
Matrix	Date	Time	Coop	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1L	250 ml	P/O	Lab Sample ID (Lab Use Only)											
S	6-19-14	0810		X	CONF - 1						1	X	X	12019158-001									
		0815		X	CONF - 2						1	X	X	-002									
		0820		X	CONF - 3						1	X	X	-003									
		0825		X	CONF - 4						1	X	X	-004									
		0830		X	CONF - 5						1	X	X	-005									
		0835		X	CONF - 6						1	X	X	-006									
		0840	X		N-SP						1	X	X	-007									
		0845	X		E-SP						1	X	X	-008									
		0850	X		S-SP						1	X	X	-009									
														-00									
Turn around time <input type="checkbox"/> Normal <input type="checkbox"/> 25% Rush <input type="checkbox"/> 50% Rush <input checked="" type="checkbox"/> 100% Rush <u>Same Day</u>																							
Relinquished by (Signature): <u>[Signature]</u>			Date: <u>6/19/14</u> Time: <u>1240</u>		Received by (Signature): <u>[Signature]</u>			Date: <u>6/19/14</u> Time: <u>1240</u>		NOTES: Paykey: 2B21200 Direct Bill to Tom Long @ Enterprise Field Services													
Relinquished by (Signature): <u>[Signature]</u>			Date: <u>6/19/14</u> Time: <u>1810</u>		Received by (Signature): <u>[Signature]</u>			Date: <u>6/20/14</u> Time: <u>0800</u>															
Relinquished by (Signature): _____			Date: _____ Time: _____		Received by (Signature): _____			Date: _____ Time: _____															
Relinquished by (Signature): _____			Date: _____ Time: _____		Received by (Signature): _____			Date: _____ Time: _____															

Matrix Container: WW - Wastewater VOA - 40 ml vial W - Water A/G - Amber / Or Glass 1 Liter S - Soil SD - Solid L - Liquid 250 ml - Glass wide mouth A - Air Bag C - Charcoal tube SL - sludge O - Oil P/O - Plastic or other



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

June 26, 2014

Kyle Summers  
APEX TITAN  
606 S. Rio Grande Unit A  
Aztec, NM 87410  
TEL: (903) 821-5603  
FAX

RE: Enterprise Lateral 3D-4

OrderNo.: 1406A14

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 1 sample(s) on 6/21/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'John Caldwell', enclosed within a thin black rectangular border.

John Caldwell  
Supervisor  
4901 Hawkins NE  
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN Client Sample ID: Conf 7  
 Project: Enterprise Lateral 3D-4 Collection Date: 6/20/2014 4:36:00 PM  
 Lab ID: 1406A14-001 Matrix: SOIL Received Date: 6/21/2014 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/24/2014 11:23:48 PM	13833
Surr: DNOP	82.6	57.9-140		%REC	1	6/24/2014 11:23:48 PM	13833
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/24/2014 5:44:39 PM	13836
Surr: BFB	88.4	80-120		%REC	1	6/24/2014 5:44:39 PM	13836
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.050		mg/Kg	1	6/24/2014 5:44:39 PM	13836
Toluene	ND	0.050		mg/Kg	1	6/24/2014 5:44:39 PM	13836
Ethylbenzene	ND	0.050		mg/Kg	1	6/24/2014 5:44:39 PM	13836
Xylenes, Total	ND	0.099		mg/Kg	1	6/24/2014 5:44:39 PM	13836
Surr: 4-Bromofluorobenzene	97.8	80-120		%REC	1	6/24/2014 5:44:39 PM	13836

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

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1406A14

26-Jun-14

**Client:** APEX TITAN  
**Project:** Enterprise Lateral 3D-4

Sample ID	<b>MB-13833</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>13833</b>	RunNo:	<b>19428</b>					
Prep Date:	<b>6/23/2014</b>	Analysis Date:	<b>6/23/2014</b>	SeqNo:	<b>561973</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	7.5		10.00		75.3	57.9	140			

Sample ID	<b>LCS-13833</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>13833</b>	RunNo:	<b>19428</b>					
Prep Date:	<b>6/23/2014</b>	Analysis Date:	<b>6/23/2014</b>	SeqNo:	<b>561976</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Diesel Range Organics (DRO)	46	10	50.00	0	92.3	68.6	130			
Surr: DNOP	3.6		5.000		72.8	57.9	140			

Sample ID	<b>MB-13859</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>13859</b>	RunNo:	<b>19466</b>					
Prep Date:	<b>6/24/2014</b>	Analysis Date:	<b>6/24/2014</b>	SeqNo:	<b>563203</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Surr: DNOP	9.6		10.00		96.4	57.9	140			
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Sample ID	<b>LCS-13859</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>13859</b>	RunNo:	<b>19466</b>					
Prep Date:	<b>6/24/2014</b>	Analysis Date:	<b>6/24/2014</b>	SeqNo:	<b>563204</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Surr: DNOP	4.7		5.000		94.6	57.9	140			
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Sample ID	<b>MB-13809</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>13809</b>	RunNo:	<b>19464</b>					
Prep Date:	<b>6/20/2014</b>	Analysis Date:	<b>6/24/2014</b>	SeqNo:	<b>563212</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Surr: DNOP	8.1		10.00		81.1	57.9	140			
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Sample ID	<b>LCS-13809</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>13809</b>	RunNo:	<b>19464</b>					
Prep Date:	<b>6/20/2014</b>	Analysis Date:	<b>6/24/2014</b>	SeqNo:	<b>563213</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Surr: DNOP	3.8		5.000		76.7	57.9	140			
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**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#: 1406A14

26-Jun-14

Client: APEX TITAN  
Project: Enterprise Lateral 3D-4

Sample ID	<b>5ML RB</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R19462</b>	RunNo:	<b>19462</b>					
Prep Date:		Analysis Date:	<b>6/24/2014</b>	SeqNo:	<b>563599</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	980		1000		98.3	80	120			

Sample ID	<b>2.5UG GRO LCS</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R19462</b>	RunNo:	<b>19462</b>					
Prep Date:		Analysis Date:	<b>6/24/2014</b>	SeqNo:	<b>563600</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		107	80	120			

Sample ID	<b>MB-13836</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>13836</b>	RunNo:	<b>19478</b>					
Prep Date:	<b>6/23/2014</b>	Analysis Date:	<b>6/24/2014</b>	SeqNo:	<b>563632</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	850		1000		85.0	80	120			

Sample ID	<b>LCS-13836</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>13836</b>	RunNo:	<b>19478</b>					
Prep Date:	<b>6/23/2014</b>	Analysis Date:	<b>6/24/2014</b>	SeqNo:	<b>563633</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	102	71.7	134			
Surr: BFB	1000		1000		100	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#: 1406A14

26-Jun-14

**Client:** APEX TITAN  
**Project:** Enterprise Lateral 3D-4

Sample ID	<b>5ML RB</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R19462</b>	RunNo:	<b>19462</b>					
Prep Date:		Analysis Date:	<b>6/24/2014</b>	SeqNo:	<b>563614</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		110	80	120			

Sample ID	<b>100NG BTEX LCS</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R19462</b>	RunNo:	<b>19462</b>					
Prep Date:		Analysis Date:	<b>6/24/2014</b>	SeqNo:	<b>563615</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.2		1.000		117	80	120			

Sample ID	<b>MB-13836</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>13836</b>	RunNo:	<b>19478</b>					
Prep Date:	<b>6/23/2014</b>	Analysis Date:	<b>6/24/2014</b>	SeqNo:	<b>563675</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.90		1.000		89.8	80	120			

Sample ID	<b>LCS-13836</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>13836</b>	RunNo:	<b>19478</b>					
Prep Date:	<b>6/23/2014</b>	Analysis Date:	<b>6/24/2014</b>	SeqNo:	<b>563676</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.050	1.000	0	97.5	80	120			
Toluene	0.95	0.050	1.000	0	94.8	80	120			
Ethylbenzene	0.94	0.050	1.000	0	94.4	80	120			
Xylenes, Total	3.0	0.10	3.000	0	98.4	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	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

**Sample Log-In Check List**

Client Name: APEX AZTEC

Work Order Number: 1406A14

RcptNo: 1

Received by/date: [Signature] 06/21/14

Logged By: Ashley Gallegos 6/21/2014 10:00:00 AM [Signature]

Completed By: Ashley Gallegos 6/21/2014 12:08:47 PM [Signature]

Reviewed By: [Signature] 06/23/14

**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? 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? Yes  No

# of preserved bottles checked for pH: \_\_\_\_\_  
 (<2 or >12 unless noted)  
 Adjusted? \_\_\_\_\_  
 Checked by: \_\_\_\_\_

**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	2.1	Good	Yes			



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

Form C-141  
Revised August 8, 2011

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

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

**Release Notification and Corrective Action**

**OPERATOR**

Initial Report  Final Report

Name of Company: Enterprise Field Services LLC	Contact: Thomas Long
Address: 614 Reilly Ave, Farmington, NM 87401	Telephone No. 505-599-2286
Facility Name: Argo #500	Facility Type: Natural Gas Gathering Line

Surface Owner: BLM	Mineral Owner: BLM	API No.
--------------------	--------------------	---------

**LOCATION OF RELEASE**

Unit Letter N	Section 18	Township 27N	Range 10W	Feet from the 669	North <del>South</del> Line	Feet from the 1868	East <del>West</del> Line	County San Juan
------------------	---------------	-----------------	--------------	-------------------------	-----------------------------	--------------------------	---------------------------	--------------------

Latitude 36.569831 Longitude -107.939898 **RCVD SEP 2 '14**

**NATURE OF RELEASE**

**OIL CONS. DIV.**

Type of Release: Natural Gas	Volume of Release: 47.89 MCF	Volume Recovered: Unknown
Source of Release: Suspected Internal Corrosion	Date and Hour of Occurrence: 6/25/2014 @ 12:15 a.m.	Date and Hour of Discovery: 6/25/2014 @ 12:45 p.m.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? Courtesy Notification to NMOCD – Cory Smith; BLM -Shari Ketcham <b>DIST. 3</b>	
By Whom? Thomas Long	Date and Hour 7/3/2014 @ 8:47 a.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse	

If a Watercourse was Impacted, Describe Fully.\*  
Describe Cause of Problem and Remedial Action: Enterprise personnel responded to a possible line leak on the Argo 500 well tie. An Enterprise technician verified the leak and initiated notification procedures. The pipeline was isolated, blown down, and depressurized and lock out tag out was applied. Remediation activities were completed on July 9, 2014. The final excavation dimension measured approximately twenty-one (21) feet long by thirteen (13) wide by fourteen (14) feet deep. Approximately 80 cubic yards of hydrocarbon impacted soil was excavated and transported to a NMOCD approved land farm facility.

Describe Area Affected and Cleanup Action Taken.\*: Enterprise personnel responded to a possible line leak on the Argo 500 well tie. An Enterprise technician verified the leak and initiated notification procedures. The pipeline was isolated, blown down, and depressurized and lock out tag out was applied. Remediation activities were completed on July 9, 2014. The final excavation dimension measured approximately twenty-one (21) feet long by thirteen (13) wide by fourteen (14) feet deep. Approximately 80 cubic yards of hydrocarbon impacted soil was excavated and transported to a NMOCD approved land farm facility. A third party corrective action report is included with this "Final C-141."

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:	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Ivan W. Zirbes	Approved by Environmental Specialist:	
Title: Sr. Director, Environmental	Approval Date: 11/19/14	Expiration Date:
E-mail Address: snolan@eprod.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 8-25-2014 Phone: (713)381-6595		

\* Attach Additional Sheets If Necessary

#NCS/432332171

150



## CORRECTIVE ACTION REPORT

Property:

**Argo #500 Well Tie Release  
SW 1/4, S18 T27N R10W  
San Juan County, New Mexico**

August 11, 2014  
Apex Project No. 7030414G025

Prepared for:

**Enterprise Field Services LLC  
614 Reilly Avenue  
Farmington, NM 87401  
Attn: Mr. Thomas Long**

Prepared by:

Handwritten signature of Heather M. Woods in black ink.

---

Heather M. Woods, P.G.  
Senior Project Manager

Handwritten signature of Elizabeth Scaggs in black ink.

---

Elizabeth Scaggs, P.G.  
Senior Program Manager

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### LIST OF APPENDICES

<b>Appendix A:</b>	Figure 1 – Topographic Map Figure 2 – Site Vicinity Map Figure 3 – Site Map with Sample Locations
<b>Appendix B:</b>	Executed C-138 Solid Waste Acceptance Forms
<b>Appendix C:</b>	Photographic Documentation
<b>Appendix D:</b>	Tables
<b>Appendix E:</b>	Laboratory Analytical Reports & Chain of Custody Documentation

## **CORRECTIVE ACTION REPORT**

**Argo #500 Well Tie Release**  
SW 1/4, S18 T27N R10W  
San Juan County, New Mexico

**Apex Project No. 7030414G025**

### **1.0 INTRODUCTION**

#### **1.1 Site Description & Background**

The Argo #500 well tie release site is located within the Enterprise Field Services LLC (Enterprise) pipeline right-of-way (ROW) in the southwest (SW) ¼ of Section 18 in Township 27 North and Range 10 West in rural San Juan County, New Mexico (36.57066N, 107.94039W), referred to hereinafter as the "Site" or "subject Site". The Site is located adjacent to the Argo #500 well pad, on public land managed by the United States Bureau of Land Management (BLM). The Site is surrounded by native vegetation rangeland periodically interrupted with oil and gas gathering facilities, including the Enterprise natural gas gathering pipeline which traverses the area from approximately north to south.

On July 9, 2014, Enterprise shut in the Argo #500 well tie pipeline and initiated excavation activities at the Site in an effort to locate and repair a subsurface leak. The leak was subsequently identified and repaired. An unknown quantity of dry natural gas and condensate/water mixture was released from the pipeline as a result of internal corrosion. The leak was identified by a release of natural gas and possible minor liquids at the ground surface characterized by a soil mound and vent hole at the release location.

A topographic map depicting the location of the Site is included as Figure 1, and a Site Vicinity Map is included as Figure 2 in Appendix A.

#### **1.2 Project Objective**

The primary objective of the corrective actions was to reduce the concentration of constituents of concern (COCs) in the on-Site soils to below the New Mexico Energy, Minerals, and Natural Resources Department (EMNRD), Oil Conservation Division (OCD) *Remediation Action Levels* using the New Mexico EMNRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases* as guidance.

### **2.0 SITE RANKING**

The local BLM office, located in Farmington, NM, has indicated to Enterprise that they concur with the established New Mexico OCD rules and standards pertaining to corrective actions and remediation goals for oil and gas releases in northwest New Mexico. In accordance with the New Mexico ENMRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases*, Apex TITAN, Inc. (Apex), utilized the general site characteristics obtained during the completion of corrective action activities and information available from the Office of the New Mexico Office of the State Engineer to determine the appropriate "ranking" for the Site. The ranking criteria and associated scoring are provided in the following table:



Ranking Criteria			Ranking Score
Depth to Groundwater	<50 feet	20	20*
	50 to 99 feet	10	
	>100 feet	0	
Wellhead Protection Area • <1,000 feet from a water source, or, <200 feet from private domestic water source.	Yes	20	0
	No	0	
Distance to Surface Water Body	<200 feet	20	10
	200 to 1,000 feet	10	
	>1,000 feet	0	
<b>Total Ranking Score</b>			<b>30</b>

\*Based on anticipated groundwater depth at <50 feet below grade surface (bgs).

Based on Apex's evaluation of the scoring criteria, the Site would have a maximum Total Ranking Score of "30". This ranking is based on the following:

- The Site is approximately 400 feet west of the Kutz Wash ordinary high-water mark. Based on this proximity, a maximum ranking for distance to surface water was assigned at "10".
- No water wells were identified on the Office of the State Engineer website database within one mile of the Site. However, the proximity of the Site to Kutz Wash indicates a potential depth to water of less than 50 feet bgs, resulting in a ranking of "20" for depth to groundwater.
- No water sources were identified within 1,000 feet of the Site.

### 3.0 RESPONSE ACTIONS

#### 3.1 Soil Excavation Activities

On July 9, 2014, Enterprise shut in the Argo #500 well tie pipeline and initiated excavation activities at the Site in an effort to locate and repair a potential leak. An unknown quantity of natural gas and condensate/water mixture was released from the pipeline as a result of internal corrosion. The leak was identified by a release of natural gas and possible minor liquids at the ground surface characterized by a soil mound and vent hole at the release location. Subsequent to the completion of pipeline repairs, the hydrocarbon affected soils were excavated from the Site. During the corrective action activities, West States Energy Contractors provided heavy equipment and labor support, and Kyle Summers and Heather Woods, Apex environmental professionals, provided environmental support.

The total depth of the final excavation measured approximately 14 feet bgs in the release footprint. The overall average surface expression of the excavation measured approximately 21 feet long by 13 feet wide.

The lithology encountered during the completion of corrective action activities consisted primarily of unconsolidated silty- and clayey-sands.

Based on field photoionization detector (PID) screening, approximately 80 cubic yards of hydrocarbon affected soils were transported to the Envirotech, Inc. (Envirotech) landfarm near Hilltop, NM for disposal/remediation. The executed C-138 form is provided in Appendix B. The remaining stockpiled soil was sampled to verify that it was unaffected, and the excavation was subsequently backfilled with clean imported fill and the remaining stockpiled soils. The Site was

then contoured to surrounding grade. The area will ultimately be reseeded with a BLM-approved seed mix.

Figure 3 is a site map that indicates the approximate location of the excavated area in relation to pertinent land features (Appendix A). Photographic documentation of the field activities is included in Appendix C.

### 3.2 Soil Sampling Program

Apex screened head-space samples of Site soils with a PID fitted with a 10.6 eV lamp to estimate excavation limits.

Apex's soil sampling program included the collection of six (6) composite confirmation samples (S-1 through S-6), from the resulting excavation for laboratory analysis. Additionally, one (1) composite sample (SP-1) was collected from remaining stockpiled soils to determine the potential to reuse these soils as excavation backfill. Figure 3 depicts the approximate location of the excavated areas and shows the final confirmation sample locations in relation to the final excavation dimensions (Appendix A).

The confirmation soil samples were collected and placed in laboratory prepared glassware, labeled/sealed using the laboratory supplied labels, and placed on ice in a cooler, which was secured with a custody seal. The sample cooler and completed chain-of-custody form were relinquished to Envirotech Analytical Laboratory in Bloomfield, New Mexico for rush analysis.

### 3.3 Laboratory Analytical Methods

The confirmation soil samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) utilizing EPA SW-846 Method #8021, and total petroleum hydrocarbons (TPH) gasoline range organics (GRO) and diesel range organics (DRO) utilizing EPA SW-846 Method #8015.

Laboratory results are summarized in Table 1, included in Appendix D. The executed chain-of-custody form and laboratory data sheets are provided in Appendix E.

## 4.0 DATA EVALUATION

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD and the United States BLM. The local BLM office, located in Farmington, NM, has indicated to Enterprise that they concur with the established New Mexico OCD rules and standards pertaining to corrective actions and remediation goals for oil and gas releases in northwest New Mexico. To address activities related to condensate releases, the New Mexico EMNRD OCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the OCD rules, specifically NMAC 19.15.30 *Remediation*. These guidance documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

### 4.1 Confirmation Soil Samples

Apex compared the BTEX and TPH concentrations or reporting limits associated with the final confirmation samples (S-1 through S-6) collected from the excavated area and stockpile sample (SP-1) to the OCD *Remediation Action Levels* (RALs) for sites having a total ranking score of "30".

- The laboratory analyses of confirmation samples collected from soils remaining in place do not indicate benzene concentrations above the laboratory reporting limits, which are below the *OCD Remediation Action Level*.
- The laboratory analyses of the confirmation samples collected from soils remaining in place do not indicate total BTEX concentrations above the laboratory reporting limits, which are below the *OCD Remediation Action Level*.
- The laboratory analyses of the confirmation samples do not indicate TPH GRO/DRO concentrations above the laboratory reporting limits, which are below the *OCD Remediation Action Level* of 100 milligram per Kilogram (mg/Kg) for a Site ranking of "30".

Confirmation sample results are provided in Table 1 in Appendix D.

## 5.0 FINDINGS AND RECOMMENDATIONS

The Argo #500 well tie release site is located within the Enterprise pipeline ROW in the SW ¼ of Section 18 in Township 27 North and Range 10 West in rural San Juan County, New Mexico, (36.57066N, 107.94039W). The Site is located adjacent to the Argo #500 well pad, on public land managed by the United States BLM. The Site is surrounded by native vegetation rangeland periodically interrupted with oil and gas gathering facilities, including the Enterprise natural gas gathering pipeline which traverses the area from approximately north to south.

On July 9, 2014, Enterprise shut in the Argo #500 well tie pipeline and initiated excavation activities at the Site in an effort to locate and repair a subsurface leak. The leak was subsequently identified and repaired. An unknown quantity of dry natural gas and condensate/water mixture was released from the pipeline as a result of internal corrosion. The leak was identified by a release of natural gas and possible minor liquids at the ground surface characterized by a soil mound and vent hole at the release location.

- The primary objective of the corrective actions was to reduce the concentration of COCs in the on-Site soils to below the New Mexico EMNRD *OCD RALs* using the New Mexico EMNRD *OCD's Guidelines for Remediation of Leaks, Spills and Releases* as guidance.
- The total depth of the final excavation was approximately 14 feet bgs. The surface expression of the final excavation measured approximately 21 feet long by 13 feet wide.
- Prior to backfilling, six (6) final confirmation samples were collected from the resulting excavation for laboratory analyses. Additionally, one (1) composite sample was collected from remaining stockpiled soils to determine the potential to reuse these soils as excavation backfill. Based on analytical results, soils remaining in place do not exhibit benzene or total BTEX concentrations above laboratory RALs, which are below the *OCD Remediation Action Levels*. Laboratory analytical results for soils remaining in place do not exhibit concentrations of combined TPH GRO/DRO above the *OCD Remediation Action Level* of 100 mg/Kg for a Site ranking of "30".
- A total of approximately 80 cubic yards of hydrocarbon affected soils were transported to the Envirotech landfarm near Hilltop, NM for disposal/remediation. The excavation was backfilled with clean imported fill and stockpiled soil not impacted by COCs above applicable *OCD Remediation Action Levels* based on laboratory analytical results. The area was then contoured to the surrounding grade. The area will ultimately be reseeded with a BLM-approved seed mix.

---

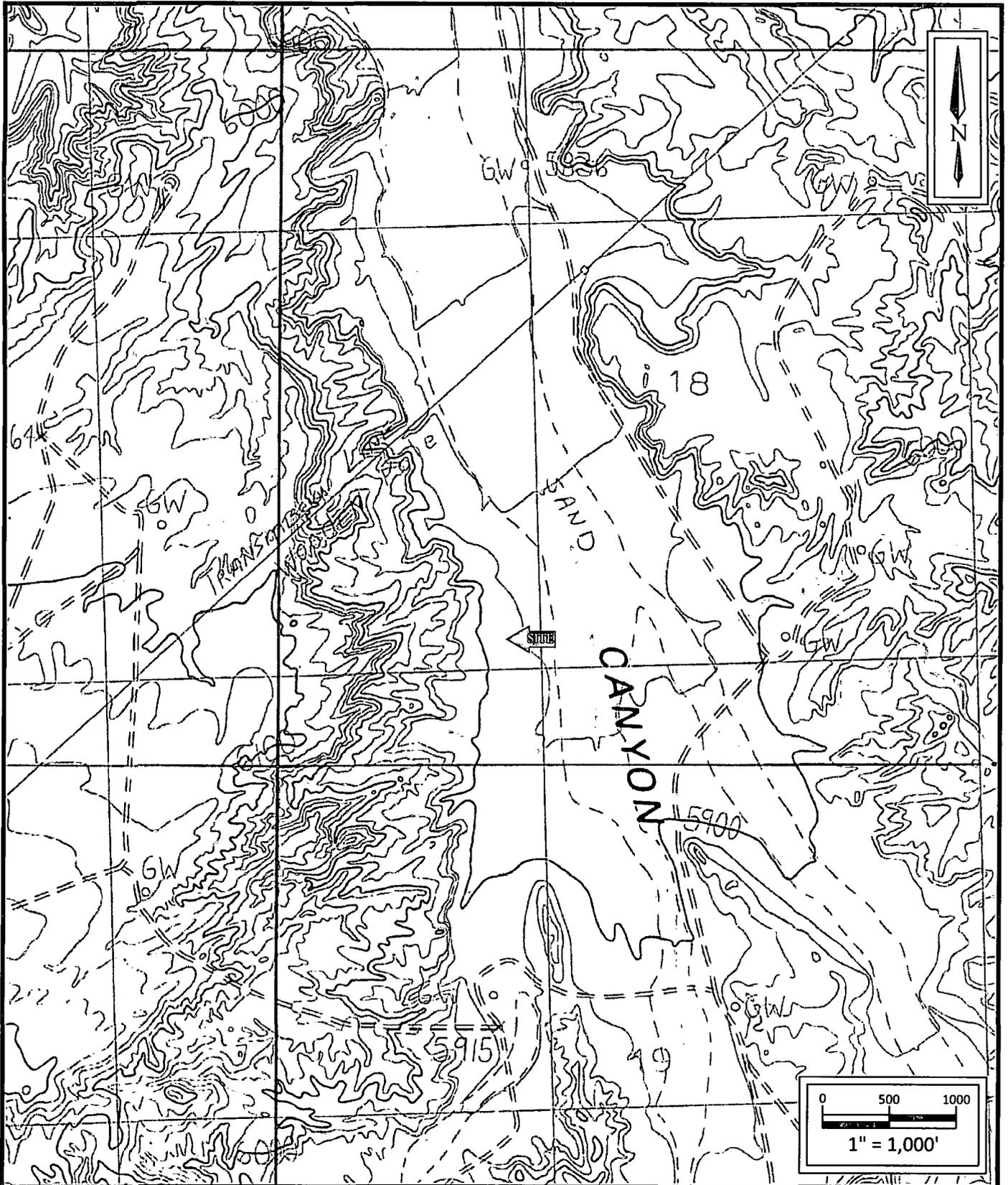
**Based on field observations and laboratory analytical results, no additional investigation or corrective action appears warranted at this time.**

## **6.0 STANDARD OF CARE, LIMITATIONS, AND RELIANCE**

Apex's services were performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. Apex makes no warranties, expressed or implied, as to the services performed hereunder. Additionally, Apex does not warrant the work of third parties supplying information used in the report (e.g. laboratories, regulatory agencies, or other third parties). This scope of services was performed in accordance with the scope of work agreed with the client.

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-Site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, or not present during these services, and Apex cannot represent that the Site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this scope of services. Environmental conditions at other areas or portions of the Site may vary from those encountered at actual sample locations. Apex's findings and recommendations are based solely upon data available to Apex at the time of these services.

This report has been prepared for the exclusive use of Enterprise, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the expressed written authorization of Enterprise and Apex. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the proposal, the report, and Apex's Agreement. The limitation of liability defined in the agreement is the aggregate limit of Apex's liability to the client.



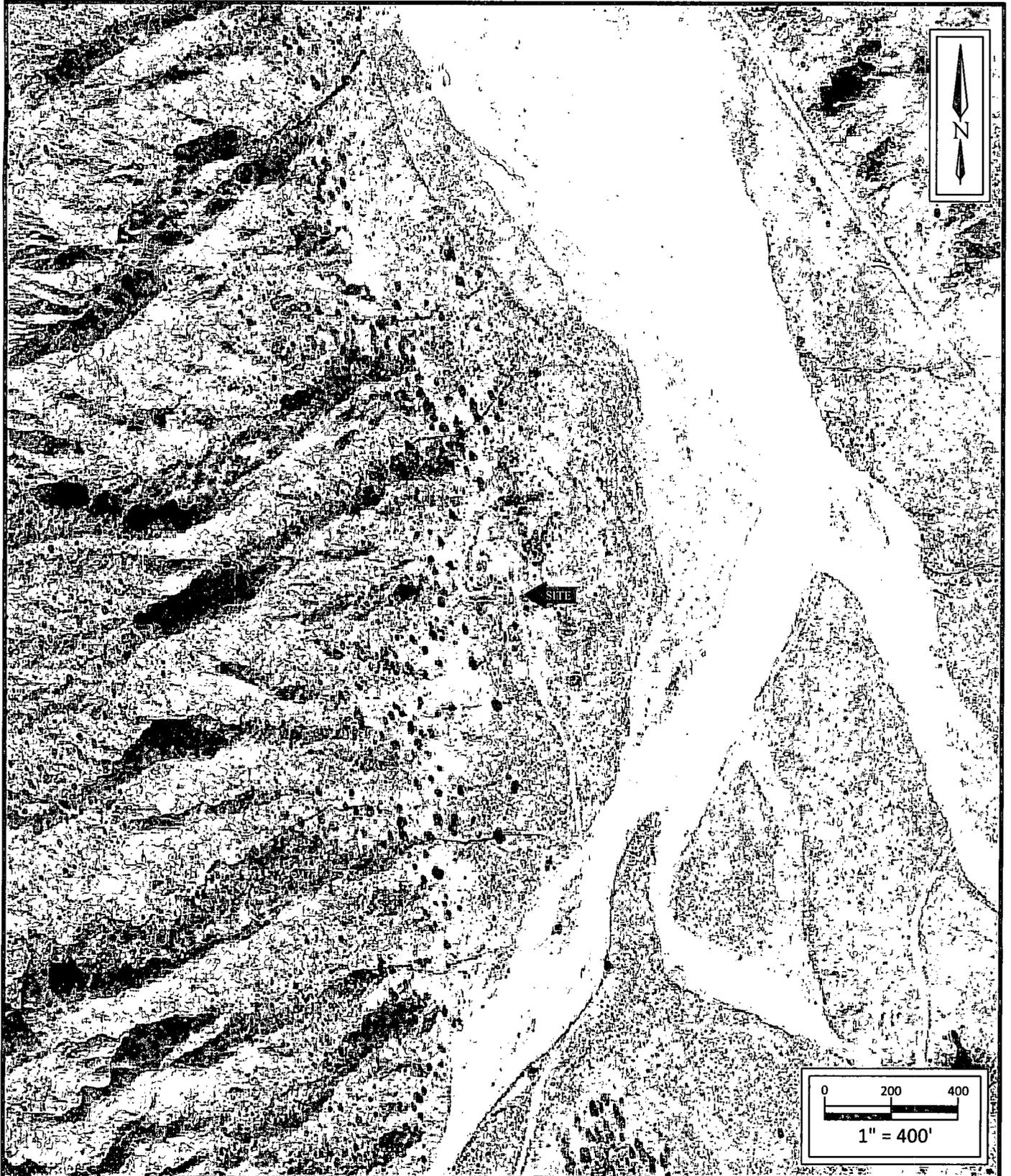
**Argo #500 Well Tie Pipeline Release**  
 SW $\frac{1}{4}$  S18 T27N R10W  
 Rural San Juan County, NM  
 36.57066N, 107.94039W

Project No. 7030414G025



**Apex TITAN, Inc.**  
 606 S. Rio Grande, Suite A  
 Aztec, New Mexico 87410  
 Phone: (505) 334-5200  
[www.apexcos.com](http://www.apexcos.com)  
 A Subsidiary of Apex Companies, LLC

**FIGURE 1**  
**Topographic Map**  
 East Fork Kutz Canyon, NM Quadrangle  
 1985



**Argo #500 Well Tie Pipeline Release**

SW $\frac{1}{4}$  S18 T27N R10W  
Rural San Juan County, NM  
36.57066N, 107.94039W

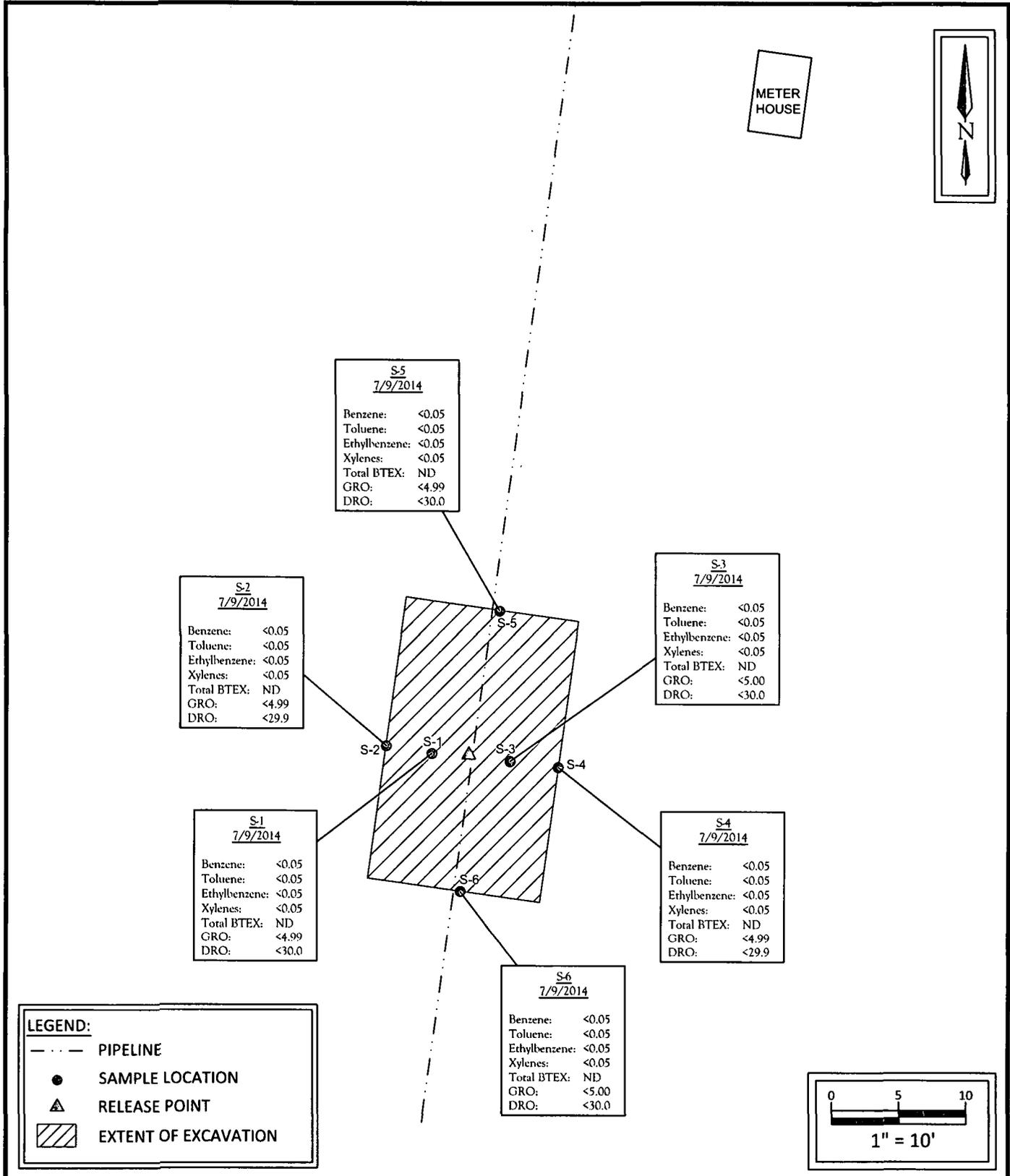


**Apex TITAN, Inc.**

606 S. Rio Grande, Suite A  
Aztec, New Mexico 87410  
Phone: (505) 334-5200  
[www.apexcos.com](http://www.apexcos.com)  
A Subsidiary of Apex Companies, LLC

**FIGURE 2**  
**Site Vicinity Map**  
2013 Aerial Photograph

Project No. 7030414G025



**Argo #500 Well Tie Pipeline Release**  
 SW $\frac{1}{4}$  S18 T27N R10W  
 Rural San Juan County, NM  
 36.57066N, 107.94039W

Project No. 7030414G025



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 Aztec, New Mexico 87410  
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 A Subsidiary of Apex Companies, LLC

**FIGURE 3**  
**Site Map with**  
**Sample Locations**

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

Form C-138  
Revised 08/01/11

\*Surface Waste Management Facility Operator  
and Generator shall maintain and make this  
documentation available for Division inspection.

### REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

<b>1. Generator Name and Address:</b> Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401
<b>2. Originating Site:</b> Argo #500 Well Tie
<b>3. Location of Material (Street Address, City, State or ULSTR):</b> Unit Letter N Section 18 T 27N R 10W, GPS 36.5569831, -107.939898, San Juan County, NM
<b>4. Source and Description of Waste:</b> Source: Natural Gas Pipeline Release Description: Exempt petroleum affected soil from clean-up efforts at pipeline release. Estimated Volume <u>50</u> yd <sup>3</sup> bbls Known Volume (to be entered by the operator at the end of the haul) <u>80</u> yd <sup>3</sup> bbls
<b>5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS</b>  I, <u>Thomas Long</u> , representative or authorized agent for <u>Enterprise Field Services, LLC</u> do hereby <b>Generator Signature</b> certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)  <input checked="" type="checkbox"/> RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. <u>Operator Use Only: Waste Acceptance Frequency</u> <input type="checkbox"/> Monthly <input type="checkbox"/> Weekly <input checked="" type="checkbox"/> Per Load  <input type="checkbox"/> RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)  <input type="checkbox"/> MSDS Information <input type="checkbox"/> RCRA Hazardous Waste Analysis <input checked="" type="checkbox"/> Process Knowledge <input type="checkbox"/> Other (Provide description in Box 4)  <b>GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS</b>  I, <u>Thomas Long</u> , 7-8-14, representative for <u>Enterprise Field Services, LLC</u> authorize Envirotech, Inc. to complete <b>Generator Signature</b> the required testing/sign the Generator Waste Testing Certification.  I, <u>Keandra Runney</u> , representative for <u>Envirotech, Inc</u> do hereby certify that <b>Representative/Agent Signature</b> representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.
<b>5. Transporter:</b> <u>West States Energy Contractors. Moss Excavation</u>

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Envirotech, Inc. Soil Remediation Facility \* Permit #: NM 01-0011  
Address of Facility: Hilltop, NM

Method of Treatment and/or Disposal:

Evaporation  Injection  Treating Plant  Landfarm  Landfill  Other

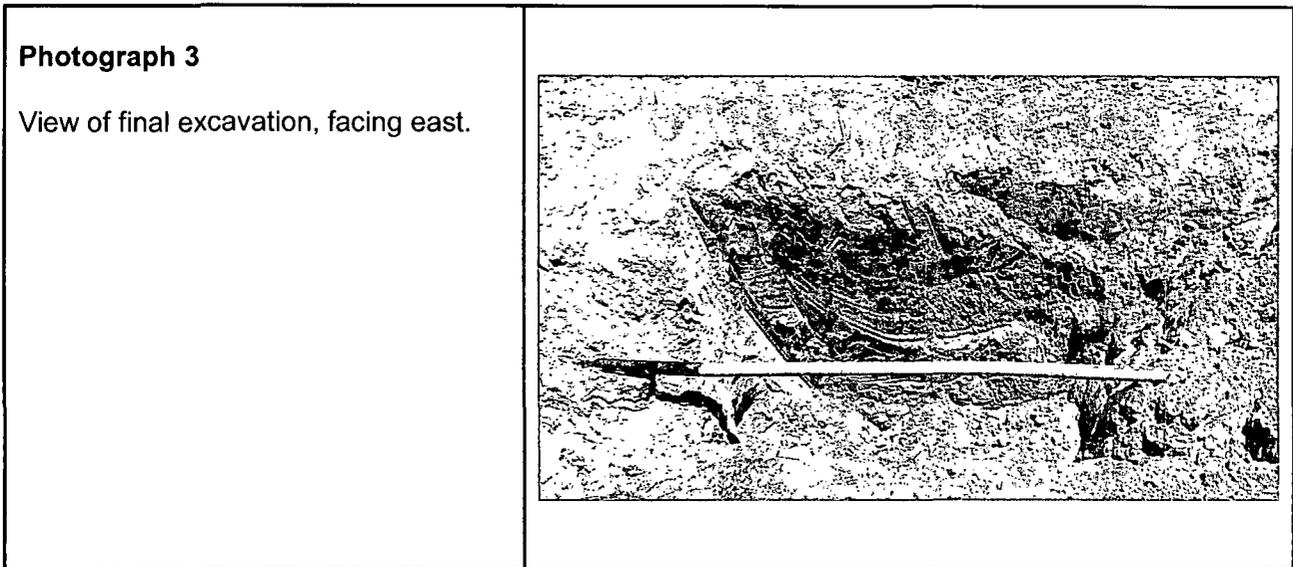
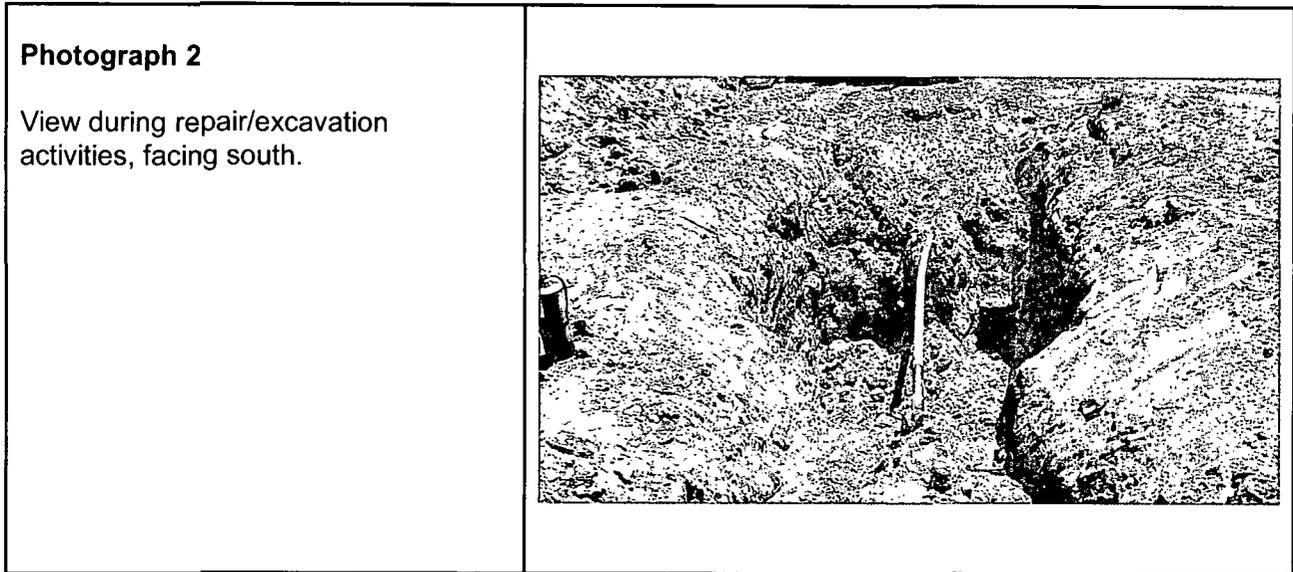
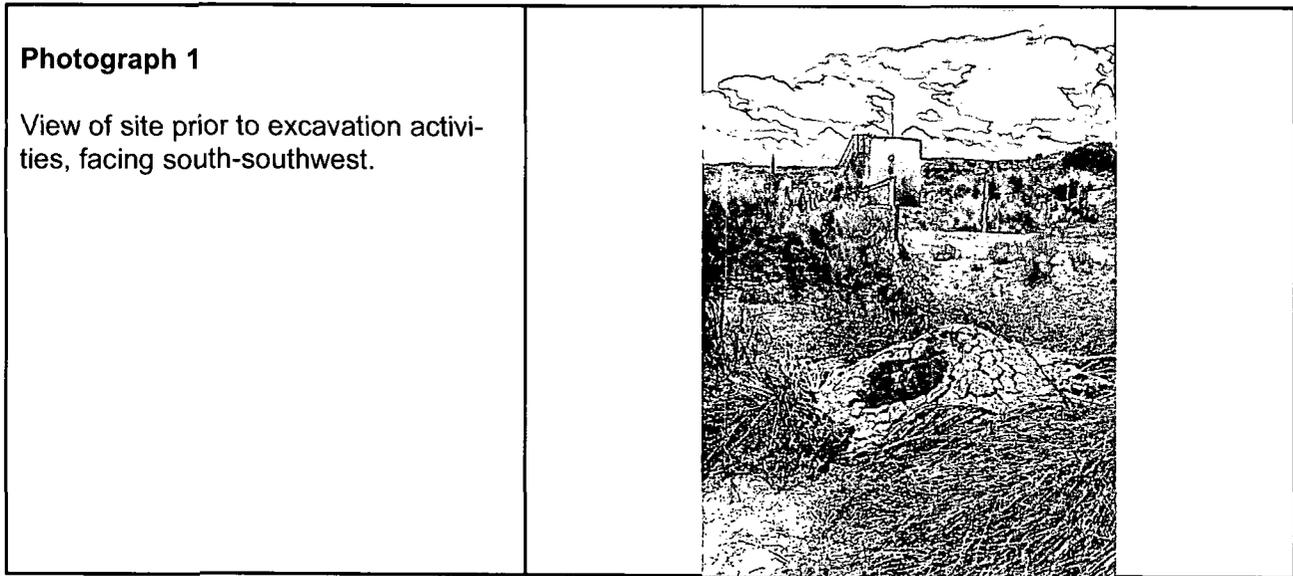
Waste Acceptance Status:

APPROVED

DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Keandra Runney  
SIGNATURE: Keandra Runney  
Surface Waste Management Facility Authorized Agent

TITLE: Waste Coordinator DATE: 7/9/14  
TELEPHONE NO.: 505-632-0615





**TABLE 1**  
**Argo #500 Well Tie Pipeline Release**  
**SOIL ANALYTICAL SUMMARY**

Sample I.D.	Date	Sample Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)
<b>New Mexico Entergy, Mineral &amp; Natural Resources Department, Oil Conservation Division, Remediation Action Level</b>			<b>10</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>50</b>	<b>100</b>	
<b>Stockpile Confirmation Samples</b>									
SP-1	7/9/2014	Stockpile	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<30.0
<b>Final Confirmation Samples</b>									
S-1	7/9/2014	14	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<30.0
S-2	7/9/2014	11 to 13	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<29.9
S-3	7/9/2014	14	<0.05	<0.05	<0.05	<0.05	ND	<5.00	<30.0
S-4	7/9/2014	11 to 13	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<29.9
S-5	7/9/2014	11 to 13	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<30.0
S-6	7/9/2014	11 to 13	<0.05	<0.05	<0.05	<0.05	ND	<5.00	<30.0

Note: Concentrations in bold and yellow exceed the applicable OCD Remediation Action Level

NE = Not Established

ND = Not Detected



## Analytical Report

### Report Summary

Client: Enterprise Products  
Chain Of Custody Number: 17204  
Samples Received: 7/9/2014 4:05:00PM  
Job Number: 97057-0352  
Work Order: P407041  
Project Name/Location: Argo #500

Entire Report Reviewed By:

A handwritten signature in black ink, appearing to read 'Tim Cain', is written over a horizontal line.

Date: 7/11/14

Tim Cain, Laboratory Manager

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



Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: Argo #500 Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 11-Jul-14 14:04
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### Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
S-1	P407041-01A	Soil	07/09/14	07/09/14	Glass Jar, 4 oz.
S-2	P407041-02A	Soil	07/09/14	07/09/14	Glass Jar, 4 oz.
S-3	P407041-03A	Soil	07/09/14	07/09/14	Glass Jar, 4 oz.
S-4	P407041-04A	Soil	07/09/14	07/09/14	Glass Jar, 4 oz.
S-5	P407041-05A	Soil	07/09/14	07/09/14	Glass Jar, 4 oz.
S-6	P407041-06A	Soil	07/09/14	07/09/14	Glass Jar, 4 oz.

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: Argo #500 Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 11-Jul-14 14:04
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S-1

P407041-01 (Solid)

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Volatile Organics by EPA 8021</b>									
Benzene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
<i>Surrogate: Bromochlorobenzene</i>		102 %		80-120	1428022	07/10/14	07/10/14	EPA 8021B	
<i>Surrogate: 1,3-Dichlorobenzene</i>		100 %		80-120	1428022	07/10/14	07/10/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1428023	07/10/14	07/10/14	EPA 8015D	

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: Argo #500 Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 11-Jul-14 14:04
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S-2

P407041-02 (Solid)

Analyte	Result	Reporting			Batch	Prepared	Analyzed	Method	Notes
		Limit	Units	Dilution					
<b>Volatile Organics by EPA 8021</b>									
Benzene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
<i>Surrogate: Bromochlorobenzene</i>		102 %		80-120	1428022	07/10/14	07/10/14	EPA 8021B	
<i>Surrogate: 1,3-Dichlorobenzene</i>		100 %		80-120	1428022	07/10/14	07/10/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1428023	07/10/14	07/10/14	EPA 8015D	

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: Argo #500 Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 11-Jul-14 14:04
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S-3

P407041-03 (Solid)

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Volatile Organics by EPA 8021</b>									
Benzene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		93.1 %		80-120	1428022	07/10/14	07/10/14	EPA 8021B	
Surrogate: Bromochlorobenzene		93.8 %		80-120	1428022	07/10/14	07/10/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1428023	07/10/14	07/10/14	EPA 8015D	

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: Argo #500 Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 11-Jul-14 14:04
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S-4

P407041-04 (Solid)

Analyte	Result	Reporting			Batch	Prepared	Analyzed	Method	Notes
		Limit	Units	Dilution					
<b>Volatile Organics by EPA 8021</b>									
Benzene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
<i>Surrogate: Bromochlorobenzene</i>		102 %		80-120	1428022	07/10/14	07/10/14	EPA 8021B	
<i>Surrogate: 1,3-Dichlorobenzene</i>		98.4 %		80-120	1428022	07/10/14	07/10/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1428023	07/10/14	07/10/14	EPA 8015D	

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: Argo #500 Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 11-Jul-14 14:04
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S-5

P407041-05 (Solid)

Analyte	Result	Reporting			Batch	Prepared	Analyzed	Method	Notes
		Limit	Units	Dilution					
<b>Volatile Organics by EPA 8021</b>									
Benzene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
<i>Surrogate: Bromochlorobenzene</i>		96.2 %		80-120	1428022	07/10/14	07/10/14	EPA 8021B	
<i>Surrogate: 1,3-Dichlorobenzene</i>		93.8 %		80-120	1428022	07/10/14	07/10/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1428023	07/10/14	07/10/14	EPA 8015D	

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: Argo #500 Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 11-Jul-14 14:04
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S-6

P407041-06 (Solid)

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Volatile Organics by EPA 8021</b>									
Benzene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
<i>Surrogate: 1,3-Dichlorobenzene</i>		100 %		80-120	1428022	07/10/14	07/10/14	EPA 8021B	
<i>Surrogate: Bromochlorobenzene</i>		103 %		80-120	1428022	07/10/14	07/10/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1428023	07/10/14	07/10/14	EPA 8015D	

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: Argo #500 Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 11-Jul-14 14:04
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**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
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**Batch 1428022 - Purge and Trap EPA 5030A**

<b>Blank (1428022-BLK1)</b>		Prepared & Analyzed: 10-Jul-14								
Benzene	ND	0.001	mg/kg							
Toluene	ND	0.001	"							
Ethylbenzene	ND	0.001	"							
p,m-Xylene	ND	0.001	"							
o-Xylene	ND	0.001	"							
Total Xylenes	ND	0.001	"							
Total BTEX	ND	0.001	"							
<i>Surrogate: 1,3-Dichlorobenzene</i>	44.4		ug/L	50.0		88.9	80-120			
<i>Surrogate: Bromochlorobenzene</i>	46.3		"	50.0		92.7	80-120			

<b>Duplicate (1428022-DUP1)</b>		Source: P407040-01		Prepared & Analyzed: 10-Jul-14						
Benzene	ND	0.001	mg/kg		ND					30
Toluene	ND	0.001	"		ND					30
Ethylbenzene	ND	0.001	"		ND					30
p,m-Xylene	ND	0.001	"		ND					30
o-Xylene	ND	0.001	"		ND					30
<i>Surrogate: 1,3-Dichlorobenzene</i>	44.4		ug/L	50.0		88.7	80-120			
<i>Surrogate: Bromochlorobenzene</i>	46.7		"	50.0		93.3	80-120			

<b>Matrix Spike (1428022-MS1)</b>		Source: P407040-01		Prepared & Analyzed: 10-Jul-14						
Benzene	47.1		ug/L	50.0	ND	94.2	39-150			
Toluene	47.0		"	50.0	ND	94.1	46-148			
Ethylbenzene	47.0		"	50.0	ND	94.1	32-160			
p,m-Xylene	93.6		"	100	ND	93.6	46-148			
o-Xylene	46.9		"	50.0	ND	93.7	46-148			
<i>Surrogate: 1,3-Dichlorobenzene</i>	46.4		"	50.0		92.8	80-120			
<i>Surrogate: Bromochlorobenzene</i>	49.1		"	50.0		98.1	80-120			

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: Argo #500 Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 11-Jul-14 14:04
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**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 1428022 - Purge and Trap EPA 5030A**

<b>Blank (1428022-BLK1)</b>										Prepared & Analyzed: 10-Jul-14
Gasoline Range Organics (C6-C10)	ND	0.10	mg/kg							
<b>Duplicate (1428022-DUP1)</b>										Prepared & Analyzed: 10-Jul-14
Gasoline Range Organics (C6-C10)	ND	0.10	mg/kg		ND				30	
<b>Matrix Spike (1428022-MS1)</b>										Prepared & Analyzed: 10-Jul-14
Gasoline Range Organics (C6-C10)	0.44		mg/L	0.450	ND	97.8	75-125			

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



Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: Argo #500 Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 11-Jul-14 14:04
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**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 1428023 - DRO Extraction EPA 3550C**

<b>Blank (1428023-BLK1)</b>		Prepared: 10-Jul-14 Analyzed: 11-Jul-14								
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg							
<b>Duplicate (1428023-DUP1)</b>		Source: P407040-01 Prepared & Analyzed: 10-Jul-14								
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg		ND				30	
<b>Matrix Spike (1428023-MS1)</b>		Source: P407040-01 Prepared & Analyzed: 10-Jul-14								
Diesel Range Organics (C10-C28)	219		mg/L	250	7.96	84.5	75-125			

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: Argo #500 Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 11-Jul-14 14:04
---	---	------------------------------

**Notes and Definitions**

- 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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# CHAIN OF CUSTODY RECORD

17204

Client: <i>Enterprise Field Services</i>	Project Name / Location: <i>Argo #500</i>	ANALYSIS / PARAMETERS											
Email results to: <i>ksummers@apexcos.com</i> <i>hwoods@apexcos.com</i>	Sampler Name: <i>H. Woods</i>	TPH (Method 8015) (G/L) (D/D)	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
Client Phone No.: <i>(903) 821-5603</i>	Client No.:												

Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative			TPH (Method 8015) (G/L) (D/D)	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 <sub>3</sub>	HCl	CO <sub>2</sub>												
S-1	7/9/14	1230	<i>P407041-01</i>	<i>1-4oz Glass</i>			<i>X</i>	<i>X</i>										<i>Y</i>	<i>Y</i>
S-2	7/9/14	1233	<i>-02</i>	<i>1-4oz Glass</i>			<i>X</i>	<i>X</i>										<i>Y</i>	<i>Y</i>
S-3	7/9/14	1310	<i>-03</i>	<i>1-4oz Glass</i>			<i>X</i>	<i>X</i>										<i>Y</i>	<i>Y</i>
S-4	7/9/14	1312	<i>-04</i>	<i>1-4oz Glass</i>			<i>X</i>	<i>X</i>										<i>Y</i>	<i>Y</i>
S-5	7/9/14	1335	<i>-05</i>	<i>1-4oz Glass</i>			<i>X</i>	<i>X</i>										<i>Y</i>	<i>Y</i>
S-6	7/9/14	1340	<i>-06</i>	<i>1-4oz Glass</i>			<i>X</i>	<i>X</i>										<i>Y</i>	<i>Y</i>

Relinquished by: (Signature) <i>Heather M. Woods</i>	Date <i>7/9/14</i>	Time <i>1605</i>	Received by: (Signature) <i>[Signature]</i>	Date <i>7/9/14</i>	Time <i>1605</i>
Relinquished by: (Signature)			Received by: (Signature)		
Sample Matrix Soil <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Sludge <input type="checkbox"/> Aqueous <input type="checkbox"/> Other <input type="checkbox"/>					

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

*RUSH*

*Paykey RB21200*

*14.2, 11.7, 12.4*



## Analytical Report

### Report Summary

Client: Enterprise Products  
Chain Of Custody Number: 17203  
Samples Received: 7/9/2014 4:05:00PM  
Job Number: 97057-0352  
Work Order: P407040  
Project Name/Location: Argo #500

Entire Report Reviewed By:

A handwritten signature in black ink, appearing to read 'Tim Cain', is written over a horizontal line.

Date: 7/11/14

Tim Cain, Laboratory Manager

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



Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: Argo #500 Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 11-Jul-14 14:01
---	---	------------------------------

**Analytical Report for Samples**

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SP-1	P407040-01A	Soil	07/09/14	07/09/14	Glass Jar, 4 oz.

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: Argo #500 Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 11-Jul-14 14:01
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**SP-1**  
**P407040-01 (Solid)**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes	
		Limit	Units							
<b>Volatile Organics by EPA 8021</b>										
Benzene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B		
Toluene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B		
Ethylbenzene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B		
p,m-Xylene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B		
o-Xylene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B		
Total Xylenes	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B		
Total BTEX	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B		
<i>Surrogate: Bromochlorobenzene</i>		100 %		80-120	1428022	07/10/14	07/10/14	EPA 8021B		
<i>Surrogate: 1,3-Dichlorobenzene</i>		97.8 %		80-120	1428022	07/10/14	07/10/14	EPA 8021B		
<b>Nonhalogenated Organics by 8015</b>										
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8015D		
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1428023	07/10/14	07/10/14	EPA 8015D		

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: Argo #500 Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 11-Jul-14 14:01
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**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
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**Batch 1428022 - Purge and Trap EPA 5030A**

<b>Blank (1428022-BLK1)</b>			Prepared & Analyzed: 10-Jul-14							
Benzene	ND	0.001	mg/kg							
Toluene	ND	0.001	"							
Ethylbenzene	ND	0.001	"							
p,m-Xylene	ND	0.001	"							
o-Xylene	ND	0.001	"							
Total Xylenes	ND	0.001	"							
Total BTEX	ND	0.001	"							
Surrogate: 1,3-Dichlorobenzene	44.4		ug/L	50.0		88.9	80-120			
Surrogate: Bromochlorobenzene	46.3		"	50.0		92.7	80-120			

<b>Duplicate (1428022-DUP1)</b>			Source: P407040-01		Prepared & Analyzed: 10-Jul-14					
Benzene	ND	0.001	mg/kg		ND					30
Toluene	ND	0.001	"		ND					30
Ethylbenzene	ND	0.001	"		ND					30
p,m-Xylene	ND	0.001	"		ND					30
o-Xylene	ND	0.001	"		ND					30
Surrogate: 1,3-Dichlorobenzene	44.4		ug/L	50.0		88.7	80-120			
Surrogate: Bromochlorobenzene	46.7		"	50.0		93.3	80-120			

<b>Matrix Spike (1428022-MS1)</b>			Source: P407040-01		Prepared & Analyzed: 10-Jul-14					
Benzene	47.1		ug/L	50.0	ND	94.2	39-150			
Toluene	47.0		"	50.0	ND	94.1	46-148			
Ethylbenzene	47.0		"	50.0	ND	94.1	32-160			
p,m-Xylene	93.6		"	100	ND	93.6	46-148			
o-Xylene	46.9		"	50.0	ND	93.7	46-148			
Surrogate: 1,3-Dichlorobenzene	46.4		"	50.0		92.8	80-120			
Surrogate: Bromochlorobenzene	49.1		"	50.0		98.1	80-120			

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laboratory@envirotech-inc.com



Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: Argo #500 Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 11-Jul-14 14:01
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**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
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**Batch 1428022 - Purge and Trap EPA 5030A**

<b>Blank (1428022-BLK1)</b>	Prepared & Analyzed: 10-Jul-14									
Gasoline Range Organics (C6-C10)	ND	0.10	mg/kg							
<b>Duplicate (1428022-DUP1)</b>	Source: P407040-01 Prepared & Analyzed: 10-Jul-14									
Gasoline Range Organics (C6-C10)	ND	0.10	mg/kg		ND				30	
<b>Matrix Spike (1428022-MS1)</b>	Source: P407040-01 Prepared & Analyzed: 10-Jul-14									
Gasoline Range Organics (C6-C10)	0.44		mg/L	0.450	ND	97.8	75-125			

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: Argo #500 Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 11-Jul-14 14:01
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**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 1428023 - DRO Extraction EPA 3550C**

<b>Blank (1428023-BLK1)</b>										Prepared: 10-Jul-14 Analyzed: 11-Jul-14
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg							
<b>Duplicate (1428023-DUP1)</b>										Source: P407040-01 Prepared & Analyzed: 10-Jul-14
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg		ND				30	
<b>Matrix Spike (1428023-MS1)</b>										Source: P407040-01 Prepared & Analyzed: 10-Jul-14
Diesel Range Organics (C10-C28)	219		mg/L	250	7.96	84.5	75-125			

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laboratory@envirotech-inc.com



Enterprise Products	Project Name:	Argo #500	
614 Reilly Ave	Project Number:	97057-0352	<b>Reported:</b>
Farmington NM, 87401	Project Manager:	Kyle Summers-Apex TITAN	11-Jul-14 14:01

**Notes and Definitions**

- 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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# CHAIN OF CUSTODY RECORD

17203

Client: <b>Enterprise Field Services LLC</b>			Project Name / Location: <b>Argo #500</b>			ANALYSIS / PARAMETERS																
Email results to: <b>ksummers@apexcos.com</b> <b>hwoods@apexcos.com</b>			Sampler Name: <b>H. Woods</b>			TPH (Method 8015) <b>Gas</b>	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			
Client Phone No.: <b>(903)821-5603</b>			Client No.: <b>97057-0352</b>																			
Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative			TPH (Method 8015) <b>Gas</b>	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 <sub>3</sub>	HCl	Other															
<b>SP-1</b>	<b>7/9/14</b>	<b>1005</b>	<b>P407040-01</b>	<b>1 - 4 oz Glass</b>			<b>X</b>	<b>X</b>	<b>X</b>												<b>Y</b>	<b>Y</b>
Relinquished by: (Signature) <b>Heather M. Woods</b>				Date <b>7/9/14</b>	Time <b>1605</b>	Received by: (Signature) 				Date <b>7/9/14</b>	Time <b>1605</b>											
Relinquished by: (Signature)						Received by: (Signature)																
Sample Matrix Soil <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Sludge <input type="checkbox"/> Aqueous <input type="checkbox"/> Other <input type="checkbox"/>																						
<input type="checkbox"/> Sample(s) dropped off after hours to secure drop off area. <b>RUSH</b>								<b>Paykey RB21200</b> <b>13.3</b>														

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

Form C-141  
Revised August 8, 2011

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

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

**Release Notification and Corrective Action**

**OPERATOR**

Initial Report  Final Report

Name of Company: Enterprise Field Services LLC	Contact: Thomas Long
Address: 614 Reilly Ave, Farmington, NM 87401	Telephone No. 505-599-2286
Facility Name: Lateral 3A Loop	Facility Type: Natural Gas Gathering Line

Surface Owner: NAPI/Navajo Tribal	Mineral Owner: NAPI/Navajo Tribal	API No.
-----------------------------------	-----------------------------------	---------

**LOCATION OF RELEASE**

Unit Letter <b>P</b>	Section <b>21</b>	Township <b>28N</b>	Range <b>12W</b>	Feet from the <b>35</b>	North/South Line <b>South</b>	Feet from the <b>853</b>	East/West Line <b>East</b>	County <b>San Juan</b>
-------------------------	----------------------	------------------------	---------------------	-------------------------------	-------------------------------------	--------------------------------	----------------------------------	---------------------------

Latitude 36.640560 Longitude -108.110925 OIL CONS. DIV.

**NATURE OF RELEASE**

DIST. 3

Type of Release: Natural Gas	Volume of Release: 85.78 MCF	Volume Recovered: Unknown
Source of Release: Suspected internal corrosion	Date and Hour of Occurrence: 6/10/2014 @ 11:00 a.m.	Date and Hour of Discovery: 6/10/2014 @ 4:30 p.m.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? Courtesy Notification to NMOCD – Cory Smith, NAPI –Mike Freeman, Eric Trevizo, Steve Austin - NNEPA	
By Whom? Thomas Long	Date and Hour 6/13/2014 @3:43 p.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action: During a line patrol in the corridor of Trunk 3A, Lateral 6B-14 and Trunk 3A loop, Enterprise technicians were dispatched to verify the leak. The technicians isolated the Trunk 3A Loop pipeline and lock out tag out was applied. A leak was confirmed on the Trunk 3A Loop. Repairs and remediation were completed on June 25, 2014. The final excavation dimensions measured approximately thirty-five (35) feet long by seventeen (17) wide by sixteen (16) feet deep. Approximately 160 cubic yards of hydrocarbon impacted soil was excavated and transported to a NMOCD land farm facility.

Describe Area Affected and Cleanup Action Taken.\* Repairs and remediation were completed on June 25, 2014. The final excavation dimensions measured approximately thirty-five (35) feet long by seventeen (17) wide by sixteen (16) feet deep. Approximately 160 cubic yards of hydrocarbon impacted soil was excavated and transported to a NMOCD land farm facility. A third party corrective action report is included with this "final" c-141.

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:	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Ivan W. Zirbes	Approved by Environmental Specialist:	
Title: Sr. Director, Environmental	Approval Date: 11/19/14	Expiration Date:
E-mail Address: snolan@eprod.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 8.25.2014 Phone: (713) 381-6595		

\* Attach Additional Sheets If Necessary

# 143 2332 839

73



**CORRECTIVE ACTION REPORT**

Property:

**Lateral 3A-Loop Pipeline Release  
SE 1/4, S21 T28N R12W  
San Juan County, New Mexico**

July 28, 2014  
Apex Project No. 7030414G022

**OIL CONS. DIV DIST. 3**

**AUG 28 2014**

Prepared for:

**Enterprise Field Services LLC  
614 Reilly Avenue  
Farmington, NM 87401  
Attn: Mr. Tom Long**

Prepared by:

Handwritten signature of Heather M. Woods in black ink.

Heather M. Woods, P.G.  
Senior Project Manager

Handwritten signature of Elizabeth Scaggs in black ink.

Elizabeth Scaggs, P.G.  
Senior Program Manager

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<b>Appendix A:</b>	Figure 1 – Topographic Map Figure 2 – Site Vicinity Map Figure 3 – Site Map with Soil Analytical Results
<b>Appendix B:</b>	Executed C-138 Solid Waste Acceptance Forms
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## **CORRECTIVE ACTION REPORT**

### **Lateral 3A-Loop Pipeline Release**

SE 1/4, S21 T28N R12W  
San Juan County, New Mexico

**Apex Project No. 7030414G022**

## **1.0 INTRODUCTION**

### **1.1 Site Description & Background**

The Lateral 3A-Loop pipeline release site is located within the Enterprise Field Services LLC (Enterprise) pipeline right-of-way (ROW) in the southeast (SE) ¼ of Section 21 in Township 28 North, Range 12 West in rural San Juan County, New Mexico (36.64071N 108.11091W), referred to hereinafter as the "Site" or "subject Site". The Site is located on land owned by the Navajo Nation, and is adjacent to center-pivot irrigation farmland operated by the Navajo Agricultural Products Industry (NAPI). The 3A-Loop Enterprise natural gas gathering pipeline traverses the area from southwest to northeast.

On June 12, 2014, Enterprise shut in the Lateral 3A-Loop pipeline and initiated excavation activities at the Site in an effort to locate and repair a subsurface leak. The leak was subsequently identified and repaired. An unknown quantity of natural gas was released from the pipeline as a result of a failed weld. The leak was identified by an area of distressed vegetation. No other surface expression was observed in the vicinity of the release.

A topographic map depicting the location of the Site is included as Figure 1, and a Site Vicinity Map is included as Figure 2 in Appendix A.

### **1.2 Project Objective**

The primary objective of the corrective actions was to reduce the concentration of constituents of concern (COCs) in the on-Site soils to below the New Mexico Energy, Minerals, and Natural Resources Department (EMNRD), Oil Conservation Division (OCD) *Remediation Action Levels* using the New Mexico EMNRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases* as guidance.

## **2.0 SITE RANKING**

The Site is subject to regulatory oversight by the Navajo Nation Environmental Protection Agency (NNEPA). Due to the absence of published NNEPA regulatory guidance, Apex TITAN, Inc. (Apex) utilized the available New Mexico ENMRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases*. Apex utilized the general site characteristics obtained during the completion of corrective action activities to determine the appropriate "ranking" for the Site. The ranking criteria and associated scoring are provided in the following table:



Ranking Criteria			Ranking Score
Depth to Groundwater	<50 feet	20	<b>20*</b>
	50 to 99 feet	10	
	>100 feet	0	
Wellhead Protection Area • <1,000 feet from a water source, or; <200 feet from private domestic water source.	Yes	20	<b>0</b>
	No	0	
Distance to Surface Water Body	<200 feet	20	<b>20</b>
	200 to 1,000 feet	10	
	>1,000 feet	0	
<b>Total Ranking Score</b>			<b>40</b>

\*Based on anticipated groundwater depth of <50 feet below grade surface (bgs).

Based on Apex's evaluation of the scoring criteria, the Site would have a maximum Total Ranking Score of "40". This ranking is based on the following:

- The Site is approximately 100 feet south of an un-named ephemeral wash which drains to the Gallegos Canyon west of the Site. This wash appears to only convey water during significant rain events, but might be considered a surface water body by some entities.
- The Site is not within a Wellhead Protection Area as no water wells were identified on the Office of the State Engineer website database within one mile of the Site.

### 3.0 RESPONSE ACTIONS

#### 3.1 Soil Excavation Activities

On June 12, 2014, Enterprise initiated excavation activities at the Site to locate and repair a potential leak. The leak was subsequently identified and repaired. The substance released consisted primarily of dry natural gas due to a failed weld in the pipeline. During the corrective action activities, Energy Maintenance Services USA, Inc. (EMS) provided heavy equipment and labor support, and Kyle Summers and Heather Woods, Apex environmental professionals, provided environmental support.

Subsequent to the completion of pipeline repairs, the hydrocarbon affected soils were excavated from the Site, resulting in an initial excavation of approximately 30 feet long by 13 feet wide, and 6 to 8 feet bgs. Confirmation samples S-1 through S-8 were collected from the floors and sidewalls of the excavation to evaluate soils remaining in place. Subsequent analytical results indicated that the floor of the excavation (S-1) and northwest sidewall (S-2) near the release still exhibited evidence of hydrocarbon impact.

The Site was over-excavated on June 16, 2014, to remove material from the northwest sidewall and excavation floor near the point of release. Confirmation samples S-9, S-10, and S-12 indicated that the northwest wall, the deeper portion of the northeast wall, and the excavation floor on the northwest side of the pipeline no longer showed evidence of hydrocarbon impact. However, confirmation sample S-11 concentrations from the excavation floor on the southeast side remained above acceptable levels.

The Site was again over-excavated on June 25, 2014, to remove additional material from the excavation floor on the southeast side. Confirmation samples S-13, S-14, and S-15 were then collected to from the excavation floor on the southeast side, the deeper portion of the southeast sidewall, and the deeper portion of the northwest sidewall.

The lithology encountered during the completion of corrective action activities consisted primarily of unconsolidated silty-sands.

The total depth of the final excavation reached approximately 16 feet bgs near the source of the release and averaged 6 feet bgs in the remaining excavation footprint. The final surface expression of the excavation measured approximately 35 feet long by 17 feet wide.

A total of approximately 160 cubic yards of hydrocarbon affected soils were transported to the Envirotech Landfarm near Hilltop, New Mexico for disposal/remediation. The executed C-138 form is provided in Appendix B. The excavation was backfilled with clean, imported fill and local unaffected soils.

Figure 3 is a site map that indicates the approximate location of the final excavated area in relation to pertinent land features (Appendix A). Photographic documentation of the field activities is included in Appendix C.

### 3.2 Soil Sampling Program

Apex screened head-space samples of Site soils with a photoionization detector (PID) fitted with a 10.6 eV lamp to aid in determining the excavation limits.

Apex's soil sampling program included the collection of fifteen (15) discrete confirmation samples (S-1 through S-15) from the resulting excavation for laboratory analysis. Additionally, five (5) composite samples (SP-1 through SP-4, and SP-2R) were collected from the stockpiled soils to determine the potential to reuse these soils as excavation backfill. Stockpile soil sample SP-2 was resampled as SP-2R after the initial sample indicated a slightly elevated total TPH concentration of 103.6 milligrams per Kilogram (mg/Kg) that did not correlate to the apparent physical characteristics of the soil. The subsequent analytical result indicated no evidence of hydrocarbon impact. Affected soils were added to the stockpile associated with sample SP-4 subsequent to initial sampling and based on field screening results, the cumulative soils associated with SP-1 and SP-4 were transported to the landfarm for proper disposal/treatment. Figure 3 depicts the approximate location of the excavated areas and shows the final confirmation sample locations in relation to the final excavation dimensions (Appendix A).

The confirmation soil samples were collected and placed in laboratory prepared glassware, labeled/sealed using the laboratory supplied labels, and placed on ice in coolers, which were secured with custody seals. The sample coolers and completed chain-of-custody form were relinquished to Envirotech Analytical Laboratory in Farmington, New Mexico and/or to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico for 24-hour rush analysis.

### 3.3 Laboratory Analytical Methods

The confirmation soil sample was analyzed for benzene, toluene, ethylbenzene and xylenes (BTEX) using EPA SW-846 Method #8021, and total petroleum hydrocarbons (TPH) gasoline range organics (GRO) and diesel range organics (DRO) using EPA SW-846 Method #8015.

Laboratory results are summarized in Table 1, included in Appendix D. The executed chain-of-custody form and laboratory data sheets are provided in Appendix E.

#### 4.0 DATA EVALUATION

The Site is subject to regulatory oversight by the NNEPA. Due to the absence of published NNEPA regulatory guidance, Apex utilized the available New Mexico EMNRD OCD guidance and rules. To address activities related to condensate releases, the New Mexico EMNRD OCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the OCD rules, specifically NMAC 19.15.30 *Remediation*. These guidance documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

##### 4.1 Confirmation Soil Samples

Apex compared the BTEX and TPH concentrations or reporting limits (RLs) associated with the final confirmation samples for soils remaining in place to the OCD *Remediation Action Levels* for sites having a total ranking score of "40". Soils associated with confirmation samples S-1, S-2, and S-11 were removed by over-excavation and are not included in the following discussion.

- The laboratory analyses of the confirmation samples collected from soils remaining in place do not indicate benzene concentrations above laboratory RLs, which are below the OCD *Remediation Action Level*.
- The laboratory analyses of the confirmation samples collected from soils remaining in place do not indicate total BTEX concentrations above laboratory RLs, which are below the OCD *Remediation Action Level*.
- The laboratory analyses of the confirmation samples collected from soils remaining in place indicate combined TPH GRO/DRO concentrations ranging from below the laboratory detection limits to 42.2 mg/Kg, which are below the OCD *Remediation Action Level*.

Stockpile soil sample SP-2 was resampled as SP-2R after the initial sample indicated a slightly elevated total TPH concentration of 103.6 mg/Kg that did not correlate to the apparent physical characteristics of the soil. The subsequent analytical results did not indicate evidence of hydrocarbon impact.

Confirmation sample results are provided in Table 1 in Appendix D.

#### 5.0 FINDINGS AND RECOMMENDATIONS

The Lateral 3A-Loop pipeline release site is located within the pipeline ROW in the SE ¼ of Section 21 in Township 28 North, Range 12 West in rural San Juan County, New Mexico. The Site is located on land owned by the Navajo Nation, and is adjacent to center-pivot irrigation farmland operated by the NAPI. The 3A-Loop Enterprise natural gas gathering pipeline traverses the area from southwest to northeast.

On June 12, 2014, Enterprise shut in the Lateral 3A-Loop pipeline and initiated excavation activities at the Site in an attempt to locate and repair a subsurface leak. The leak was subsequently identified and repaired. An unknown quantity of natural gas was released from the pipeline as a result of failed weld. The leak was identified by an area of distressed vegetation. No other surface expression was observed in the vicinity of the release.

- The primary objective of the corrective actions was to reduce the concentration of COCs in the on-Site soils to below the New Mexico EMNRD OCD *Remediation Action Levels* using the New Mexico EMNRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases* as guidance.
- The total depth of the final excavation reached approximately 16 feet bgs near the source of the release and averaged 6 feet bgs in the remaining excavation footprint. The surface expression of the final excavation measured approximately 35 feet long by 17 feet wide.
- Prior to backfilling, final confirmation samples were collected from the resulting excavation for laboratory analyses. Based on analytical results, soils remaining in place do not exhibit benzene or total BTEX concentrations above laboratory RLs, which are below the OCD *Remediation Action Levels*. Laboratory analytical results for soils remaining in place did not exhibit concentrations of combined TPH GRO/DRO above the OCD *Remediation Action Level* of 100 mg/Kg for a Site ranking of "40".
- A total of approximately 160 cubic yards of hydrocarbon affected soils were transported to the Envirotech Landfarm near Hilltop, New Mexico for disposal/remediation. The excavation was backfilled with clean imported fill and stockpiled soils not impacted by COCs above applicable OCD *Remediation Action Levels* based on laboratory analytical results. The area was then contoured to the surrounding grade.

Mr. Steve Austin, Senior Hydrologist for the NNEPA Water Quality Program, provided approval via email to backfill the excavation on July 7, 2014, based on laboratory analytical data.

**Based on the laboratory analytical, no additional investigation or corrective action appears warranted at this time.**

## 6.0 STANDARD OF CARE, LIMITATIONS, AND RELIANCE

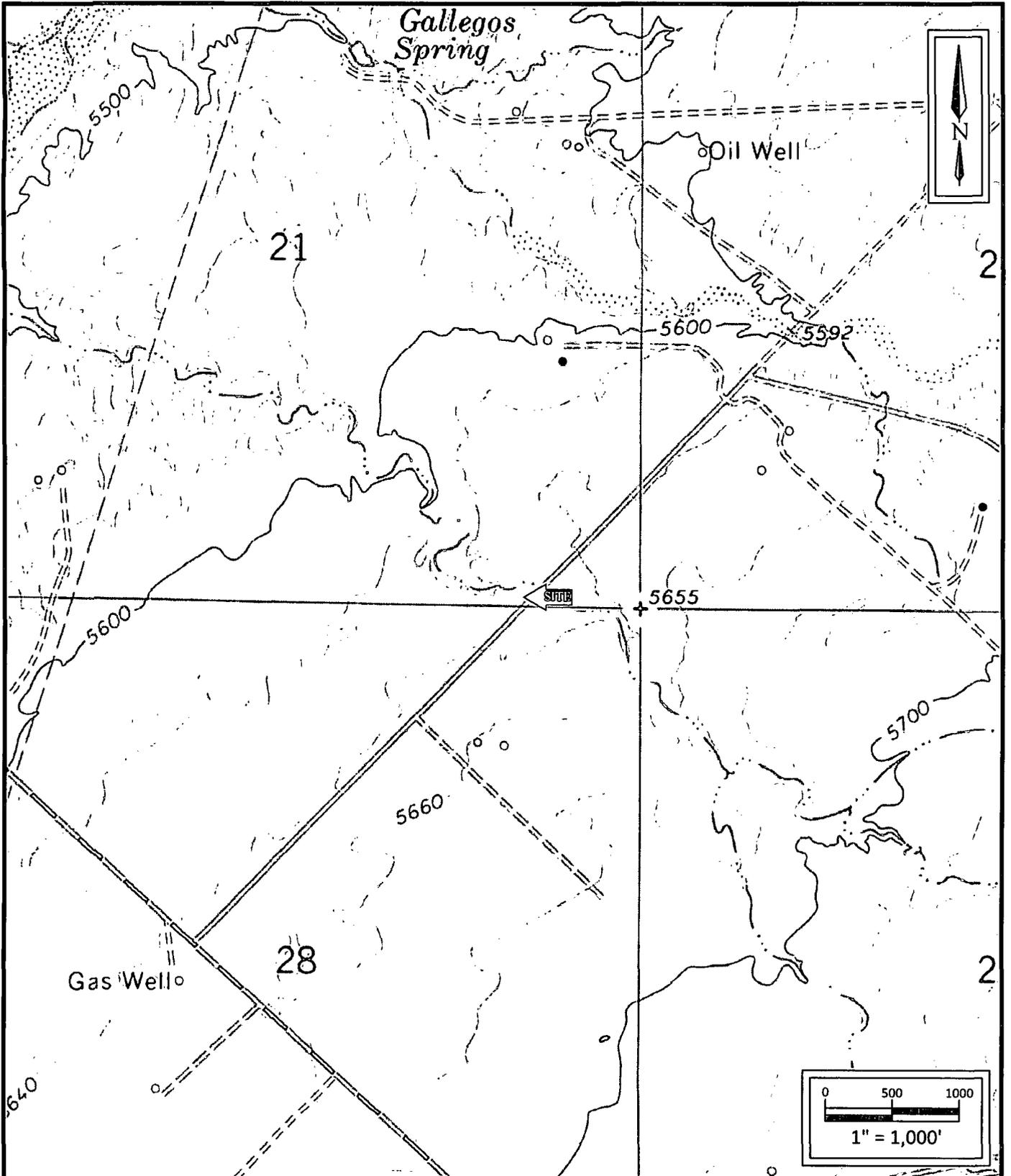
Apex's services were performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. Apex makes no warranties, expressed or implied, as to the services performed hereunder. Additionally, Apex does not warrant the work of third parties supplying information used in the report (e.g. laboratories, regulatory agencies, or other third parties). This scope of services was performed in accordance with the scope of work agreed with the client.

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-Site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, or not present during these services, and Apex cannot represent that the Site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this scope of services. Environmental conditions at other areas or portions of the Site may vary from those encountered at actual sample locations. Apex's findings and recommendations are based solely upon data available to Apex at the time of these services.

This report has been prepared for the exclusive use of Enterprise, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the expressed written authorization of Enterprise and Apex. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the proposal,



the report, and Apex's Agreement. The limitation of liability defined in the agreement is the aggregate limit of Apex's liability to the client.



**Lateral 3A-Loop Pipeline Release**

SE 1/4, Sec 21 T28N R12W  
 San Juan County, NM  
 36.64071N, 108.11091W

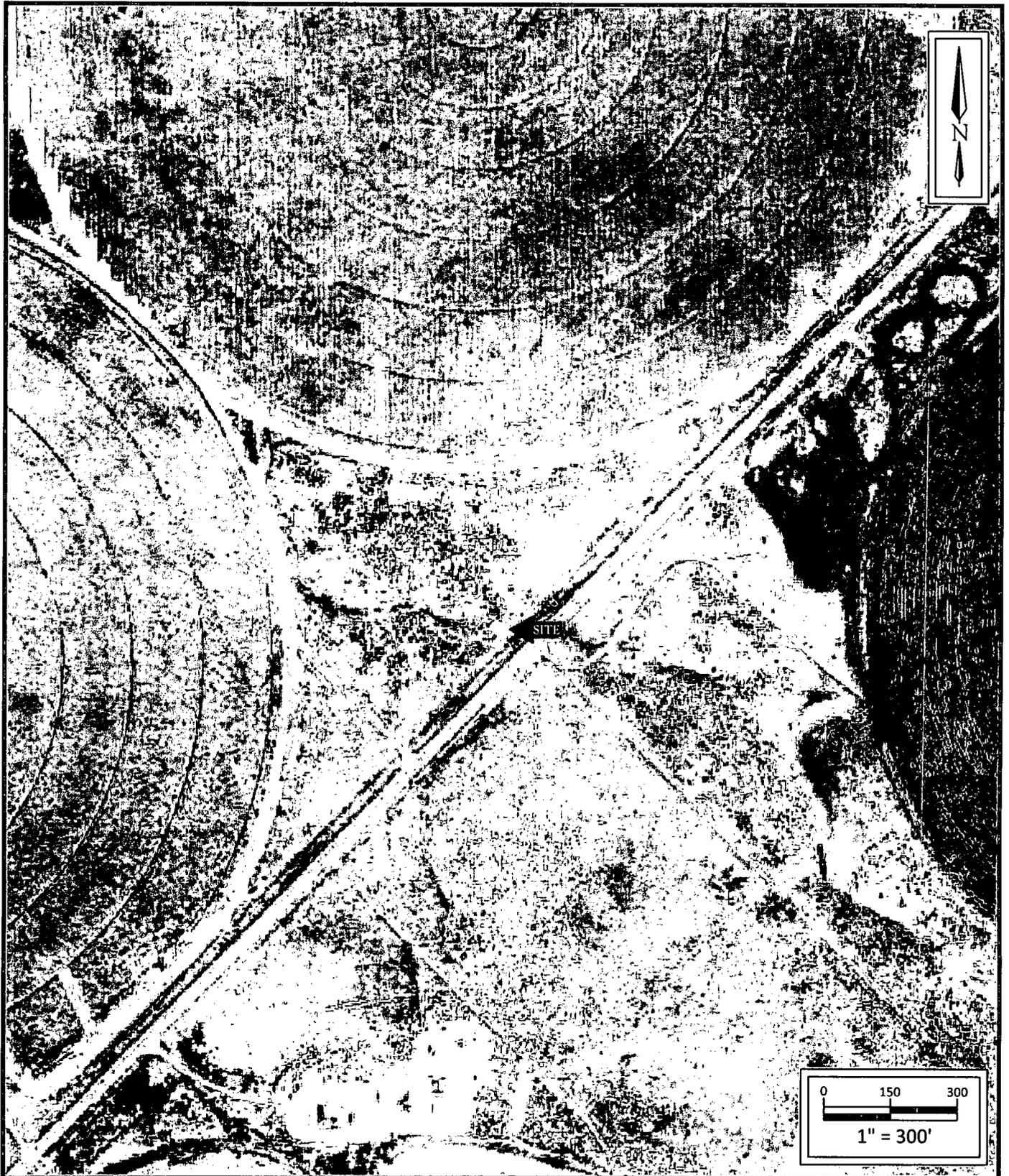
Project No. 7030414G022



**Apex TITAN, Inc.**

606 S. Rio Grande, Suite A  
 Aztec, New Mexico 87410  
 Phone: (505) 334-5200  
[www.apexcos.com](http://www.apexcos.com)  
 A Subsidiary of Apex Companies, LLC

**FIGURE 1**  
**Topographic Map**  
 Horn Canyon, NM Quadrangle  
 1965



**Lateral 3A-Loop Pipeline Release**

SE  $\frac{1}{4}$ , Sec 21 T28N R12W  
 San Juan County, NM  
 36.64071N, 108.11091W

Project No. 7030414G022



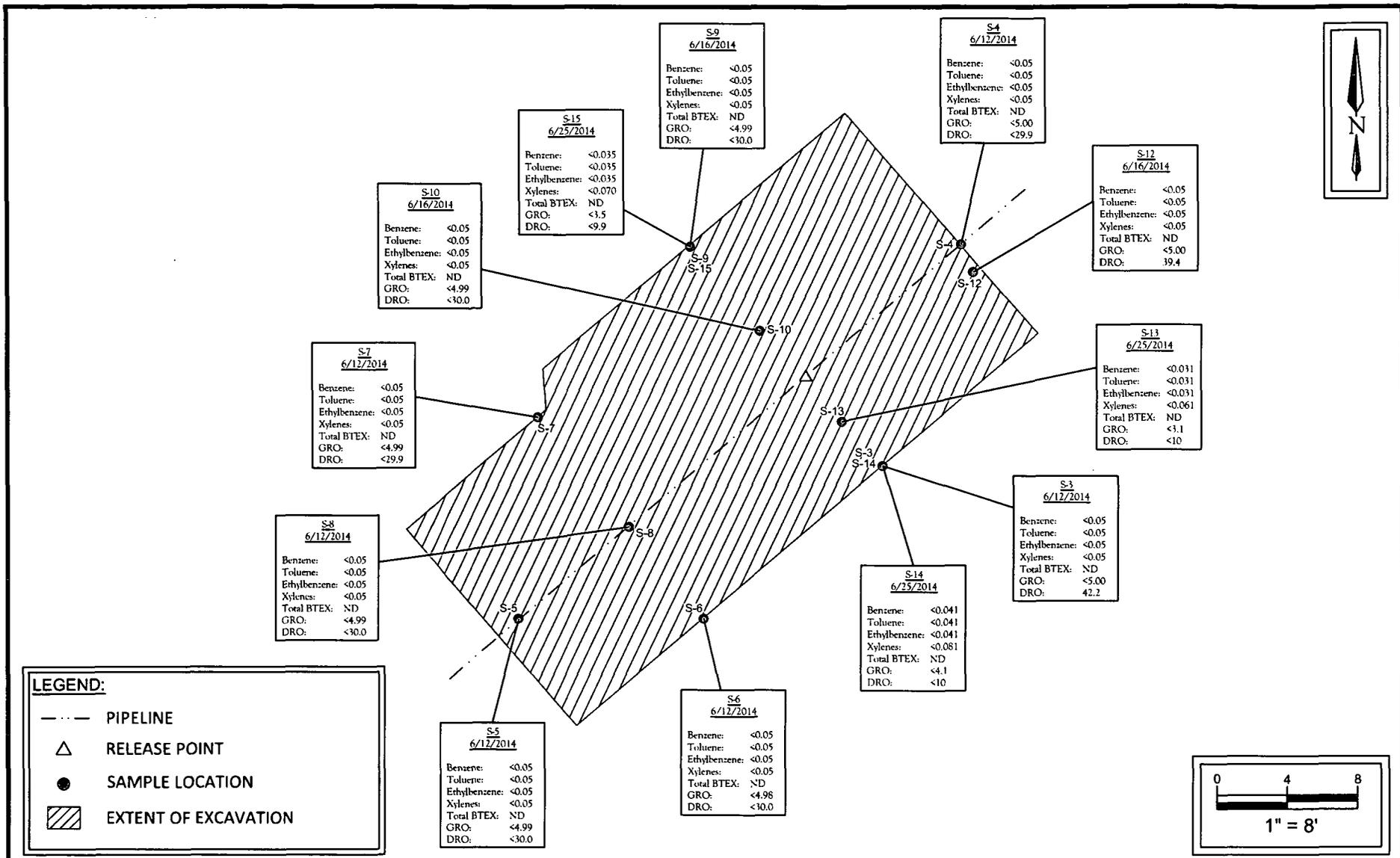
**Apex TITAN, Inc.**

606 S. Rio Grande, Suite A  
 Aztec, New Mexico 87410  
 Phone: (505) 334-5200

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**FIGURE 2**  
**Site Vicinity Map**  
 2013 Aerial Photograph



**Lateral 3A-Loop Pipeline Release**

SE 1/4, Sec 21 T28N R12W  
San Juan County, NM  
36.64071N, 108.11091W

Project No. 7030414G022



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www.apexcos.com

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**FIGURE 3**  
Site Map with  
Soil Analytical Results

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 97057-0643  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-138  
Revised 08/01/11

\*Surface Waste Management Facility Operator  
and Generator shall maintain and make this  
documentation available for Division inspection.

### REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

**1. Generator Name and Address:**

Enterprise Field Services, LLC, 614 Rellly Ave, Farmington NM 87401

June '14

**2. Originating Site: Lateral 3A Loop Natural Gas Gathering Line**

**3. Location of Material (Street Address, City, State or ULSTR):**

Unit Letter P Sec 21 T 28N R 12W, GPS 36.640560, -108.110925, San Juan County, NM

**4. Source and Description of Waste:**

Source: Natural Gas Pipeline Release

Description: Exempt petroleum affected soil from clean-up efforts at pipeline release.

Estimated Volume 50 yd<sup>3</sup> bbls Known Volume (to be entered by the operator at the end of the haul) 160 yd<sup>3</sup> bbls

**5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Thomas Long, representative or authorized agent for Enterprise Field Services, LLC do hereby  
**Generator Signature**

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only: Waste Acceptance Frequency  Monthly  Weekly  Per Load

RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

MSDS Information  RCRA Hazardous Waste Analysis  Process Knowledge  Other (Provide description in Box 4)

**GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS**

I, Thomas Long, representative for Enterprise Field Services, LLC authorize Envirotech, Inc. to complete  
**Generator Signature**  
the required testing/sign the Generator Waste Testing Certification.

I, Kendra Runnung, representative for Envirotech, Inc do hereby certify that  
**Representative/Agent Signature**

representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

**5. Transporter: ~~IMI, West States Energy Contractors~~ or unknown trucking company on OCD approved haulers list. EMS**

OCD Permitted Surface Waste Management Facility

Moss Excavation

Name and Facility Permit #: Envirotech, Inc. Soil Remediation Facility \* Permit #: NM 01-0011

Address of Facility: Las Lunas, NM

Method of Treatment and/or Disposal:

Evaporation  Injection  Treating Plant  Landfarm  Landfill  Other

Waste Acceptance Status:

APPROVED

DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Kendra Runnung

SIGNATURE: Kendra Runnung

TITLE: Environmental Manager

TELEPHONE NO.:

DATE: 6/16/14

Surface Waste Management Facility Authorized Agent

505-632-0615



# Bill of Lading

MANIFEST # 47120

DATE 6-16-14 JOB # 97057-10643

PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

LOAD NO.	COMPLETE DESCRIPTION OF SHIPMENT						TRANSPORTING COMPANY			
	POINT OF ORIGIN	DESTINATION	MATERIAL	GRID	YDS	BBLS	COMPANY	TRK#	TIME	DRIVER SIGNATURE
1	ENVIROTECH	Cat A 3 Loop	CLEAN	-	10	-	EMS	310-309	810	Wesley Clark
2	"	ENTERPRISE	F111	-	10	-	EMS	310-309	1033	Wesley Clark
3	"	"	"	-	10	-	EMS	310-309	1228	Wesley Clark
4	"	"	"	-	10	-	EMS	310-309	1338	Wesley Clark
5	"	"	"	-	10	-	EMS	310-309	1505	Wesley Clark
6	"	"	"	-	10	-	EMS	310-309	1610	Wesley Clark
					60					
RESULTS:		LANDFARM EMPLOYEE:	<i>Cary Robinson</i> EL Certification of above receipt & placement			NOTES:				
<input checked="" type="checkbox"/>	CHLORIDE TEST									
<input checked="" type="checkbox"/>	PAINT FILTER TEST									

By signing as the driver/transporter, I certify the material hauled from the above location has not been added to or tampered with. I certify the material is from the above mentioned Generator/Point of Origin and that no additional material has been added or mixed into the load.

TRANSPORTER CO. EMS NAME Wesley Clark SIGNATURE Wesley Clark  
 COMPANY CONTACT Mike Sanchez PHONE \_\_\_\_\_ DATE 6-16-14

Signatures required prior to distribution of the legal document.



# Bill of Lading

MANIFEST # 47121  
 DATE 6-16-14 JOB # 97057-0643

PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

LOAD NO.	COMPLETE DESCRIPTION OF SHIPMENT						TRANSPORTING COMPANY			
	POINT OF ORIGIN	DESTINATION	MATERIAL	GRID	YDS	BBLS	COMPANY	TRK#	TIME	DRIVER SIGNATURE
1	ENTERPRISE Lot 3-A-LOOP	LFII	Cont SOIL	D-2	10	-	EMS	310 309	1030	Wesley Chubb
2	"	"	"	D-2	10	-	EMC	310 309	1220	Wesley Chubb
3	"	"	"	D-2	10	-	EMS	310 309	1330	Wesley Chubb
4	"	"	"	D-2	10	-	EMS	310 309	1505	Wesley Chubb
5	"	"	"	D-2	10	-	EMS	310 309	1640	Wesley Chubb
6	"	"	"	D-2	10	-	EMS	310 300	1750	Wesley Chubb
					60					
RESULTS:		LANDFARM EMPLOYEE:		NOTES:						
<271/ <271	CHLORIDE TEST	1/1	Cory Robinson <sup>EL</sup>							
	PAINT FILTER TEST	2	Certification of above receipt & placement							

By signing as the driver/transporter, I certify the material hauled from the above location has not been added to or tampered with. I certify the material is from the above mentioned Generator/Point of Origin and that no additional material has been added or mixed into the load.

TRANSPORTER CO. EMS NAME Wesley Chubb SIGNATURE Wesley Chubb  
 COMPANY CONTACT Mike Sanchez PHONE \_\_\_\_\_ DATE 6-16-14

Signatures required prior to distribution of the legal document.



# Bill of Lading

MANIFEST # 47262

DATE 6-25-14 JOB # 97057-0643

PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

LOAD NO.	COMPLETE DESCRIPTION OF SHIPMENT						TRANSPORTING COMPANY			
	POINT OF ORIGIN	DESTINATION	MATERIAL	GRID	YDS	BBLS	COMPANY	TRK#	TIME	DRIVER SIGNATURE
1	Enterprise Lot 3 A Loop	LFII-5	Cont SOIL	E-14	10	-	MOSS	15	835	Nathan B. McKinney
2	" "	" "	" "	E-14	10	-	MOSS	17	835	Oy Kobza
3	" "	" "	" "	E-14	10	-	MOSS	15	940	Nathan B. McKinney
4	" "	" "	" "	E-14	10	-	MOSS	17	945	Oy Kobza
5	" "	" "	" "	E-14	10	-	MOSS	15	1045	Nathan B. McKinney
6	" "	" "	" "	E-14	10	-	MOSS	17	1048	Oy Kobza
7	" "	" "	" "	E-14	10	-	MOSS	15	1152	Nathan B. McKinney
8	" "	" "	" "	E-14	10	-	MOSS	17	1155	Oy Kobza
9	" "	" "	" "	F-14	10	-	MOSS	15	1300	Nathan B. McKinney
10	" "	" "	" "	F-14	10	-	MOSS	17	1304	Oy Kobza
					<u>100</u>					
RESULTS: See notes		LANDFARM EMPLOYEE: <u>Gary Robinson</u> <sup>EL</sup>		NOTES: Cl test strips on loads 1, 5 & 9						
2	CHLORIDE TEST	3	Certification of above receipt & placement							
	PAINT FILTER TEST	3								

By signing as the driver/transporter, I certify the material hauled from the above location has not been added to or tampered with. I certify the material is from the above mentioned Generator/Point of Origin and that no additional material has been added or mixed into the load.

TRANSPORTER CO. Moss Excavation NAME Nathan B. McKinney SIGNATURE Nathan B. McKinney  
 COMPANY CONTACT Buck PHONE \_\_\_\_\_ DATE 6-25-14

Signatures required prior to distribution of the legal document.

008



# Bill of Lading

MANIFEST # 47263  
 DATE 6-25-14 JOB # 97057-0643

PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

LOAD NO.	COMPLETE DESCRIPTION OF SHIPMENT						TRANSPORTING COMPANY			
	POINT OF ORIGIN	DESTINATION	MATERIAL	GRID	YDS	BBLs	COMPANY	TRK#	TIME	DRIVER SIGNATURE
1	Envirotech	Enterprise LOT 34	CLEAN Fill	-	10	-	MOSS	15	835	Nathan B. McK
2	"	Loop	SOIL	-	10	-	MOSS	17	835	Og Kobza
3	"	"	"	-	10	-	MOSS	15	945	Nathan B. McK
4	"	"	"	-	10	-	MOSS	17	945	Og Kobza
5	"	"	"	-	10	-	MOSS	15	1045	Nathan B. McK
6	"	"	"	-	10	-	MOSS	17	1048	Og Kobza
7	"	"	"	-	10	-	MOSS	15	1152	Nathan B. McK
8	"	"	"	-	10	-	MOSS	17	1155	Og Kobza
9	"	"	"	-	10	-	MOSS	15	1300	Nathan B. McK
10	"	"	"	-	10	-	MOSS	17	1304	Og Kobza
11	"	"	"	-	10	-	MOSS	15	1400	Nathan B. McK
12	"	"	"	-	10	-	MOSS	17	1405	Og Kobza
RESULTS:		LANDFARM EMPLOYEE:		Certification of above receipt & placement <i>Gary Robinson</i> 120 EL			NOTES:			
<input checked="" type="checkbox"/>	CHLORIDE TEST	<input checked="" type="checkbox"/>								
<input checked="" type="checkbox"/>	PAINT FILTER TEST	<input checked="" type="checkbox"/>								

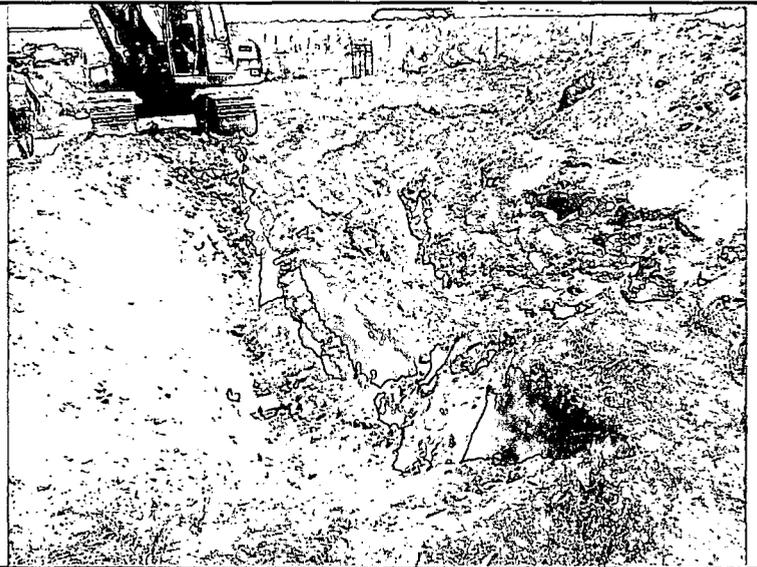
By signing as the driver/transporter, I certify the material hauled from the above location has not been added to or tampered with. I certify the material is from the above mentioned Generator/Point of Origin and that no additional material has been added or mixed into the load.

TRANSPORTER CO. Moss Excavation NAME NATHAN B. MCKENNEY SIGNATURE *Nathan B. McK*  
 COMPANY CONTACT BUCK PHONE \_\_\_\_\_ DATE 6-25-14

Signatures required prior to distribution of the legal document.

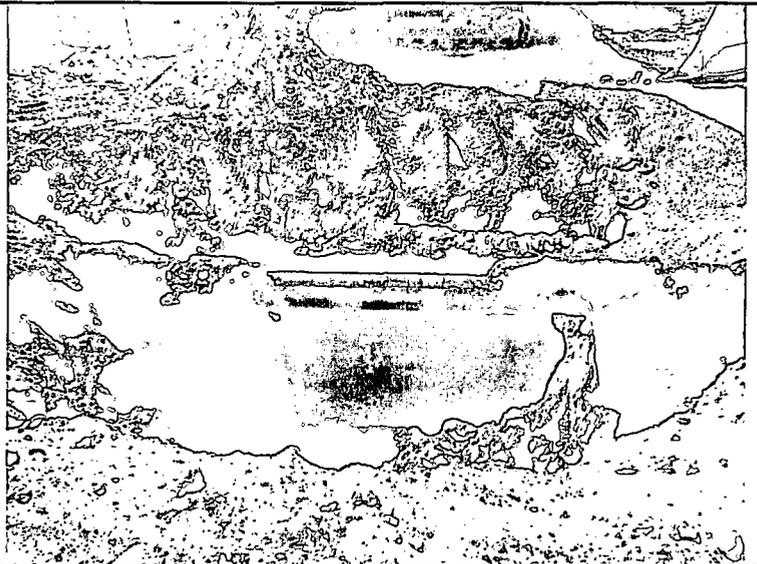
**Photograph 1**

Initial excavation activities prior to pipe-line repair, facing east.



**Photograph 2**

General view of the final excavation extents facing southeast.



**Photograph 3**

General view of the final excavation extents facing south.





**TABLE 1**  
**Lateral 3A-Loop Pipeline Release**  
**SOIL ANALYTICAL SUMMARY**

Sample I.D.	Date	Sample Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)
New Mexico Entergy, Mineral & Natural Resources Department, Oil Conservation Division, Remediation Action Level			10	NE	NE	NE	50	100	
<b>Stockpiles Removed to Landfarm</b>									
SP-1	6/12/2014	Stockpile	<0.05	<0.05	<0.05	<0.05	ND	<4.98	160
SP-4*	6/12/2014	Stockpile	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<30.0
<b>Stockpiles Reused for Excavation Backfill</b>									
SP-2**	6/12/2014	Stockpile	<0.05	<0.05	<0.05	<0.05	ND	5.53	98.1
SP-2R	6/16/2014	Stockpile	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<29.9
SP-3	6/12/2014	Stockpile	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<30.0
<b>Samples from Soils Removed by Excavation</b>									
S-1	6/12/2014	8	<0.05	1.03	1.86	17.2	20.1	311	2,220
S-2	6/12/2014	6	<0.05	<0.05	<0.05	<0.05	ND	<4.99	131
S-11	6/16/2014	14	<0.05	<0.05	<0.05	0.32	0.32	17.2	406
<b>Final Confirmation Samples</b>									
S-3	6/12/2014	6	<0.05	<0.05	<0.05	<0.05	ND	<5.00	42.2
S-4	6/12/2014	6	<0.05	<0.05	<0.05	<0.05	ND	<5.00	<29.9
S-5	6/12/2014	6	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<30.0
S-6	6/12/2014	6	<0.05	<0.05	<0.05	<0.05	ND	<4.98	<30.0
S-7	6/12/2014	6	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<29.9
S-8	6/12/2014	6	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<30.0
S-9	6/16/2014	6 to 9	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<30.0
S-10	6/16/2014	14	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<30.0
S-12	6/16/2014	11	<0.05	<0.05	<0.05	<0.05	ND	<5.00	39.4
S-13	6/25/2014	16	<0.031	<0.031	<0.031	<0.061	ND	<3.1	<10
S-14	6/25/2014	15	<0.041	<0.041	<0.041	<0.081	ND	<4.1	<10
S-15	6/25/2014	15	<0.035	<0.035	<0.035	<0.070	ND	<3.5	<9.9

Note: Concentrations in bold and yellow exceed the applicable OCD Remediation Action Level

NE = Not Established

\*Additional affected material was added to stockpile after sampling. Stockpile removed to landfarm based on field screening of final stockpile material.

\*\*Resampled as SP-2R.



## Analytical Report

### Report Summary

Client: Enterprise Products  
Chain Of Custody Number: 17079  
Samples Received: 6/12/2014 10:15:00AM  
Job Number: 97057-0352  
Work Order: P406048  
Project Name/Location: 3A-Loop

Entire Report Reviewed By:

Date: 6/16/14

Tim Cain, Laboratory Manager

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



Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 16-Jun-14 13:47
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### Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
S-1	P406048-01A	Soil	06/12/14	06/12/14	Glass Jar, 4 oz.
S-2	P406048-02A	Soil	06/12/14	06/12/14	Glass Jar, 4 oz.
S-3	P406048-03A	Soil	06/12/14	06/12/14	Glass Jar, 4 oz.
S-4	P406048-04A	Soil	06/12/14	06/12/14	Glass Jar, 4 oz.
S-5	P406048-05A	Soil	06/12/14	06/12/14	Glass Jar, 4 oz.
S-6	P406048-06A	Soil	06/12/14	06/12/14	Glass Jar, 4 oz.
S-7	P406048-07A	Soil	06/12/14	06/12/14	Glass Jar, 4 oz.
S-8	P406048-08A	Soil	06/12/14	06/12/14	Glass Jar, 4 oz.

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 16-Jun-14 13:47
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S-1

P406048-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Volatile Organics by EPA 8021</b>									
Benzene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Toluene	1.03	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Ethylbenzene	1.86	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
p,m-Xylene	15.4	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
o-Xylene	1.82	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Total Xylenes	17.2	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Total BTEX	20.1	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Surrogate: Bromochlorobenzene		98.3 %		80-120	1424033	06/12/14	06/12/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		107 %		80-120	1424033	06/12/14	06/12/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	311	4.98	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8015D	
Diesel Range Organics (C10-C28)	2220	29.9	mg/kg	1	1424032	06/12/14	06/13/14	EPA 8015D	

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 16-Jun-14 13:47
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S-2

P406048-02 (Solid)

Analyte	Result	Reporting			Batch	Prepared	Analyzed	Method	Notes
		Limit	Units	Dilution					
<b>Volatile Organics by EPA 8021</b>									
Benzene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
<i>Surrogate: Bromochlorobenzene</i>		84.0 %		80-120	1424033	06/12/14	06/12/14	EPA 8021B	
<i>Surrogate: 1,3-Dichlorobenzene</i>		83.4 %		80-120	1424033	06/12/14	06/12/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8015D	
Diesel Range Organics (C10-C28)	131	29.9	mg/kg	1	1424032	06/12/14	06/13/14	EPA 8015D	

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P406048-03 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Volatile Organics by EPA 8021</b>									
Benzene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
<i>Surrogate: 1,3-Dichlorobenzene</i>		91.5 %		80-120	1424033	06/12/14	06/12/14	EPA 8021B	
<i>Surrogate: Bromochlorobenzene</i>		91.9 %		80-120	1424033	06/12/14	06/12/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8015D	
Diesel Range Organics (C10-C28)	42.2	29.9	mg/kg	1	1424032	06/12/14	06/13/14	EPA 8015D	

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P406048-04 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Volatile Organics by EPA 8021</b>									
Benzene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
<i>Surrogate: Bromochlorobenzene</i>		91.3 %		80-120	1424033	06/12/14	06/12/14	EPA 8021B	
<i>Surrogate: 1,3-Dichlorobenzene</i>		90.1 %		80-120	1424033	06/12/14	06/12/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1424032	06/12/14	06/13/14	EPA 8015D	

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S-5

P406048-05 (Solid)

Analyte	Result	Reporting			Batch	Prepared	Analyzed	Method	Notes
		Limit	Units	Dilution					
<b>Volatile Organics by EPA 8021</b>									
Benzene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
<i>Surrogate: Bromochlorobenzene</i>		89.8 %		80-120	1424033	06/12/14	06/12/14	EPA 8021B	
<i>Surrogate: 1,3-Dichlorobenzene</i>		90.0 %		80-120	1424033	06/12/14	06/12/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1424032	06/12/14	06/13/14	EPA 8015D	

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**P406048-06 (Solid)**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Volatile Organics by EPA 8021</b>									
Benzene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
<i>Surrogate: 1,3-Dichlorobenzene</i>		<i>90.0 %</i>		<i>80-120</i>	<i>1424033</i>	<i>06/13/14</i>	<i>06/13/14</i>	<i>EPA 8021B</i>	
<i>Surrogate: Bromochlorobenzene</i>		<i>92.4 %</i>		<i>80-120</i>	<i>1424033</i>	<i>06/13/14</i>	<i>06/13/14</i>	<i>EPA 8021B</i>	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	4.98	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1424032	06/13/14	06/13/14	EPA 8015D	

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P406048-07 (Solid)

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Volatile Organics by EPA 8021</b>									
Benzene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
<i>Surrogate: Bromochlorobenzene</i>		96.1 %		80-120	1424033	06/13/14	06/13/14	EPA 8021B	
<i>Surrogate: 1,3-Dichlorobenzene</i>		92.8 %		80-120	1424033	06/13/14	06/13/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1424032	06/13/14	06/13/14	EPA 8015D	

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 16-Jun-14 13:47
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P406048-08 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Volatile Organics by EPA 8021</b>									
Benzene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
<i>Surrogate: Bromochlorobenzene</i>		99.0 %		80-120	1424033	06/13/14	06/13/14	EPA 8021B	
<i>Surrogate: 1,3-Dichlorobenzene</i>		96.0 %		80-120	1424033	06/13/14	06/13/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1424032	06/13/14	06/13/14	EPA 8015D	

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 16-Jun-14 13:47
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**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
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**Batch 1424033 - Purge and Trap EPA 5030A**

**Blank (1424033-BLK1)**

Prepared & Analyzed: 12-Jun-14

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	45.6		ug/L	50.0		91.3	80-120			
Surrogate: Bromochlorobenzene	46.4		"	50.0		92.9	80-120			

**Duplicate (1424033-DUP1)**

Source: P406048-01

Prepared & Analyzed: 12-Jun-14

Benzene	ND	0.05	mg/kg	ND				30		
Toluene	0.64	0.05	"	1.03				47.5	30	D1
Ethylbenzene	1.42	0.05	"	1.86				26.9	30	
p,m-Xylene	12.3	0.05	"	15.4				22.1	30	
o-Xylene	1.38	0.05	"	1.82				27.1	30	
Surrogate: 1,3-Dichlorobenzene	54.1		ug/L	50.0		108	80-120			
Surrogate: Bromochlorobenzene	52.9		"	50.0		106	80-120			

**Matrix Spike (1424033-MS1)**

Source: P406048-01

Prepared & Analyzed: 12-Jun-14

Benzene	47.6		ug/L	50.0	ND	95.1	39-150			
Toluene	54.6		"	50.0	20.7	67.8	46-148			
Ethylbenzene	71.3		"	50.0	37.3	68.1	32-160			
p,m-Xylene	307		"	100	308	NR	46-148			SPK1
o-Xylene	79.8		"	50.0	36.3	86.9	46-148			
Surrogate: 1,3-Dichlorobenzene	53.2		"	50.0		106	80-120			
Surrogate: Bromochlorobenzene	52.8		"	50.0		106	80-120			

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**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
<b>Batch 1424032 - DRO Extraction EPA 3550C</b>										
<b>Blank (1424032-BLK1)</b> Prepared: 12-Jun-14 Analyzed: 13-Jun-14										
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg							
<b>Duplicate (1424032-DUP1)</b> Source: P406048-01 Prepared: 12-Jun-14 Analyzed: 13-Jun-14										
Diesel Range Organics (C10-C28)	2030	30.0	mg/kg		2220			9.28	30	
<b>Matrix Spike (1424032-MS1)</b> Source: P406048-01 Prepared: 12-Jun-14 Analyzed: 13-Jun-14										
Diesel Range Organics (C10-C28)	2310		mg/L	250	2110	77.6	75-125			

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**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
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**Batch 1424033 - Purge and Trap EPA 5030A**

<b>Blank (1424033-BLK1)</b>	Prepared & Analyzed: 12-Jun-14									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg							
<b>Duplicate (1424033-DUP1)</b>	Source: P406048-01 Prepared & Analyzed: 12-Jun-14									
Gasoline Range Organics (C6-C10)	260	4.99	mg/kg		311			18.0	30	
<b>Matrix Spike (1424033-MS1)</b>	Source: P406048-01 Prepared & Analyzed: 12-Jun-14									
Gasoline Range Organics (C6-C10)	5.28		mg/L	0.450	6.22	NR	75-125			SPK1

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 16-Jun-14 13:47
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**Notes and Definitions**

- 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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# CHAIN OF CUSTODY RECORD

17079

Client: <b>ENTERPRISE</b>	Project Name / Location: <b>3A-LOOP</b>	ANALYSIS / PARAMETERS											
Email results to: <b>Kyle Summers</b>	Sampler Name: <b>AARON BRYANT Kyle Summers</b>	TPH (Method 8015) <b>PP/1620</b>	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
Client Phone No.: <b>903-821-5603</b>	Client No.: <b>97057-0352</b>												

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 <sub>3</sub>	HCl													
S-1	6/17/14	0830	P406048-01	1x 4oz			X	X										Y	Y
S-2		0835	P406048-02				X	X											
S-3		0840	P406048-03				X	X											
S-4		0845	P406048-04				X	X											
S-5		0850	P406048-05				X	X											
S-6		0855	P406048-06				X	X											
S-7		0900	P406048-07				X	X											
S-8		0910	P406048-08				X	X											
<del>NFS AB</del>																			

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	6/17/14	10:15		6/17/14	10:15
Relinquished by: (Signature)			Received by: (Signature)		
Sample Matrix	<b>RB 21200</b>				
Soil <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Sludge <input type="checkbox"/> Aqueous <input type="checkbox"/> Other <input type="checkbox"/>					

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

RUSH

(3, 4, 14, 15, 16)



## Analytical Report

### Report Summary

Client: Enterprise Products  
Chain Of Custody Number: 17080  
Samples Received: 6/12/2014 10:16:00AM  
Job Number: 97057-0352  
Work Order: P406049  
Project Name/Location: 3A-Loop Stockpiles

Entire Report Reviewed By:

A handwritten signature in black ink, appearing to read 'Tim Cain', is written over a horizontal line.

Date: 6/16/14

Tim Cain, Laboratory Manager

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



Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Stockpiles Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 16-Jun-14 13:50
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### Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SP-1	P406049-01A	Soil	06/12/14	06/12/14	Glass Jar, 4 oz.
SP-2	P406049-02A	Soil	06/12/14	06/12/14	Glass Jar, 4 oz.
SP-3	P406049-03A	Soil	06/12/14	06/12/14	Glass Jar, 4 oz.
SP-4	P406049-04A	Soil	06/12/14	06/12/14	Glass Jar, 4 oz.

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Stockpiles Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 16-Jun-14 13:50
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**SP-1**  
**P406049-01 (Solid)**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes	
		Limit	Units							
<b>Volatile Organics by EPA 8021</b>										
Benzene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B		
Toluene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B		
Ethylbenzene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B		
p,m-Xylene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B		
o-Xylene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B		
Total Xylenes	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B		
Total BTEX	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B		
<i>Surrogate: Bromochlorobenzene</i>		99.6 %		80-120	1424033	06/13/14	06/13/14	EPA 8021B		
<i>Surrogate: 1,3-Dichlorobenzene</i>		95.7 %		80-120	1424033	06/13/14	06/13/14	EPA 8021B		
<b>Nonhalogenated Organics by 8015</b>										
Gasoline Range Organics (C6-C10)	ND	4.98	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8015D		
Diesel Range Organics (C10-C28)	160	29.9	mg/kg	1	1424032	06/13/14	06/13/14	EPA 8015D		

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Stockpiles Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 16-Jun-14 13:50
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**SP-2**  
**P406049-02 (Solid)**

Analyte	Result	Reporting			Batch	Prepared	Analyzed	Method	Notes
		Limit	Units	Dilution					
<b>Volatile Organics by EPA 8021</b>									
Benzene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
<i>Surrogate: Bromochlorobenzene</i>		101 %		80-120	1424033	06/13/14	06/13/14	EPA 8021B	
<i>Surrogate: 1,3-Dichlorobenzene</i>		93.8 %		80-120	1424033	06/13/14	06/13/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	5.53	4.99	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8015D	
Diesel Range Organics (C10-C28)	98.1	29.9	mg/kg	1	1424032	06/13/14	06/13/14	EPA 8015D	

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Stockpiles Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 16-Jun-14 13:50
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**SP-3**  
**P406049-03 (Solid)**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes	
		Limit	Units							
<b>Volatile Organics by EPA 8021</b>										
Benzene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B		
Toluene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B		
Ethylbenzene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B		
p,m-Xylene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B		
o-Xylene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B		
Total Xylenes	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B		
Total BTEX	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B		
<i>Surrogate: Bromochlorobenzene</i>		99.1 %		80-120	1424033	06/13/14	06/13/14	EPA 8021B		
<i>Surrogate: 1,3-Dichlorobenzene</i>		94.0 %		80-120	1424033	06/13/14	06/13/14	EPA 8021B		
<b>Nonhalogenated Organics by 8015</b>										
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8015D		
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1424032	06/13/14	06/13/14	EPA 8015D		

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Stockpiles Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 16-Jun-14 13:50
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**SP-4**  
**P406049-04 (Solid)**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Volatile Organics by EPA 8021</b>									
Benzene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
<i>Surrogate: Bromochlorobenzene</i>		97.6 %		80-120	1424033	06/13/14	06/13/14	EPA 8021B	
<i>Surrogate: 1,3-Dichlorobenzene</i>		91.4 %		80-120	1424033	06/13/14	06/13/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1424032	06/13/14	06/13/14	EPA 8015D	

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Stockpiles Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 16-Jun-14 13:50
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**· 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
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**Batch 1424033 - Purge and Trap EPA 5030A**

<b>Blank (1424033-BLK1)</b>			<b>Prepared &amp; Analyzed: 12-Jun-14</b>							
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	45.6		ug/L	50.0		91.3	80-120			
Surrogate: Bromochlorobenzene	46.4		"	50.0		92.9	80-120			

<b>Duplicate (1424033-DUP1)</b>			<b>Source: P406048-01</b>		<b>Prepared &amp; Analyzed: 12-Jun-14</b>					
Benzene	ND	0.05	mg/kg		ND				30	
Toluene	0.64	0.05	"		1.03			47.5	30	D1
Ethylbenzene	1.42	0.05	"		1.86			26.9	30	
p,m-Xylene	12.3	0.05	"		15.4			22.1	30	
o-Xylene	1.38	0.05	"		1.82			27.1	30	
Surrogate: 1,3-Dichlorobenzene	54.1		ug/L	50.0		108	80-120			
Surrogate: Bromochlorobenzene	52.9		"	50.0		106	80-120			

<b>Matrix Spike (1424033-MS1)</b>			<b>Source: P406048-01</b>		<b>Prepared &amp; Analyzed: 12-Jun-14</b>					
Benzene	47.6		ug/L	50.0	ND	95.1	39-150			
Toluene	54.6		"	50.0	20.7	67.8	46-148			
Ethylbenzene	71.3		"	50.0	37.3	68.1	32-160			
p,m-Xylene	307		"	100	308	NR	46-148			SPK1
o-Xylene	79.8		"	50.0	36.3	86.9	46-148			
Surrogate: 1,3-Dichlorobenzene	53.2		"	50.0		106	80-120			
Surrogate: Bromochlorobenzene	52.8		"	50.0		106	80-120			

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Stockpiles Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 16-Jun-14 13:50
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**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
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**Batch 1424032 - DRO Extraction EPA 3550C**

<b>Blank (1424032-BLK1)</b>		Prepared: 12-Jun-14 Analyzed: 13-Jun-14								
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg							
<b>Duplicate (1424032-DUP1)</b>		Source: P406048-01 Prepared: 12-Jun-14 Analyzed: 13-Jun-14								
Diesel Range Organics (C10-C28)	2030	30.0	mg/kg		2220			9.28	30	
<b>Matrix Spike (1424032-MS1)</b>		Source: P406048-01 Prepared: 12-Jun-14 Analyzed: 13-Jun-14								
Diesel Range Organics (C10-C28)	2310		mg/L	250	2110	77.6	75-125			

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Stockpiles Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 16-Jun-14 13:50
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**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
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**Batch 1424033 - Purge and Trap EPA 5030A**

<b>Blank (1424033-BLK1)</b>	Prepared & Analyzed: 12-Jun-14									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg							
<b>Duplicate (1424033-DUP1)</b>	Source: P406048-01 Prepared & Analyzed: 12-Jun-14									
Gasoline Range Organics (C6-C10)	260	4.99	mg/kg		311			18.0	30	
<b>Matrix Spike (1424033-MS1)</b>	Source: P406048-01 Prepared & Analyzed: 12-Jun-14									
Gasoline Range Organics (C6-C10)	5.28		mg/L	0.450	6.22	NR	75-125			SPK1

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Stockpiles Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	<b>Reported:</b> 16-Jun-14 13:50
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**Notes and Definitions**

- 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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# CHAIN OF CUSTODY RECORD

17080

Client: <i>Enterprise</i>	Project Name / Location: <i>3A-Loop Stockpiles</i>	ANALYSIS / PARAMETERS											
Email results to: <i>Ryle Summers</i>	Sampler Name: <i>Ryle Summers</i>	TPH (Method 8015) <i>GRD</i>	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
Client Phone No.: <i>703 821 5603</i>	Client No.: <i>97057-0352</i>												

Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative			TPH (Method 8015) <i>GRD</i>	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 <sub>3</sub>	HCl													
<i>SP-1</i>	<i>6/12/14</i>	<i>0920</i>	<i>P406049-01</i>	<i>1x40z</i>				<i>X</i>	<i>X</i>									<i>Y</i>	<i>Y</i>
<i>SP-2</i>		<i>0930</i>	<i>P406049-02</i>																
<i>SP-3</i>		<i>0940</i>	<i>P406049-03</i>																
<i>SP-4</i>		<i>0950</i>	<i>P406049-04</i>																
<i>NFS</i>																			
<i>NFS</i>																			

Relinquished by: (Signature) <i>[Signature]</i>	Date <i>6/12/14</i>	Time <i>10:16</i>	Received by: (Signature) <i>[Signature]</i>	Date <i>6/24/14</i>	Time <i>10:16</i>
Relinquished by: (Signature)			Received by: (Signature)		
Sample Matrix			<i>RB21200</i>		
Soil <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Sludge <input type="checkbox"/> Aqueous <input type="checkbox"/> Other <input type="checkbox"/>					

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

*RUSH*

 *8.9, 10.4 10.7*



## Analytical Report

### Report Summary

Client: Enterprise Products  
Chain Of Custody Number: 17087  
Samples Received: 6/16/2014 12:30:00PM  
Job Number: 97057-0352  
Work Order: P406059  
Project Name/Location: 3A-Loop

Entire Report Reviewed By:

A handwritten signature in black ink, appearing to read 'Tim Cain', is written over a horizontal line.

Date: 7/15/14

Tim Cain, Laboratory Manager

Supplement to analytical report generated on: 6/18/14 11:55 am

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 15-Jul-14 12:31
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**Analytical Report for Samples**

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
S-9	P406059-01A	Soil	06/16/14	06/16/14	Glass Jar, 4 oz.
S-10	P406059-02A	Soil	06/16/14	06/16/14	Glass Jar, 4 oz.
S-11	P406059-03A	Soil	06/16/14	06/16/14	Glass Jar, 4 oz.
S-12	P406059-04A	Soil	06/16/14	06/16/14	Glass Jar, 4 oz.

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 15-Jul-14 12:31
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S-9

P406059-01 (Solid)

Analyte	Result	Reporting			Batch	Prepared	Analyzed	Method	Notes
		Limit	Units	Dilution					
<b>Volatile Organics by EPA 8021</b>									
Benzene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
<i>Surrogate: Bromochlorobenzene</i>		99.4 %		80-120	1425001	06/17/14	06/17/14	EPA 8021B	
<i>Surrogate: 1,3-Dichlorobenzene</i>		98.2 %		80-120	1425001	06/17/14	06/17/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1425002	06/17/14	06/17/14	EPA 8015D	

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 15-Jul-14 12:31
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**S-10**

**P406059-02 (Solid)**

Analyte	Result	Reporting			Batch	Prepared	Analyzed	Method	Notes
		Limit	Units	Dilution					
<b>Volatile Organics by EPA 8021</b>									
Benzene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
<i>Surrogate: Bromochlorobenzene</i>		103 %		80-120	1425001	06/17/14	06/17/14	EPA 8021B	
<i>Surrogate: 1,3-Dichlorobenzene</i>		100 %		80-120	1425001	06/17/14	06/17/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1425002	06/17/14	06/17/14	EPA 8015D	

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 15-Jul-14 12:31
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**S-11**  
**P406059-03 (Solid)**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Volatile Organics by EPA 8021</b>									
Benzene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
p,m-Xylene	0.32	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Total Xylenes	0.32	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Total BTEX	0.32	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
<i>Surrogate: Bromochlorobenzene</i>		107 %		80-120	1425001	06/17/14	06/17/14	EPA 8021B	
<i>Surrogate: 1,3-Dichlorobenzene</i>		102 %		80-120	1425001	06/17/14	06/17/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	17.2	5.00	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8015D	
Diesel Range Organics (C10-C28)	406	30.0	mg/kg	1	1425002	06/17/14	06/17/14	EPA 8015D	

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 15-Jul-14 12:31
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**S-12**  
**P406059-04 (Solid)**

Analyte	Result	Reporting			Batch	Prepared	Analyzed	Method	Notes
		Limit	Units	Dilution					
<b>Volatile Organics by EPA 8021</b>									
Benzene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
<i>Surrogate: Bromochlorobenzene</i>		106 %		80-120	1425001	06/17/14	06/17/14	EPA 8021B	
<i>Surrogate: 1,3-Dichlorobenzene</i>		102 %		80-120	1425001	06/17/14	06/17/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8015D	
Diesel Range Organics (C10-C28)	39.4	29.9	mg/kg	1	1425002	06/17/14	06/17/14	EPA 8015D	

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 15-Jul-14 12:31
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**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
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**Batch 1425001 - Purge and Trap EPA 5030A**

<b>Blank (1425001-BLK1)</b>			Prepared & Analyzed: 16-Jun-14							
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	44.8		ug/L	50.0		89.6	80-120			
Surrogate: Bromochlorobenzene	45.6		"	50.0		91.1	80-120			

<b>Duplicate (1425001-DUP1)</b>			Source: P406053-01		Prepared & Analyzed: 16-Jun-14					
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	47.8		ug/L	50.0		95.6	80-120			
Surrogate: Bromochlorobenzene	49.2		"	50.0		98.5	80-120			

<b>Matrix Spike (1425001-MS1)</b>			Source: P406053-01		Prepared & Analyzed: 16-Jun-14					
Benzene	43.9		ug/L	50.0	ND	87.9	39-150			
Toluene	44.5		"	50.0	ND	89.0	46-148			
Ethylbenzene	46.2		"	50.0	ND	92.3	32-160			
p,m-Xylene	91.3		"	100	ND	91.3	46-148			
o-Xylene	45.9		"	50.0	ND	91.9	46-148			
Surrogate: 1,3-Dichlorobenzene	48.6		"	50.0		97.1	80-120			
Surrogate: Bromochlorobenzene	50.5		"	50.0		101	80-120			

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 15-Jul-14 12:31
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**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
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**Batch 1425001 - Purge and Trap EPA 5030A**

<b>Blank (1425001-BLK1)</b>	Prepared & Analyzed: 16-Jun-14									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg							
<b>Duplicate (1425001-DUP1)</b>	Source: P406053-01 Prepared & Analyzed: 16-Jun-14									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg		ND				30	
<b>Matrix Spike (1425001-MS1)</b>	Source: P406053-01 Prepared & Analyzed: 16-Jun-14									
Gasoline Range Organics (C6-C10)	0.47		mg/L	0.450	ND	105	75-125			

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 15-Jul-14 12:31
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**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
<b>Batch 1425002 - DRO Extraction EPA 3550C</b>										
<b>Blank (1425002-BLK1)</b> Prepared & Analyzed: 16-Jun-14										
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg							
<b>Duplicate (1425002-DUP1)</b> Source: P406053-01 Prepared & Analyzed: 16-Jun-14										
Diesel Range Organics (C10-C28)	80.6	29.9	mg/kg		75.4			6.71	30	
<b>Matrix Spike (1425002-MS1)</b> Source: P406053-01 Prepared & Analyzed: 16-Jun-14										
Diesel Range Organics (C10-C28)	307		mg/L	250	71.8	94.1	75-125			

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 15-Jul-14 12:31
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**Notes and Definitions**

- 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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# CHAIN OF CUSTODY RECORD

17087

Client: <u>Enterprise</u>		Project Name / Location: <u>3A-Loop</u>		ANALYSIS / PARAMETERS																											
Email results to: <u>Kyle Summers</u>		Sampler Name: <u>Kyle Summers</u>		<div style="text-align: right; margin-bottom: 5px;"><b>GRD</b></div> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">TPH (Method 8015)</td> <td style="width: 5%;">BTEX (Method 8021)</td> <td style="width: 5%;">VOC (Method 8260)</td> <td style="width: 5%;">RCRA 8 Metals</td> <td style="width: 5%;">Cation / Anion</td> <td style="width: 5%;">RCI</td> <td style="width: 5%;">TCLP with H/P</td> <td style="width: 5%;">CO Table 910-1</td> <td style="width: 5%;">TPH (418.1)</td> <td style="width: 5%;">CHLORIDE</td> <td style="width: 5%;"></td> <td style="width: 5%;"></td> <td style="width: 5%;"></td> <td style="width: 5%;"></td> <td style="width: 5%;">Sample Cool</td> <td style="width: 5%;">Sample Intact</td> </tr> </table>												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
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				
Client Phone No.: <u>903 821 6603</u>		Client No.: <u>97057-0352</u>																													
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 <sub>3</sub>	HCl																									
<u>S-9</u>	<u>6/16/19</u>	<u>1030</u>	<u>P406059-01</u>	<u>1 X 4 oz.</u>			<u>X</u>	<u>X</u>												<u>Y</u>	<u>Y</u>										
<u>S-10</u>	↓	<u>1045</u>	<u>P406059-02</u>	↓			<u>X</u>	<u>X</u>												↓	↓										
<u>S-11</u>	↓	<u>1055</u>	<u>P406059-03</u>	↓			<u>X</u>	<u>X</u>												↓	↓										
<u>S-12</u>	↓	<u>1110</u>	<u>P406059-04</u>	↓			<u>X</u>	<u>X</u>												↓	↓										
<del>RES</del>																															
Relinquished by: (Signature) <u>[Signature]</u>				Date/Time <u>6/16/19 1230</u>		Received by: (Signature) <u>[Signature]</u>										Date/Time <u>6/16/19 1230</u>															
Relinquished by: (Signature)						Received by: (Signature)																									
Sample Matrix						<u>RB21200</u>																									
Soil <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Sludge <input type="checkbox"/> Aqueous <input type="checkbox"/> Other <input type="checkbox"/>																															
<input type="checkbox"/> Sample(s) dropped off after hours to secure drop off area.																															
<u>RUSH</u>																															

CHD



## Analytical Report

### Report Summary

Client: Enterprise Products  
Chain Of Custody Number: 17088  
Samples Received: 6/16/2014 12:30:00PM  
Job Number: 97057-0352  
Work Order: P406060  
Project Name/Location: 3A-Loop Stockpiles

Entire Report Reviewed By:

A handwritten signature in black ink, appearing to read 'Tim Cain', is written over a horizontal line.

Date: 7/15/14

Tim Cain, Laboratory Manager

Supplement to analytical report generated on: 6/18/14 11:58 am

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



Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Stockpiles Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 15-Jul-14 12:20
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**Analytical Report for Samples**

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SP-2R	P406060-01A	Soil	06/16/14	06/16/14	Glass Jar, 4 oz.

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Stockpiles Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 15-Jul-14 12:20
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**SP-2R**

**P406060-01 (Solid)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Volatile Organics by EPA 8021</b>									
Benzene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
<i>Surrogate: Bromochlorobenzene</i>		104 %		80-120	1425001	06/17/14	06/17/14	EPA 8021B	
<i>Surrogate: 1,3-Dichlorobenzene</i>		99.3 %		80-120	1425001	06/17/14	06/17/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1425002	06/17/14	06/17/14	EPA 8015D	

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Stockpiles Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 15-Jul-14 12:20
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**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
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**Batch 1425001 - Purge and Trap EPA 5030A**

<b>Blank (1425001-BLK1)</b>			Prepared & Analyzed: 16-Jun-14							
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	44.8		ug/L	50.0		89.6	80-120			
Surrogate: Bromochlorobenzene	45.6		"	50.0		91.1	80-120			

<b>Duplicate (1425001-DUP1)</b>			Source: P406053-01		Prepared & Analyzed: 16-Jun-14					
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	47.8		ug/L	50.0		95.6	80-120			
Surrogate: Bromochlorobenzene	49.2		"	50.0		98.5	80-120			

<b>Matrix Spike (1425001-MS1)</b>			Source: P406053-01		Prepared & Analyzed: 16-Jun-14					
Benzene	43.9		ug/L	50.0	ND	87.9	39-150			
Toluene	44.5		"	50.0	ND	89.0	46-148			
Ethylbenzene	46.2		"	50.0	ND	92.3	32-160			
p,m-Xylene	91.3		"	100	ND	91.3	46-148			
o-Xylene	45.9		"	50.0	ND	91.9	46-148			
Surrogate: 1,3-Dichlorobenzene	48.6		"	50.0		97.1	80-120			
Surrogate: Bromochlorobenzene	50.5		"	50.0		101	80-120			

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

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Stockpiles Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 15-Jul-14 12:20
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**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
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**Batch 1425001 - Purge and Trap EPA 5030A**

<b>Blank (1425001-BLK1)</b>										Prepared & Analyzed: 16-Jun-14
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg							
<b>Duplicate (1425001-DUP1)</b>										Prepared & Analyzed: 16-Jun-14
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg		ND				30	
<b>Matrix Spike (1425001-MS1)</b>										Prepared & Analyzed: 16-Jun-14
Gasoline Range Organics (C6-C10)	0.47		mg/L	0.450	ND	105	75-125			

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Stockpiles Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 15-Jul-14 12:20
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**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
<b>Batch 1425002 - DRO Extraction EPA 3550C</b>										
<b>Blank (1425002-BLK1)</b> Prepared & Analyzed: 16-Jun-14										
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg							
<b>Duplicate (1425002-DUP1)</b> Source: P406053-01 Prepared & Analyzed: 16-Jun-14										
Diesel Range Organics (C10-C28)	80.6	29.9	mg/kg		75.4			6.71	30	
<b>Matrix Spike (1425002-MS1)</b> Source: P406053-01 Prepared & Analyzed: 16-Jun-14										
Diesel Range Organics (C10-C28)	307		mg/L	250	71.8	94.1	75-125			

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: 3A-Loop Stockpiles Project Number: 97057-0352 Project Manager: Kyle Summers-Apex TITAN	Reported: 15-Jul-14 12:20
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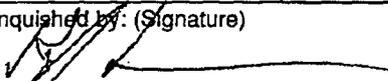
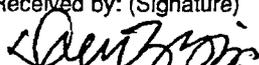
**Notes and Definitions**

- 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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# CHAIN OF CUSTODY RECORD

17088

Client: <b>Enterprise</b>		Project Name / Location: <b>3A-LOOD Stockpiles</b>					ANALYSIS / PARAMETERS													
Email results to: <b>Nyle Summers</b>		Sampler Name: <b>Nyle Summers</b>					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
Client Phone No.: <b>903 821-5603</b>		Client No.: <b>97057-0352</b>																		
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 <sub>3</sub>	HCl														
<del>SP-4R-5P-2R N.E.</del>	<del>6/16/14</del>	<del>1130</del>	<del>P406060-01</del>	<del>1 X 40Z</del>			<del>X</del>	<del>X</del>											<del>Y</del>	<del>Y</del>
<p><del>YES</del></p> <p><del>MS</del></p>																				
Relinquished by: (Signature) 				Date/Time: <b>6/16/14 1220</b>	Received by: (Signature) 								Date/Time: <b>6/16/14 1230</b>							
Relinquished by: (Signature)					Received by: (Signature)															
Sample Matrix					RB 21200															
Soil <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Sludge <input type="checkbox"/> Aqueous <input type="checkbox"/> Other <input type="checkbox"/>																				
<input type="checkbox"/> Sample(s) dropped off after hours to secure drop off area. <b>RUSH</b>																				



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

June 30, 2014

Kyle Summers

Apex Titan, Inc.

606 S. Rio Grande Unit A

Aztec, NM 87410

TEL: (903) 821-5603

FAX (214) 350-2914

RE: Entreprise Lateral 3A-Loop

OrderNo.: 1406B93

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 3 sample(s) on 6/26/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Apex Titan, Inc. **Client Sample ID:** S-13  
**Project:** Entreprise Lateral 3A-Loop **Collection Date:** 6/25/2014 8:43:00 AM  
**Lab ID:** 1406B93-001 **Matrix:** MEOH (SOIL) **Received Date:** 6/26/2014 8:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/26/2014 11:01:58 AM	13911
Surr: DNOP	84.6	57.9-140		%REC	1	6/26/2014 11:01:58 AM	13911
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.1		mg/Kg	1	6/26/2014 9:30:45 AM	R19523
Surr: BFB	95.8	80-120		%REC	1	6/26/2014 9:30:45 AM	R19523
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.031		mg/Kg	1	6/26/2014 9:30:45 AM	R19523
Toluene	ND	0.031		mg/Kg	1	6/26/2014 9:30:45 AM	R19523
Ethylbenzene	ND	0.031		mg/Kg	1	6/26/2014 9:30:45 AM	R19523
Xylenes, Total	ND	0.061		mg/Kg	1	6/26/2014 9:30:45 AM	R19523
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	6/26/2014 9:30:45 AM	R19523

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Apex Titan, Inc.

**Client Sample ID:** S-14

**Project:** Entreprise Lateral 3A-Loop

**Collection Date:** 6/25/2014 9:07:00 AM

**Lab ID:** 1406B93-002

**Matrix:** MEOH (SOIL)

**Received Date:** 6/26/2014 8:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/26/2014 11:31:59 AM	13911
Surr: DNOP	84.3	57.9-140		%REC	1	6/26/2014 11:31:59 AM	13911
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	6/26/2014 9:59:24 AM	R19523
Surr: BFB	95.2	80-120		%REC	1	6/26/2014 9:59:24 AM	R19523
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.041		mg/Kg	1	6/26/2014 9:59:24 AM	R19523
Toluene	ND	0.041		mg/Kg	1	6/26/2014 9:59:24 AM	R19523
Ethylbenzene	ND	0.041		mg/Kg	1	6/26/2014 9:59:24 AM	R19523
Xylenes, Total	ND	0.081		mg/Kg	1	6/26/2014 9:59:24 AM	R19523
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	6/26/2014 9:59:24 AM	R19523

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

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Apex Titan, Inc. **Client Sample ID:** S-15  
**Project:** Entreprise Lateral 3A-Loop **Collection Date:** 6/25/2014 9:09:00 AM  
**Lab ID:** 1406B93-003 **Matrix:** MEOH (SOIL) **Received Date:** 6/26/2014 8:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/26/2014 12:01:56 PM	13911
Surr: DNOP	86.0	57.9-140		%REC	1	6/26/2014 12:01:56 PM	13911
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	6/26/2014 10:28:00 AM	R19523
Surr: BFB	94.6	80-120		%REC	1	6/26/2014 10:28:00 AM	R19523
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.035		mg/Kg	1	6/26/2014 10:28:00 AM	R19523
Toluene	ND	0.035		mg/Kg	1	6/26/2014 10:28:00 AM	R19523
Ethylbenzene	ND	0.035		mg/Kg	1	6/26/2014 10:28:00 AM	R19523
Xylenes, Total	ND	0.070		mg/Kg	1	6/26/2014 10:28:00 AM	R19523
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	6/26/2014 10:28:00 AM	R19523

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

<b>Qualifiers:</b>	* 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	Page 3 of 6
	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#: 1406B93

30-Jun-14

**Client:** Apex Titan, Inc.  
**Project:** Entreprise Lateral 3A-Loop

Sample ID	<b>MB-13911</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>13911</b>	RunNo:	<b>19522</b>					
Prep Date:	<b>6/26/2014</b>	Analysis Date:	<b>6/26/2014</b>	SeqNo:	<b>564983</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	7.1		10.00		70.6	57.9	140			

Sample ID	<b>LCS-13911</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>13911</b>	RunNo:	<b>19522</b>					
Prep Date:	<b>6/26/2014</b>	Analysis Date:	<b>6/26/2014</b>	SeqNo:	<b>564984</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	89.3	68.6	130			
Surr: DNOP	3.4		5.000		67.1	57.9	140			

Sample ID	<b>MB-13913</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>13913</b>	RunNo:	<b>19522</b>					
Prep Date:	<b>6/26/2014</b>	Analysis Date:	<b>6/26/2014</b>	SeqNo:	<b>565609</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	6.6		10.00		66.4	57.9	140			

Sample ID	<b>LCS-13913</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>13913</b>	RunNo:	<b>19522</b>					
Prep Date:	<b>6/26/2014</b>	Analysis Date:	<b>6/26/2014</b>	SeqNo:	<b>565610</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.1		5.000		61.7	57.9	140			

### 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#: 1406B93

30-Jun-14

Client: Apex Titan, Inc.  
Project: Entreprise Lateral 3A-Loop

Sample ID	<b>MB-13887 MK</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R19523</b>	RunNo:	<b>19523</b>					
Prep Date:		Analysis Date:	<b>6/26/2014</b>	SeqNo:	<b>565478</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	960		1000		95.6	80	120			

Sample ID	<b>LCS-13887 MK</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R19523</b>	RunNo:	<b>19523</b>					
Prep Date:		Analysis Date:	<b>6/26/2014</b>	SeqNo:	<b>565479</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	25.00	0	115	71.7	134			
Surr: BFB	1100		1000		105	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#: 1406B93

30-Jun-14

**Client:** Apex Titan, Inc.

**Project:** Entreprise Lateral 3A-Loop

Sample ID	<b>MB-13887 MK</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R19523</b>	RunNo:	<b>19523</b>					
Prep Date:		Analysis Date:	<b>6/26/2014</b>	SeqNo:	<b>565515</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

Sample ID	<b>LCS-13887 MK</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R19523</b>	RunNo:	<b>19523</b>					
Prep Date:		Analysis Date:	<b>6/26/2014</b>	SeqNo:	<b>565516</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	104	80	120			
Toluene	1.0	0.050	1.000	0	102	80	120			
Ethylbenzene	1.0	0.050	1.000	0	102	80	120			
Xylenes, Total	3.0	0.10	3.000	0	101	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	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

**Sample Log-In Check List**

Client Name: APEX AZTEC

Work Order Number: 1406B93

RcptNo: 1

Received by/date: [Signature] 06/26/14

Logged By: Lindsay Mangin 6/26/2014 8:10:00 AM [Signature]

Completed By: Lindsay Mangin 6/26/2014 8:21:08 AM [Signature]

Reviewed By: IO 06/26/14

**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 or >12 unless noted)  
 Adjusted? \_\_\_\_\_  
 Checked by: \_\_\_\_\_

**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	1.7	Good	Yes			

# Chain-of-Custody Record

Client: Apex TITAN, Inc.

Mailing Address: 606 South Rio Grande

Suite A, Aztec NM 87410

Phone #: 505-334-5200

email or Fax#:

QA/QC Package:

Standard  Level 4 (Full Validation)

Accreditation

NELAP  Other \_\_\_\_\_

EDD (Type) \_\_\_\_\_

Project Name: Enterprise Lateral 3A-Loop

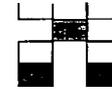
Project #: \_\_\_\_\_

Project Manager: K. Summers

Sampler: H. Woods

On Ice:  Yes  No

Sample Temperature: 1.7



## 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.	BTEX + MTBE + TPH (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MMS)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)	
6/25/14	0843	Soil	S-13	1-4oz	Cold	-001	X	X											
6/25/14	0907	Soil	S-14	1-4oz	Cold	-002	X	X											
6/25/14	0909	Soil	S-15	1-4oz	Cold	-003	X	X											

Date: 6/25/14 Time: 1412 Relinquished by: Leathan M. Woods

Received by: Christine Walle Date: 6/25/14 Time: 1412

Date: 6/25/14 Time: 1740 Relinquished by: Christine Walle

Received by: [Signature] Date: 06/26/14 Time: 0810

Remarks: Direct Bill to Enterprise Field Services  
C/O Tom Long  
Paykey Code:

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.