

**3R-1011**

**Release Report/ General  
Correspondence**

**Enterprise SJ**

**Date: Apr-Jun 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

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 3B-23 Block Valve Leak (EOL)	Facility Type: Gathering Line/Block Valve

Surface Owner: Private	Mineral Owner: BLM	API No.
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**LOCATION OF RELEASE**

Unit Letter A	Section 30	Township 29N	Range 11W	Feet from the 1240	<del>North</del> South Line	Feet from the 25	<del>East</del> West Line	County San Juan
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Latitude 36.700682 Longitude -108.028410

**NATURE OF RELEASE**

Type of Release: Natural Gas and Natural Gas Liquids	Volume of Release: 29 MCF Gas; Estimated 3-5 BBLs Liquids	Volume Recovered: Unknown
Source of Release: Block Valve Malfunction	Date and Hour of Occurrence: 1/27/2014 @ 6:06 p.m.	Date and Hour of Discovery: 1/27/2014 @ 6:06 p.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Brandon Powell - NMOCD	
By Whom? Thomas Long	Date and Hour: 1/27/2014 7:00 p.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

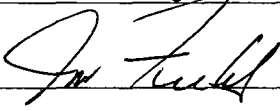
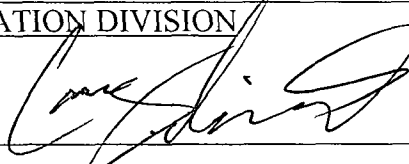
If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* A release was discovered on the Lateral 3B-23 (EOL) Block Valve. The release area was in the vicinity of a residential area. The line was blown down, taken out of service and LOTO (lock out tag out) was applied. A surface area of approximately 6 feet by 6 feet was impacted by a condensate/water mix.

MAY 27 2014

Describe Area Affected and Cleanup Action Taken.\* A surface area of approximately 6 feet by 6 feet was impacted by a condensate/water mix. Remediation was completed on March 11, 2014. Approximately 99 cubic yards of hydrocarbon impacted soil was excavated and transported to an approved NMOCD land farm facility. The final excavation measured approximately fifteen (15) feet long by fifteen (15) wide ranging from ten (10) to twelve (12) feet below ground surface. 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: 		OIL CONSERVATION DIVISION	
Printed Name: Jon Fields		Approved by Environmental Specialist: 	
Title: Director, Environmental		Approval Date: 5/29/14	Expiration Date:
E-mail Address: jefields@eprod.com		Conditions of Approval:	
Date: 5-22-2014 Phone: (713)381-6684		Attached <input type="checkbox"/>	

\* Attach Additional Sheets If Necessary

# NCS 141 4850.180



## **CORRECTIVE ACTION REPORT**

Property:

**3B-23 EOL Release  
NE 1/4, S30 T29N R11W  
San Juan County, New Mexico**

**OIL CONS. DIV DIST. 3  
MAY 27 2014**

April 14, 2014  
Apex Project No. 7030414G003

Prepared for:

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

Prepared by:

A handwritten signature in black ink, appearing to read 'Kyle Summers', written over a horizontal line.

Kyle Summers, C.P.G.  
Branch Manager

A handwritten signature in black ink, appearing to read 'B. Chris Mitchell', written over a horizontal line.

B. Chris Mitchell, P.G.  
Principal Geoscientist

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## **CORRECTIVE ACTION REPORT**

**3B-23 EOL Release  
NE 1/4, S30 T29N R11W  
San Juan County, New Mexico  
  
Apex Project No. 7030414G003**

### **1.0 INTRODUCTION**

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

The 3B-23 EOL Release Site is located within the Enterprise Products Operating LLC (Enterprise) pipeline right-of-way (ROW) in the northeast (NE) ¼ of Section 30 in Township 29 North and Range 11 West in Bloomfield, San Juan County, New Mexico, referred to hereinafter as the "Site" or "subject Site". The Site is located on land owned by San Juan County, at the southeast edge of the Salmon River Ruins cultural park and museum property, and is surrounded by the cultural park and residential areas, periodically interrupted with oil and gas gathering facilities, including one (1) Enterprise natural gas gathering pipeline riser and an associated well tie that traverses the Site.

On February 20th, 2014, Enterprise shut in the 3B-23 EOL due to a gasket leak on the pipeline riser. Repair activities were initiated and an initial attempt to facilitate corrective action at the site by hand-digging was subsequently abandoned due to the depth of impact. On March 4<sup>th</sup>, 2014, after approval from a San Juan County archeologist, corrective actions resumed with the aid of a back hoe. An unknown quantity of condensate/water mixture was potentially released from the riser as a result of the damaged gasket. The leak was visually identified by a release of natural gas from the riser to the atmosphere. Slight soil discoloration was visible at the surface.

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 chemicals 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* (RALs) using the New Mexico EMNRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases* as guidance.

#### **1.3 Standard of Care**

Apex TITAN's (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.

## 1.4 Additional Limitations

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.

## 1.5 Reliance

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.

## 2.0 SITE RANKING

In accordance with the 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 table below:

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	20
	No	0	
Distance to Surface Water Body	<200 feet	20	10
	200 to 1,000 feet	10	
	>1,000 feet	0	
Total Ranking Score			50

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

Based on Apex's evaluation of the scoring criteria, the Site would have a Total Ranking Score of 50. This ranking is based on the following:

- The Site is located in an area where groundwater is expected to be encountered within 50 feet bgs.
- The Office of the State Engineer website database identifies several private water wells within Section 30 of T29N R12W. No water wells were visually identified within 200 feet of the Site, but may be present as two (2) residences are located within 200 feet of the

Site. The San Juan River (a water source) is located approximately 980 feet south of the Site.

- A possible historic pond is located near the Site at the head of an ephemeral wash (as identified by the 1965 USGS topographic map, but does not contain water. The San Juan River (surface water body) is located approximately 980 feet south of the Site.

### **3.0 RESPONSE ACTIONS**

#### **3.1 Soil Excavation Activities**

On February 20th, 2014, Enterprise shut in the 3B-23 EOL due to a gasket leak on the pipeline riser. Repair activities were initiated and an initial attempt to facilitate corrective action at the site by hand-digging was subsequently abandoned due to the depth of impact. On March 4<sup>th</sup>, 2014, after approval from a San Juan County archeologist, corrective actions resumed with the aid of a back hoe. An estimated five (5) to ten (10) barrels of condensate/water mixture was potentially released from the riser as a result of the damaged gasket. The leak was visually identified by a release of natural gas from the riser to the atmosphere. Slight soil discoloration was visible at the surface. During the corrective action activities, West States Energy Contractors provided heavy equipment and labor support, and Kyle Summers and Aaron Bryant, Apex environmental professionals, provided environmental support. An Archeologist from the Salmon River Ruins museum was present during all excavation activities.

During the first stage of corrective action, subsequent to the pipeline repair activities, approximately 9 cubic yards of hydrocarbon affected soils were excavated at the Site using hand tools. Initial corrective action activities were halted once the depth of excavation reached 4 feet bgs.

On March 4<sup>th</sup>, 2014, subsequent to the approval to utilize a back hoe at the Site, Enterprise resumed corrective actions. The excavation was extended in all four (4) cardinal directions from the riser, and an additional 90 cubic yards of material were removed from the floor and sidewalls of the excavation in the immediate vicinity of the release. The total depth of the final excavation reached approximately 10 feet to 12 bgs. The overall average surface expression of the excavation measured approximately 15 feet long by 15 feet wide.

A total of approximately 99 cubic yards of hydrocarbon affected soils were excavated and transported to the Industrial Ecosystems, Inc. landfarm on Crouch Mesa, near Aztec, NM for disposal/remediation. The executed C-138 forms are provided in Appendix B. Following the receipt of acceptable confirmation sampling results, the excavation was backfilled with clean imported fill and contoured to surrounding grade.

During excavation activities, air in the breathing zone was monitored to ensure that the Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL) of 200 parts per million (ppm) Time Weighted Average (TWA) for an 8-hour work day was not exceeded. Additionally, Enterprise monitored the excavation for explosive atmosphere conditions and oxygen deficiency prior to any entries into the excavation.

The lithology encountered during the completion of corrective action activities consisted primarily of loose silty-sands with occasional gravel and cobbles.

Although soil moisture increased with excavation depth, groundwater was not encountered during the corrective action activities.

Figure 3 is a site map that indicates the location of the excavated area and shows the final confirmation sample locations in relation to the final excavation dimensions (Appendix A).. Photographic documentation of the field activities is included in Appendix C.

### 3.2 Soil Sampling Program

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

Apex's soil sampling program included the collection of eleven (11) confirmation samples (SC-1 through SC-11) from the side walls and bottom of the excavation for laboratory analysis. The soil sample locations were selected based on visual, olfactory and/or PID evidence of potential impairment and excavation dimensions, and based on on-site OCD guidance, composite samples were collected 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 confirmation soil samples were collected and placed in laboratory prepared glassware, labeled/sealed using the laboratory supplied label, 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 either Envirotech Analytical Laboratory in Farmington, New Mexico or Hall Environmental Analysis Laboratory in Albuquerque, New Mexico for 24-hr rush analysis.

## 4.0 LABORATORY ANALYTICAL METHODS

Confirmation soil samples were 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 (GRO) 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.

## 5.0 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.

### 5.1 Confirmation Soil Samples

Apex compared the BTEX and TPH concentrations or reporting limits (RLs) associated with the eleven (11) confirmation samples collected from the excavated area to the OCD RAL for sites having a total ranking score of "50".

- The laboratory analyses of the confirmation samples of soils remaining in place did not indicate benzene concentrations above the OCD RAL.

- The laboratory analyses of the confirmation samples of soils remaining in place did not indicate total BTEX concentrations above the OCD RAL.
- The laboratory analyses of the confirmation samples of soil remaining in place did not indicate TPH GRO/DRO concentrations above the OCD RAL of 100 mg/Kg for a Site ranking of "50".

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

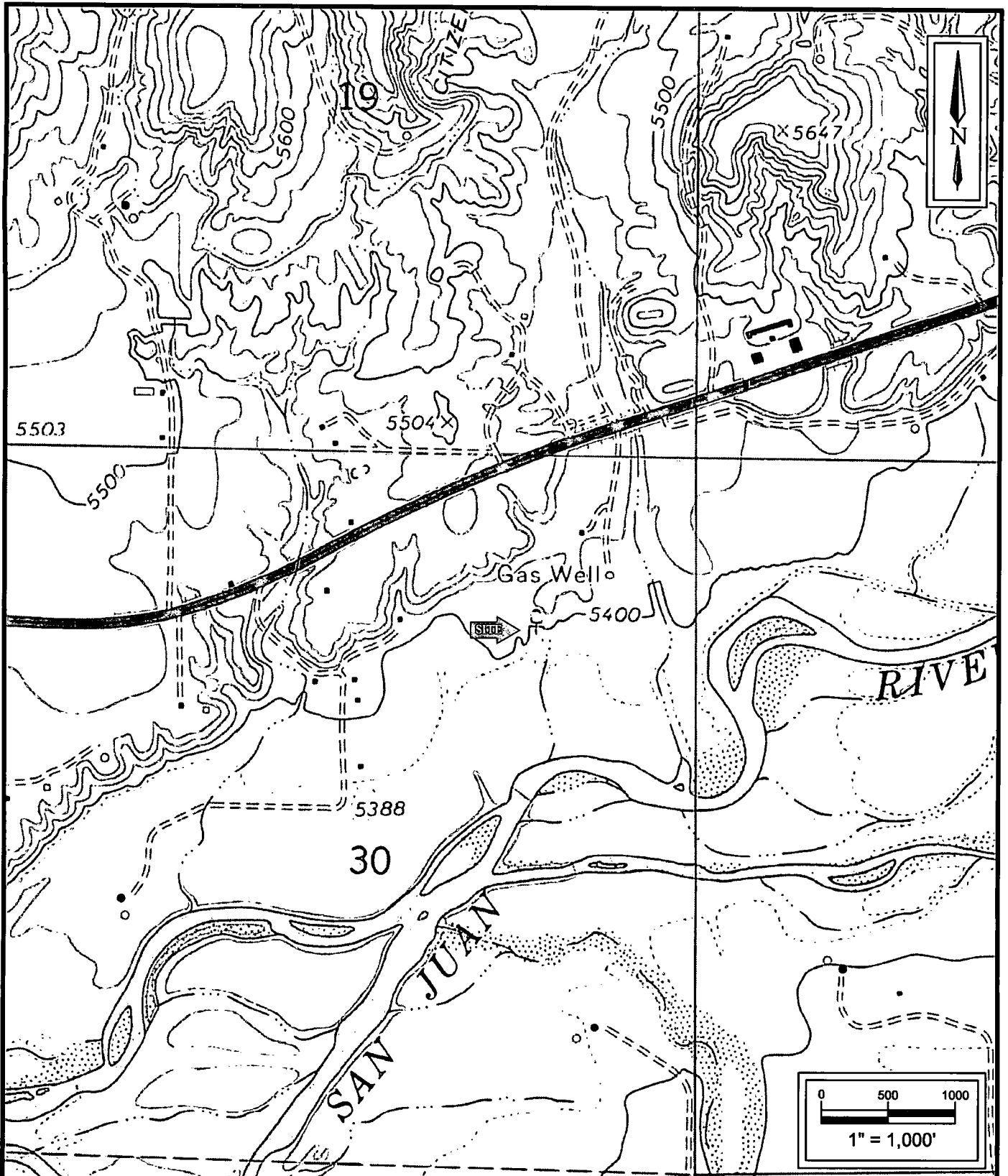
## 6.0 FINDINGS AND RECOMMENDATIONS

The 3B-23 EOL Release Site is located within the Enterprise pipeline ROW in the NE ¼ of Section 30 in Township 29 North and Range 11 West in Bloomfield, San Juan County, New Mexico. The Site is located on land owned by San Juan County, at the southeast edge of the Salmon River Ruins cultural park and museum property, and is surrounded by the cultural park and residential areas, periodically interrupted with oil and gas gathering facilities, including one (1) Enterprise natural gas gathering pipeline riser and an associated well tie that traverses the Site.

On February 20th, 2014, Enterprise shut in the 3B-23 EOL due to a gasket leak on the pipeline riser. Repair activities were initiated and an initial attempt to facilitate corrective action at the site by hand-digging was subsequently abandoned due to the depth of impact. On March 4<sup>th</sup>, 2014, after approval from a San Juan County archeologist, corrective actions resumed with the aid of a back hoe. An unknown quantity of condensate/water mixture was potentially released from the riser as a result of the damaged gasket. The leak was visually identified by a release of natural gas from the riser to the atmosphere. Slight soil discoloration was visible at the surface.

- 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 reached approximately 10 feet to 12 feet bgs near the source of the release. The overall average surface expression of the excavation measured approximately 15 feet long by 15 feet wide.
- A total of approximately 99 cubic yards of hydrocarbon affected soils were transported to the Industrial Ecosystems, Inc. landfarm on Crouch Mesa, near Aztec, NM for disposal/remediation. The excavation was backfilled with clean imported fill and contoured to the surrounding grade.
- The lithology encountered during the completion of corrective action activities consisted primarily of loose silty-sands with occasional gravel and cobbles.
- Groundwater was not encountered during the corrective action excavation activities.
- Prior to backfilling the excavation, confirmation samples were collected from the floor and sidewalls of the excavation. Based on analytical and screening results, the soils remaining on-site do not exhibit COC concentrations above the OCD RALs.

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



3B-23 EOL Release

NE 1/4 S30 T29N R11W  
Bloomfield, San Juan County, NM  
36.700572N, -108.028397W

Project No. 7030414G003.001



**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



**3B-23 EOL Release**

**NE 1/4 S30 T29N R11W**

**Bloomfield, San Juan County, NM**

**36.700572N, -108.028397W**

**Project No. 7030414G003.001**



**Apex TITAN, Inc.**

606 S. Rio Grande, Suite A

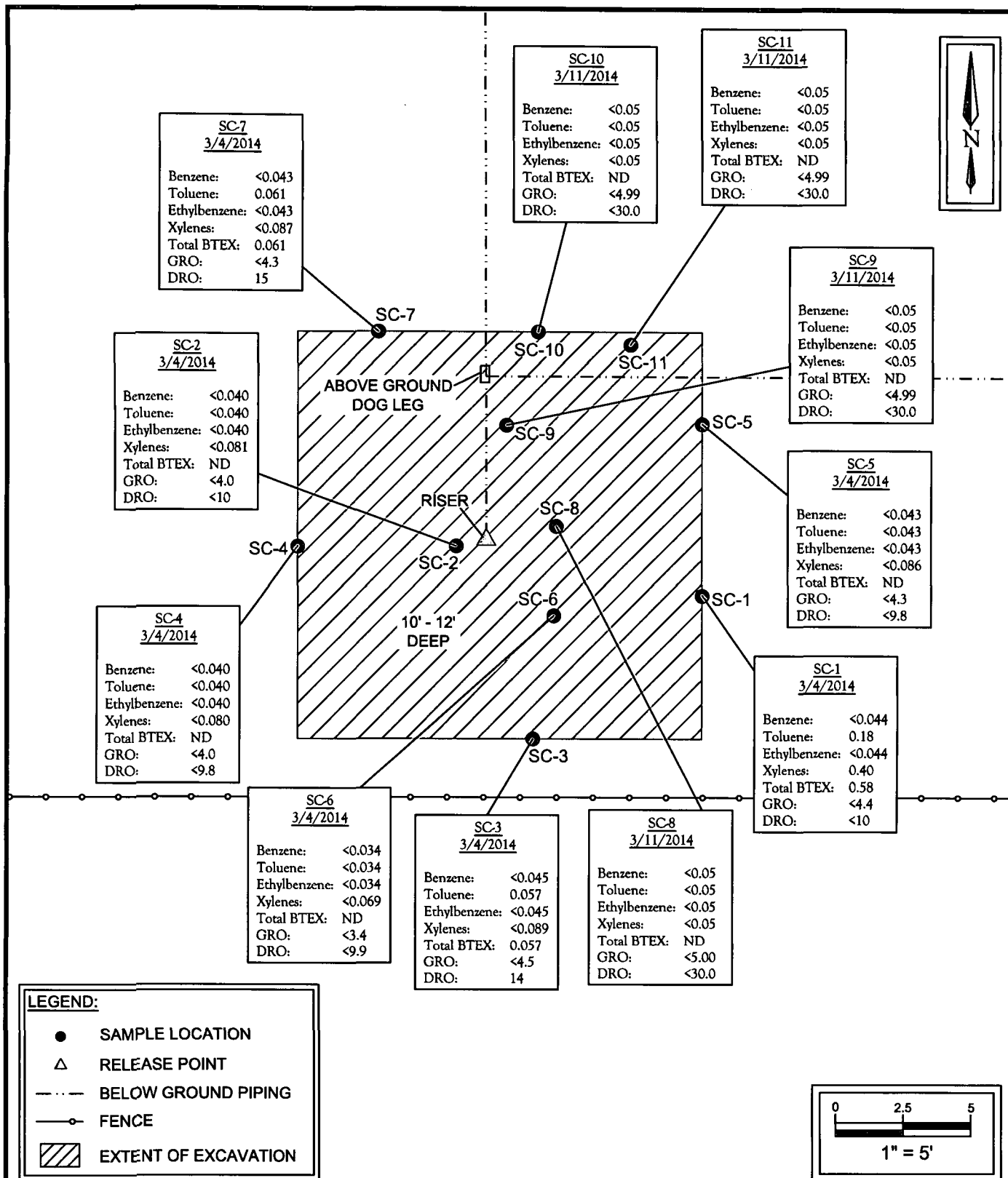
Aztec, New Mexico 87410

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**



**3B-23 EOL Release**  
 NE $\frac{1}{4}$  S30 T29N R11W  
 Bloomfield, San Juan County, NM  
 36.700572N, -108.028397W

Project No. 7030414G003.001



**Apex TITAN, Inc.**  
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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  
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-138  
Revised August 1, 2011

\*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 Avenue, Farmington, NM 87401	3-11-14 10cy
2. Originating Site: Lateral 3B-23 EOL	3-10-14 20cy
3. Location of Material (Street Address, City, State or ULSTR): Unit A, Section 30, T29N, R11W; 36.700682, -108.028410	3-5-14 10cy
4. Source and Description of Waste: Hydrocarbon impacted soils associated with a release from a natural gas gathering line block valve.	3-4-14 50cy
5. Estimated Volume 30 yd <sup>3</sup> bbls Known Volume (to be entered by the operator at the end of the haul) 9 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  
PRINT & SIGN NAME COMPANY NAME  
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 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 (the appropriate items)

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

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long 2-20-14, representative for Enterprise Field Services, LLC authorize Envirotech to  
Generator Signature  
complete the required testing/sign the Generator Waste Testing Certification.

I, [Signature] representative for Envirotech, Inc. do hereby  
representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and the results  
have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC  
of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section  
19.15.36 NMAC.

6. Transporter: West States Energy Contractors (WSEC)

OCD Permitted Surface Waste Management Facility  
Name and Facility Permit #: JFJ Landfarm/Industrial Ecosystems, Inc. \* Permit #: NM 01-0010B  
Address of Facility: #49 CR 2150 Aztec, New Mexico  
Method of Treatment and/or Disposal:  
Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☒ APPROVED ☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: [Signature] TITLE: [Signature] DATE: 2-20-14

SIGNATURE: [Signature] TELEPHONE NO.: 505-633-782

Surface Waste Management Facility Authorized Agent

CL-21  
Ph-7  
2-20-14

**SITE PHOTOGRAPHS**

**Photograph 1**

Staining at base of Riser.



**Photograph 2**

Excavating the west portion of the release area (facing south).



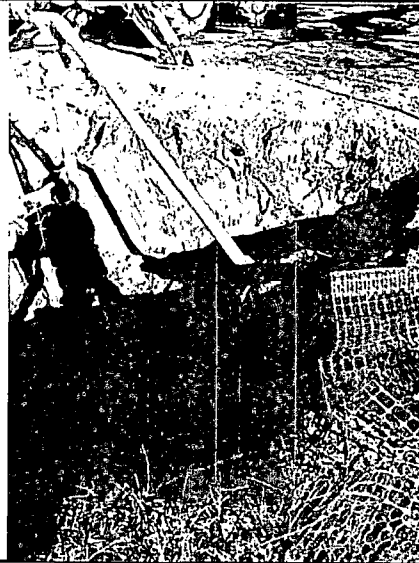
**Photograph 3**

General view of final excavation facing southwest. Note the backfill in SW corner to prevent sloughing near fence.



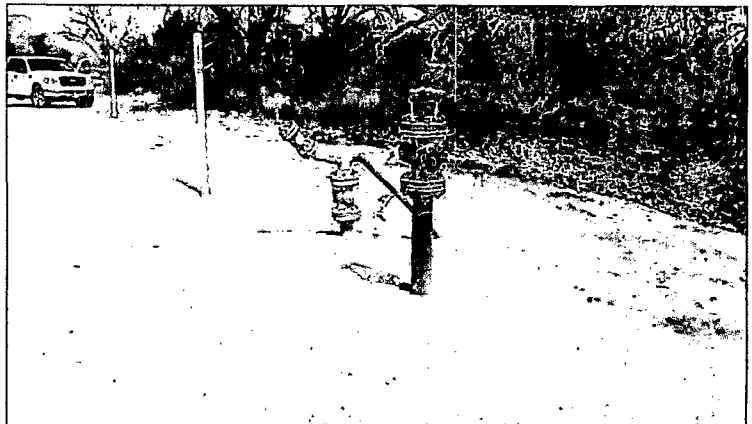
## Photograph 4

General view of final excavation (east half) facing northwest.



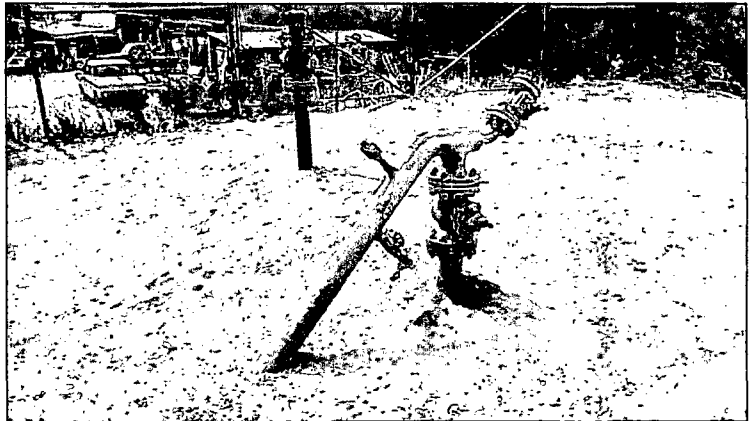
## Photograph 5

View after completion of corrective actions (facing north).



## Photograph 6

View after the completion of corrective actions (facing southwest).





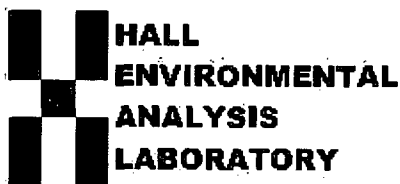
**TABLE 1**  
**3B-23 EOL**  
**SOIL ANALYTICAL SUMMARY**

Sample I.D.	Date	Sample Type C- Composite G - Grab	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 for Soils Remaining in Place										
SC-1	3/4/2014	C (3 aliquot)	2-8	<0.044	0.18	<0.044	0.40	0.58	<4.4	<10
SC-2	3/4/2014	C (3 aliquot)	11-12	<0.040	<0.040	<0.040	<0.081	ND	<4.0	<10
SC-3	3/4/2014	C (4 aliquot)	2-10	<0.045	0.057	<0.045	<0.089	0.057	<4.5	14
SC-4	3/4/2014	C (4 aliquot)	1-11	<0.040	<0.040	<0.040	<0.080	ND	<4.0	<9.8
SC-5	3/4/2014	C (3 aliquot)	2-10	<0.043	<0.043	<0.043	<0.086	ND	<4.3	<9.8
SC-6	3/4/2014	C (2 aliquot)	10-11	<0.034	<0.034	<0.034	<0.069	ND	<3.4	<9.9
SC-7	3/4/2014	C (2 aliquot)	3-8	<0.043	0.061	<0.043	<0.087	0.061	<4.3	15
SC-8	3/11/2014	C (3 aliquot)	10-11	<0.05	<0.05	<0.05	<0.05	ND	<5.00	<30.0
SC-9	3/11/2014	C (2 aliquot)	10-12	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<30.0
SC-10	3/11/2014	C (3 aliquot)	1-8	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<30.0
SC-11	3/11/2014	C (2 aliquot)	3-5	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<30.0

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

NA = Not Analyzed

NE = Not Established



*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)

March 07, 2014

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

RE: 3B-23 EDL

OrderNo.: 1403225

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 7 sample(s) on 3/6/2014 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,

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1403225

Date Reported: 3/7/2014

CLIENT: Southwest Geoscience

Client Sample ID: SC-1

Project: 3B-23 EDL

Collection Date: 3/4/2014 3:14:00 PM

Lab ID: 1403225-001

Matrix: SOIL

Received Date: 3/6/2014 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/6/2014 12:09:24 PM	12049
Surr: DNOP	107	66-131		%REC	1	3/6/2014 12:09:24 PM	12049
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: JMP
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	3/6/2014 11:15:40 AM	R17144
Surr: BFB	94.1	74.5-129		%REC	1	3/6/2014 11:15:40 AM	R17144
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: JMP
Benzene	ND	0.044		mg/Kg	1	3/6/2014 11:15:40 AM	R17144
Toluene	0.18	0.044		mg/Kg	1	3/6/2014 11:15:40 AM	R17144
Ethylbenzene	ND	0.044		mg/Kg	1	3/6/2014 11:15:40 AM	R17144
Xylenes, Total	0.40	0.089		mg/Kg	1	3/6/2014 11:15:40 AM	R17144
Surr: 4-Bromofluorobenzene	107	80-120		%REC	1	3/6/2014 11:15:40 AM	R17144

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 1403225

Date Reported: 3/7/2014

CLIENT: Southwest Geoscience

Client Sample ID: SC-2

Project: 3B-23 EDL

Collection Date: 3/4/2014 3:30:00 PM

Lab ID: 1403225-002

Matrix: SOIL

Received Date: 3/6/2014 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	3/6/2014 11:38:48 AM	12049
Surr: DNOP	107	66-131		%REC	1	3/6/2014 11:38:48 AM	12049
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: JMP
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	3/6/2014 11:45:46 AM	R17144
Surr: BFB	86.5	74.5-129		%REC	1	3/6/2014 11:45:46 AM	R17144
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: JMP
Benzene	ND	0.040		mg/Kg	1	3/6/2014 11:45:46 AM	R17144
Toluene	ND	0.040		mg/Kg	1	3/6/2014 11:45:46 AM	R17144
Ethylbenzene	ND	0.040		mg/Kg	1	3/6/2014 11:45:46 AM	R17144
Xylenes, Total	ND	0.081		mg/Kg	1	3/6/2014 11:45:46 AM	R17144
Surr: 4-Bromofluorobenzene	97.1	80-120		%REC	1	3/6/2014 11:45:46 AM	R17144

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 1403225

Date Reported: 3/7/2014

CLIENT: Southwest Geoscience

Client Sample ID: SC-3

Project: 3B-23 EDL

Collection Date: 3/4/2014 3:45:00 PM

Lab ID: 1403225-003

Matrix: SOIL

Received Date: 3/6/2014 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: JME
Diesel Range Organics (DRO)	14	9.9		mg/Kg	1	3/6/2014 1:41:29 PM	12049
Surr: DNOP	117	66-131		%REC	1	3/6/2014 1:41:29 PM	12049
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: JMP
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	3/6/2014 12:15:54 PM	R17144
Surr: BFB	92.9	74.5-129		%REC	1	3/6/2014 12:15:54 PM	R17144
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: JMP
Benzene	ND	0.045		mg/Kg	1	3/6/2014 12:15:54 PM	R17144
Toluene	0.057	0.045		mg/Kg	1	3/6/2014 12:15:54 PM	R17144
Ethylbenzene	ND	0.045		mg/Kg	1	3/6/2014 12:15:54 PM	R17144
Xylenes, Total	ND	0.089		mg/Kg	1	3/6/2014 12:15:54 PM	R17144
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	3/6/2014 12:15:54 PM	R17144

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 1403225

Date Reported: 3/7/2014

CLIENT: Southwest Geoscience

Client Sample ID: SC-4

Project: 3B-23 EDL

Collection Date: 3/4/2014 3:50:00 PM

Lab ID: 1403225-004

Matrix: SOIL

Received Date: 3/6/2014 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: JME
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	3/6/2014 2:12:16 PM	12049
Surr: DNOP	106	66-131		%REC	1	3/6/2014 2:12:16 PM	12049
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: JMP
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	3/6/2014 12:46:09 PM	R17144
Surr: BFB	95.3	74.5-129		%REC	1	3/6/2014 12:46:09 PM	R17144
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: JMP
Benzene	ND	0.040		mg/Kg	1	3/6/2014 12:46:09 PM	R17144
Toluene	ND	0.040		mg/Kg	1	3/6/2014 12:46:09 PM	R17144
Ethylbenzene	ND	0.040		mg/Kg	1	3/6/2014 12:46:09 PM	R17144
Xylenes, Total	ND	0.080		mg/Kg	1	3/6/2014 12:46:09 PM	R17144
Surr: 4-Bromofluorobenzene	107	80-120		%REC	1	3/6/2014 12:46:09 PM	R17144

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	Page 4 of 11
	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 1403225

Date Reported: 3/7/2014

CLIENT: Southwest Geoscience

Client Sample ID: SC-5

Project: 3B-23 EDL

Collection Date: 3/5/2014 8:00:00 AM

Lab ID: 1403225-005

Matrix: SOIL

Received Date: 3/6/2014 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: JME
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	3/6/2014 2:43:23 PM	12049
Surr: DNOP	113	66-131		%REC	1	3/6/2014 2:43:23 PM	12049
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: JMP
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	3/6/2014 1:16:19 PM	R17144
Surr: BFB	92.8	74.5-129		%REC	1	3/6/2014 1:16:19 PM	R17144
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: JMP
Benzene	ND	0.043		mg/Kg	1	3/6/2014 1:16:19 PM	R17144
Toluene	ND	0.043		mg/Kg	1	3/6/2014 1:16:19 PM	R17144
Ethylbenzene	ND	0.043		mg/Kg	1	3/6/2014 1:16:19 PM	R17144
Xylenes, Total	ND	0.086		mg/Kg	1	3/6/2014 1:16:19 PM	R17144
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	3/6/2014 1:16:19 PM	R17144

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 1403225

Date Reported: 3/7/2014

CLIENT: Southwest Geoscience

Client Sample ID: SC-6

Project: 3B-23 EDL

Collection Date: 3/5/2014 8:10:00 AM

Lab ID: 1403225-006

Matrix: SOIL

Received Date: 3/6/2014 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: JME
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	3/6/2014 3:14:23 PM	12049
Surr: DNOP	121	66-131		%REC	1	3/6/2014 3:14:23 PM	12049
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: JMP
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	3/6/2014 1:46:34 PM	R17144
Surr: BFB	88.5	74.5-129		%REC	1	3/6/2014 1:46:34 PM	R17144
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: JMP
Benzene	ND	0.034		mg/Kg	1	3/6/2014 1:46:34 PM	R17144
Toluene	ND	0.034		mg/Kg	1	3/6/2014 1:46:34 PM	R17144
Ethylbenzene	ND	0.034		mg/Kg	1	3/6/2014 1:46:34 PM	R17144
Xylenes, Total	ND	0.069		mg/Kg	1	3/6/2014 1:46:34 PM	R17144
Surr: 4-Bromofluorobenzene	98.3	80-120		%REC	1	3/6/2014 1:46:34 PM	R17144

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	Page 6 of 11
	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 1403225

Date Reported: 3/7/2014

CLIENT: Southwest Geoscience

Client Sample ID: SC-7

Project: 3B-23 EDL

Collection Date: 3/5/2014 8:20:00 AM

Lab ID: 1403225-007

Matrix: SOIL

Received Date: 3/6/2014 10:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: JME
Diesel Range Organics (DRO)	15	10		mg/Kg	1	3/6/2014 3:45:22 PM	12049
Surr: DNOP	114	66-131		%REC	1	3/6/2014 3:45:22 PM	12049
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: JMP
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	3/6/2014 2:16:48 PM	R17144
Surr: BFB	94.1	74.5-129		%REC	1	3/6/2014 2:16:48 PM	R17144
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: JMP
Benzene	ND	0.043		mg/Kg	1	3/6/2014 2:16:48 PM	R17144
Toluene	0.061	0.043		mg/Kg	1	3/6/2014 2:16:48 PM	R17144
Ethylbenzene	ND	0.043		mg/Kg	1	3/6/2014 2:16:48 PM	R17144
Xylenes, Total	ND	0.087		mg/Kg	1	3/6/2014 2:16:48 PM	R17144
Surr: 4-Bromofluorobenzene	106	80-120		%REC	1	3/6/2014 2:16:48 PM	R17144

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#: 1403225

07-Mar-14

Client: Southwest Geoscience

Project: 3B-23 EDL

Sample ID	MB-12049	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	12049	RunNo:	17130					
Prep Date:	3/6/2014	Analysis Date:	3/6/2014	SeqNo:	492587	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	9.4		10.00		94.4	66	131			

Sample ID	LCS-12049	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	12049	RunNo:	17130					
Prep Date:	3/6/2014	Analysis Date:	3/6/2014	SeqNo:	492697	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	97.2	60.8	145			
Surr: DNOP	4.8		5.000		97.0	66	131			

Sample ID	MB-12024	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	12024	RunNo:	17130					
Prep Date:	3/5/2014	Analysis Date:	3/6/2014	SeqNo:	492768	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.6		10.00		95.8	66	131			

Sample ID	LCS-12024	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	12024	RunNo:	17130					
Prep Date:	3/5/2014	Analysis Date:	3/6/2014	SeqNo:	492769	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.8		5.000		117	66	131			

Sample ID	1403225-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	SC-1	Batch ID:	12049	RunNo:	17130					
Prep Date:	3/6/2014	Analysis Date:	3/6/2014	SeqNo:	492945	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	56	10	50.00	4.741	102	47.4	148			
Surr: DNOP	5.9		5.000		118	66	131			

Sample ID	1403225-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	SC-1	Batch ID:	12049	RunNo:	17130					
Prep Date:	3/6/2014	Analysis Date:	3/6/2014	SeqNo:	492984	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	56	9.9	49.26	4.741	103	47.4	148	0.425	22.7	
Surr: DNOP	5.6		4.926		115	66	131	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#: 1403225

07-Mar-14

Client: Southwest Geoscience

Project: 3B-23 EDL

Sample ID	MB-12059	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	12059	RunNo:	17125					
Prep Date:	3/6/2014	Analysis Date:	3/6/2014	SeqNo:	493441	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.2		10.00		81.6	66	131			

Sample ID	LCS-12059	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	12059	RunNo:	17125					
Prep Date:	3/6/2014	Analysis Date:	3/6/2014	SeqNo:	493442	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.2		5.000		84.3	66	131			

## 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#: 1403225

07-Mar-14

Client: Southwest Geoscience

Project: 3B-23 EDL

Sample ID	5ML RB	SampType	MBLK	TestCode	EPA Method 8015D: Gasoline Range					
Client ID	PBS	Batch ID	R17144	RunNo	17144					
Prep Date:		Analysis Date	3/6/2014	SeqNo	493621	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	940		1000		93.6	74.5	129			

Sample ID	2.5UG GRO LCS	SampType	LCS	TestCode	EPA Method 8015D: Gasoline Range					
Client ID	LCSS	Batch ID	R17144	RunNo	17144					
Prep Date:		Analysis Date	3/6/2014	SeqNo	493623	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	93.0	71.7	134			
Surr: BFB	960		1000		95.9	74.5	129			

Sample ID	1403225-001AMS	SampType	MS	TestCode	EPA Method 8015D: Gasoline Range					
Client ID	SC-1	Batch ID	R17144	RunNo	17144					
Prep Date:		Analysis Date	3/6/2014	SeqNo	493633	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.4	22.24	0	97.5	69.5	145			
Surr: BFB	910		889.7		102	74.5	129			

Sample ID	1403225-001AMSD	SampType	MSD	TestCode	EPA Method 8015D: Gasoline Range					
Client ID	SC-1	Batch ID	R17144	RunNo	17144					
Prep Date:		Analysis Date	3/6/2014	SeqNo	493634	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.4	22.24	0	93.2	69.5	145	4.45	20	
Surr: BFB	910		889.7		102	74.5	129	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#: 1403225

07-Mar-14

Client: Southwest Geoscience

Project: 3B-23 EDL

Sample ID	5ML RB	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID: R17144			RunNo: 17144					
Prep Date:		Analysis Date: 3/6/2014			SeqNo: 493688		Units: mg/Kg			
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		107	80	120			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	R17144	RunNo:	17144					
Prep Date:		Analysis Date:	3/6/2014	SeqNo:	493689	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.050	1.000	0	92.7	80	120			
Toluene	0.93	0.050	1.000	0	93.4	80	120			
Ethylbenzene	0.94	0.050	1.000	0	94.1	80	120			
Xylenes, Total	2.9	0.10	3.000	0	96.6	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		105	80	120			

Sample ID	1403225-001AMS		SampType: MS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	SC-1		Batch ID: R17144		RunNo: 17144					
Prep Date:			Analysis Date: 3/6/2014		SeqNo: 493699		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.81	0.044	0.8897	0.02838	87.3	67.4	135			
Toluene	0.99	0.044	0.8897	0.1814	90.4	72.6	135			
Ethylbenzene	0.85	0.044	0.8897	0.03212	91.5	69.4	143			
Xylenes, Total	2.9	0.089	2.669	0.3987	94.4	70.8	144			
Surr: 4-Bromofluorobenzene	0.98		0.8897		111	80	120			

Sample ID	1403225-001AMSD		SampType: MSD		TestCode: EPA Method 8021B: Volatiles					
Client ID:	SC-1		Batch ID: R17144		RunNo: 17144					
Prep Date:			Analysis Date: 3/6/2014		SeqNo: 493700		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.79	0.044	0.8897	0.02838	85.9	67.4	135	1.51	20	
Toluene	0.97	0.044	0.8897	0.1814	88.2	72.6	135	1.91	20	
Ethylbenzene	0.84	0.044	0.8897	0.03212	90.4	69.4	143	1.21	20	
Xylenes, Total	2.9	0.089	2.669	0.3987	92.4	70.8	144	1.87	20	
Surr: 4-Bromofluorobenzene	0.98		0.8897		111	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: Southwest Geoscience

Work Order Number: 1403225

RcptNo: 1

Received by/date: AT 03/06/14

Logged By: Anne Thorne 3/6/2014 10:20:00 AM Anne Thorne

Completed By: Anne Thorne 3/6/2014 Anne Thorne

Reviewed By: mg 03/06/14

## 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

17. Additional remarks:

## 18. Cooler Information

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

**Southwest**  
GEOSCIENCE  
Environmental & Hydrogeologic Consultants

Laboratory: 11416  
Address: ABQ

Contact: *Free info*

Phone: \_\_\_\_\_

PO/SO #: 04146003

Project Manager Juan Mera

Sampler's Name Kyle Summers

Sampler's Signature \_\_\_\_\_

Proj. No. 0414 G 003

Project Name **3B-23 EOL**





No/Type of Containers

[illegible]

Lab Sample ID (Lab Use Only)

M03225 -cc1  
cc2  
~cc3  
~cc4  
~cc5  
~cc6  
cc7

Turn around time ☐ Normal ☐ 25% Rush ☐ 50% Rush ☒ 100% Rush *Same day*

Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
	3/5/14	1531		3/5/14	1531
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
	3/10/14	1630		03/06/14	1020
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:

**NOTES:**

10

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



## Analytical Report

### Report Summary

Client: Southwest Geoscience  
Chain Of Custody Number: 16705  
Samples Received: 3/11/2014 10:04:00AM  
Job Number: 07174-0003  
Work Order: P403026  
Project Name/Location: 3B-23 EOL

Entire Report Reviewed By:

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

Tim Cain, Laboratory Manager

Date: 3/13/14

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.



Southwest Geoscience  
2351 W. Northwest Hwy  
Dallas TX, 75220

Project Name: 3B-23 EOL  
Project Number: 07174-0003  
Project Manager: Kyle Summers

Reported:  
13-Mar-14 13:14

### Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SC-8	P403026-01A	Soil	03/11/14	03/11/14	Glass Jar, 4 oz.
SC-9	P403026-02A	Soil	03/11/14	03/11/14	Glass Jar, 4 oz.
SC-10	P403026-03A	Soil	03/11/14	03/11/14	Glass Jar, 4 oz.
SC-11	P403026-04A	Soil	03/11/14	03/11/14	Glass Jar, 4 oz.

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laboratory@envirotech-inc.com

Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: 3B-23 EOL  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

 Reported:  
 13-Mar-14 13:14

**SC-8**  
**P403026-01 (Solid)**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1411005	03/11/14	03/12/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1411005	03/11/14	03/12/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1411005	03/11/14	03/12/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1411005	03/11/14	03/12/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1411005	03/11/14	03/12/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1411005	03/11/14	03/12/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1411005	03/11/14	03/12/14	EPA 8021B	
Surrogate: Bromochlorobenzene		102 %		80-120	1411005	03/11/14	03/12/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		98.9 %		80-120	1411005	03/11/14	03/12/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1411005	03/11/14	03/12/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1411004	03/11/14	03/12/14	EPA 8015D	

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Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: 3B-23 EOL  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

 Reported:  
 13-Mar-14 13:14

**SC-9**
**P403026-02 (Solid)**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1411005	03/11/14	03/12/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1411005	03/11/14	03/12/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1411005	03/11/14	03/12/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1411005	03/11/14	03/12/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1411005	03/11/14	03/12/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1411005	03/11/14	03/12/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1411005	03/11/14	03/12/14	EPA 8021B	
Surrogate: Bromochlorobenzene		100 %		80-120	1411005	03/11/14	03/12/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		97.7 %		80-120	1411005	03/11/14	03/12/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1411005	03/11/14	03/12/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1411004	03/11/14	03/12/14	EPA 8015D	

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 Dallas TX, 75220

 Project Name: 3B-23 EOL  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

 Reported:  
 13-Mar-14 13:14

**SC-10**
**P403026-03 (Solid)**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1411005	03/11/14	03/12/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1411005	03/11/14	03/12/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1411005	03/11/14	03/12/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1411005	03/11/14	03/12/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1411005	03/11/14	03/12/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1411005	03/11/14	03/12/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1411005	03/11/14	03/12/14	EPA 8021B	
Surrogate: Bromochlorobenzene		104 %		80-120	1411005	03/11/14	03/12/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		101 %		80-120	1411005	03/11/14	03/12/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1411005	03/11/14	03/12/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1411004	03/11/14	03/12/14	EPA 8015D	

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Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: 3B-23 EOL  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

 Reported:  
 13-Mar-14 13:14

**SC-11**
**P403026-04 (Solid)**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1		1411005	03/11/14	03/12/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1		1411005	03/11/14	03/12/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1		1411005	03/11/14	03/12/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1		1411005	03/11/14	03/12/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1		1411005	03/11/14	03/12/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1		1411005	03/11/14	03/12/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1		1411005	03/11/14	03/12/14	EPA 8021B	
Surrogate: Bromochlorobenzene		94.5 %		80-120		1411005	03/11/14	03/12/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		96.3 %		80-120		1411005	03/11/14	03/12/14	EPA 8021B	
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1		1411005	03/11/14	03/12/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1		1411004	03/11/14	03/12/14	EPA 8015D	

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Southwest Geoscience 2351 W. Northwest Hwy Dallas TX, 75220	Project Name: 3B-23 EOL Project Number: 07174-0003 Project Manager: Kyle Summers	Reported: 13-Mar-14 13:14
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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 1411005 - Purge and Trap EPA 5030A

<b>Blank (1411005-BLK1)</b>		Prepared: 11-Mar-14 Analyzed: 12-Mar-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	46.5		ug/L	50.0		93.0	80-120			
Surrogate: Bromochlorobenzene	50.3		"	50.0		101	80-120			

<b>Duplicate (1411005-DUP1)</b>		Source: P402099-01RE1 Prepared: 11-Mar-14 Analyzed: 12-Mar-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	42.8		ug/L	50.0		85.6	80-120			
Surrogate: Bromochlorobenzene	56.9		"	50.0		114	80-120			

<b>Matrix Spike (1411005-MS1)</b>		Source: P402099-01RE1 Prepared: 11-Mar-14 Analyzed: 12-Mar-14								
Benzene	50.4		ug/L	50.0	ND	101	39-150			
Toluene	54.7		"	50.0	ND	109	46-148			
Ethylbenzene	52.5		"	50.0	ND	105	32-160			
p,m-Xylene	107		"	100	ND	107	46-148			
o-Xylene	52.5		"	50.0	ND	105	46-148			
Surrogate: 1,3-Dichlorobenzene	56.4		"	50.0		113	80-120			
Surrogate: Bromochlorobenzene	66.0		"	50.0		132	80-120			Surrl

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laboratory@envirotech-inc.com



Southwest Geoscience 2351 W. Northwest Hwy Dallas TX, 75220	Project Name: 3B-23 EOL Project Number: 07174-0003 Project Manager: Kyle Summers	Reported: 13-Mar-14 13:14
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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 1411004 - DRO Extraction EPA 3550C

<b>Blank (1411004-BLK1)</b>		Prepared: 11-Mar-14 Analyzed: 12-Mar-14								
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg							
<b>Duplicate (1411004-DUP1)</b>		Source: P402099-01 Prepared: 11-Mar-14 Analyzed: 12-Mar-14								
Diesel Range Organics (C10-C28)	3860	30.0	mg/kg		5910			42.1	30	D1
<b>Matrix Spike (1411004-MS1)</b>		Source: P402099-01 Prepared: 11-Mar-14 Analyzed: 12-Mar-14								
Diesel Range Organics (C10-C28)	4270		mg/L	250	5630	NR	75-125			SPK1

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Southwest Geoscience 2351 W. Northwest Hwy Dallas TX, 75220	Project Name: 3B-23 EOL Project Number: 07174-0003 Project Manager: Kyle Summers	Reported: 13-Mar-14 13:14
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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 1411005 - Purge and Trap EPA 5030A

##### Blank (1411005-BLK1)

Prepared: 11-Mar-14 Analyzed: 12-Mar-14

Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg							
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##### Duplicate (1411005-DUP1)

Source: P402099-01RE1

Prepared: 11-Mar-14 Analyzed: 12-Mar-14

Gasoline Range Organics (C6-C10)	13.7	4.99	mg/kg		7.20			62.1	30	D1
----------------------------------	------	------	-------	--	------	--	--	------	----	----

##### Matrix Spike (1411005-MS1)

Source: P402099-01RE1

Prepared: 11-Mar-14 Analyzed: 12-Mar-14

Gasoline Range Organics (C6-C10)	0.55		mg/L	0.450	0.14	90.2	75-125			
----------------------------------	------	--	------	-------	------	------	--------	--	--	--

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laboratory@envirotech-inc.com

Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

Project Name: 3B-23 EOL  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 13-Mar-14 13:14

### Notes and Definitions

Surr1 Surrogate recovery was above acceptable limits.

SPK1 The spike recovery for this QC sample is outside of control limits.

D1 Duplicates or Matrix Spike Duplicates Relative Percent Difference exceeds 30%.

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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16705

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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.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company: Enterprise Field Services LLC	Contact: Thomas Long
Address: P.O. Box 4324, Houston, TX 77210	Telephone No. 505-599-2286
Facility Name: Lateral 10A-5	Facility Type: Natural Gas Gathering Line
Surface Owner: NAPI/Navajo Nation	Mineral Owner: BLM
API No.	

LOCATION OF RELEASE

Unit Letter M	Section 34	Township 26N	Range 12W	Feet from the 200	North <del>South</del> Line	Feet from the 1274	East <del>West</del> Line	County San Juan
------------------	---------------	-----------------	--------------	----------------------	-----------------------------	-----------------------	---------------------------	--------------------

Latitude 36.438323 Longitude -108.103399

NATURE OF RELEASE

Type of Release: Natural Gas and Natural gas liquids	Volume of Release: Unknown	Volume Recovered: Unknown
Source of Release: Internal Corrosion of the Pipeline	Date and Hour of Occurrence: 2/19/2014 @ 12:30 p.m.	Date and Hour of Discovery: 2/19/2014 @ 12:30 p.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? NMOCD - Jonathan Kelly, NNEPA - Steve Austin, Greg Yazzie and Mike Freeman - NAPI	
By Whom? Thomas Long	Date and Hour 2/20/2014 @ 9:18 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.

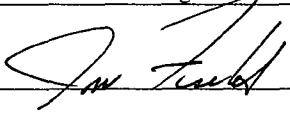
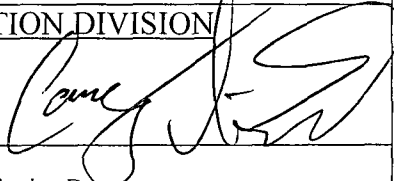
Describe Cause of Problem and Remedial Action Taken.\* A release was discovered on the Trunk 10A-5. The release was a result of internal corrosion of the pipeline. Initially an area of approximately 12 feet by 25 feet was affected. The line was blown down, taken out of service and LOTO (lock out tag out) was applied. The repairs/remediation activities were completed on February 25, 2014.

OIL CONS. DIV DIST. 3

MAY 27 2014

Describe Area Affected and Cleanup Action Taken.\* Assessment and remediation activities were completed on February 25, 2014. Approximately 40 cubic yards of hydrocarbon impacts 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: 	OIL CONSERVATION DIVISION	
Printed Name: Jon Fields	Approved by Environmental Specialist: 	
Title: Director, Environmental	Approval Date: 5/29/14	Expiration Date:
E-mail Address: jefields@eprod.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 5-22-2014	Phone: (713)381-6684	

\* Attach Additional Sheets If Necessary

#NCS 141 484 9222

42



Animas Environmental Services, LLC

[www.animasenvironmental.com](http://www.animasenvironmental.com)

624 E. Comanche  
Farmington, NM 87401  
505-564-2281

Durango, Colorado  
970-403-3084

May 8, 2014

Thomas Long  
Enterprise Field Services, LLC  
614 Reilly Avenue  
Farmington, New Mexico 87401

*Via electronic mail with delivery confirmation receipt to:*  
[tjlong@eprod.com](mailto:tjlong@eprod.com)

**RE: Release Assessment Report  
Lateral 10A-5 February 2014 Pipeline Release  
SW¼ SW¼, Section 34, T26N, R12W  
San Juan County, New Mexico**

**OIL CONS. DIV DIST. 3  
MAY 27 2014**

Dear Mr. Long:

On February 20 and 25, 2014, Animas Environmental Services, LLC (AES) completed an assessment associated with a release of natural gas and pipeline liquids of unknown volume resulting from a pipeline leak at the Enterprise Field Services, LLC (Enterprise) Lateral 10A-5 pipeline. The release was discovered on February 19, 2014, and resulted from pipeline corrosion.

---

## 1.0 Site Information

### 1.1 Location

Location – SW¼ SW¼, Section 34, T26N, R12W, San Juan County, New Mexico

Latitude/Longitude – N36.43801 and W108.10355, respectively

Surface Owner – Navajo Reservation (Navajo Agricultural Products Industry)

Figure 1. Topographic Site Location Map

Figure 2. Aerial Site Map

### 1.2 NMOCD Ranking

In accordance with Navajo Nation Environmental Protection Agency (NNEPA) release protocols, action levels were established per New Mexico Oil Conservation Division (NMOCD) *Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993) prior to the assessment. The release was given a ranking score of 30 based on the following factors:

- **Depth to Groundwater:** A perched groundwater table associated with percolation of irrigation water was observed at 5.5 feet below ground surface (bgs) in the excavation at the time of pipeline repair activities. (20 points)
- **Wellhead Protection Area:** The release location is not within a wellhead protection area. (0 points)
- **Distance to Surface Water Body:** The release is located approximately 925 feet to the north of an ephemeral wash which discharges to West Fork Gallegos Canyon. (10 points)

The ranking score of 30 dictates that concentrations for impacted soils left in place must be below the NMOCD action levels of 10 mg/kg benzene, 50 mg/kg total benzene, toluene, ethylbenzene, and xylenes (BTEX), and 100 mg/kg total petroleum hydrocarbons (TPH) as gasoline range organics (GRO) and diesel range organics (DRO).

### *1.3 Assessment and Mitigation*

On February 19, 2014, Enterprise personnel discovered a release associated with internal corrosion during pipeline lowering operations along the Lateral 10A-5 pipeline. On February 20, 2014, AES collected two soil samples (S-1 and S-2) from the north and south walls of the initial excavation, in addition to one composite sample (SC-1) from temporarily stockpiled soil, for field screening and laboratory analysis. The east and west walls were comprised of disturbed, clean backfill from the line lowering operations; therefore, no samples were collected from these walls. Following additional excavation for pipeline repair access on February 25, 2014, AES collected one soil sample (S-3) from the base of the excavation and two composite soil samples (SC-2 and SC-3) from temporarily stockpiled soil for field screening and laboratory analysis. Based on field screening results, the excavation was extended an additional 1.5 feet in depth, and a soil sample (S-4) was collected from the final excavation base. A water sample (W-1) was collected from the edge of the excavation, immediately down gradient of the release location, and was also submitted for laboratory analysis.

The final excavation measured approximately 60 feet by 22 feet by 10 feet deep. The excavation was backfilled with clean, imported material along with a portion of the excavation spoils shown to be below applicable action levels (based on field sampling and laboratory analyses). Approximately 40 cubic yards of petroleum impacted soil was transported to the Envirotech Landfarm for proper disposal. Soil sample locations and final excavation extents are included on Figure 3. The Envirotech Bill of Lading and a photograph log are included in the Appendix.



## 2.0 Soil and Water Sampling

Two soil samples (S-1 and S-2) were collected from the north and south walls of the initial excavation, and two soil samples (S-3 and S-4) were collected from the base of the excavation. Three composite soil samples (SC-1 through SC-3) were collected from the temporarily stockpiled excavation soils. All soil samples were field screened for volatile organic compounds (VOCs). One water sample (W-1) for was collected from the edge of the excavation, immediately down gradient of the release location.

### 2.1 Field Screening

#### 2.1.1 Volatile Organic Compounds

Field screening for VOC vapors was conducted with a photo-ionization detector (PID) organic vapor meter (OVM). Before beginning field screening, the PID-OVM was first calibrated with 100 parts per million (ppm) isobutylene gas.

### 2.2 Laboratory Analyses

Samples collected for laboratory analysis were placed into new, clean, laboratory-supplied containers, which were then labeled, placed on ice, and logged onto a sample chain of custody record. The soil samples collected during initial excavation activities (S-1, S-2, SC-1) were submitted for laboratory analysis to Envirotech Analytical Laboratory (Envirotech), in Farmington, New Mexico. The soil and water samples collected during final excavation activities (S-4, SC-2, SC-3, and W-1) were submitted for laboratory analysis to Hall Environmental Analysis Laboratory (Hall), in Albuquerque, New Mexico. All samples were maintained on ice until delivery.

Soil and water samples were laboratory analyzed for:

- BTEX per U.S. Environmental Protection Agency (USEPA) Method 8021.

Soil Samples were also laboratory analyzed for:

- TPH (GRO/DRO) per USEPA Method 8015.

### 2.3 Field Screening and Laboratory Analytical Results

Soil field screening results showed that VOC concentrations via OVM ranged from 0.0 ppm in S-1 and S-2 to 26.8 ppm in S-3. Results are included in Table 1 and on Figure 3.

Table 1. Soil Field Screening VOC Results  
Lateral 10A-5 Pipeline Release Assessment, February 2014

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Sample Depth (ft bgs)</i>	<i>VOCs via OVM (ppm)</i>
<b>NNEPA/NMOCD Action Level*</b>			<b>100</b>
S-1	2/20/14	1 to 8.5	0.0
S-2	2/20/14	1 to 8.5	0.0
S-3	2/25/14	8.5	26.8
S-4	2/25/14	10	1.5
SC-1	2/20/14	Stockpile	NM
SC-2	2/25/14	Stockpile	0.6
SC-3	2/25/14	Stockpile	1.0

NM – Not Measured

\*NNEPA action levels determined by the NMOCD ranking score per *NMOCD Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993).

Soil laboratory analytical results showed that benzene, total BTEX, and TPH concentrations were below laboratory detection limits in all samples except SC-1, with a TPH concentration of 727 mg/kg. Results are included in Table 2 and on Figure 3. The laboratory analytical reports are attached.

Table 2. Soil Laboratory Analytical Results – BTEX and TPH  
Lateral 10A-5 Pipeline Release Assessment, February 2014

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Depth (ft)</i>	<i>Benzene (mg/Kg)</i>	<i>Total BTEX (mg/Kg)</i>	<i>TPH – GRO (mg/Kg)</i>	<i>TPH – DRO (mg/Kg)</i>
<b>NNEPA/NMOCD Action Level*</b>			<b>10</b>	<b>50</b>	<b>100</b>	
S-1	2/20/14	1 to 5.5	<0.05	<0.05	<4.99	<29.9
S-2	2/20/14	1 to 5.5	<0.05	<0.05	<5.00	<30.0
S-4	2/25/14	10	<0.024	<0.121	<2.4	<10
SC-1	2/20/14	Stockpile	<0.05	<0.05	<b>&lt;4.99</b>	<b>727</b>
SC-2	2/25/14	Stockpile	<0.024	<0.121	<2.4	<10
SC-3	2/25/14	Stockpile	<0.026	<0.130	<2.6	<10

\*NNEPA action levels determined by the NMOCD ranking score per *NMOCD Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993)

Water laboratory analytical results for benzene, toluene, ethylbenzene, and xylene concentrations were below laboratory detection limits in W-1. Laboratory analytical results are included in Table 3 and on Figure 3. The laboratory analytical report is attached.

Table 3. Water Laboratory Analytical Results – BTEX  
Lateral 10A-5 Pipeline Release Assessment, February 2014

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Benzene (µg/L)</i>	<i>Toluene (µg/L)</i>	<i>Ethyl-</i>	<i>Xylenes (µg/L)</i>
				<i>Benzene (µg/L)</i>	
<i>WQCC Standards</i>		<i>10</i>	<i>750</i>	<i>750</i>	<i>620</i>
W-1	2/25/14	<2.0	<2.0	<2.0	<4.0

### 3.0 Conclusions and Recommendations

On February 20 and 25, 2014, AES conducted an assessment associated with a pipeline release on the Lateral 10A-5. NNEPA utilizes action levels for releases determined by NMOCD ranking score per *NMOCD Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993), and the release was assigned a ranking score of 30. Field screening of soil samples S-1 through S-4 and composite soil samples SC-2 and SC-3 showed VOC concentrations below the NMOCD action level of 100 ppm, with the highest VOC concentration reported in S-3 with 26.8 ppm in S-3. Soil laboratory analytical results showed that benzene, total BTEX, and TPH concentrations were below laboratory detection limits in all samples except SC-1, with a TPH concentration above the NMOCD action level of 100 mg/kg with 727 mg/kg, which was subsequently removed to the landfarm for proper disposal.

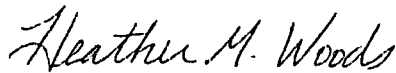
Additionally, water sample W-1 collected immediately downgradient of the release location showed that shallow groundwater does not appear to have been impacted as a result of the pipeline release, with concentrations for all parameters analyzed below laboratory detection limits and below applicable Water Quality Control Commission (WQCC) standards. Based on field screening and laboratory analytical results, no further work is recommended for the Lateral 10A-5 February 2014 pipeline release.

If you have any questions about this report or site conditions, please do not hesitate to contact Heather Woods at (505) 564-2281.

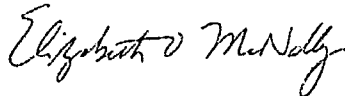
Sincerely,



David J. Reese  
Environmental Scientist



Heather M. Woods, P.G.  
Project Manager

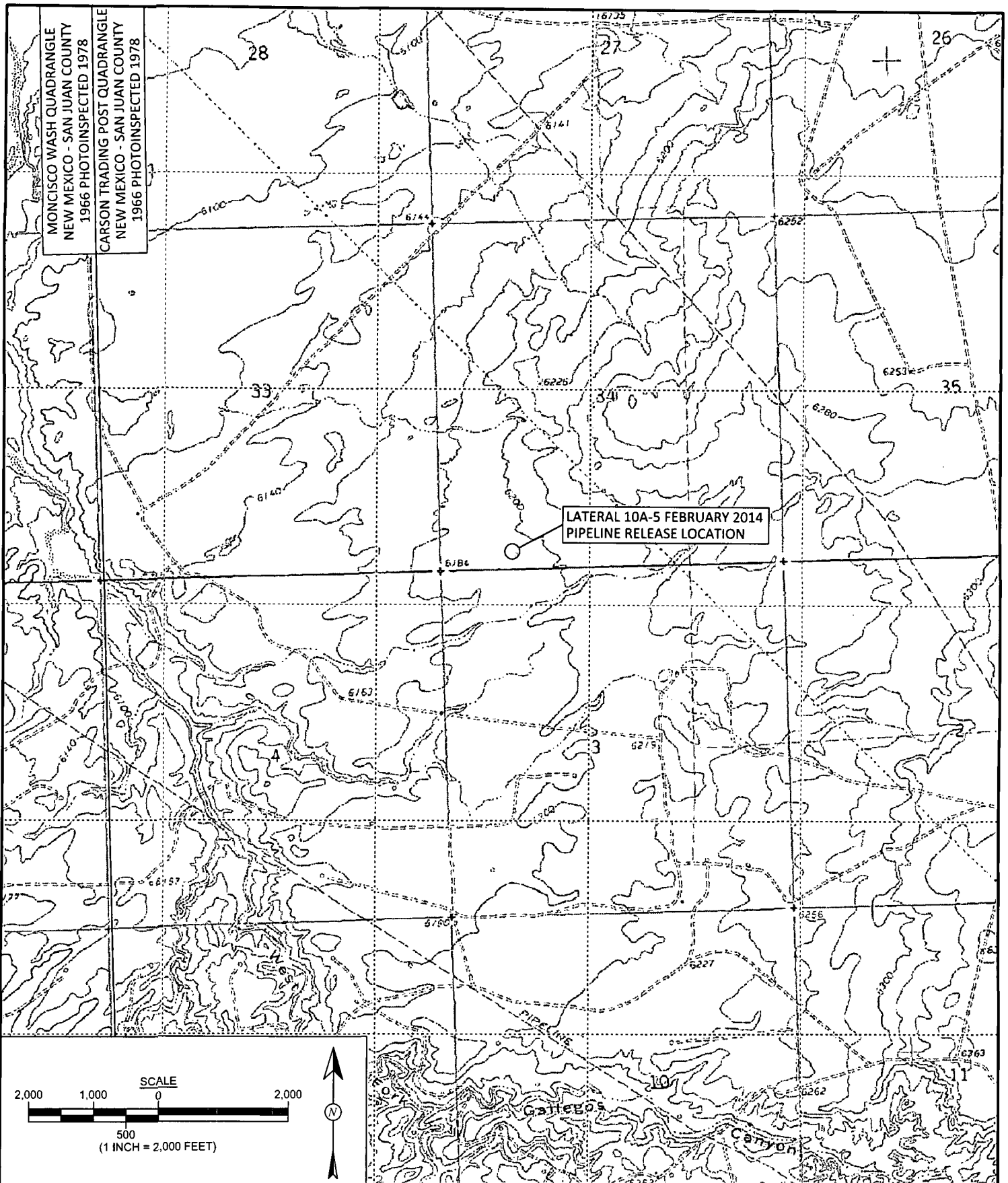


Elizabeth McNally, P.E.

Attachments:

- Figure 1. Topographic Site Location Map
- Figure 2. Aerial Site Map
- Figure 3. Final Excavation Sample Locations and Results, February 2014
- Bill of Lading (Envirotech 46061)
- Photograph Log
- Laboratory Analytical Report (Envirotech P402048)
- Laboratory Analytical Reports (Hall 1402A02 and 1402985)

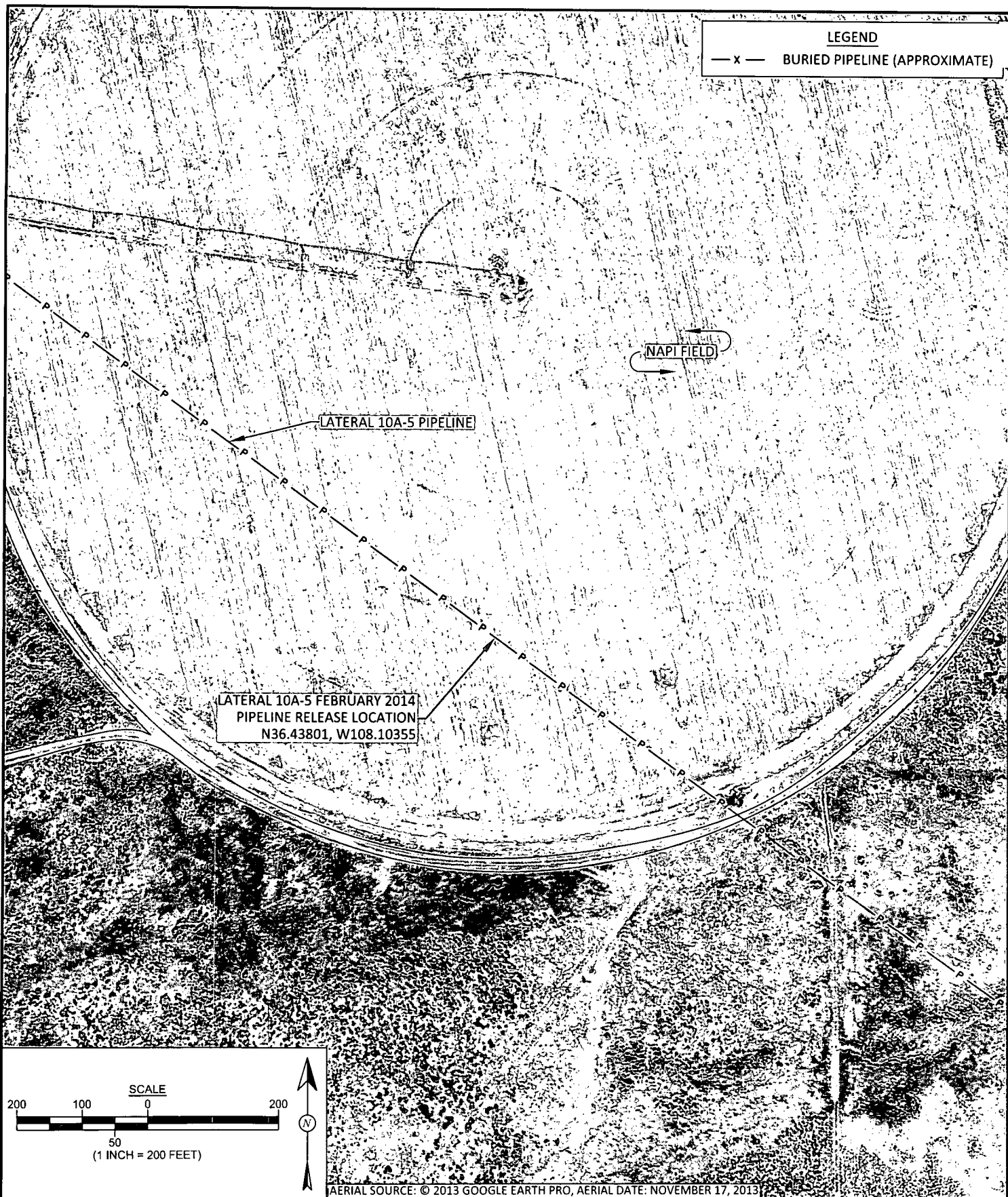
R:\Animas 2000\Dropbox\0000 Animas Server Dropbox EM\2014 Projects\Enterprise\Lateral 10A-5\Enterprise Lateral 10A-5 Release Report 050814.docx



<b>DRAWN BY:</b> S. Glasses	<b>DATE DRAWN:</b> March 7, 2014
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> April 24, 2014
<b>CHECKED BY:</b> H. Woods	<b>DATE CHECKED:</b> April 24, 2014
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> April 24, 2014

**FIGURE 1**

**TOPOGRAPHIC SITE LOCATION MAP**  
ENTERPRISE FIELD SERVICES LLC  
LATERAL 10A-5 FEBRUARY 2014 PIPELINE RELEASE  
SW¼ SW¼, SECTION 34, T26N, R12W  
SAN JUAN COUNTY, NEW MEXICO  
N36.43801, W108.10355



Animas Environmental Services, LLC

**DRAWN BY:**  
C. Lameman

**REVISIONS BY:**  
C. Lameman

**CHECKED BY:**  
H. Woods

**APPROVED BY:**  
E. McNally

**DATE DRAWN:**  
April 24, 2014

**DATE REVISED:**  
April 24, 2014

**DATE CHECKED:**  
April 24, 2014

**DATE APPROVED:**  
April 24, 2014

## FIGURE 2

### AERIAL SITE MAP FEBRUARY 2014

ENTERPRISE FIELD SERVICES LLC  
LATERAL 10A-5 FEBRUARY 2014 PIPELINE RELEASE  
SW¼ SW¼, SECTION 34, T26N, R12W  
SAN JUAN COUNTY, NEW MEXICO  
N36.43801, W108.10355

FIGURE 3

FINAL EXCAVATION SAMPLE  
LOCATIONS AND RESULTS  
FEBRUARY 2014

ENTERPRISE FIELD SERVICES LLC  
LATERAL 10A-5 FEBRUARY 2014  
PIPELINE RELEASE  
SW¼ SW¼, SECTION 34, T26N, R12W  
SAN JUAN COUNTY, NEW MEXICO  
N36.43801, W108.10355

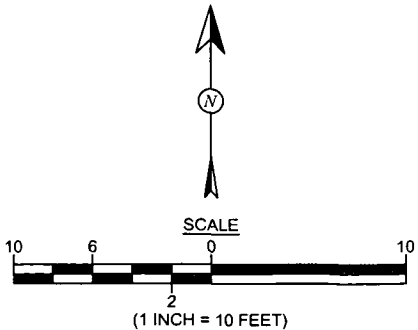


Animas Environmental Services, LLC

<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> April 24, 2014
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> April 24, 2014
<b>CHECKED BY:</b> H. Woods	<b>DATE CHECKED:</b> April 24, 2014
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> April 24, 2014

LEGEND

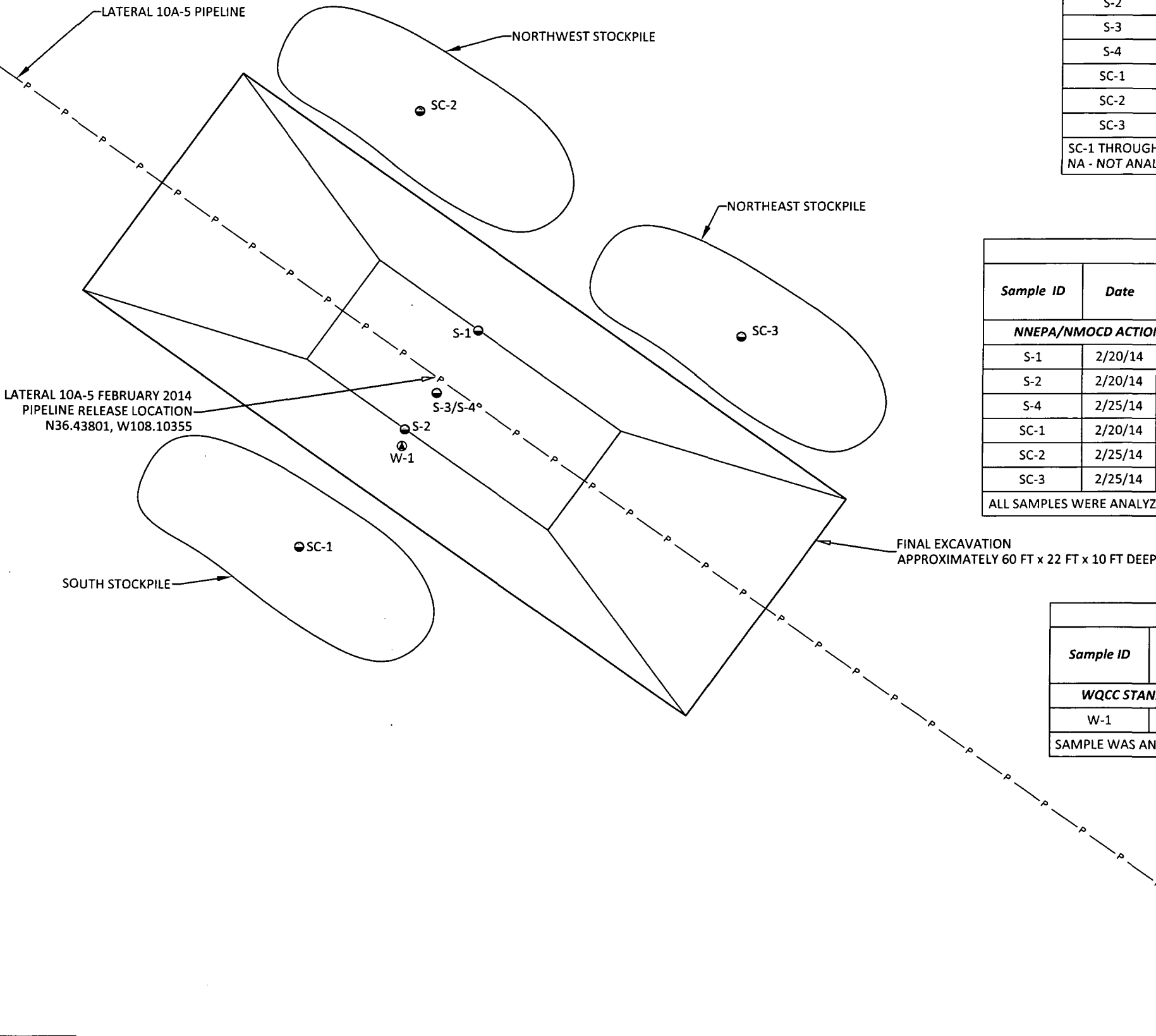
- SOIL SAMPLE LOCATIONS
- ⊙ WATER SAMPLE LOCATION
- P — BURIED PIPELINE (APPROXIMATE)



Field Sampling Results			
Sample ID	Date	Depth (ft)	OVM-PID (ppm)
NNEPA/NMOCD ACTION LEVEL			100
S-1	2/20/14	1 to 8.5	0.0
S-2	2/20/14	1 to 8.5	0.0
S-3	2/25/14	8.5	26.8
S-4	2/25/14	10	1.5
SC-1	2/20/14	Stockpile	NA
SC-2	2/25/14	Stockpile	0.6
SC-3	2/25/14	Stockpile	1.0
SC-1 THROUGH SC-3 WERE COMPOSITE SAMPLES. NA - NOT ANALYZED.			

Laboratory Analytical Results						
Sample ID	Date	Depth (ft)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH - GRO (mg/kg)	TPH - DRO (mg/kg)
NNEPA/NMOCD ACTION LEVEL			10	50	100	
S-1	2/20/14	1 to 8.5	<0.05	<0.20	<4.99	<29.9
S-2	2/20/14	1 to 8.5	<0.05	<0.20	<5.00	<30.0
S-4	2/25/14	10	<0.024	<0.121	<2.4	<10
SC-1	2/20/14	Stockpile	<0.05	<0.20	<4.99	727
SC-2	2/25/14	Stockpile	<0.024	<0.121	<2.4	<10
SC-3	2/25/14	Stockpile	<0.026	<0.130	<2.6	<10
ALL SAMPLES WERE ANALYZED PER EPA METHOD 8021B AND 8015D.						

Water Laboratory Analytical Results					
Sample ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Xylenes (µg/L)
WQCC STANDARD		10	750	750	620
W-1	2/25/14	<2.0	<2.0	<2.0	<4.0
SAMPLE WAS ANALYZED PER EPA METHOD 8021B.					





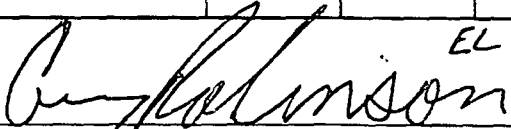
envirotech

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

# Bill of Lading

MANIFEST # 46061

DATE 2-26-14 JOB # 97057-0626

LOAD NO.	COMPLETE DESCRIPTION OF SHIPMENT						TRANSPORTING COMPANY			
	POINT OF ORIGIN	DESTINATION	MATERIAL	GRID	YDS	BBLs	COMPANY	TRK#	TIME	DRIVER SIGNATURE
1	Enterprise Lot 10-A-5	LFII-5	CONIT SO.L.	H-29	10	-	DOUG FOUTZ	934	925	Ron [Signature]
2	" "	LFII-5	"	H-29	10	-	"	834	925	Don [Signature]
3	" "	"	"	H-29	10	-	"	934	1028	Ron [Signature]
4	" "	"	"	H-29	10	-	"	834	1028	Don [Signature]
					40					
RESULTS:		LANDFARM EMPLOYEE:		NOTES:						
< 291	CHLORIDE TEST									
	PAINT FILTER TEST	1	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. Don Fantz Const NAME Ron Bright SIGNATURE Ron Bright

COMPANY CONTACT Craig Foutz PHONE 325 4922 DATE 2-24-14

***Signatures required prior to distribution of the legal document.***

**White - Company Records, Yellow - Billing, Pink - Customer**





Photo #1	
Client: Enterprise Field Services, LLC	
Project: Lateral 10A-5 Pipeline Release	
Taken by: Heather Woods	
Date: February 20, 2014	
AES Project No. 140216	Description: View of initial excavation looking southeast.

Photo #2	
Client: Enterprise Field Services, LLC	
Project: Lateral 10A-5 Pipeline Release	
Taken by: Heather Woods	
Date: February 25, 2014	
AES Project No. 140216	Description: View of final excavation looking northwest.



## Analytical Report

### Report Summary

Client: Animas Environmental Services

Chain Of Custody Number: 16621

Samples Received: 2/20/2014 4:15:00PM

Job Number: 99083-0001

Work Order: P402048

Project Name/Location: Lateral 10A-5 Pipeline  
Release

Entire Report Reviewed By:

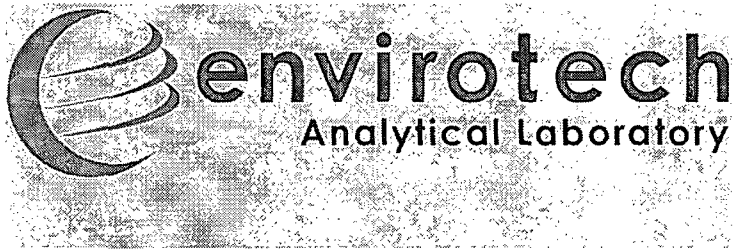
A handwritten signature in black ink, appearing to be 'Tim Cain', is written over a horizontal line.

Tim Cain, Laboratory Manager

Date: 2/26/14

Supplement to analytical report generated on: 2/26/14 2:00 pm

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.



Animas Environmental Services  
624 E. Comanche St.  
Farmington NM, 87401-6815

Project Name: Lateral 10A-5 Pipeline Release  
Project Number: 99083-0001  
Project Manager: Heather Woods

Reported:  
26-Feb-14 14:04

### Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
S-1	P402048-01A	Soil	02/20/14	02/20/14	Glass Jar, 4 oz.
S-2	P402048-02A	Soil	02/20/14	02/20/14	Glass Jar, 4 oz.
SC-1	P402048-03A	Soil	02/20/14	02/20/14	Glass Jar, 4 oz.

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5796 US Highway 64, Farmington, NM 87401

Ph (505) 632-0615 Fx (505) 632-1865

Three Springs - 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (970) 259-0615 Fx (800) 362-1879

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



Animas Environmental Services  
624 E. Comanche St.  
Farmington NM, 87401-6815

Project Name: Lateral 10A-5 Pipeline Release  
Project Number: 99083-0001  
Project Manager: Heather Woods

Reported:  
26-Feb-14 14:04

# S-1

## P402048-01 (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	1409005	02/24/14	02/25/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1409005	02/24/14	02/25/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1409005	02/24/14	02/25/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1409005	02/24/14	02/25/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1409005	02/24/14	02/25/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1409005	02/24/14	02/25/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1409005	02/24/14	02/25/14	EPA 8021B	
Surrogate: Bromochlorobenzene		109 %		80-120	1409005	02/24/14	02/25/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		104 %		80-120	1409005	02/24/14	02/25/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1409005	02/24/14	02/25/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1409004	02/24/14	02/25/14	EPA 8015D	

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



Animas Environmental Services  
624 E. Comanche St.  
Farmington NM, 87401-6815

Project Name: Lateral 10A-5 Pipeline Release  
Project Number: 99083-0001  
Project Manager: Heather Woods

Reported:  
26-Feb-14 14:04

S-2  
P402048-02 (Solid)

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1		1409005	02/24/14	02/25/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1		1409005	02/24/14	02/25/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1		1409005	02/24/14	02/25/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1		1409005	02/24/14	02/25/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1		1409005	02/24/14	02/25/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1		1409005	02/24/14	02/25/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1		1409005	02/24/14	02/25/14	EPA 8021B	
Surrogate: Bromochlorobenzene		110 %		80-120		1409005	02/24/14	02/25/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		106 %		80-120		1409005	02/24/14	02/25/14	EPA 8021B	
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1		1409005	02/24/14	02/25/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1		1409004	02/24/14	02/25/14	EPA 8015D	

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laboratory@envirotech-inc.com



Animas Environmental Services  
624 E. Comanche St.  
Farmington NM, 87401-6815

Project Name: Lateral 10A-5 Pipeline Release  
Project Number: 99083-0001  
Project Manager: Heather Woods

Reported:  
26-Feb-14 14:04

### SC-1

### P402048-03 (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	1409005	02/24/14	02/25/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1409005	02/24/14	02/25/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1409005	02/24/14	02/25/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1409005	02/24/14	02/25/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1409005	02/24/14	02/25/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1409005	02/24/14	02/25/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1409005	02/24/14	02/25/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		100 %		80-120	1409005	02/24/14	02/25/14	EPA 8021B	
Surrogate: Bromochlorobenzene		105 %		80-120	1409005	02/24/14	02/25/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1409005	02/24/14	02/25/14	EPA 8015D	
Diesel Range Organics (C10-C28)	727	29.9	mg/kg	1	1409004	02/24/14	02/26/14	EPA 8015D	

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Animas Environmental Services  
624 E. Comanche St.  
Farmington NM, 87401-6815

Project Name: Lateral 10A-5 Pipeline Release  
Project Number: 99083-0001  
Project Manager: Heather Woods

Reported:  
26-Feb-14 14:04

### 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 1409005 - Purge and Trap EPA 5030A

##### Blank (1409005-BLK1)

Prepared: 24-Feb-14 Analyzed: 25-Feb-14

E	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	50.9		ug/L	50.0		102	80-120			
Surrogate: Bromochlorobenzene	52.6		"	50.0		105	80-120			

##### Duplicate (1409005-DUP1)

Source: P402048-01

Prepared: 24-Feb-14 Analyzed: 25-Feb-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	53.2		ug/L	50.0		106	80-120			
Surrogate: Bromochlorobenzene	55.3		"	50.0		111	80-120			

##### Matrix Spike (1409005-MS1)

Source: P402048-01

Prepared: 24-Feb-14 Analyzed: 25-Feb-14

Benzene	47.7		ug/L	50.0	ND	95.4	39-150			
Toluene	47.4		"	50.0	ND	94.8	46-148			
Ethylbenzene	47.3		"	50.0	ND	94.7	32-160			
p,m-Xylene	95.0		"	100	ND	95.0	46-148			
o-Xylene	48.0		"	50.0	ND	96.0	46-148			
Surrogate: 1,3-Dichlorobenzene	52.4		"	50.0		105	80-120			
Surrogate: Bromochlorobenzene	54.5		"	50.0		109	80-120			

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Animas Environmental Services  
624 E. Comanche St.  
Farmington NM, 87401-6815

Project Name: Lateral 10A-5 Pipeline Release  
Project Number: 99083-0001  
Project Manager: Heather Woods

Reported:  
26-Feb-14 14:04

**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 1409004 - DRO Extraction EPA 3550C</b>										
<b>Blank (1409004-BLK1)</b>				Prepared: 24-Feb-14 Analyzed: 25-Feb-14						
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg							
<b>Duplicate (1409004-DUP1)</b>				Source: P402048-01 Prepared: 24-Feb-14 Analyzed: 25-Feb-14						
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg		ND				30	
<b>Matrix Spike (1409004-MS1)</b>				Source: P402048-01 Prepared: 24-Feb-14 Analyzed: 25-Feb-14						
Diesel Range Organics (C10-C28)	173	31.6	mg/kg	263	ND	65.8	75-125			SPK 1

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Animas Environmental Services  
624 E. Comanche St.  
Farmington NM, 87401-6815

Project Name: Lateral 10A-5 Pipeline Release  
Project Number: 99083-0001  
Project Manager: Heather Woods

Reported:  
26-Feb-14 14:04

### 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 1409005 - Purge and Trap EPA 5030A

##### Blank (1409005-BLK1)

Prepared: 24-Feb-14 Analyzed: 25-Feb-14

Gasoline Range Organics (C6-C10) ND 4.99 mg/kg

##### Duplicate (1409005-DUP1)

Source: P402048-01

Prepared: 24-Feb-14 Analyzed: 25-Feb-14

Gasoline Range Organics (C6-C10) ND 4.99 mg/kg ND 30

##### Matrix Spike (1409005-MS1)

Source: P402048-01

Prepared: 24-Feb-14 Analyzed: 25-Feb-14

Gasoline Range Organics (C6-C10) 0.44 mg/L 0.450 ND 98.0 75-125

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Farmington NM, 87401-6815

Project Name: Lateral 10A-5 Pipeline Release  
Project Number: 99083-0001  
Project Manager: Heather Woods

**Reported:**  
26-Feb-14 14:04

#### Notes and Definitions

SPK I The spike recovery for this QC sample is outside of control limits.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

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# CHAIN OF CUSTODY RECORD

16621

Client: <i>Animas Environmental Services</i>			Project Name / Location: <i>Lateral 10A-5 Pipeline Release</i>			ANALYSIS / PARAMETERS															
Email results to: <i>hwoods@animasenvironmental.com</i> <i>tjlonge@eprod.com</i>			Sampler Name: <i>H. Woods / C. Skyles</i>			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.:			Client No.: <i>99083-0001</i>																		
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	acid														
<i>S-1</i>	<i>2/20/14</i>	<i>1425</i>	<i>P402048-01</i>	<i>1-4oz Glass</i>			<i>X</i>	<i>X</i>	<i>X</i>											<i>1</i>	<i>✓</i>
<i>S-2</i>	<i>2/20/14</i>	<i>1429</i>	<i>P402048-02</i>	<i>1-4oz Glass</i>			<i>X</i>	<i>X</i>	<i>X</i>											<i>1</i>	<i>1</i>
<i>SC-1</i>	<i>2/20/14</i>	<i>1500</i>	<i>P402048-03</i>	<i>1-4oz Glass</i>			<i>X</i>	<i>X</i>	<i>X</i>											<i>1</i>	<i>1</i>
Relinquished by: (Signature) <i>Heather M. Woods</i>					Date <i>2/20/14</i>	Time <i>1612</i>	Received by: (Signature) <i>Done 3/30/14</i>										Date <i>2/20/14</i>	Time <i>1815</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"/>																					
<input type="checkbox"/> Sample(s) dropped off after hours to secure drop off area.																					



*8.2*  
*5.1*  
*7.4*

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Page 10 of 10



*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)

March 03, 2014

Heather Woods

Animas Environmental Services

624 East Comanche

Farmington, NM 87401

TEL: (505) 716-2787

FAX (505) 324-2022

RE: Lateral 10A-5

OrderNo.: 1402A02

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 1 sample(s) on 2/26/2014 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,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1402A02

Date Reported: 3/3/2014

CLIENT: Animas Environmental Services

Client Sample ID: W-1

Project: Lateral 10A-5

Collection Date: 2/25/2014 12:00:00 PM

Lab ID: 1402A02-001

Matrix: AQUEOUS

Received Date: 2/26/2014 10:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: JMP
Methyl tert-butyl ether (MTBE)	ND	5.0	p	µg/L	2	2/27/2014 12:33:45 PM	R17017
Benzene	ND	2.0	p	µg/L	2	2/27/2014 12:33:45 PM	R17017
Toluene	ND	2.0	p	µg/L	2	2/27/2014 12:33:45 PM	R17017
Ethylbenzene	ND	2.0	p	µg/L	2	2/27/2014 12:33:45 PM	R17017
Xylenes, Total	ND	4.0	p	µg/L	2	2/27/2014 12:33:45 PM	R17017
1,2,4-Trimethylbenzene	ND	2.0	p	µg/L	2	2/27/2014 12:33:45 PM	R17017
1,3,5-Trimethylbenzene	ND	2.0	p	µg/L	2	2/27/2014 12:33:45 PM	R17017
Surr: 4-Bromofluorobenzene	102	85-136	p	%REC	2	2/27/2014 12:33:45 PM	R17017

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#: 1402A02

03-Mar-14

Client: Animas Environmental Services

Project: Lateral 10A-5

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBW	Batch ID:	R17017	RunNo:	17017					
Prep Date:		Analysis Date:	2/27/2014	SeqNo:	489520	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5								
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Surr: 4-Bromofluorobenzene	21		20.00		107	85	136			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSW	Batch ID:	R17017	RunNo:	17017					
Prep Date:		Analysis Date:	2/27/2014	SeqNo:	489521	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	18	2.5	20.00	0	88.8	71.1	128			
Benzene	19	1.0	20.00	0	93.3	80	120			
Toluene	19	1.0	20.00	0	94.2	80	120			
Ethylbenzene	19	1.0	20.00	0	95.5	80	120			
Xylenes, Total	58	2.0	60.00	0	97.4	80	120			
1,2,4-Trimethylbenzene	19	1.0	20.00	0	97.3	80	120			
1,3,5-Trimethylbenzene	20	1.0	20.00	0	99.0	80	120			
Surr: 4-Bromofluorobenzene	19		20.00		95.7	85	136			

Sample ID	1402A02-001AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	W-1	Batch ID:	R17017	RunNo:	17017					
Prep Date:		Analysis Date:	2/27/2014	SeqNo:	489526	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	35	5.0	40.00	0	88.0	62.4	135			
Benzene	38	2.0	40.00	0.7400	94.3	71	129			
Toluene	40	2.0	40.00	1.028	96.5	68.4	135			
Ethylbenzene	40	2.0	40.00	0	99.1	69.4	135			
Xylenes, Total	120	4.0	120.0	1.084	100	72.4	135			
1,2,4-Trimethylbenzene	40	2.0	40.00	0.5160	98.8	67.1	135			
1,3,5-Trimethylbenzene	41	2.0	40.00	0.4560	101	75.9	130			
Surr: 4-Bromofluorobenzene	46		40.00		116	85	136			

## 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#: 1402A02

03-Mar-14

Client: Animas Environmental Services

Project: Lateral 10A-5

Sample ID 1402A02-001AMSD		SampType: MSD			TestCode: EPA Method 8021B: Volatiles					
Client ID: W-1		Batch ID: R17017			RunNo: 17017					
Prep Date:		Analysis Date: 2/27/2014			SeqNo: 489527		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	35	5.0	40.00	0	86.5	62.4	135	1.71	20	
Benzene	38	2.0	40.00	0.7400	92.0	71	129	2.40	20	
Toluene	38	2.0	40.00	1.028	93.4	68.4	135	3.17	20	
Ethylbenzene	39	2.0	40.00	0	97.1	69.4	135	2.00	20	
Xylenes, Total	120	4.0	120.0	1.084	97.6	72.4	135	2.41	20	
1,2,4-Trimethylbenzene	40	2.0	40.00	0.5160	98.1	67.1	135	0.702	20	
1,3,5-Trimethylbenzene	40	2.0	40.00	0.4560	99.2	75.9	130	1.65	20	
Surr: 4-Bromofluorobenzene	46		40.00		114	85	136	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: Animas Environmental

Work Order Number: 1402A02

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

2/26/2014 10:15:00 AM

Completed By: Lindsay Mangin

2/26/2014 12:53:33 PM

Reviewed By:

At 02/26/14

### 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	1.6	Good	Yes			



Client: Animas Environmental

---

Mailing Address: 624 E Comanche  
Farmington, NM, 87401

Phone #: (505) 564 2281

email or Fax#:

---

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

---

Accreditation

☐ NELAP ☐ Other \_\_\_\_\_

---

☐ EDD (Type) \_\_\_\_\_

Sample Temperature: 1.6

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

X		BTEX + MTBE + TMB's (8021)	
		BTEX + MTBE + TPH (Gas only)	
		TPH 8015B (GRO / DRO / MRO)	
		TPH (Method 418.1)	
		EDB (Method 504.1)	
		PAH's (8310 or 8270 SIMS)	
		RCRA 8 Metals	
		Anions (F, Cl, NO <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)	

[illegible]

Date:	Time:	Relinquished by:	Received by:	Date	Time
2/25/14	1717	Jesse Espinoza	Christina Warte	2/25/14	1717
Date:	Time:	Relinquished by:	Received by:	Date	Time
2/25/14	1749	Christ Warte	Christ Warte	2/26/14	1015

Remarks:	
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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 noted 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)

February 27, 2014

Heather Woods

Animas Environmental Services  
624 East Comanche  
Farmington, NM 87401  
TEL: (505) 716-2787  
FAX (505) 324-2022

RE: Lateral 101A-5

OrderNo.: 1402985

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 3 sample(s) on 2/26/2014 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 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,

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services

Client Sample ID: S-4

Project: Lateral 101A-5

Collection Date: 2/25/2014 12:13:00 PM

Lab ID: 1402985-001

Matrix: MEOH (SOIL)

Received Date: 2/26/2014 10:15:00 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	2/26/2014 1:35:39 PM	11903
Surr: DNOP	85.6	66-131		%REC	1	2/26/2014 1:35:39 PM	11903
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JMP</b>
Gasoline Range Organics (GRO)	ND	2.4		mg/Kg	1	2/26/2014 11:41:31 AM	R16966
Surr: BFB	82.3	74.5-129		%REC	1	2/26/2014 11:41:31 AM	R16966
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JMP</b>
Benzene	ND	0.024		mg/Kg	1	2/26/2014 11:41:31 AM	R16966
Toluene	ND	0.024		mg/Kg	1	2/26/2014 11:41:31 AM	R16966
Ethylbenzene	ND	0.024		mg/Kg	1	2/26/2014 11:41:31 AM	R16966
Xylenes, Total	ND	0.049		mg/Kg	1	2/26/2014 11:41:31 AM	R16966
Surr: 4-Bromofluorobenzene	94.8	80-120		%REC	1	2/26/2014 11:41:31 AM	R16966

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 1 of 6
	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: Animas Environmental Services

Client Sample ID: SC-2

Project: Lateral 101A-5

Collection Date: 2/25/2014 12:20:00 PM

Lab ID: 1402985-002

Matrix: MEOH (SOIL)

Received Date: 2/26/2014 10:15:00 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	2/26/2014 1:57:54 PM	11903
Surr: DNOP	85.0	66-131		%REC	1	2/26/2014 1:57:54 PM	11903
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JMP</b>
Gasoline Range Organics (GRO)	ND	2.4		mg/Kg	1	2/26/2014 12:10:02 PM	R16966
Surr: BFB	82.3	74.5-129		%REC	1	2/26/2014 12:10:02 PM	R16966
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JMP</b>
Benzene	ND	0.024		mg/Kg	1	2/26/2014 12:10:02 PM	R16966
Toluene	ND	0.024		mg/Kg	1	2/26/2014 12:10:02 PM	R16966
Ethylbenzene	ND	0.024		mg/Kg	1	2/26/2014 12:10:02 PM	R16966
Xylenes, Total	ND	0.049		mg/Kg	1	2/26/2014 12:10:02 PM	R16966
Surr: 4-Bromofluorobenzene	93.9	80-120		%REC	1	2/26/2014 12:10:02 PM	R16966

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.

## Analytical Report

Lab Order 1402985

Date Reported: 2/27/2014

CLIENT: Animas Environmental Services

Client Sample ID: SC-3

Project: Lateral 101A-5

Collection Date: 2/25/2014 12:23:00 PM

Lab ID: 1402985-003

Matrix: MEOH (SOIL)

Received Date: 2/26/2014 10:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/26/2014 2:20:05 PM	11903
Surr: DNOP	85.3	66-131		%REC	1	2/26/2014 2:20:05 PM	11903
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: JMP
Gasoline Range Organics (GRO)	ND	2.6		mg/Kg	1	2/26/2014 12:38:36 PM	R16966
Surr: BFB	82.1	74.5-129		%REC	1	2/26/2014 12:38:36 PM	R16966
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: JMP
Benzene	ND	0.026		mg/Kg	1	2/26/2014 12:38:36 PM	R16966
Toluene	ND	0.026		mg/Kg	1	2/26/2014 12:38:36 PM	R16966
Ethylbenzene	ND	0.026		mg/Kg	1	2/26/2014 12:38:36 PM	R16966
Xylenes, Total	ND	0.052		mg/Kg	1	2/26/2014 12:38:36 PM	R16966
Surr: 4-Bromofluorobenzene	93.9	80-120		%REC	1	2/26/2014 12:38:36 PM	R16966

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

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1402985

27-Feb-14

Client: Animas Environmental Services

Project: Lateral 101A-5

Sample ID	MB-11896		SampType: MBLK		TestCode: EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 11896		RunNo: 16968					
Prep Date:	2/25/2014		Analysis Date: 2/26/2014		SeqNo: 488286		Units: %REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.2		10.00		81.5	66	131			

Sample ID	LCS-11896		SampType: LCS		TestCode: EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 11896		RunNo: 16968					
Prep Date:	2/25/2014		Analysis Date: 2/26/2014		SeqNo: 488287		Units: %REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3		5.000		86.9	66	131			

Sample ID	MB-11903		SampType: MBLK		TestCode: EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 11903		RunNo: 16968					
Prep Date:	2/26/2014		Analysis Date: 2/26/2014		SeqNo: 488291		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	8.0		10.00		79.6	66	131			

Sample ID	LCS-11903		SampType: LCS		TestCode: EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 11903		RunNo: 16968					
Prep Date:	2/26/2014		Analysis Date: 2/26/2014		SeqNo: 488292		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	92.6	60.8	145			
Surr: DNOP	4.0		5.000		80.8	66	131			

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	Page 4 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#: 1402985

27-Feb-14

Client: Animas Environmental Services

Project: Lateral 101A-5

Sample ID	MB-11892 MK	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	R16966	RunNo:	16966					
Prep Date:	2/25/2014	Analysis Date:	2/26/2014	SeqNo:	488600	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	810		1000		80.6	74.5	129			

Sample ID	LCS-11892 MK	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	R16966	RunNo:	16966					
Prep Date:	2/25/2014	Analysis Date:	2/26/2014	SeqNo:	488601	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	97.8	71.7	134			
Surr: BFB	880		1000		88.0	74.5	129			

Sample ID	MB-11892	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	11892	RunNo:	16966					
Prep Date:	2/25/2014	Analysis Date:	2/26/2014	SeqNo:	488617	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	810		1000		80.6	74.5	129			

Sample ID	LCS-11892	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	11892	RunNo:	16966					
Prep Date:	2/25/2014	Analysis Date:	2/26/2014	SeqNo:	488618	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	880		1000		88.0	74.5	129			

### 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#: 1402985

27-Feb-14

Client: Animas Environmental Services

Project: Lateral 101A-5

Sample ID	MB-11892 MK	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	R16966	RunNo:	16966					
Prep Date:		Analysis Date:	2/26/2014	SeqNo:	488628	Units:	mg/Kg			
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	0.92		1.000		92.1	80	120			

Sample ID	LCS-11892 MK	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	R16966	RunNo:	16966					
Prep Date:		Analysis Date:	2/26/2014	SeqNo:	488629	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	108	80	120			
Toluene	1.1	0.050	1.000	0	111	80	120			
Ethylbenzene	1.1	0.050	1.000	0	111	80	120			
Xylenes, Total	3.4	0.10	3.000	0	114	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		99.8	80	120			

Sample ID	MB-11892	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	11892	RunNo:	16966					
Prep Date:	2/25/2014	Analysis Date:	2/26/2014	SeqNo:	488640	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.92		1.000		92.1	80	120			

Sample ID	LCS-11892	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	11892	RunNo:	16966					
Prep Date:	2/25/2014	Analysis Date:	2/26/2014	SeqNo:	488641	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		99.8	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: Animas Environmental

Work Order Number: 1402985

RcptNo: 1

Received by/date:

Logged By:

Ashley Gallegos

2/26/2014 10:15:00 AM

Completed By:

Ashley Gallegos

2/26/2014 10:24:15 AM

Reviewed By:

## 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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	1.6	Good	Yes			

☐ EDD (Type) \_\_\_\_\_

Sample Temperature:

1402985

~~MeOH~~

MeOH	—
EtOH	—

Mean	—
------	---

Remarks:	
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2/26/14 10

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: Lateral 5D-2	Facility Type: Natural Gas Gathering Line

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

### LOCATION OF RELEASE

Unit Letter B	Section 15	Township 29N	Range 12W	Feet from the 753	North South Line	Feet from the 1962	East West Line	County San Juan
------------------	---------------	-----------------	--------------	----------------------	------------------	-----------------------	----------------	--------------------

Latitude 36.73179 Longitude -108.08428

### NATURE OF RELEASE

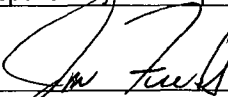
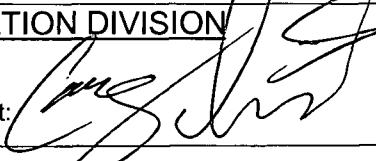
Type of Release: Natural Gas Release	Volume of Release: Unknown	Volume Recovered: None
Source of Release: Natural Gas Gathering Line	Date and Hour of Occurrence: 2/11/2014 @ 4:00 p.m.	Date and Hour of Discovery: 2/11/2014 @ 4:00 p.m.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? <b>OIL CONS. DIV DIST. 3</b> <b>MAY 19 2014</b>	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\* The release is in a small un-named arroyo on Crouch Mesa.

Describe Cause of Problem and Remedial Action Taken.\* On 9/20/2013, a line locator responding to a N.M. One-Call request smelled gas. Another technician was dispatched and arrived at around 4:34 PM MST. Using a leak detector, the technician confirmed hydrocarbons were present. The Lateral 5D-2 pipeline was shut in and pressure drops were observed in the line, confirming a leak. The two wells feeding the line were isolated, locked and tagged out, and blown down to 0 psig. Investigation activities were completed on October 8, 2013.

Describe Area Affected and Cleanup Action Taken.\* After the investigation activities were complete, it was determined that subsurface contaminant concentrations were minimal. 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: 5/29/14	Expiration Date:
E-mail Address: jefields@eprod.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 5-13-2014	Phone: (713)381-6684	

\* Attach Additional Sheets If Necessary

#NCS 1414931202

25



Animas Environmental Services, LLC

[www.animasenvironmental.com](http://www.animasenvironmental.com)

624 E. Comanche  
Farmington, NM 87401  
505-564-2281

Durango, Colorado  
970-403-3084

April 28, 2014

Thomas Long  
Enterprise Field Services, LLC  
614 Reilly Avenue  
Farmington, New Mexico 87401

*Via electronic mail with delivery confirmation receipt to:*  
[tjlong@eprod.com](mailto:tjlong@eprod.com)

**RE: Release Assessment Report  
Lateral 5D-2 Pipeline Release  
NW¼ NE¼, Section 15, T29N, R12W  
San Juan County, New Mexico**

**OIL CONS. DIV DIST. 3**

**MAY 19 2014**

Dear Mr. Long:

On September 26 and 27, 2013, Animas Environmental Services, LLC (AES) completed an assessment associated with a suspected release from the Enterprise Field Services, LLC (Enterprise) Lateral 5D-2 pipeline. On October 8, 2013, AES also advanced two soil borings in the wash along the pipeline to aid in locating the suspected release. No release location was confirmed during the assessment activities, and a portion of the pipeline has been filled with inert gas and capped for abandonment.

---

## 1.0 Site Information

### 1.1 Location

Location – NW¼ NE¼, Section 15, T29N, R12W, San Juan County, New Mexico

Latitude/Longitude – N36.73179 and W108.08428, respectively

Surface Owner – Private

Figure 1. Topographic Site Location Map

Figure 2. Aerial Site Map

### 1.2 NMOCD Ranking

In accordance with New Mexico Oil Conservation Division (NMOCD) release protocols, action levels were established per NMOCD *Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993) prior to the assessment. The suspected release was given a ranking score of 30 based on the following factors:

- **Depth to Groundwater:** Depth to groundwater is between 50 to 100 feet below ground surface (bgs) based on a depth to groundwater reported in nearby wells registered with the New Mexico Office of the State Engineer. (10 points)
- **Wellhead Protection Area:** The suspected release location is not within a wellhead protection area. (0 points)
- **Distance to Surface Water Body:** The suspected release area is located within 200 feet of an unnamed ephemeral wash draining to the San Juan River. (30 points)

The ranking score of 30 dictates that concentrations for impacted soils left in place must be below the NMOCD action levels of 10 mg/kg benzene, 50 mg/kg total benzene, toluene, ethylbenzene, and xylenes (BTEX), and 100 mg/kg total petroleum hydrocarbons (TPH) as gasoline range organics (GRO) and diesel range organics (DRO). An action level of 100 parts per million (ppm) volatile organic compound (VOCs) concentrations via organic vapor meter (OVM) may be substituted for laboratory analysis of benzene and total BTEX.

### *1.3 Assessment and Mitigation*

A suspected release was discovered by a third-party line locator on September 20, 2013, and an Enterprise technician was dispatched to the location to remove the line from service. On September 26 and 27, 2013, Enterprise contractors completed an excavation along the pipeline in the suspected release area. AES provided field screening for excavation guidance and prior to backfilling the excavation, collected five confirmation soil samples for field screening and laboratory analysis from the walls and base of the final excavation, as well as two confirmation soil samples from the stockpiled soils. No release location was confirmed within the final excavation area. The final excavation measured approximately 47 feet by 15 feet by 9 feet deep and was backfilled with the stockpiled soil. Soil sample locations and final excavation extents are included on Figure 3.

On October 8, 2013, AES returned to the location and advanced two soil borings in the wash to the east of the release location, each boring to a total depth of 20 feet and 24 feet bgs. Soil borings were completed with a GeoProbe DT 6620 track-mounted direct push rig operated by Earth Worx, Los Lunas, New Mexico. Soil samples were collected from continuously driven core-barrel samplers with a diameter of 3.25 inches during advancement of the borings. At 4-foot intervals, a soil sample was collected from the core barrel sampler and transferred to appropriately labeled sample containers. For each soil boring, a Soil Boring Log was completed. These logs recorded sample identification, depth collected, and method of collection, as well as observations of soil moisture, color, grain size, contaminant presence, and overall stratigraphy. The local site lithology consisted of poorly graded sand underlain by clayey sand to sandy clay. No groundwater was observed in the borings at the time of drilling. Following field

activities, the pipeline was blown down with inert nitrogen gas and capped from approximately N36.73162, W108.08703 to N36.73197, W108.08178. Soil boring locations are included on Figure 4. A photograph log and soil boring logs are included in the Appendix.

---

## 2.0 Soil Sampling

Five soil samples (SC-1 through SC-5) were collected from the walls and the base of the final excavation during the assessment in September 2013. Two composite samples (SC-6 and SC-7) were also collected from the stockpiled soil. Fourteen samples were also collected from two soil borings (SB-1 and SB-2) advanced in the wash in October 2013. Each sample was field screened for VOCs, and selected samples were also field analyzed for TPH. Samples SC-2 and SC-5 were submitted for laboratory analysis.

### 2.1 Field Sampling

#### 2.1.1 Volatile Organic Compounds

Field screening for VOC vapors was conducted with a photo-ionization detector (PID) OVM. Before beginning field screening, the PID-OVM was first calibrated with 100 ppm isobutylene gas.

#### 2.1.2 Total Petroleum Hydrocarbons

Selected soil samples were also analyzed in the field for TPH per U.S. Environmental Protection Agency (USEPA) Method 418.1 using a Buck Scientific Model HC-404 Total Hydrocarbon Analyzer Infrared Spectrometer (Buck). A 3-point calibration was completed prior to conducting soil analyses. Field analytical protocol followed AES's *Standard Operating Procedure: Field Analysis Total Petroleum Hydrocarbons per EPA Method 418.1*.

### 2.2 Laboratory Analyses

Samples collected for laboratory analysis were placed into new, clean, laboratory-supplied containers, which were then labeled, placed on ice, and logged onto a sample chain of custody record. Samples were maintained on ice until delivery to the analytical laboratory, Hall Environmental Analysis Laboratory (Hall), in Albuquerque, New Mexico. Both soil samples were laboratory analyzed for:

- TPH (GRO/DRO) per USEPA Method 8015D.

Additionally, soil sample SC-2 was laboratory analyzed for:

- BTEX per USEPA Method 8021B.

## 2.3 Field Sampling and Laboratory Analytical Results

On September 26 and 27, 2013, soil field screening results for the excavation showed that VOC concentrations via OVM ranged from 0.0 ppm in SC-4 through SC-7 up to 3.3 ppm in SC-2. Field TPH concentrations ranged from 64.8 mg/kg in SC-3 and SC-4 up to 155 mg/kg in SC-5. On October 8, 2013, soil field screening results for the soil borings showed that VOC concentrations via OVM were 0.0 ppm for all the samples collected, except for SB-2 at 0 to 4 feet with 7.8 ppm. Field TPH concentration for SB-2 at 12 to 16 feet was 87.3 mg/kg. The AES Field Sampling Report is attached.

Table 1. Field Sampling VOC and TPH Results  
Lateral 5D-2 Pipeline Release Assessment, September and October 2013

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Sample Depth (ft bgs)</i>	<i>VOCs via OVM (ppm)</i>	<i>Field TPH (mg/kg)</i>
<b>NMOCD Action Level*</b>			<b>100</b>	<b>100</b>
SC-1	9/26/13	1 to 9	1.8	80.9
SC-2	9/26/13	9	3.3	94.4
SC-3	9/26/13	1 to 9	1.5	64.8
SC-4	9/27/13	1 to 9	0.0	64.8
SC-5	9/27/13	1 to 9	0.0	<b>155</b>
SC-6	9/27/13	Stockpile	0.0	75.5
SC-7	9/27/13	Stockpile	0.0	83.6
SB-1	10/8/13	0 to 4	0.0	NA
		4 to 6.5	0.0	NA
		6.5 to 8	0.0	NA
		8 to 12	0.0	NA
		12 to 16	0.0	NA
		16 to 20	0.0	NA
SB-2	10/8/13	0 to 4	7.8	NA
		4 to 8	0.0	NA
		8 to 12	0.0	NA
		12 to 16	0.0	87.3
		16 to 19.5	0.0	NA
		19.5 to 20	0.0	NA
		20 to 21	0.0	NA

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Sample Depth (ft bgs)</i>	<i>VOCs via OVM (ppm)</i>	<i>Field TPH (mg/kg)</i>
<b>NMOCD Action Level*</b>			<b>100</b>	<b>100</b>
SB-2	10/8/13	21 to 24	0.0	NA

NA – not analyzed

\*Action level determined by the NMOCD ranking score per NMOCD Guidelines for Remediation of Leaks, Spills and Releases (August 1993)

Laboratory analytical results showed that benzene and total BTEX concentrations were below laboratory detection limits for SC-2. TPH (GRO/DRO) concentrations were also below the laboratory detection limits in SC-2 and SC-5. Laboratory analytical results are included in Table 2 and on Figure 3. The laboratory analytical report is attached.

Table 2. Laboratory Analytical Results – Benzene, Total BTEX, and TPH  
Lateral 5D-2 Pipeline Release Assessment, September and October 2013

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Sample Depth (ft bgs)</i>	<i>Benzene (mg/kg)</i>	<i>Total BTEX (mg/kg)</i>	<i>TPH – GRO (mg/kg)</i>	<i>TPH – DRO (mg/kg)</i>
<b>NMOCD Action Level*</b>			<b>10</b>	<b>50</b>	<b>100</b>	
SC-2	9/26/13	9	<0.047	<0.234	<4.7	<10
SC-5	9/27/13	1 to 9	NA	NA	<4.7	<10

NA – not analyzed

\*Action level determined by the NMOCD ranking score per NMOCD Guidelines for Remediation of Leaks, Spills and Releases (August 1993)

### 3.0 Conclusions and Recommendations

Action levels for releases determined by NMOCD ranking score per *NMOCD Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993), and the release was assigned a ranking score of 30. Field screening of SC-1 through SC-7 and samples from SB-1 and SB-2 showed VOC concentrations below the NMOCD action level of 100 ppm. Field TPH concentrations were also below the NMOCD action level of 100 mg/kg in all the samples collected, except for SC-5 with 155 mg/kg. However, laboratory analytical results reported benzene, total BTEX, and TPH below the applicable NMOCD action levels in SC-2 and SC-5.

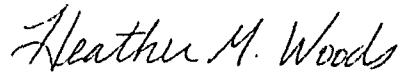
Based on field sampling and laboratory results of the final excavation extents and adjacent wash area for petroleum contaminated soils, benzene, total BTEX, and TPH concentrations are below the applicable NMOCD action levels. No further work is recommended for the assessed portions of the Lateral 5D-2 pipeline. Should the



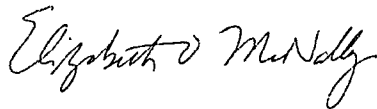
suspected pipeline release be located in the future, additional assessment may be required at that time.

If you have any questions about this report or site conditions, please do not hesitate to contact me at (505) 564-2281.

Sincerely,



Heather Woods, P.G.  
Project Manager



Elizabeth McNally, P.E.

Attachments:

- Figure 1. Topographic Site Location Map
- Figure 2. Aerial Site Map, September and October 2013
- Figure 3. Release Assessment Sample Locations and Results, September 2013
- Figure 4. Soil Boring Locations and Results, October 2013
- AES Field Sampling Report
- Photograph Log
- Soil Boring Logs
- Laboratory Analytical Report (Hall 1309E35)

R:\Animas 2000\Dropbox\0000 Animas Server Dropbox EM\2014 Projects\Enterprise\Lateral 5D-2\Enterprise Lateral 5D-2 Release Report 042814.docx

HORN CANYON QUADRANGLE  
NEW MEXICO - SAN JUAN COUNTY  
1965 PHOTOREVISED 1979

Radio Facility

Substation

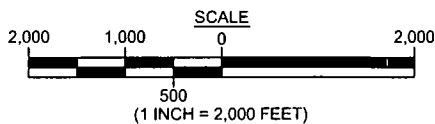
Gas Wells

LATERAL SD-2 PIPELINE  
SUSPECTED RELEASE LOCATION

Pumping Sta.

Desert Hills Cr.

SCALE  
2,000 1,000 0 2,000  
500  
(1 INCH = 2,000 FEET)



# AES

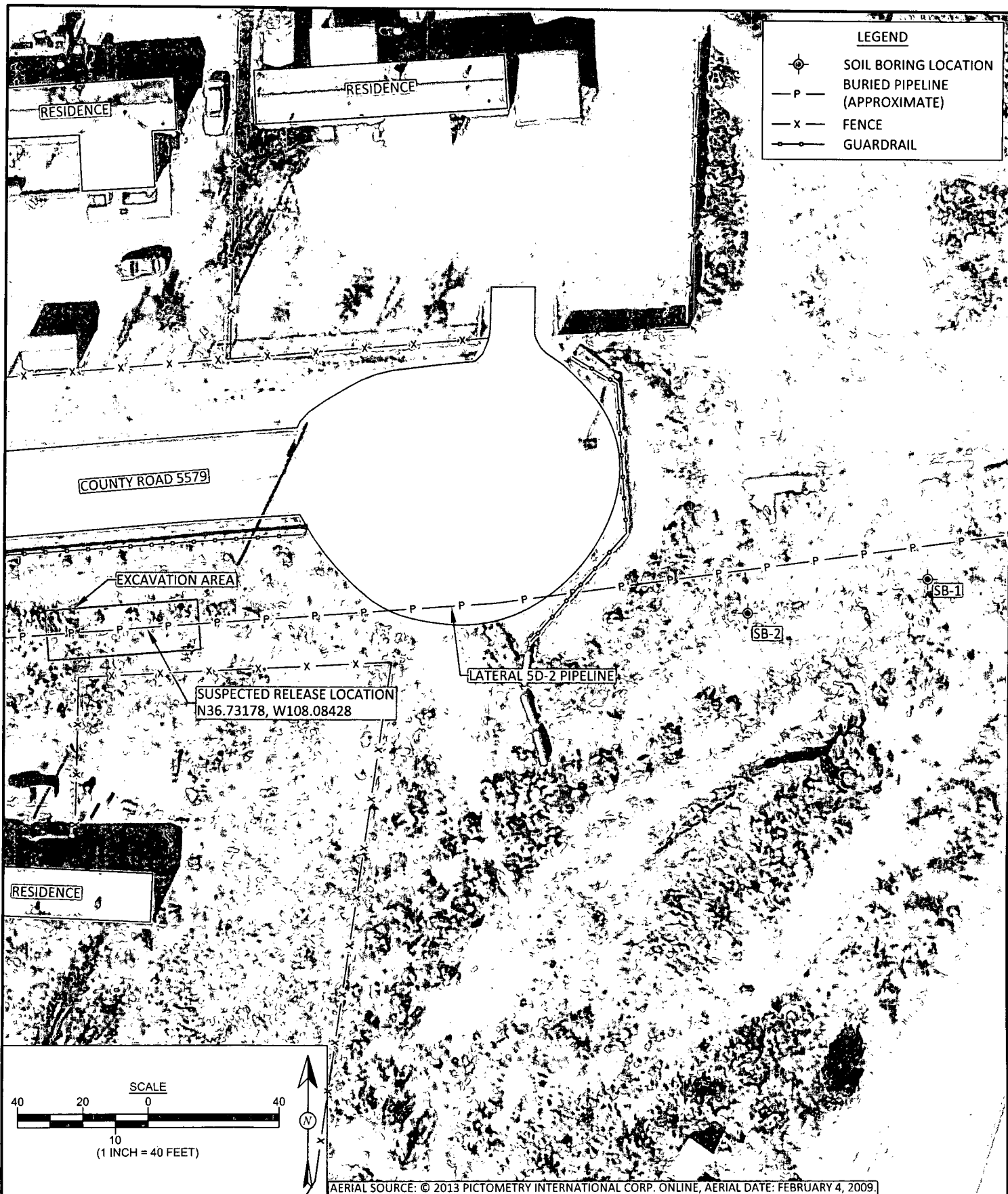


Animas Environmental Services, LLC

**APPROVED BY:**  
E. McNally

**DATE APPROVED:**  
April 21, 2014

**TOPOGRAPHIC SITE LOCATION MAP**  
**ENTERPRISE FIELD SERVICES, LLC**  
**LATERAL 5D-2 SEPTEMBER 2013 PIPELINE RELEASE**  
**NW¼, NE¼, SECTION 15, T29N, R12W**  
**SAN JUAN COUNTY, NEW MEXICO**  
**N36.73178, W108.08428**



## FIGURE 2

**AERIAL SITE MAP**  
**SEPTEMBER AND OCTOBER 2013**  
 ENTERPRISE FIELD SERVICES, LLC  
 LATERAL 5D-2 SEPTEMBER 2013 PIPELINE RELEASE  
 NW¼ NE¼, SECTION 15, T29N, R12W  
 SAN JUAN COUNTY, NEW MEXICO  
 N36.73178, W108.08428

**DRAWN BY:**  
C. Lameman

**DATE DRAWN:**  
April 21, 2014

**REVISIONS BY:**  
C. Lameman

**DATE REVISED:**  
April 21, 2014

**CHECKED BY:**  
H. Woods

**DATE CHECKED:**  
April 21, 2014

**APPROVED BY:**  
E. McNally

**DATE APPROVED:**  
April 21, 2014

AES



Animas Environmental Services, LLC

FIGURE 3

RELEASE ASSESSMENT SAMPLE  
LOCATIONS AND RESULTS  
SEPTEMBER 2013  
ENTERPRISE FIELD SERVICES, LLC  
LATERAL 5D-2 SEPTEMBER 2013  
PIPELINE RELEASE  
NW¼ NE¼, SECTION 15, T29N, R12W  
SAN JUAN COUNTY, NEW MEXICO  
N36.73178, W108.08428

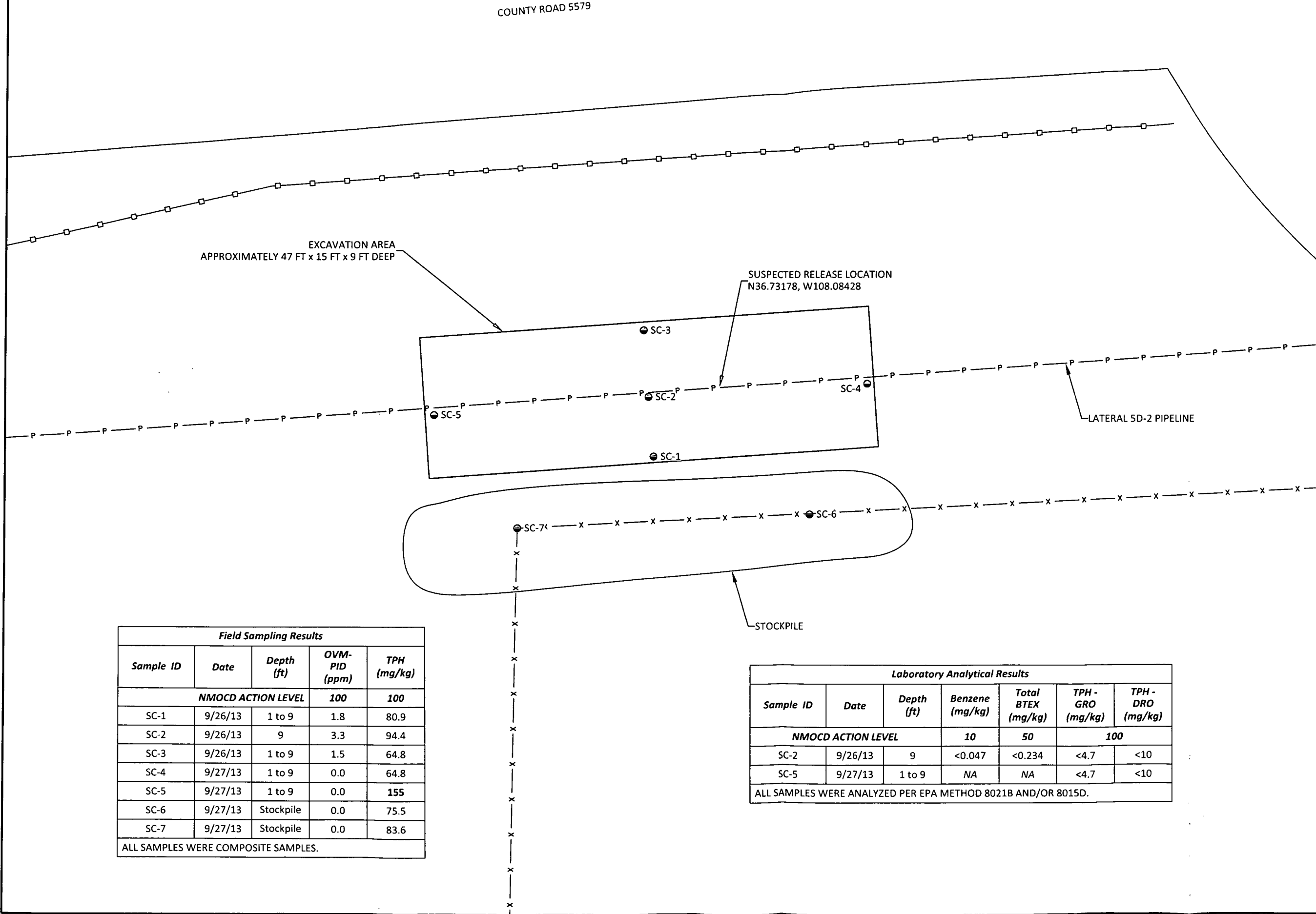


Animas Environmental Services, LLC

<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> April 22, 2014
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> April 22, 2014
<b>CHECKED BY:</b> H. Woods	<b>DATE CHECKED:</b> April 22, 2014
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> April 22, 2014

LEGEND

- SAMPLE LOCATIONS
- P — BURIED PIPELINE (APPROXIMATE)
- x — FENCE
- □ — GUARDRAIL



Field Sampling Results				
Sample ID	Date	Depth (ft)	OVM-PID (ppm)	TPH (mg/kg)
NMOCD ACTION LEVEL			100	100
SC-1	9/26/13	1 to 9	1.8	80.9
SC-2	9/26/13	9	3.3	94.4
SC-3	9/26/13	1 to 9	1.5	64.8
SC-4	9/27/13	1 to 9	0.0	64.8
SC-5	9/27/13	1 to 9	0.0	155
SC-6	9/27/13	Stockpile	0.0	75.5
SC-7	9/27/13	Stockpile	0.0	83.6

ALL SAMPLES WERE COMPOSITE SAMPLES.

Laboratory Analytical Results						
Sample ID	Date	Depth (ft)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH - GRO (mg/kg)	TPH - DRO (mg/kg)
NMOCD ACTION LEVEL			10	50	100	
SC-2	9/26/13	9	<0.047	<0.234	<4.7	<10
SC-5	9/27/13	1 to 9	NA	NA	<4.7	<10

ALL SAMPLES WERE ANALYZED PER EPA METHOD 8021B AND/OR 8015D.

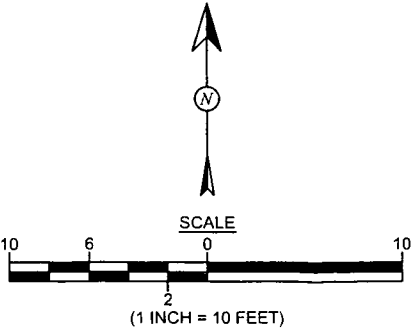


FIGURE 4

SOIL BORING LOCATIONS  
AND RESULTS  
OCTOBER 2013  
ENTERPRISE FIELD SERVICES, LLC  
LATERAL SD-2 SEPTEMBER 2013  
PIPELINE RELEASE  
NW¼, NE¼, SECTION 15, T29N, R12W  
SAN JUAN COUNTY, NEW MEXICO  
N36.73178, W108.08428



Animas Environmental Services, LLC

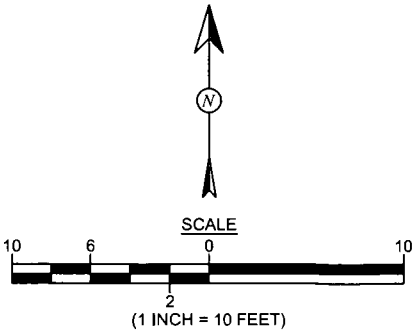
<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> April 22, 2014
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> April 22, 2014
<b>CHECKED BY:</b> H. Woods	<b>DATE CHECKED:</b> April 22, 2014
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> April 22, 2014

LEGEND

- SOIL BORING LOCATION
- BURIED PIPELINE (APPROXIMATE)
- GUARDRAIL

Field Sampling Results				
Sample ID	Date	Depth (ft)	OVM-PID (ppm)	TPH (mg/kg)
NMOCD ACTION LEVEL			100	100
SB-1	10/8/13	0 to 4	0.0	NA
		4 to 6.5	0.0	NA
		6.5 to 8	0.0	NA
		8 to 12	0.0	NA
		12 to 16	0.0	NA
		16 to 20	0.0	NA
SB-2	10/8/13	0 to 4	7.8	NA
		4 to 8	0.0	NA
		8 to 12	0.0	NA
		12 to 16	0.0	87.3
		16 to 19.5	0.0	NA
		19.5 to 20	0.0	NA
		20 to 21	0.0	NA
		21 to 24	0.0	NA

NA - NOT ANALYZED



# AES Field Sampling Report



Animas Environmental Services, LLC

www.animasenvironmental.com

Client: Enterprise Field Services, LLC

Project Location: Lateral 5D-2 September 2013 Pipeline Release

Dates: 9/26/14, 9/27/14 and 10/8/13

Matrix: Soil

624 E. Comanche  
Farmington, NM 87401  
505-564-2281

Durango, Colorado  
970-403-3084

Sample ID	Collection Date	Collection Time	OVM (ppm)	Field TPH* (mg/kg)	Field TPH Analysis Time	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SC-1	9/26/2013	10:30	1.8	80.9	16:33	20.0	1	HMW
SC-2	9/26/2013	10:32	3.3	94.4	18:43	20.0	1	HMW
SC-3	9/26/2013	10:34	1.5	64.8	16:41	20.0	1	HMW
SC-4	9/27/2013	10:40	0.0	64.8	16:49	20.0	1	HMW
SC-5	9/27/2013	10:46	0.0	155	16:55	20.0	1	HMW
SC-6	9/27/2013	10:59	0.0	75.5	17:01	20.0	1	HMW
SC-7	9/27/2013	11:01	0.0	83.6	17:06	20.0	1	HMW
SB-1 @ 0-4'	9/12/2013	13:25	0.0	Not Analyzed for TPH				
SB-1 @ 4-6.5'	9/12/2013	13:26	0.0	Not Analyzed for TPH				
SB-1 @ 6.5-8'	9/12/2013	13:26	0.0	Not Analyzed for TPH				
SB-1 @ 8-12'	9/12/2013	13:29	0.0	Not Analyzed for TPH				
SB-1 @ 12-16'	9/12/2013	13:33	0.0	Not Analyzed for TPH				
SB-1 @ 16-20'	9/12/2013	13:35	0.0	Not Analyzed for TPH				

Sample ID	Collection Date	Collection Time	OVM (ppm)	Field TPH* (mg/kg)	Field TPH Analysis Time	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SB-2 @ 0-4'	10/8/2013	13:47	0.0	Not Analyzed for TPH				
SB-2 @ 4-8'	10/8/2013	13:49	0.0	Not Analyzed for TPH				
SB-2 @ 8-12'	10/8/2013	13:52	0.0	Not Analyzed for TPH				
SB-2 @ 12-16'	10/8/2013	13:55	0.0	87.3	14:38	20.0	1	HMW
SB-2 @ 16-19.5'	10/8/2013	13:58	0.0	Not Analyzed for TPH				
SB-2 @ 19.5-20'	10/8/2013	14:00	0.0	Not Analyzed for TPH				
SB-2 @ 20-21'	10/8/2013	14:03	0.0	Not Analyzed for TPH				
SB-2 @ 21-24'	10/8/2013	14:03	0.0	Not Analyzed for TPH				

DF Dilution Factor  
 NA Not Analyzed  
 ND Not Detected at the Reporting Limit  
 PQL Practical Quantitation Limit  
 \*Field TPH concentrations recorded may be below PQL.

Total Petroleum Hydrocarbons - USEPA 418.1

Analyst:

*Heather M Woods*

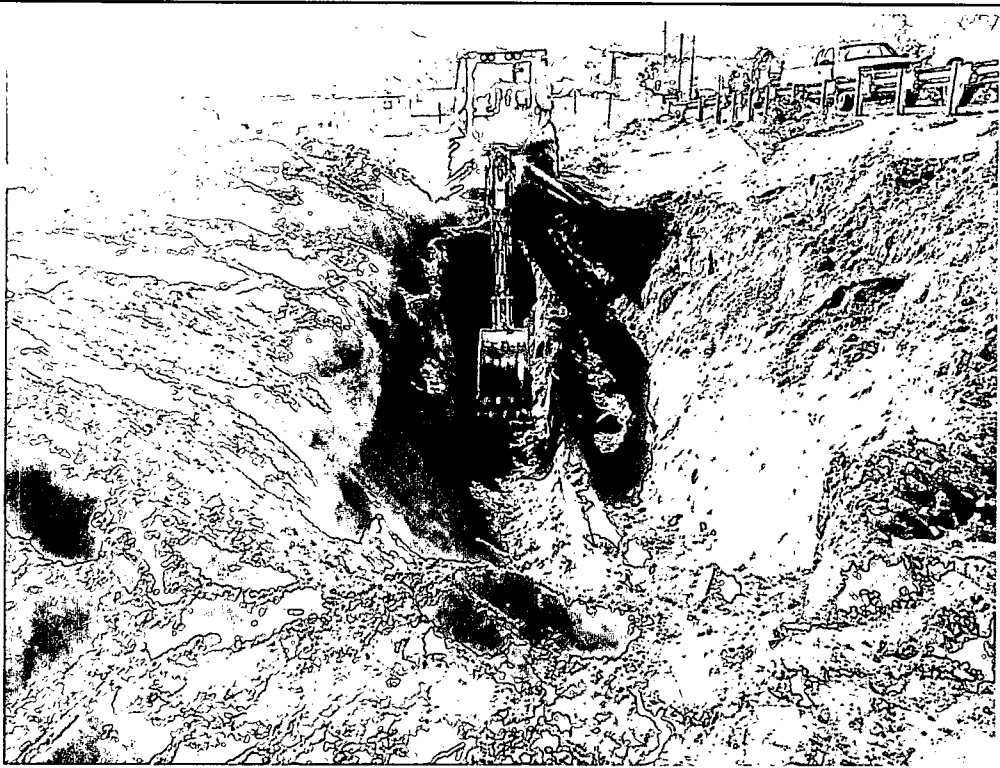
Photo #1	
Client: Enterprise Field Services, LLC	
Project: Lateral 5D-2	
Taken by: Heather Woods	
Date: September 26, 2013	
AES Project No. 130928	Description: View looking east during pipeline excavation.

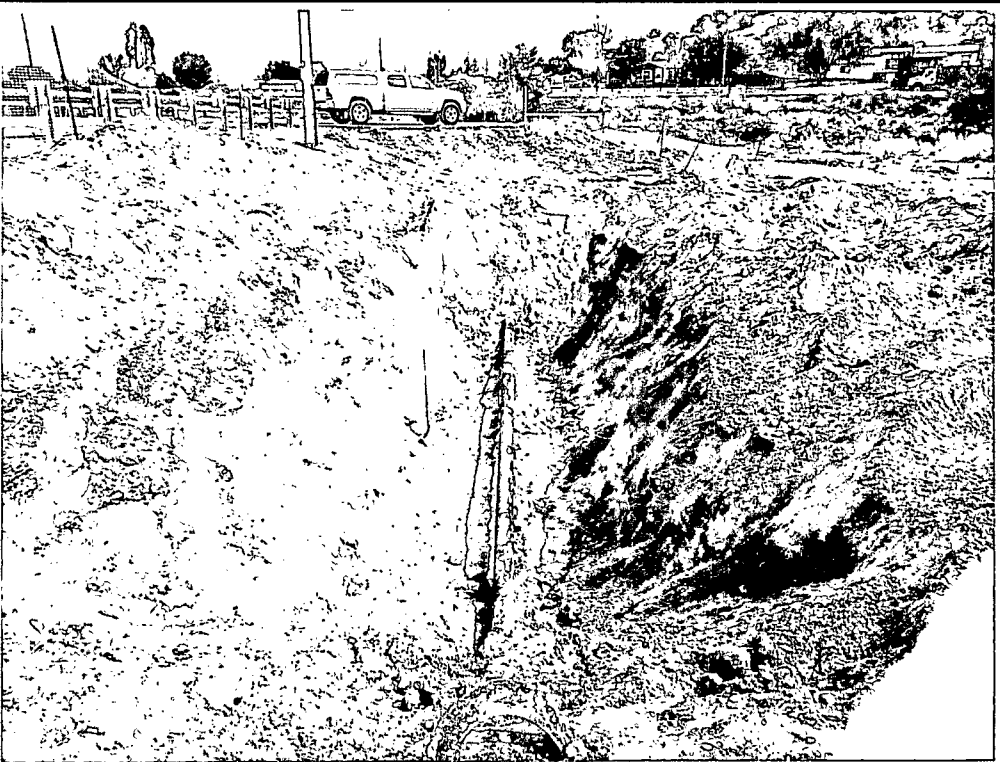
Photo #2	
Client: Enterprise Field Services, LLC	
Project: Lateral 5D-2	
Taken by: Heather Woods	
Date: September 27, 2013	
AES Project No. 130928	Description: View looking east of final excavation.



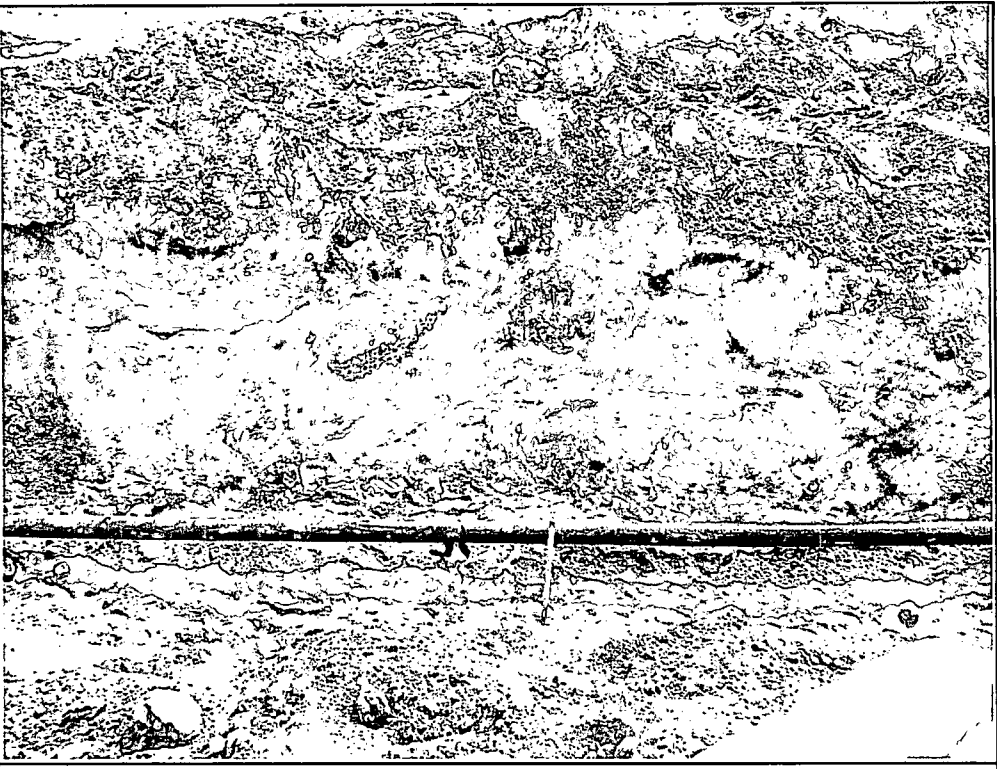
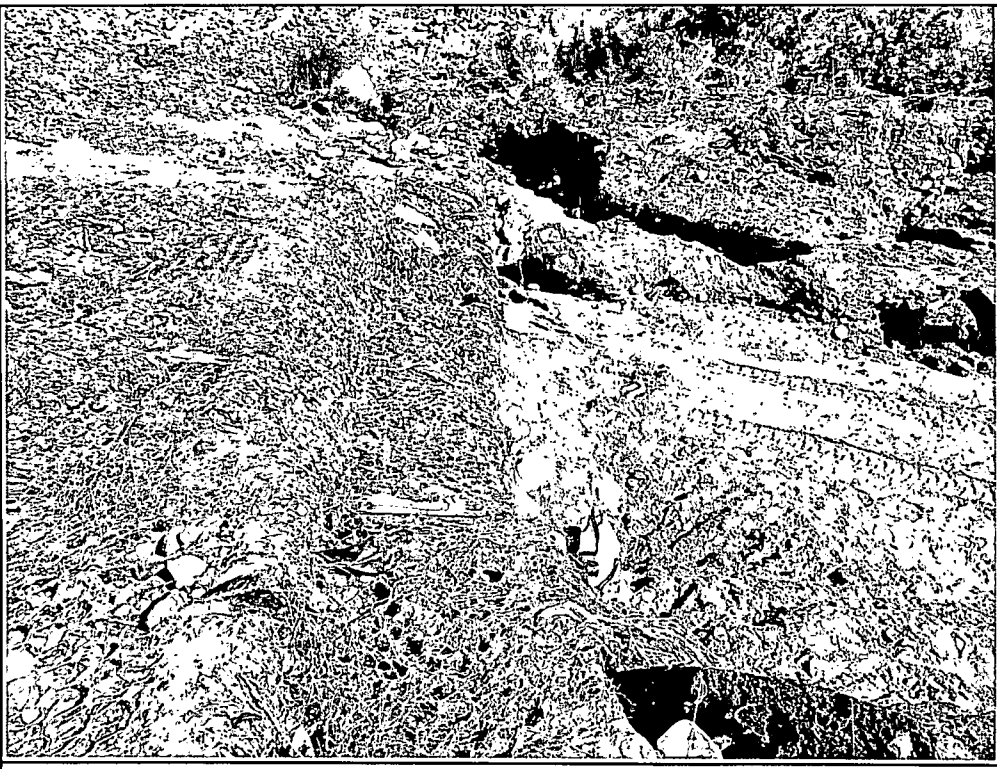
Photo #3	
Client: Enterprise Field Services, LLC	
Project: Lateral 5D-2	
Taken by: Heather Woods	
Date: September 27, 2013	
AES Project No. 130928	Description: View looking south of final excavation.

Photo #4	
Client: Enterprise Field Services, LLC	
Project: Lateral 5D-2	
Taken by: Heather Woods	
Date: October 8, 2013	
AES Project No. 130928	Description: View looking east of wash where soil borings SB-1 and SB-2 were completed.



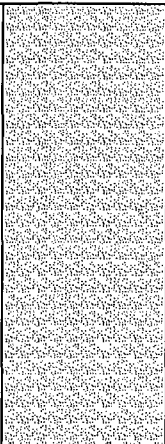
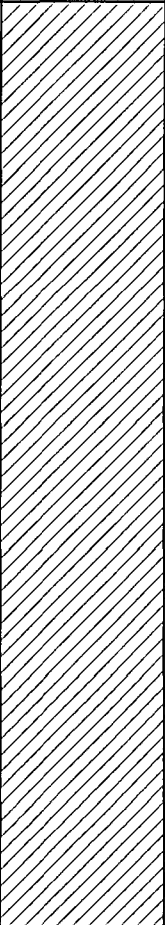
Animas  
Environmental  
Services, LLC.  
624 East Comanche  
Farmington, NM 87401

## LOG OF: SB-1

ENTERPRISE FIELD SERVICES LLC  
LATERAL 5D-2 PIPELINE RELEASE  
NW¼ NE¼, SECTION 15, T29N, R12W  
SAN JUAN COUNTY, NEW MEXICO  
N36.73178, W108.08428

Date Started : 10/8/13  
Date Completed : 10/8/13  
Hole Diameter : 3.25 in.  
Drilling Method : Geoprobe  
Sampling Method : Continuous

Latitude : N36.73179  
Longitude : W108.08353  
Survey By : Not Surveyed  
Logged By : H. Woods/ S. Lynn

Depth in Feet	Surf. Elev.	USCS	GRAPHIC	DESCRIPTION	PID (ppm)
0		SP		Poorly Graded Sand, Brown, Dry to Moist, Fine to Medium Grained, No Odor, and No Staining.	0.0
5					0.0
10		CL		Sandy Lean Clay, Brown, Fine to Medium Grained Sand, Moist, No Odor, and No Staining.	0.0
15					0.0
20					0.0



Animas  
Environmental  
Services, LLC.  
624 East Comanche  
Farmington, NM 87401

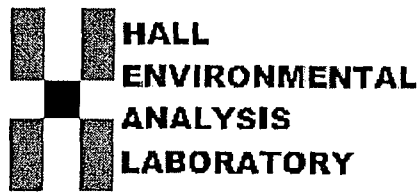
## LOG OF: SB-2

ENTERPRISE FIELD SERVICES LLC  
LATERAL 5D-2 PIPELINE RELEASE  
NW¼ NE¼, SECTION 15, T29N, R12W  
SAN JUAN COUNTY, NEW MEXICO  
N36.73178, W108.08428

Date Started : 10/8/13  
Date Completed : 10/8/13  
Hole Diameter : 3.25 in.  
Drilling Method : Geoprobe  
Sampling Method : Continuous

Latitude : N36.73177  
Longitude : W108.08373  
Survey By : Not Surveyed  
Logged By : H. Woods/ S. Lynn

Depth in Feet	Surf. Elev.	USCS	GRAPHIC	DESCRIPTION	PID (ppm)
0		SP		Poorly Graded Sand, Brown, Dry to Moist, Fine to Medium Grained, Moderate Odor, and Slight Staining.	7.8
4					0.0
8					0.0
12					0.0
16		SC		Clayey Sand Grading to Sandy Clay, Fine to Medium Grained Sand, Brown, Moist, Moderate Odor, and Slight Staining.	0.0
20		SC		Clayey Sand, Gray Brown, Moist, Fine Grained, Slight to Moderate Odor and Slight to Moderate Staining.	0.0 0.0
24					0.0



*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)

October 04, 2013

Ross Kennemer

Animas Environmental Services  
624 East Comanche  
Farmington, NM 87401  
TEL: (505) 486-1776  
FAX (505) 324-2022

RE: Enterprise Lateral 5D-2

OrderNo.: 1309E35

Dear Ross Kennemer:

Hall Environmental Analysis Laboratory received 2 sample(s) on 9/28/2013 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,

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1309E35

Date Reported: 10/4/2013

CLIENT: Animas Environmental Services

Client Sample ID: SC-2

Project: Enterprise Lateral 5D-2

Collection Date: 9/26/2013 5:18:00 PM

Lab ID: 1309E35-001

Matrix: SOIL

Received Date: 9/28/2013 11:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/2/2013 3:36:38 PM	9576
Surr: DNOP	87.5	63-147		%REC	1	10/2/2013 3:36:38 PM	9576
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/2/2013 2:43:49 PM	9584
Surr: BFB	102	80-120		%REC	1	10/2/2013 2:43:49 PM	9584
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	10/2/2013 2:43:49 PM	9584
Toluene	ND	0.047		mg/Kg	1	10/2/2013 2:43:49 PM	9584
Ethylbenzene	ND	0.047		mg/Kg	1	10/2/2013 2:43:49 PM	9584
Xylenes, Total	ND	0.093		mg/Kg	1	10/2/2013 2:43:49 PM	9584
Surr: 4-Bromofluorobenzene	113	80-120		%REC	1	10/2/2013 2:43:49 PM	9584

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 for VOA and TOC only.
	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 1309E35

Date Reported: 10/4/2013

CLIENT: Animas Environmental Services

Client Sample ID: SC-~~9~~5<sup>μw</sup>

Project: Enterprise Lateral 5D-2

Collection Date: 9/27/2013 2:02:00 PM

Lab ID: 1309E35-002

Matrix: SOIL

Received Date: 9/28/2013 11:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/2/2013 5:11:50 PM	9576
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	10/2/2013 5:11:50 PM	9576
Surr: DNOP	89.7	63-147		%REC	1	10/2/2013 5:11:50 PM	9576
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/2/2013 4:14:22 PM	9584
Surr: BFB	101	80-120		%REC	1	10/2/2013 4:14:22 PM	9584

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 for VOA and TOC only.
	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#: 1309E35

04-Oct-13

Client: Animas Environmental Services

Project: Enterprise Lateral 5D-2

Sample ID	MB-9576	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	9576	RunNo:	13723					
Prep Date:	10/1/2013	Analysis Date:	10/1/2013	SeqNo:	391935	Units:	mg/Kg			
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	9.7		10.00		96.8	63	147			

Sample ID	LCS-9576	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	9576	RunNo:	13723					
Prep Date:	10/1/2013	Analysis Date:	10/1/2013	SeqNo:	391959	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	89.0	77.1	128			
Surr: DNOP	5.1		5.000		102	63	147			

## 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 for VOA and TOC only.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

Ball Environmental Analysis Laboratory, Inc.

WO#: 1309E35

04-Oct-13

Client: Animas Environmental Services

Project: Enterprise Lateral 5D-2

Sample ID	MB-9584	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	9584	RunNo:	13779					
Prep Date:	10/1/2013	Analysis Date:	10/2/2013	SeqNo:	393846	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		100	80	120			

Sample ID	LCS-9584	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	9584	RunNo:	13779					
Prep Date:	10/1/2013	Analysis Date:	10/2/2013	SeqNo:	393847	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	90.1	74.5	126			
Surr: BFB	1100		1000		108	80	120			

Sample ID	1309E35-002AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	SC-9	Batch ID:	9584	RunNo:	13779					
Prep Date:	10/1/2013	Analysis Date:	10/2/2013	SeqNo:	393853	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.7	23.32	0	97.6	76	156			
Surr: BFB	1000		932.8		110	80	120			

Sample ID	1309E35-002AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	SC-9	Batch ID:	9584	RunNo:	13779					
Prep Date:	10/1/2013	Analysis Date:	10/2/2013	SeqNo:	393854	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.7	23.32	0	97.4	76	156	0.164	17.7	
Surr: BFB	1000		932.8		110	80	120	0	0	

## Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- 1 Analyte detected below quantitation limits
- > RSD is greater than RSDlimit
- ! 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 for VOA and TOC only.
- RL Reporting Detection Limit



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1309E35

04-Oct-13

Client: Animas Environmental Services

Project: Enterprise Lateral 5D-2

Sample ID	MB-9584		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	9584		RunNo:	13779			
Prep Date:	10/1/2013		Analysis Date:	10/2/2013		SeqNo:	393969		Units: mg/Kg	
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		114	80	120			

Sample ID	LCS-9584		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	9584		RunNo:	13779			
Prep Date:	10/1/2013		Analysis Date:	10/2/2013		SeqNo:	393970		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.050	1.000	0	94.4	80	120			
Toluene	0.95	0.050	1.000	0	94.9	80	120			
Ethylbenzene	0.98	0.050	1.000	0	97.9	80	120			
Xylenes, Total	3.0	0.10	3.000	0	101	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		116	80	120			

Sample ID	1309E35-001AMS		SampType:	MS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	SC-2		Batch ID:	9584		RunNo:	13779			
Prep Date:	10/1/2013		Analysis Date:	10/2/2013		SeqNo:	393973		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.047	0.9381	0	96.2	67.3	145			
Toluene	0.93	0.047	0.9381	0.01819	97.3	66.8	144			
Ethylbenzene	0.97	0.047	0.9381	0.01791	102	61.9	153			
Xylenes, Total	3.1	0.094	2.814	0.05373	107	65.8	149			
Surr: 4-Bromofluorobenzene	1.1		0.9381		116	80	120			

Sample ID	1309E35-001AMSD		SampType:	MSD		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	SC-2		Batch ID:	9584		RunNo:	13779			
Prep Date:	10/1/2013		Analysis Date:	10/2/2013		SeqNo:	393974		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.047	0.9372	0	97.8	67.3	145	1.50	20	
Toluene	0.94	0.047	0.9372	0.01819	97.9	66.8	144	0.479	20	
Ethylbenzene	0.98	0.047	0.9372	0.01791	102	61.9	153	0.474	20	
Xylenes, Total	3.1	0.094	2.812	0.05373	107	65.8	149	0.210	20	
Surr: 4-Bromofluorobenzene	1.1		0.9372		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 for VOA and TOC only.  
RL Reporting Detection Limit

## Sample Log-In Check List

Client Name: Animas Environmental

Work Order Number: 1309E35

RcptNo: 1

Received by/date: AF 09/28/13

Logged By: Anne Thorne

9/28/2013 11:10:00 AM

*Anne Thorne*

Completed By: Anne Thorne

10/1/2013

*Anne Thorne*

Reviewed By: IO

10/01/13

### 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	4.1	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

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 H-46/Bruington 15G Well Tie	Facility Type: Well Tie/Gathering Line

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

**LOCATION OF RELEASE**

Unit Letter F	Section 15	Township 30N	Range 11W	Feet from the 1801	North South Line	Feet from the 2071	East West Line	County San Juan
------------------	---------------	-----------------	--------------	-----------------------	------------------	-----------------------	----------------	--------------------

Latitude 36.8143 Longitude -107.9806

**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: 1/23/2014 @ 10:30 a.m.	Date and Hour of Discovery: 1/23/2014 @ 10:30 a.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.	

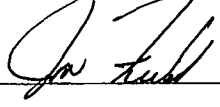
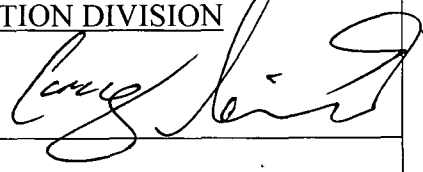
If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* A release was discovered on the Lateral H-46/Bruington 15G well tie on 1-23-14. The release caused by internal corrosion of the pipeline. The well was isolated and LOTO (lock out tag out) was applied. Repairs were completed during the week of January 27, 2014.

MAY 19 2014

Describe Area Affected and Cleanup Action Taken.\* Remediation activities completed during the week of January 27, 2014. The final was excavation was approximately 45 feet long by 17 feet wide by ranging from three (3) to five (5) feet deep where sandstone was encountered. Approximately 100 cubic yards of impacted soils were excavated and transported to a NMOCD approved landfarm. After approval from NMOCD, the excavation was sprayed with a solution of potassium permanganate to treat subsurface contaminants within the sandstone and then backfilled. 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: Jon Fields	Approved by Environmental Specialist: 	
Title: Director, Environmental	Approval Date: 5/29/14	Expiration Date:
E-mail Address: jefields@eprod.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 5-13-2014 Phone: (713)381-6684		

\* Attach Additional Sheets If Necessary

#NCS 1414933231



OIL CONS. DIV DIST. 3  
MAY 19 2014

## CORRECTIVE ACTION REPORT

Property:

**H-46/Bruington # 15G Well Tie Release  
NW 1/4, S15 T30N R11W  
San Juan County, New Mexico**

April 8, 2014

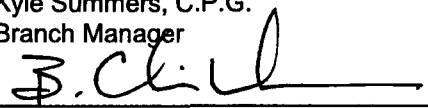
Apex Project No. 7030414G004

Prepared for:

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

Prepared by:

  
\_\_\_\_\_  
Kyle Summers, C.P.G.  
Branch Manager

  
\_\_\_\_\_  
B. Chris Mitchell, P.G.  
Principal Geoscientist



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## **CORRECTIVE ACTION REPORT**

### **H-46/Bruington #15G Well Tie Release**

NW 1/4, S15 T30N R11W  
San Juan County, New Mexico

**Apex Project No. 7030414G004**

## **1.0 INTRODUCTION**

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

The H-46/Bruington #15G Well Tie Release Site is located within the Enterprise Products Operating LLC (Enterprise) pipeline right-of-way (ROW) in the northwest (NW) ¼ of Section 15 in Township 30 North and Range 11 West in rural San Juan County, New Mexico, referred to hereinafter as the "Site" or "subject Site". The Site is located on private property owned by Aztec Orchards Inv Co Trust c/o R. Chaffee, and consists of native vegetation rangeland periodically interrupted with oil and gas gathering facilities, including one (1) Enterprise natural gas gathering pipeline which traverses the area from east to west.

On January 28th, 2014, Enterprise shut in the H-46/Bruington #15G Well Tie pipeline and initiated excavation activities at the Site to allow the identification and repair of a subsurface leak. The pipeline leak was subsequently repaired. An unknown quantity of condensate/water mixture was potentially released from the pipeline as a result of internal corrosion. The leak was identified by a release of natural gas at the ground surface. Soil discoloration and minimal liquid evidence was visible at the surface.

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 chemicals 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 (RALs)* using the New Mexico EMNRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases* as guidance.

### **1.3 Standard of Care**

Apex TITAN's (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.

### **1.4 Additional Limitations**

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.

## 1.5 Reliance

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 express 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.

## 2.0 SITE RANKING

In accordance with the 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 table below:

Ranking Criteria			Ranking Score
Depth to Groundwater	<50 feet	20	10*
	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	
Total Ranking Score			20

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

Based on Apex's evaluation of the scoring criteria, the Site would have a Total Ranking Score of 20. This ranking is based on the following:

- The nearest residence is located over 1,500 feet northwest of the site and the nearest identified water well documented by the Office of the State Engineer website database is located over 2,000 feet northwest of the Site, with a recorded depth to water of 30 feet. However, due to the difference in elevation of approximately 100 feet, the depth to groundwater at the Site is anticipated to be greater >50 feet bgs.
- An un-named ephemeral wash is located approximately 300 feet east of the site and might be considered a "surface water body", but appears to only convey water during significant rain events.



### **3.0 RESPONSE ACTIONS**

#### **3.1 Soil Excavation Activities**

On January 28th, 2014, Enterprise shut in the H-46/Bruington #15G well tie and initiated excavation activities at the Site to allow the identification and repair of a subsurface leak. During the corrective action activities, West States Energy Contractors provided heavy equipment and labor support, and Kyle Summers and Aaron Bryant, Apex environmental professionals, provided environmental support.

Subsequent to the pipeline repair activities, additional hydrocarbon affected soils were excavated at the Site. The total depth of the final excavation reached approximately 5 feet bgs near the source of the release and averaged 3 feet to 4 feet bgs in the remaining excavation footprint. The overall average surface expression of the excavation measured approximately 45 feet long by 17 feet wide.

Analytical results for soils remaining in place indicate hydrocarbon impact on the excavation floor directly below the point of release; however, competent sandstone rendered further excavation impracticable. All other areas of the final excavation exhibited COC levels below the OCD RALs.

Enterprise obtained permission from the OCD to apply potassium permanganate to the floor of the excavation prior to backfilling and closing the Site.

A total of approximately 100 cubic yards of hydrocarbon affected soils were transported to the Industrial Ecosystems, Inc. landfarm on Crouch Mesa, near Aztec, NM for disposal/remediation. The executed C-138 forms are provided in Appendix B. The excavation was backfilled with clean imported fill and contoured to surrounding grade.

During excavation activities, air in the breathing zone was monitored to ensure that the Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL) of 200 parts per million (ppm) Time Weighted Average (TWA) for an 8-hour work day was not exceeded. Additionally, Enterprise monitored the excavation for explosive atmosphere conditions and oxygen deficiency prior to any entries into the excavation.

The lithology encountered during the completion of corrective action activities consisted primarily of loose silty-sands and competent sandstone.

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 the impacted soils with a photoionization detector (PID) fitted with a 10.6 eV lamp to estimate excavation limits.

Apex's soil sampling program included the collection of eleven (11) discrete confirmation samples (S-1 through S-5, S-8 and S-9, and S-11 through S-14) from the side walls and bottom of the excavation for laboratory analysis. The soil sample locations were selected based on visual, olfactory and/or PID evidence of potential impairment and excavation dimensions.

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 label, 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 Farmington, New Mexico for 24-hr rush analysis.

#### **4.0 LABORATORY ANALYTICAL METHODS**

Confirmation soil samples were 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 (GRO) 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.

#### **5.0 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.

##### **5.1 Confirmation Soil Samples**

Apex compared the BTEX and TPH concentrations or reporting limits (RLs) associated with the eleven (11) confirmation samples collected from the excavated area to the OCD RALs for sites having a total ranking score of "20".

- The laboratory analyses of the confirmation samples of soil and sandstone remaining in place did not indicate benzene concentrations above the OCD RAL.
- The laboratory analyses of the confirmation samples of soil and sandstone remaining in place did not indicate total BTEX concentrations above the OCD RAL.
- The laboratory analyses of confirmation samples S-1 through S-5, S-8, S-9, S-11, S-13, and S-14 did not indicate TPH GRO/DRO concentrations above the OCD RAL of 100 mg/Kg for a Site ranking of "20".
- The laboratory analyses of confirmation sample S-12 indicated TPH GRO/DRO concentrations above the OCD RAL of 100 mg/Kg for a site ranking of "20". The TPH GRO/DRO concentrations were 340 mg/Kg and 1,900 mg/Kg, respectively, and were collected from sandstone bedrock.

Based on analytical and screening results, confirmation sample S-12 exhibited TPH GRO/DRO concentrations above the OCD RALs. The other confirmation samples for soil and bedrock which remains in-place at the Site did not exhibit COC concentrations above the OCD RALs for a Site

ranking of "20". Confirmation sample laboratory analytical results are provided in Table 1 in Appendix D.

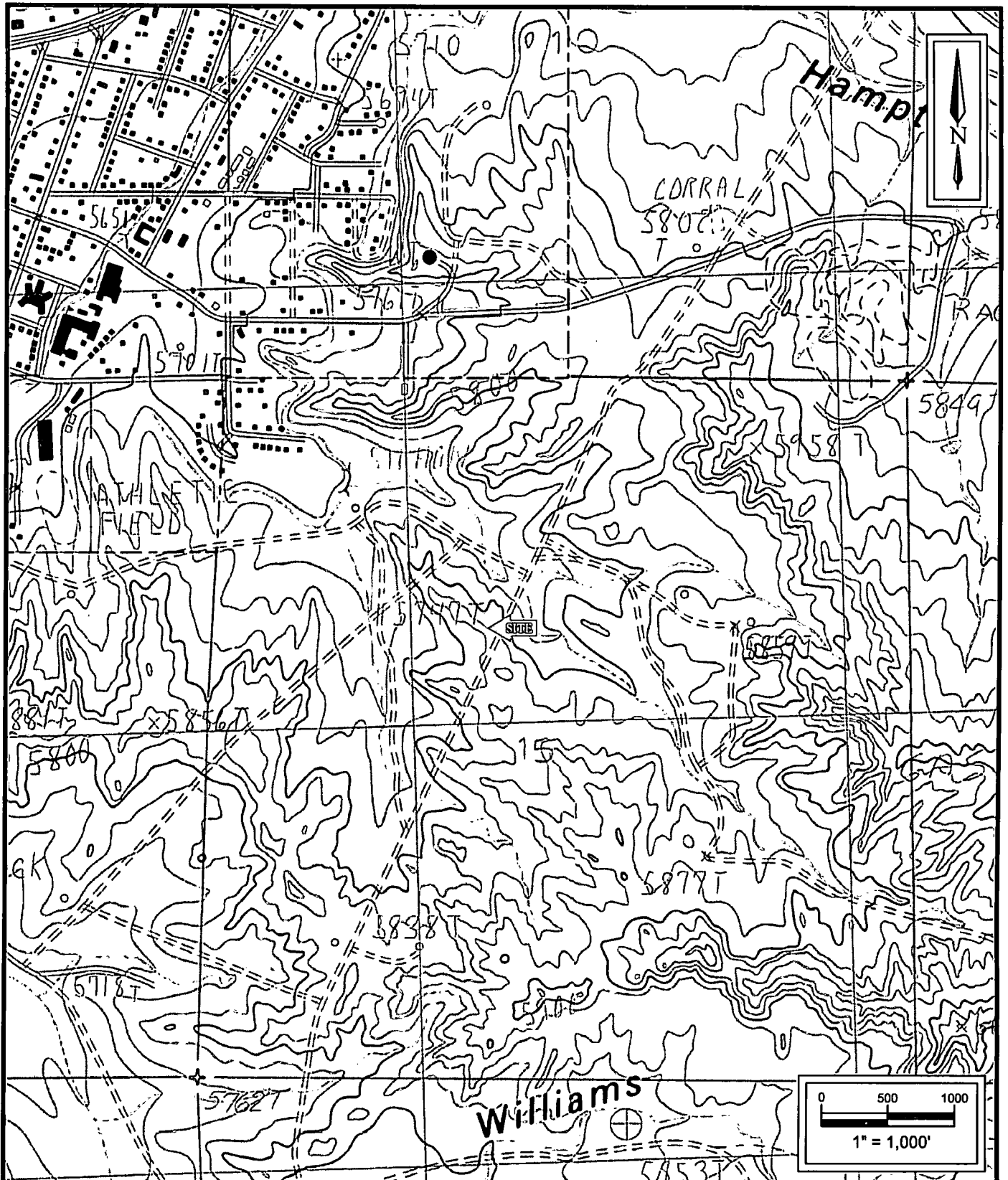
## 6.0 FINDINGS AND RECOMMENDATIONS

The H-46/Bruington #15G Well Tie Release Site is located within the Enterprise pipeline ROW in the NW ¼ of Section 15 in Township 30 North and Range 11 West in rural San Juan County, New Mexico. The Site is located on private land belonging to Aztec Orchards Inv Co Trust c/o R. Chaffe, and consists of native vegetation rangeland periodically interrupted with oil and gas gathering facilities, including one (1) Enterprise natural gas gathering pipeline which traverses the area from east to west.

On January 28th, 2014, Enterprise shut in the H-46/Bruington #15G Well Tie pipeline and initiated excavation activities at the Site to allow the identification and repair of a subsurface leak. The pipeline leak was subsequently repaired and returned to service. An unknown quantity of condensate/water mixture was potentially released from the pipeline as a result of internal corrosion. The leak was identified by a release of natural gas at the ground surface. Soil discoloration and minimal liquid evidence was visible at the surface.

- 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 reached approximately 5 feet bgs near the source of the release and averaged 3 feet to 4 feet bgs in the remaining excavation footprint. The overall average surface expression of the excavation measured approximately 45 feet long by 17 feet wide.
- Prior to applying potassium permanganate and backfilling the excavation, discrete confirmation samples were collected from the floor and sidewalls of the excavation. Based on analytical results, confirmation sample S-12 exhibited TPH GRO/DRO concentrations above the OCD RAL of 100 mg/Kg. The remaining confirmation samples for soil and sandstone which remains in-place at the Site did not exhibit COC concentrations above the OCD RALs for a Site ranking of "20".
- A total of approximately 100 cubic yards of hydrocarbon affected soils were transported to the Industrial Ecosystems, Inc. landfarm on Crouch Mesa, near Aztec, NM for disposal/remediation. Subsequent to the OCD-approved application of potassium permanganate to the floor of the excavation, the excavation was backfilled with clean imported fill and contoured to the approximate surrounding grade.
- The lithology encountered during the completion of corrective action activities consisted primarily of loose silty-sands and competent sandstone.

**Based on the laboratory analytical results and the OCD-approved treatment of the excavation with potassium permanganate, no additional investigation or corrective action appears warranted at this time.**



**H-46/Brulington #15G Well Tie Release**  
 S15 T30N R11W  
 Rural San Juan County, New Mexico  
 36.8143N, -107.9806W



**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**  
 Aztec, NM Quadrangle  
 1985

Project No. 7030414G004.001



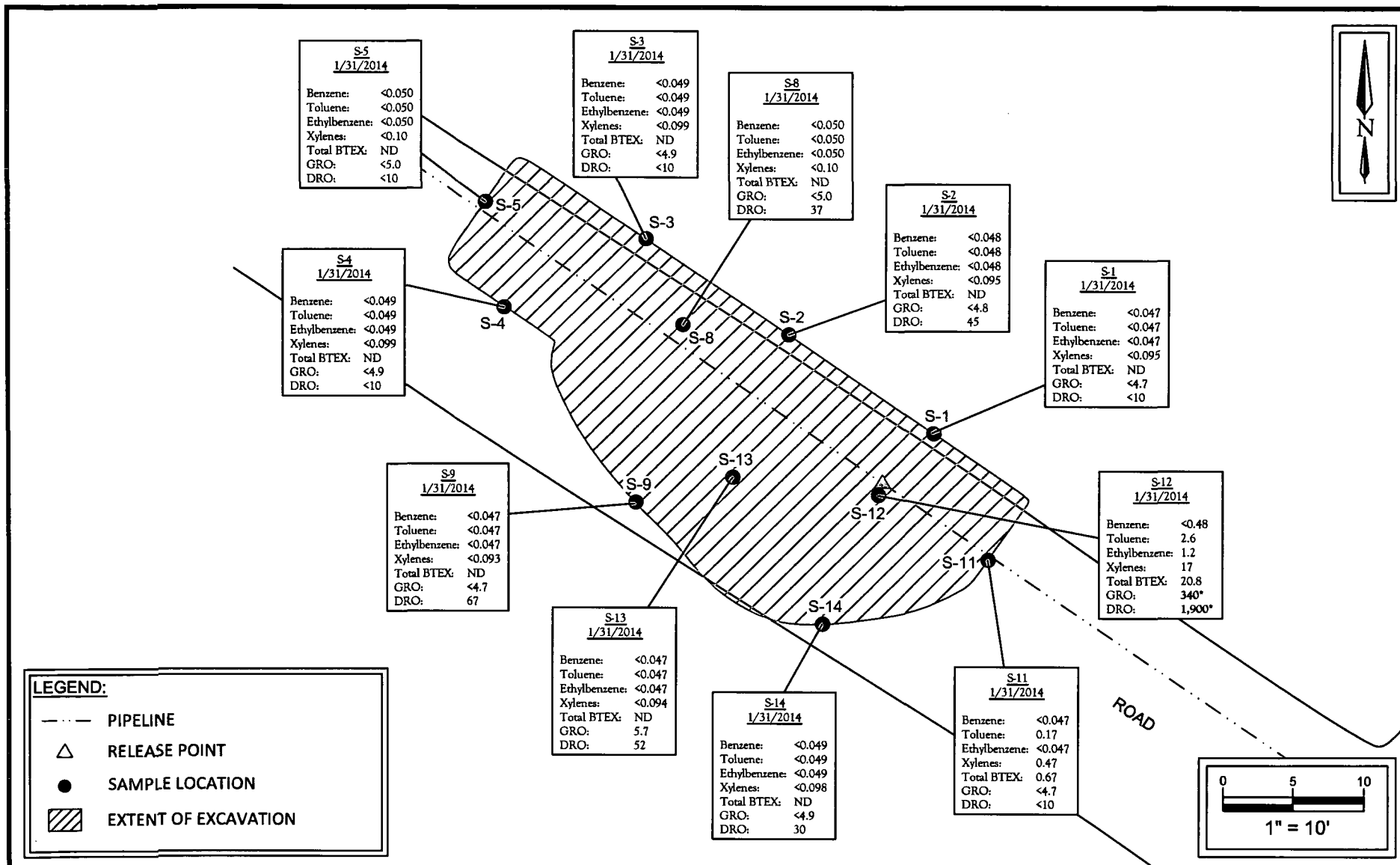
**H-46/Burlington #15G Well Tie Release**  
**S15 T30N R11W**  
 Rural San Juan County, New Mexico  
 36.8143N, -107.9806W



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 A Subsidiary of Apex Companies, LLC

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

Project No. 7030414G004.001



H-46/Bruington #15G Well Tie Release  
S15 T30N R11W  
Rural San Juan County, New Mexico  
36.8143N, -107.9806W

Project No. 7030414G004.001



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A Subsidiary of Apex Companies, LLC

**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  
1400 Rio Brazos Road, Aztec, NM 87410  
District IV  
100 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**

1. Generator Name and Address:  
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401 Paykey Code: RB21200

2. Originating Site:  
H-46/Bruington 15G Well Tie

3. Location of Material (Street Address, City, State or ULSTR):  
Unit F Sec-15, T-30N, R-11W, San Juan County, NM

4. Source and Description of Waste:

Source: Pipeline Release

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

Estimated Volume 20 yds<sup>3</sup> / bbls Known Volume (to be entered by the operator at the end of the haul) 200 yds<sup>3</sup> bbls

**GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, Ronald Seale, 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  
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 ha  
characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, pa  
subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardou  
the appropriate items)

☒ MSDS Information ☐ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box

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

I, Ronald Seale, representative for Enterprise Field Services, LLC authorize IEI to complete  
Generator Signature

the required testing/sign the Generator Waste Testing Certification.

I, CC I, representative for CC I 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 sam  
have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The resu  
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, WestStates or unknown trucking company on OCD approved haulers list.  
OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: JFJ Landfarm/Industrial Ecosystems, Inc. \* Permit #: NM 01-0010B  
Address of Facility: # 49 CR 3150 Aztec, NM 87410

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: L. Machedo  
SIGNATURE: L. Machedo

Surface Waste Management Facility Authorized Agent

TITLE: Admin Specialist DATE: 1-30-14  
TELEPHONE NO.: 505 693-1782

CL-280  
Ph-8

**Photograph 1**

Evidence of pipeline release at ground surface.



**Photograph 2**

Initial excavation activities.



**Photograph 3**

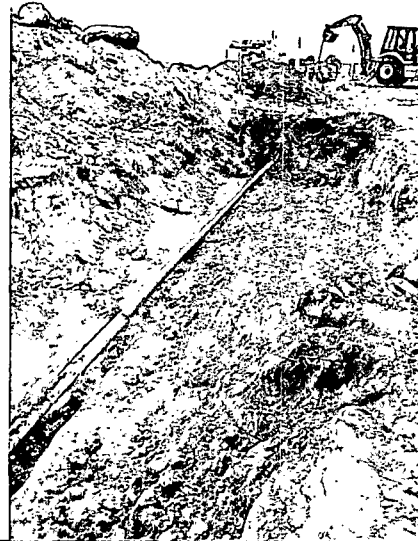
Removal of sandstone along the pipeline using jackhammer subsequent to excavation and repair activities.





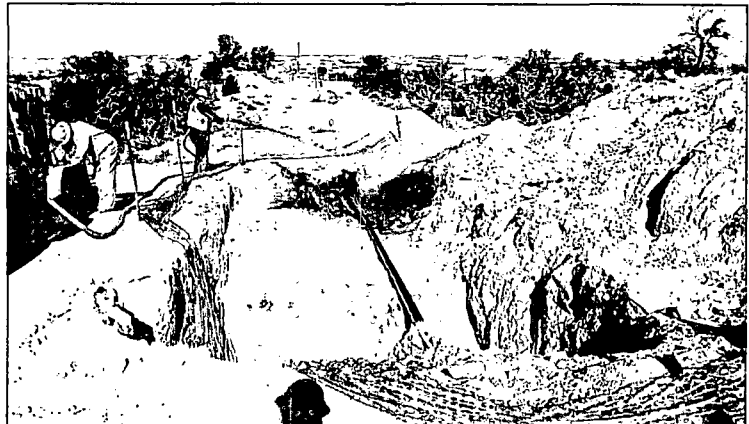
**Photograph 4**

View of pipe chase (facing east) after final excavation and repair activities.



**Photograph 5**

Application of potassium permanganate by Envirotech.





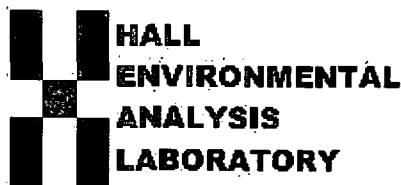
**TABLE 1**  
**H-46/Bruington #15C Well Tie Release**  
**SOIL ANALYTICAL SUMMARY**

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	
Samples for Soils which were Removed by Excavation									
S-6	Not Analyzed - Removed Based on PID Readings								
S-7	Not Analyzed - Removed Based on PID Readings								
S-10	Not Analyzed - Removed Based on PID Readings								
Final Confirmation Samples - Soils Remaining in Place									
S-1	1/31/2014	2-4	<0.047	<0.047	<0.047	<0.095	ND	<4.7	<10
S-2	1/31/2014	2-4	<0.048	<0.048	<0.048	<0.095	ND	<4.8	45
S-3	1/31/2014	2-4	<0.049	<0.049	<0.049	<0.099	ND	<4.9	<10
S-4	1/31/2014	2-4	<0.049	<0.049	<0.049	<0.099	ND	<4.9	<10
S-5	1/31/2014	3-4	<0.050	<0.050	<0.050	<0.10	ND	<5.0	<10
S-8	1/31/2014	4	<0.050	<0.050	<0.050	<0.10	ND	<5.0	37
S-9	1/31/2014	2-4	<0.047	<0.047	<0.047	<0.093	ND	<4.7	67
S-11	1/31/2014	2-5	<0.047	0.17	<0.047	0.47	0.67	<4.7	<10
S-12	1/31/2014	5	<0.48	2.6	1.2	17	20.8	340	1,900
S-13	1/31/2014	4	<0.047	<0.047	<0.047	<0.094	ND	5.7	52
S-14	1/31/2014	2-4	<0.049	<0.049	<0.049	<0.098	ND	<4.9	30

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

NA = Not Analyzed

NE = Not Established



*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)

February 11, 2014

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

RE: H-46/Bruington #15G

OrderNo.: 1402109

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 11 sample(s) on 2/4/2014 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

**Analytical Report**

Lab Order 1402109

Date Reported: 2/11/2014

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Southwest Geoscience**Client Sample ID:** S-1**Project:** H-46/Bruington #15G**Collection Date:** 1/31/2014 1:00:00 PM**Lab ID:** 1402109-001**Matrix:** SOIL**Received Date:** 2/4/2014 10:36:00 AM

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							<b>Analyst: BCN</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/6/2014 2:20:26 PM	11569
Surr: DNOP	92.2	66-131		%REC	1	2/6/2014 2:20:26 PM	11569
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							<b>Analyst: JMP</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/6/2014 1:59:54 PM	11577
Surr: BFB	83.6	74.5-129		%REC	1	2/6/2014 1:59:54 PM	11577
<b>EPA METHOD 8021B: VOLATILES</b>							<b>Analyst: JMP</b>
Benzene	ND	0.047		mg/Kg	1	2/6/2014 1:59:54 PM	11577
Toluene	ND	0.047		mg/Kg	1	2/6/2014 1:59:54 PM	11577
Ethylbenzene	ND	0.047		mg/Kg	1	2/6/2014 1:59:54 PM	11577
Xylenes, Total	ND	0.095		mg/Kg	1	2/6/2014 1:59:54 PM	11577
Surr: 4-Bromofluorobenzene	90.9	80-120		%REC	1	2/6/2014 1:59:54 PM	11577

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

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

# Analytical Report

Lab Order 1402109

Date Reported: 2/11/2014

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Southwest Geoscience

Client Sample ID: S-2

Project: H-46/Bruington #15G

Collection Date: 1/31/2014 1:05:00 PM

Lab ID: 1402109-002

Matrix: SOIL

Received Date: 2/4/2014 10:36:00 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)	45	10		mg/Kg	1	2/6/2014 2:42:21 PM	11569
Surr: DNOP	96.5	66-131		%REC	1	2/6/2014 2:42:21 PM	11569
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JMP</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/6/2014 3:25:42 PM	11577
Surr: BFB	89.5	74.5-129		%REC	1	2/6/2014 3:25:42 PM	11577
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JMP</b>
Benzene	ND	0.048		mg/Kg	1	2/6/2014 3:25:42 PM	11577
Toluene	ND	0.048		mg/Kg	1	2/6/2014 3:25:42 PM	11577
Ethylbenzene	ND	0.048		mg/Kg	1	2/6/2014 3:25:42 PM	11577
Xylenes, Total	ND	0.095		mg/Kg	1	2/6/2014 3:25:42 PM	11577
Surr: 4-Bromofluorobenzene	91.8	80-120		%REC	1	2/6/2014 3:25:42 PM	11577

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 2 of 15
	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 1402109

Date Reported: 2/11/2014

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Southwest Geoscience**Client Sample ID:** S-3**Project:** H-46/Bruington #15G**Collection Date:** 1/31/2014 1:10:00 PM**Lab ID:** 1402109-003**Matrix:** SOIL**Received Date:** 2/4/2014 10:36:00 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	2/6/2014 3:04:17 PM	11569
Surr: DNOP	87.5	66-131		%REC	1	2/6/2014 3:04:17 PM	11569
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JMP</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/6/2014 4:51:16 PM	11577
Surr: BFB	83.2	74.5-129		%REC	1	2/6/2014 4:51:16 PM	11577
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JMP</b>
Benzene	ND	0.049		mg/Kg	1	2/6/2014 4:51:16 PM	11577
Toluene	ND	0.049		mg/Kg	1	2/6/2014 4:51:16 PM	11577
Ethylbenzene	ND	0.049		mg/Kg	1	2/6/2014 4:51:16 PM	11577
Xylenes, Total	ND	0.099		mg/Kg	1	2/6/2014 4:51:16 PM	11577
Surr: 4-Bromofluorobenzene	91.5	80-120		%REC	1	2/6/2014 4:51:16 PM	11577

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: Southwest Geoscience  
 Project: H-46/Bruington #15G  
 Lab ID: 1402109-004

Matrix: SOIL

Client Sample ID: S-4  
 Collection Date: 1/31/2014 1:15:00 PM  
 Received Date: 2/4/2014 10:36:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/6/2014 3:26:17 PM	11569
Surr: DNOP	94.5	66-131		%REC	1	2/6/2014 3:26:17 PM	11569
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: JMP
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/6/2014 5:19:54 PM	11577
Surr: BFB	82.7	74.5-129		%REC	1	2/6/2014 5:19:54 PM	11577
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: JMP
Benzene	ND	0.049		mg/Kg	1	2/6/2014 5:19:54 PM	11577
Toluene	ND	0.049		mg/Kg	1	2/6/2014 5:19:54 PM	11577
Ethylbenzene	ND	0.049		mg/Kg	1	2/6/2014 5:19:54 PM	11577
Xylenes, Total	ND	0.099		mg/Kg	1	2/6/2014 5:19:54 PM	11577
Surr: 4-Bromofluorobenzene	90.0	80-120		%REC	1	2/6/2014 5:19:54 PM	11577

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	Page 4 of 15
	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 1402109

Date Reported: 2/11/2014

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Southwest Geoscience**Client Sample ID:** S-5**Project:** H-46/Bruington #15G**Collection Date:** 1/31/2014 1:20:00 PM**Lab ID:** 1402109-005**Matrix:** SOIL**Received Date:** 2/4/2014 10:36:00 AM

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							<b>Analyst: BCN</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/6/2014 3:48:12 PM	11569
Surr: DNOP	94.5	66-131		%REC	1	2/6/2014 3:48:12 PM	11569
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							<b>Analyst: JMP</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/6/2014 5:48:31 PM	11577
Surr: BFB	84.2	74.5-129		%REC	1	2/6/2014 5:48:31 PM	11577
<b>EPA METHOD 8021B: VOLATILES</b>							<b>Analyst: JMP</b>
Benzene	ND	0.050		mg/Kg	1	2/6/2014 5:48:31 PM	11577
Toluene	ND	0.050		mg/Kg	1	2/6/2014 5:48:31 PM	11577
Ethylbenzene	ND	0.050		mg/Kg	1	2/6/2014 5:48:31 PM	11577
Xylenes, Total	ND	0.10		mg/Kg	1	2/6/2014 5:48:31 PM	11577
Surr: 4-Bromofluorobenzene	90.8	80-120		%REC	1	2/6/2014 5:48:31 PM	11577

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

<b>Qualifiers:</b>	<b>*</b>	Value exceeds Maximum Contaminant Level.	<b>B</b>	Analyte detected in the associated Method Blank	Page 5 of 15
	<b>E</b>	Value above quantitation range	<b>H</b>	Holding times for preparation or analysis exceeded	
	<b>J</b>	Analyte detected below quantitation limits	<b>ND</b>	Not Detected at the Reporting Limit	
	<b>O</b>	RSD is greater than RSDlimit	<b>P</b>	Sample pH greater than 2.	
	<b>R</b>	RPD outside accepted recovery limits	<b>RL</b>	Reporting Detection Limit	
	<b>S</b>	Spike Recovery outside accepted recovery limits			



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1402109

Date Reported: 2/11/2014

CLIENT: Southwest Geoscience

Client Sample ID: S-8

Project: H-46/Bruington #15G

Collection Date: 1/31/2014 2:00:00 PM

Lab ID: 1402109-006

Matrix: SOIL

Received Date: 2/4/2014 10:36:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: BCN
Diesel Range Organics (DRO)	37	10		mg/Kg	1	2/6/2014 4:10:13 PM	11569
Surr: DNOP	100	66-131		%REC	1	2/6/2014 4:10:13 PM	11569
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: JMP
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/7/2014 11:05:30 AM	11577
Surr: BFB	91.5	74.5-129		%REC	1	2/7/2014 11:05:30 AM	11577
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: JMP
Benzene	ND	0.050		mg/Kg	1	2/7/2014 11:05:30 AM	11577
Toluene	ND	0.050		mg/Kg	1	2/7/2014 11:05:30 AM	11577
Ethylbenzene	ND	0.050		mg/Kg	1	2/7/2014 11:05:30 AM	11577
Xylenes, Total	ND	0.10		mg/Kg	1	2/7/2014 11:05:30 AM	11577
Surr: 4-Bromofluorobenzene	90.0	80-120		%REC	1	2/7/2014 11:05:30 AM	11577

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		

**Analytical Report**

Lab Order 1402109

Date Reported: 2/11/2014

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Southwest Geoscience**Client Sample ID:** S-9**Project:** H-46/Bruington #15G**Collection Date:** 1/31/2014 2:10:00 PM**Lab ID:** 1402109-007**Matrix:** SOIL**Received Date:** 2/4/2014 10:36:00 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)	67	10		mg/Kg	1	2/6/2014 4:32:08 PM	11569
Surr: DNOP	116	66-131		%REC	1	2/6/2014 4:32:08 PM	11569
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JMP</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/7/2014 12:31:12 PM	11577
Surr: BFB	95.9	74.5-129		%REC	1	2/7/2014 12:31:12 PM	11577
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JMP</b>
Benzene	ND	0.047		mg/Kg	1	2/7/2014 12:31:12 PM	11577
Toluene	ND	0.047		mg/Kg	1	2/7/2014 12:31:12 PM	11577
Ethylbenzene	ND	0.047		mg/Kg	1	2/7/2014 12:31:12 PM	11577
Xylenes, Total	ND	0.093		mg/Kg	1	2/7/2014 12:31:12 PM	11577
Surr: 4-Bromofluorobenzene	92.9	80-120		%REC	1	2/7/2014 12:31:12 PM	11577

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

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

# Analytical Report

Lab Order 1402109

Date Reported: 2/11/2014

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Southwest Geoscience

Client Sample ID: S-11

Project: H-46/Bruington #15G

Collection Date: 1/31/2014 2:30:00 PM

Lab ID: 1402109-008

Matrix: SOIL

Received Date: 2/4/2014 10:36:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/6/2014 4:54:13 PM	11569
Surr: DNOP	102	66-131		%REC	1	2/6/2014 4:54:13 PM	11569
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: JMP
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/6/2014 6:17:07 PM	11577
Surr: BFB	84.2	74.5-129		%REC	1	2/6/2014 6:17:07 PM	11577
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: JMP
Benzene	ND	0.047		mg/Kg	1	2/6/2014 6:17:07 PM	11577
Toluene	0.17	0.047		mg/Kg	1	2/6/2014 6:17:07 PM	11577
Ethylbenzene	ND	0.047		mg/Kg	1	2/6/2014 6:17:07 PM	11577
Xylenes, Total	0.47	0.094		mg/Kg	1	2/6/2014 6:17:07 PM	11577
Surr: 4-Bromofluorobenzene	90.8	80-120		%REC	1	2/6/2014 6:17:07 PM	11577

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: Southwest Geoscience  
 Project: H-46/Bruington #15G  
 Lab ID: 1402109-009

Matrix: SOIL

Client Sample ID: S-12  
 Collection Date: 1/31/2014 2:40:00 PM  
 Received Date: 2/4/2014 10:36:00 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)	1900	100		mg/Kg	10	2/6/2014 6:21:49 PM	11569
Surr: DNOP	0	66-131	S	%REC	10	2/6/2014 6:21:49 PM	11569
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JMP</b>
Gasoline Range Organics (GRO)	340	48		mg/Kg	10	2/7/2014 12:59:52 PM	11577
Surr: BFB	210	74.5-129	S	%REC	10	2/7/2014 12:59:52 PM	11577
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JMP</b>
Benzene	ND	0.48		mg/Kg	10	2/7/2014 12:59:52 PM	11577
Toluene	2.6	0.48		mg/Kg	10	2/7/2014 12:59:52 PM	11577
Ethylbenzene	1.2	0.48		mg/Kg	10	2/7/2014 12:59:52 PM	11577
Xylenes, Total	17	0.97		mg/Kg	10	2/7/2014 12:59:52 PM	11577
Surr: 4-Bromofluorobenzene	104	80-120		%REC	10	2/7/2014 12:59:52 PM	11577

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

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

**Analytical Report**Lab Order **1402109**Date Reported: **2/11/2014****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Southwest Geoscience**Client Sample ID:** S-13**Project:** H-46/Bruington #15G**Collection Date:** 1/31/2014 3:30:00 PM**Lab ID:** 1402109-010**Matrix:** SOIL**Received Date:** 2/4/2014 10:36:00 AM

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							<b>Analyst: BCN</b>
Diesel Range Organics (DRO)	52	10		mg/Kg	1	2/6/2014 6:43:44 PM	11569
Surr: DNOP	93.9	66-131		%REC	1	2/6/2014 6:43:44 PM	11569
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							<b>Analyst: JMP</b>
Gasoline Range Organics (GRO)	5.7	4.7		mg/Kg	1	2/7/2014 1:28:28 PM	11577
Surr: BFB	106	74.5-129		%REC	1	2/7/2014 1:28:28 PM	11577
<b>EPA METHOD 8021B: VOLATILES</b>							<b>Analyst: JMP</b>
Benzene	ND	0.047		mg/Kg	1	2/7/2014 1:28:28 PM	11577
Toluene	ND	0.047		mg/Kg	1	2/7/2014 1:28:28 PM	11577
Ethylbenzene	ND	0.047		mg/Kg	1	2/7/2014 1:28:28 PM	11577
Xylenes, Total	ND	0.094		mg/Kg	1	2/7/2014 1:28:28 PM	11577
Surr: 4-Bromofluorobenzene	92.8	80-120		%REC	1	2/7/2014 1:28:28 PM	11577

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1402109

Date Reported: 2/11/2014

CLIENT: Southwest Geoscience

Client Sample ID: S-14

Project: H-46/Bruington #15G

Collection Date: 1/31/2014 3:40:00 PM

Lab ID: 1402109-011

Matrix: SOIL

Received Date: 2/4/2014 10:36:00 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	2/6/2014 7:05:42 PM	11569
Surr: DNOP	91.8	66-131		%REC	1	2/6/2014 7:05:42 PM	11569
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JMP</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/7/2014 1:57:04 PM	11577
Surr: BFB	87.7	74.5-129		%REC	1	2/7/2014 1:57:04 PM	11577
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JMP</b>
Benzene	ND	0.049		mg/Kg	1	2/7/2014 1:57:04 PM	11577
Toluene	ND	0.049		mg/Kg	1	2/7/2014 1:57:04 PM	11577
Ethylbenzene	ND	0.049		mg/Kg	1	2/7/2014 1:57:04 PM	11577
Xylenes, Total	ND	0.098		mg/Kg	1	2/7/2014 1:57:04 PM	11577
Surr: 4-Bromofluorobenzene	93.0	80-120		%REC	1	2/7/2014 1:57:04 PM	11577

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 11 of 15
	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#: 1402109

11-Feb-14

Client: Southwest Geoscience

Project: H-46/Bruington #15G

Sample ID	MB-11569	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	11569	RunNo:	16554					
Prep Date:	2/5/2014	Analysis Date:	2/6/2014	SeqNo:	476906	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	6.8		10.00		68.3	66	131			

Sample ID	MB-11588	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	11588	RunNo:	16554					
Prep Date:	2/5/2014	Analysis Date:	2/6/2014	SeqNo:	476907	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	7.5		10.00		75.2	66	131			

Sample ID	LCS-11569	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	11569	RunNo:	16554					
Prep Date:	2/5/2014	Analysis Date:	2/6/2014	SeqNo:	476908	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	10	50.00	0	104	60.8	145			
Surr: DNOP	4.3		5.000		86.7	66	131			

Sample ID	LCS-11588	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	11588	RunNo:	16554					
Prep Date:	2/5/2014	Analysis Date:	2/6/2014	SeqNo:	476909	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.7		5.000		74.9	66	131			

### 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#: 1402109

11-Feb-14

Client: Southwest Geoscience

Project: H-46/Bruington #15G

Sample ID	MB-11577		SampType:	MBLK		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	PBS		Batch ID:	11577		RunNo:	16565				
Prep Date:	2/5/2014		Analysis Date:	2/6/2014		SeqNo:	477086		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	ND	5.0									
Surr: BFB	840		1000		83.5	74.5	129				

Sample ID	LCS-11577		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 11577		RunNo: 16565					
Prep Date:	2/5/2014		Analysis Date: 2/6/2014		SeqNo: 477087		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	111	74.5	126			
Surr: BFB	890		1000		88.7	74.5	129			

Sample ID	1402109-001AMS		SampType: MS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	S-1		Batch ID: 11577		RunNo: 16565					
Prep Date:	2/5/2014		Analysis Date: 2/6/2014		SeqNo: 477089		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	34	4.8	23.79	0	141	69.5	145			
Surr: BFB	890		951.5		93.4	74.5	129			

Sample ID	1402109-001AMSD		SampType:	MSD		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	S-1		Batch ID:	11577		RunNo:	16565				
Prep Date:	2/5/2014		Analysis Date:	2/6/2014		SeqNo:	477090		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	30	4.7	23.72	0	127	69.5	145	11.3	20		
Surr: BFB	890		948.8		93.3	74.5	129	0	0		

Sample ID	5ML RB	SampType:	MBLK		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	PBS	Batch ID:	R16598		RunNo:	16598				
Prep Date:		Analysis Date:	2/7/2014		SeqNo:	478175	Units:	%REC		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	830		1000		83.2	74.5	129			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	R16598	RunNo:	16598					
Prep Date:		Analysis Date:	2/7/2014	SeqNo:	478176	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	900		1000		90.2	74.5	129			

### 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#: 1402109

11-Feb-14

Client: Southwest Geoscience

Project: H-46/Bruington #15G

Sample ID	MB-11577		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 11577		RunNo: 16565					
Prep Date:	2/5/2014		Analysis Date: 2/6/2014		SeqNo: 477123		Units: mg/Kg			
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		90.3	80	120			

Sample ID	LCS-11577		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 11577		RunNo: 16565					
Prep Date:	2/5/2014		Analysis Date: 2/6/2014		SeqNo: 477124		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	111	80	120			
Toluene	1.1	0.050	1.000	0	110	80	120			
Ethylbenzene	1.1	0.050	1.000	0	110	80	120			
Xylenes, Total	3.3	0.10	3.000	0	109	80	120			
Surr: 4-Bromofluorobenzene	0.97		1.000		96.6	80	120			

Sample ID	MB-11577		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 11577		RunNo: 16565					
Prep Date:	2/5/2014		Analysis Date: 2/6/2014		SeqNo: 477126		Units: mg/Kg			
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		90.3	80	120			

Sample ID	LCS-11577		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 11577		RunNo: 16565					
Prep Date:	2/5/2014		Analysis Date: 2/6/2014		SeqNo: 477127		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	111	80	120			
Toluene	1.1	0.050	1.000	0	110	80	120			
Ethylbenzene	1.1	0.050	1.000	0	110	80	120			
Xylenes, Total	3.3	0.10	3.000	0	109	80	120			
Surr: 4-Bromofluorobenzene	0.97		1.000		96.6	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#: 1402109

11-Feb-14

Client: Southwest Geoscience

Project: H-46/Bruington #15G

Sample ID	1402109-002AMS		SampType:	MS		TestCode:	EPA Method 8021B: Volatiles				
Client ID:	S-2		Batch ID:	11577		RunNo:	16565				
Prep Date:	2/5/2014		Analysis Date:	2/6/2014		SeqNo:	477130		Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	1.3	0.048	0.9551	0	135	67.4	135				
Toluene	1.3	0.048	0.9551	0.01099	135	72.6	135				
Ethylbenzene	1.3	0.048	0.9551	0.007147	137	69.4	143				
Xylenes, Total	4.0	0.096	2.865	0.05885	138	70.8	144				
Surr: 4-Bromofluorobenzene	0.92		0.9551		96.6	80	120				

Sample ID	1402109-002AMSD	SampType:	MSD	TestCode: EPA Method 8021B: Volatiles						
Client ID:	S-2	Batch ID:	11577	RunNo: 16565						
Prep Date:	2/5/2014	Analysis Date:	2/6/2014	SeqNo: 477131			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.3	0.048	0.9569	0	132	67.4	135	2.09	20	
Toluene	1.3	0.048	0.9569	0.01099	130	72.6	135	3.10	20	
Ethylbenzene	1.3	0.048	0.9569	0.007147	133	69.4	143	3.32	20	
Xylenes, Total	3.8	0.096	2.871	0.05885	132	70.8	144	3.99	20	
Surr: 4-Bromofluorobenzene	0.93		0.9569		96.8	80	120	0	0	

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	R16598	RunNo:	16598					
Prep Date:		Analysis Date:	2/7/2014	SeqNo:	478191	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.89		1.000		89.3	80	120			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	R16598	RunNo:	16598					
Prep Date:		Analysis Date:	2/7/2014	SeqNo:	478192	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.96		1.000		95.9	80	120			

### Qualifiers:

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

## Sample Log-In Check List

Client Name: Southwest Geoscience

Work Order Number: 1402109

RcptNo: 1

Received by/date:

Logged By:

Ashley Gallegos

2/4/2014 10:36:00 AM

Completed By:

Ashley Gallegos

2/4/2014 4:44:39 PM

Reviewed By:

JB

2/5/14

### 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: <input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person		
Regarding:			
Client Instructions:			

17. Additional remarks:

### 18. Cooler Information

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

**Southwest**  
GEOSCIENCE  
Environmental & Hydrogeologic Consultants

SOUTHWEST GEOSCIENCE • 2351 W. Northwest Hwy., Suite 3321 • Dallas, Texas 75220 • Office: 214-350-5469 • Fax 214-350-2914

## CHAIN OF CUSTODY RECORD

<h1 style="margin: 0;">Southwest</h1> <h2 style="margin: 0;">GEOSCIENCE</h2> <p style="margin: 0;">Environmental &amp; Hydrogeologic Consultants</p>		Laboratory: <u>HALL</u>		ANALYSIS REQUESTED <div style="transform: rotate(-45deg); display: inline-block; border: 1px solid black; padding: 5px;"> BTEX 8021 TPH 8015 DRO/GRO </div>										Lab use only	
		Address: <u>ABQ</u>												Due Date:	
Office Location: <u>AZTGL, Nm</u>		Contact: <u>FREEMAN</u>		<div style="border: 1px solid black; padding: 2px;"> Temp. of coolers when received (C°): <u>1</u> </div> <div style="display: flex; justify-content: space-between; border-top: 1px solid black; border-bottom: 1px solid black;"> <span>1</span><span>2</span><span>3</span><span>4</span><span>5</span> </div>											
Project Manager: <u>Kyle Summers</u>		Phone: _____												Page <u>2</u> of <u>2</u>	
Sampler's Name: <u>Kyle Summers</u>		PO/SO #: _____		<div style="border: 1px solid black; padding: 2px;"> Lab Sample ID (Lab Use Only) </div>											
Sampler's Signature: <u>[Signature]</u>		No/Type of Containers: <u>H-46 113 RINGTON #1517</u>													
Proj. No.	Project Name														
<u>041461004</u>	<u>H-46 113 RINGTON #1517</u>														
Matrix	Date	Time	Coed	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 L.	250 ml	P/O	Lab Sample ID (Lab Use Only)			
<u>S</u>	<u>1-31-14</u>	<u>1540</u>		<u>X</u>	<u>S-14</u>						<u>1</u>			<u>X</u>	
<div style="font-size: 2em; transform: rotate(-15deg); display: inline-block;"> NFS AB </div>															
Turn around time <input checked="" type="checkbox"/> Normal <input type="checkbox"/> 25% Rush <input type="checkbox"/> 50% Rush <input type="checkbox"/> 100% Rush															
Relinquished by (Signature): <u>[Signature]</u>		Date: <u>2/3/14</u>	Time: <u>1409</u>	Received by (Signature): <u>[Signature]</u>		Date: <u>2/3/14</u>	Time: <u>1409</u>	NOTES:							
Relinquished by (Signature): <u>[Signature]</u>		Date: <u>2/3/14</u>	Time: <u>1740</u>	Received by (Signature): <u>[Signature]</u>		Date: <u>02/04/14</u>	Time: <u>1036</u>								
Relinquished by (Signature): _____		Date: _____	Time: _____	Received by (Signature): _____		Date: _____	Time: _____								
Relinquished by (Signature): _____		Date: _____	Time: _____	Received by (Signature): _____		Date: _____	Time: _____								
Matrix		WW - Wastewater		W - Water		S - Soil		SD - Solid		L - Liquid		A - Air Bag			
Container		VOA - 40 ml vial		A/G - Amber / Or Glass 1 Liter		C - Charcoal tube		SL - sludge		O - Oil		P/O - Plastic or other _____			

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-17 Pipeline	Facility Type: Gas gathering system pipeline	
Surface Owner: BLM	Mineral Owner	API No.

**LOCATION OF RELEASE**

Unit Letter B	Section 3	Township 27N	Range 10W	Feet from the	North/South Line	Feet from the	East/West Line	County San Juan
------------------	--------------	-----------------	--------------	---------------	------------------	---------------	----------------	--------------------

Latitude 36.60892 Longitude 107.882305

OIL CONS. DIV DIST. 3  
MAY 05 2014

**NATURE OF RELEASE**

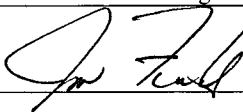
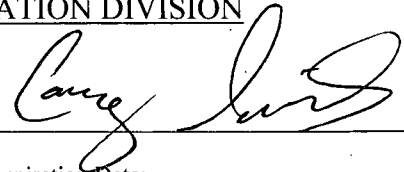
Type of Release: Natural gas and natural gas liquids	Volume of Release: <b>Unknown amount of natural gas; Estimated 5 to 10 bbls of liquids</b>	Volume Recovered <b>Unknown</b>
Source of Release Natural Gas gathering pipeline	Date and Hour of Occurrence <b>Unknown</b>	Date and Hour of Discovery <b>10-8-2013 @ 10:254 a.m.</b>
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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\* The release occurred within the subsurface of a dry ephemeral which is a tributary to Armenta Wash. An area of approximately 40 feet long by 20 feet wide was observed.

Describe Cause of Problem and Remedial Action Taken.\* During a routine pipeline patrol, a leak was discovered. The pipeline line was isolated and removed from service. Repairs to the pipeline were completed by installing three (3) feet of new pipe to replace the section of pipe damaged by internal corrosion on October 10, 2013.

Describe Area Affected and Cleanup Action Taken.\* Remediation and repair activities began on October 10, 2013. Approximately 564 cubic yards of impacted soil was excavated and transported to a NMOCD approved land farm facility. The removal of the impacted soil was temporarily postponed until correspondence with regulatory agencies was complete and rescheduling was accomplished. The excavation continued on March 24, 2014 where an additional 270 cubic yards of impacted soil was removed and transported to a NMOCD approved land farm facility. The final excavation measured 40 feet long by 20 feet wide ranging from approximately 15 to 21 feet below ground surface. 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>5/14/14</u>	Expiration Date:
E-mail Address: jefields@eprod.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: <u>4-30-2014</u> Phone: (713)381-6684		

\* Attach Additional Sheets If Necessary

#NCS 141 34 37 400

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CORRECTIVE ACTION REPORT

OIL CONS. DIV DIST. 3

MAY 05 2014

Property:

Lateral 2B-17 Pipeline Release  
NE 1/4, S3 T27N R10W  
San Juan County, New Mexico

April 11, 2014  
SWG Project No. 0413G015

Prepared for:

Enterprise Products Operating LLC  
614 Reilly Avenue  
Farmington, NM 87401  
Attn: Mr. Tom Long

Prepared by:

  
\_\_\_\_\_  
Kyle Summers, C.P.G.  
Branch Manager

  
\_\_\_\_\_  
B. Chris Mitchell, P.G.  
Principal Geoscientist

**Southwest**  
GEOSCIENCE

606 S. Rio Grande Avenue  
Unit A, Downstairs West  
Aztec, NM 87410  
Ph: (505) 334-5200  
Fax: (505) 334-5204

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              Figure 3 – Site Map

Appendix B: Executed C-138 Solid Waste Acceptance Forms

Appendix C: Photographic Documentation

Appendix D: Tables

Appendix E: Laboratory Analytical Reports &  
              Chain of Custody Documentation

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## CORRECTIVE ACTION REPORT

Lateral 2B-17 Pipeline Release Site  
NE 1/4, S3 T27N R10W  
San Juan County, New Mexico

SWG Project No. 0413G015

### 1.0 INTRODUCTION

#### 1.1 Site Description & Background

The Lateral 2B-17 Pipeline Release Site is located within the Enterprise Products Operating LLC (Enterprise) pipeline right-of-way (ROW) in the northeast (NE) ¼ of Section 3 in Township 27 North and Range 10 West in rural San Juan County, New Mexico, referred to hereinafter as the "Site" or "subject Site". The Site is located on public land managed by the U.S. Bureau of Land Management (BLM), and consists of native vegetation rangeland periodically interrupted with oil and gas gathering facilities, including one (1) 6-inch and one (1) 10-inch Enterprise natural gas gathering pipelines which traverse the area from east to west.

On October 8<sup>th</sup>, 2013, Enterprise shut in the lateral 2B-17 pipeline and initiated excavation activities at the Site in an attempt to locate a potential leak. The leak was subsequently identified and repaired. An estimated 10 bbls of condensate/water mixture was potentially released from the pipeline as a result of corrosion. No surface expression of the release was evident at the Site.

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 chemicals 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.

#### 1.3 Standard of Care

Southwest Geoscience's (SWG'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. SWG makes no warranties, expressed or implied, as to the services performed hereunder. Additionally, SWG 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.

#### 1.4 Additional Limitations

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 SWG 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. SWG's findings and recommendations are based solely upon data available to SWG at the time of these services.

## 1.5 Reliance

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 express written authorization of Enterprise and SWG. 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 SWG's Agreement. The limitation of liability defined in the agreement is the aggregate limit of SWG's liability to the client.

## 2.0 SITE RANKING

In accordance with the New Mexico ENMRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases*, SWG 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 table below:

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	20
	200 to 1,000 feet	10	
	>1,000 feet	0	
Total Ranking Score			40

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

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

- The nearest identified water well documented by the Office of the State Engineer website database is located over 3,000 feet southeast of the Site. This water well indicates a depth to water of 94 feet. Although groundwater was not encountered at the vertical extent of the excavation (21 feet bgs), an assigned ranking of "20" was given to the Site based on an assumed

groundwater depth of <50 feet bgs due to the close proximity of an ephemeral wash.

- No water wells or water sources were identified in the immediate area.
- For the purpose of determining the preliminary ranking, the dry ephemeral wash adjacent to the site might qualify as "surface water", resulting in a ranking of "20". However, considering that no groundwater was observed in the excavation, it is unlikely that significant subsurface flow is present. This un-named wash is a tributary to the larger Armenta Wash which it joins approximately 2.6 miles north of the Site.

### **3.0 RESPONSE ACTIONS**

#### **3.1 Soil Excavation Activities**

On October 8<sup>th</sup>, 2013, Enterprise shut in the lateral 2B-17 pipeline and initiated excavation activities at the Site in an attempt to locate a potential leak (based on a vapor monitoring survey of the pipeline ROW) in the pipeline. During the remediation and repair activities, West States Energy Contractors provided heavy equipment and labor support, and Kyle Summers, a SWG environmental professional, provided environmental support.

The leak was identified on October 10<sup>th</sup>, 2013, and repairs were initiated. Stained soils were identified along the pipeline ROW to the east, and this material led to a historic release area east and north of the pipeline release area (possibly a former drip tank location). This material was also excavated and removed from the Site.

During the first stage of corrective action, approximately 564 cubic yards of hydrocarbon affected soils were excavated at the Site. Based on initial sampling results, the excavation was extended to approximately 15 feet bgs in the immediate area of the release, after which additional confirmation samples were collected. This depth represented the practicable mechanical limits of the on-site excavation equipment. Due to the physical nature (low angle of repose) of the sandy soils, additional excavation with the available equipment would put both the repaired pipeline and the adjacent pipeline in jeopardy of physical stress damage due to load shifting. The Site was fenced and equipment de-mobilized pending laboratory results from confirmation sampling.

Analytical results from the initial corrective actions indicated remaining hydrocarbon impact on the excavation floor directly below the point of release. All other areas of the excavation exhibited COC levels below the OCD Remediation Action Levels (RALs). Enterprise met with the OCD and BLM to discuss further actions at the Site.

On March 24<sup>th</sup>, 2014 Enterprise resumed excavation at the Site. The excavation was further benched for added stability, and an additional 270 cubic yards of material were removed from the floor and lower sidewalls of the excavation in the immediate vicinity of the release. The total depth of the final excavation reached approximately 21 feet bgs near the source of the release, and approximately 6 feet bgs in the remaining original excavation footprint. The overall average surface expression of the excavation measured approximately 40 feet long by 20 feet wide.

A total of approximately 834 cubic yards of hydrocarbon affected soils mixed with a limited amount of overburden slough were transported to the Envirotech landfarm near Hilltop, NM for disposal/remediation. The executed C-138 forms are provided

in Appendix B. The excavation was backfilled on March 27<sup>th</sup> and 28<sup>th</sup> 2014 with clean imported fill and unaffected overburden and benching-derived soils.

During excavation activities, air in the breathing zone was monitored to ensure that the Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL) of 200 parts per million (ppm) Time Weighted Average (TWA) for an 8-hour work day was not exceeded. Additionally, Enterprise monitored the excavation for explosive atmosphere conditions and oxygen deficiency prior to any entries into the excavation.

The lithology encountered during the completion of corrective action activities consisted primarily of loose silty-sands and 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**

SWG screened head-space samples of the impacted soils with a photoionization detector (PID) fitted with a 10.6 eV lamp to estimate excavation limits.

SWG's soil sampling program included the collection of twenty-two (22) discrete and composite confirmation samples (S-1 through S-4, and Conf-6 through Conf-23) from the side walls and bottom of the excavation for laboratory analysis. The soil sample locations were selected based on visual, olfactory and/or PID evidence of potential impairment and excavation dimensions. At the request of the OCD, composite samples were collected where possible during the second stage of the excavation.

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 label, 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 Farmington, New Mexico for 24-hr rush analysis.

## **4.0 LABORATORY ANALYTICAL METHODS**

Confirmation soil samples were 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 (GRO) 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.

## 5.0 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.

### 5.1 Confirmation Soil Samples

SWG compared the BTEX and TPH concentrations or reporting limits (RLs) associated with the twenty-two (22) confirmation samples collected from the excavated area to the OCD *Remediation Action Levels* for sites having a total ranking score of >20.

- The laboratory analysis of the confirmation soil samples of soils remaining in place did not indicate benzene concentrations above the OCD *Remediation Action Level*.
- The laboratory analysis of the confirmation soil samples of soils remaining in place did not indicate total BTEX concentrations above the OCD *Remediation Action Levels*.
- The laboratory analysis of the confirmation soil samples of soils remaining in place did not indicate TPH GRO/DRO concentrations above the OCD *Remediation Action Levels*.
- The laboratory analyses of samples S-2, S-3, and Conf-14 indicated total BTEX and/or TPH GRO/DRO levels above the OCD *Remediation Action Levels*, however, these affected soils were subsequently removed for disposal/treatment during the final excavation activities.

Based on analytical and screening results, the soils which remain in-place at the Site exhibit no COC concentrations above the OCD *Remediation Action Levels*. Confirmation sample results are provided in Table 1 in Appendix D.

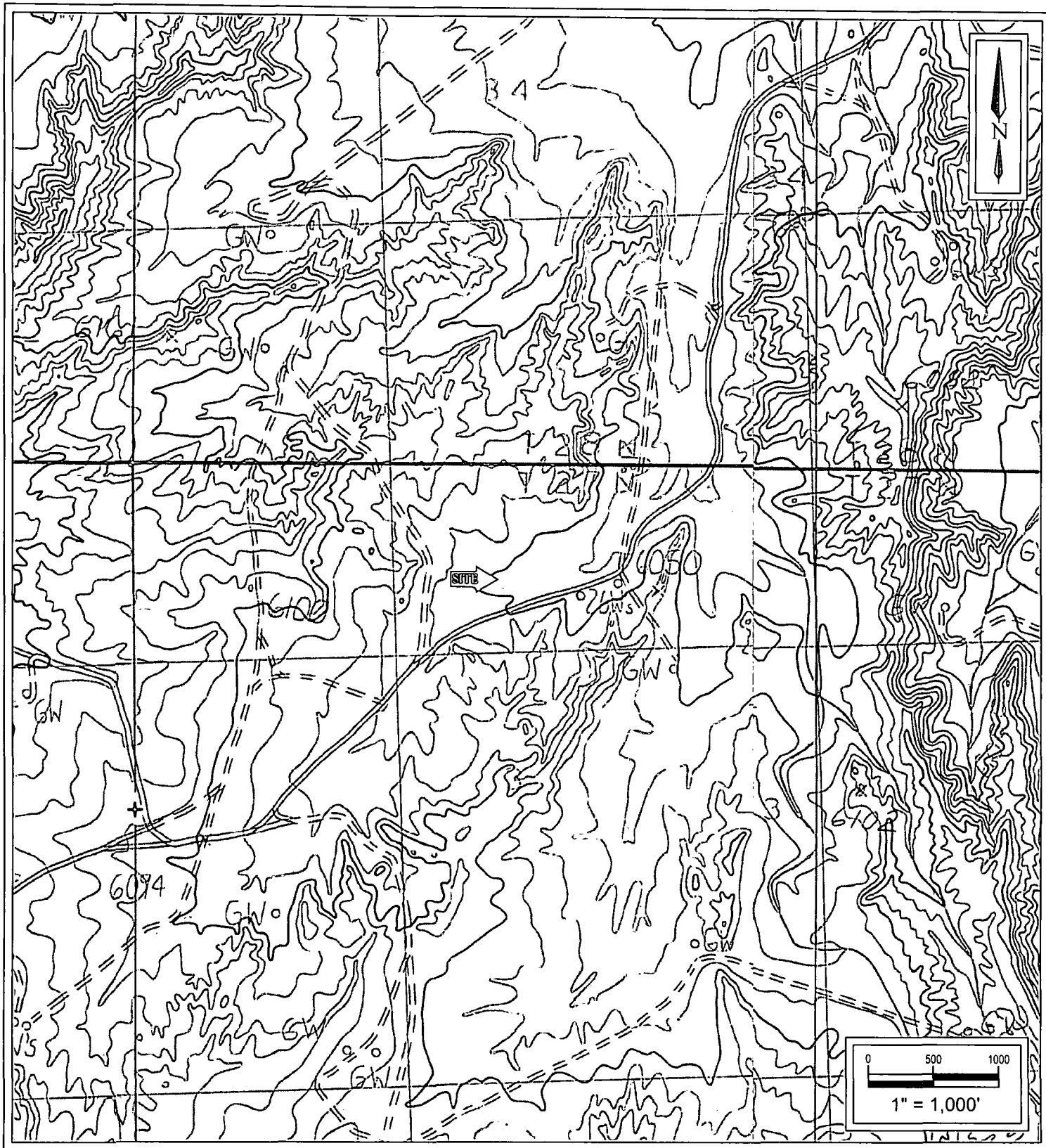
## 6.0 FINDINGS AND RECOMMENDATIONS

The Lateral 2B-17 Pipeline Release Site is located within the Enterprise pipeline ROW in the NE ¼ of Section 3 in Township 27 North and Range 10 West in rural San Juan County, New Mexico. The Site is located on public land managed by the U.S. BLM, and consists of native vegetation rangeland periodically interrupted with oil and gas gathering facilities, including one 6-inch and one 10-inch Enterprise pipelines which traverse the area from east to west.

On October 8<sup>th</sup>, 2013, Enterprise shut in the lateral 2B-17 pipeline and initiated excavation activities at the Site in an attempt to locate a potential leak (based on a vapor monitoring survey of the pipeline ROW) in the pipeline. The leak was subsequently identified and repaired. An estimated 10 bbls of condensate/water mixture was potentially released from the pipeline as a result of corrosion. 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 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 21 feet bgs near the source of the release, and approximately 6 feet bgs in the remaining original excavation footprint. The overall average surface expression of the excavation measured approximately 40 feet long by 20 feet wide.
- A total of approximately 834 cubic yards of hydrocarbon affected soils mixed with a limited amount of overburden slough were transported to the Envirotech landfarm near Hilltop, NM for disposal/remediation. The excavation was backfilled on March 27<sup>th</sup> and 28<sup>th</sup> 2014 with clean imported fill and unaffected overburden and benching-derived soils.
- The lithology encountered during the completion of corrective action activities consisted primarily of loose silty-sands and sands.
- Prior to backfilling the excavation, discrete and composite confirmation samples were collected from the floor and sidewalls of the excavation. Based on analytical and screening results, the soils remaining on-site do not exhibit COC concentrations above the *OCD Remediation Action Levels*.

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

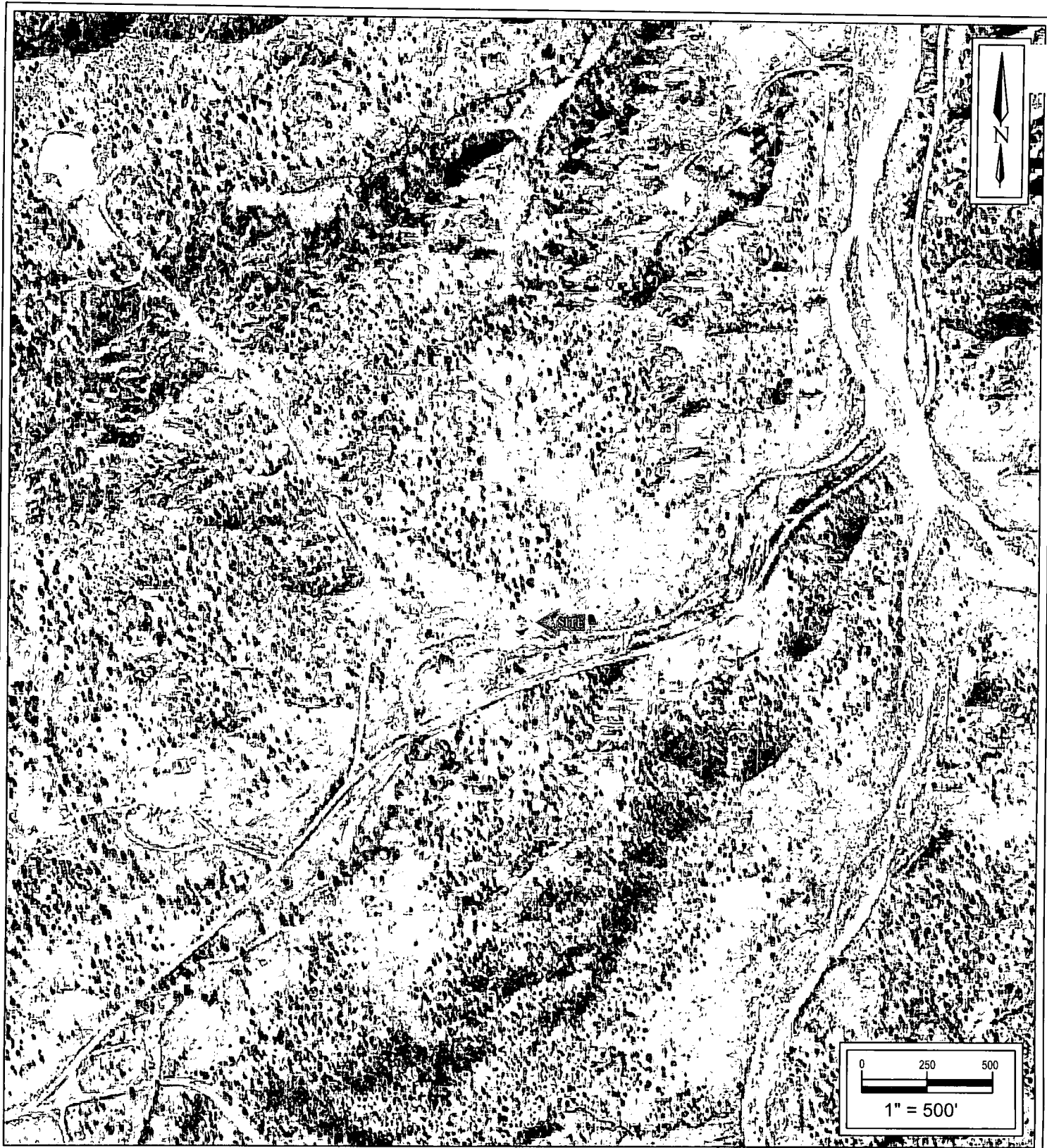


**Lateral 2B-17 Pipeline Release**  
 Rural San Juan County,  
 Navajo Nation, New Mexico

SWG Project No. 0413G015

**Southwest**  
 GEOSCIENCE

**Figure 1**  
**Topographic Map**  
 East Fork Kutz Canyon Quadrangle  
 And Huerfanito Peak Quadrangle  
 1985



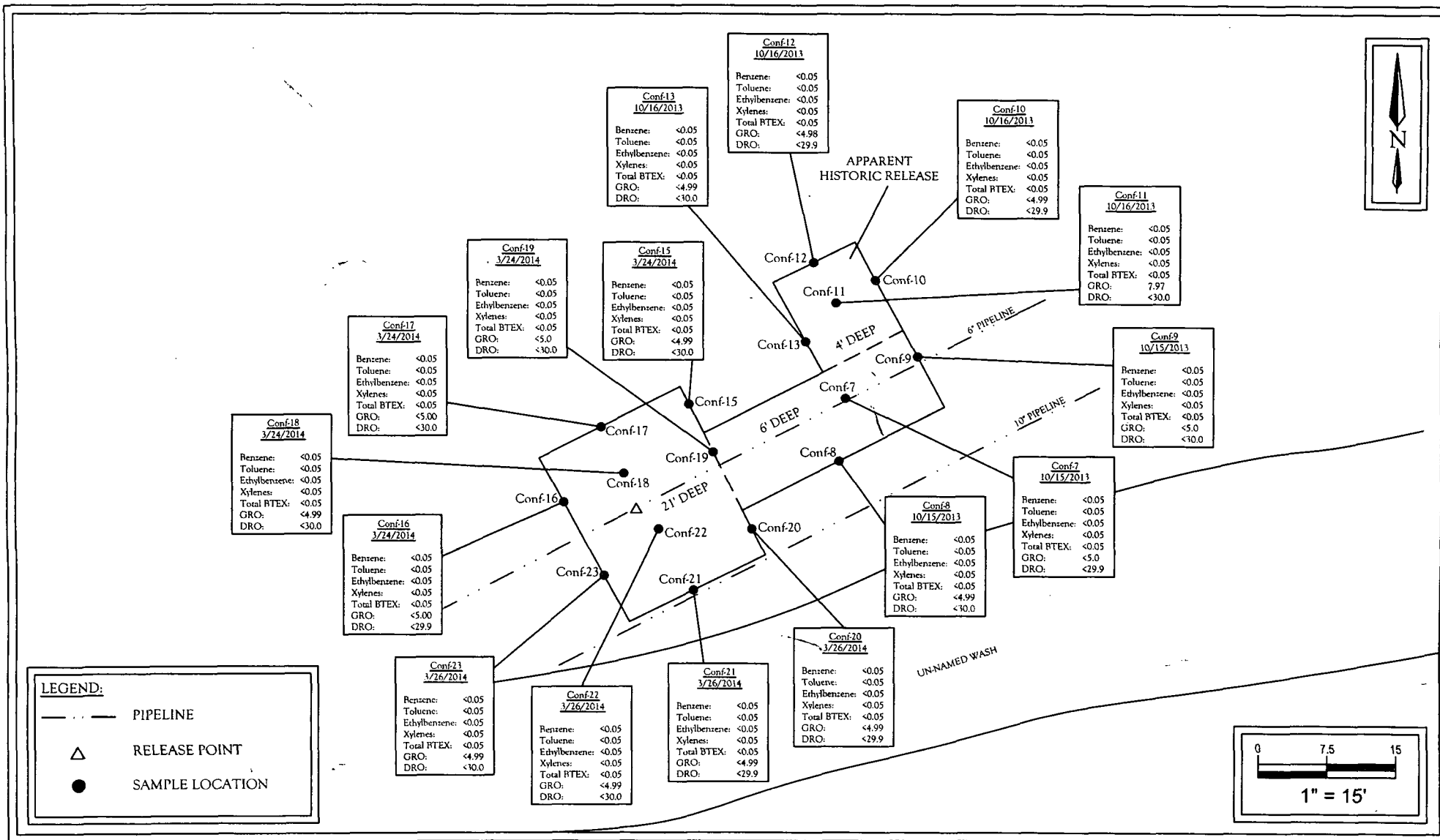
Lateral 2B-17 Pipeline Release  
Rural San Juan County,  
Navajo Nation, New Mexico

SWG Project No. 0413G015

Southwest  
GEOSCIENCE

Figure 2  
Site Vicinity Map  
2013 Aerial Photograph





Lateral 2B-17 Pipeline Release  
Rural San Juan County,  
Navajo Nation, New Mexico

SWG Project No. 0413G015

Southwest  
GEOSCIENCE

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  
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 Reilly Ave, Farmington NM 87401

Paykey Code: RB21200

**2. Originating Site:**

Lateral 2B-17 Pipeline

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

Unit B Sec 3 T 27N R 10W, 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 20 yd<sup>3</sup> / bbls Known Volume (to be entered by the operator at the end of the haul) 564 (yd) / bbls

**5. 10-11-13 GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

Runell Seale, 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**

Runell Seale, representative for Enterprise Field Services, LLC authorize ENVIROTECH to complete  
Generator Signature

the required testing/sign the Generator Waste Testing Certification.

Kendra Runney, 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, WestStates or unknown trucking company on OCD approved haulers list.**

**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: Kendra Runney

SIGNATURE: Kendra Runney

Surface Waste Management Facility Authorized Agent

TITLE: Waste Coordinator

TELEPHONE NO.:

505-632-0615

DATE: 10/11/13

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

97057-0597

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

Form C-138  
Revised 08/01/11

## REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

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

Paykey Code: RB21200

2. Originating Site:

Lateral 2B-17 Pipeline

March '14

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

Unit B Sec 3 T 27N R 10W, 36.608982, -107.882305, 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) 270/1 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 to complete

Generator Signature

the required testing/sign the Generator Waste Testing Certification.

I, Greg Crahtree, 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, WestStates or unknown trucking company on OCD approved haulers list. Flying M, Moss, West States, EMS,  
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 Crahtree

SIGNATURE: Greg Crahtree

Surface Waste Management Facility Authorized Agent

TITLE: Environmental Manager

TELEPHONE NO.:

505-632-0615

DATE: 3/25/14



# Bill of Lading

MANIFEST # 44865

DATE 10-10-13 JOB # 97057-0597

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

[illegible]

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 Lee Moss SIGNATURE Lee Moss

COMPANY CONTACT Gary Maestas PHONE                      DATE 10-10-13

***Signatures required prior to distribution of the legal document.***

**White - Company Records. Yellow - Billing. Pink - Customer**

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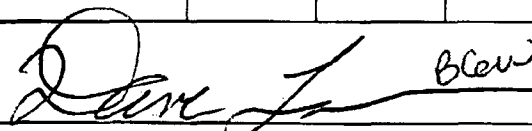


## Bill of Lading

MANIFEST # 44869

DATE 10-11-13 JOB # 97057-0597

**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	EMERGENCY LOT 2B17	LF#	CONC SOIL	E-21	10	-	Bet	105	9:35	Brian Stone
2	"	"	"	E-21	10	-	Bet	105	11:10	Brian Stone
3	"	"	"	E-21	10	-	Bet	105	12:55	Brian Stone
4	"	"	"	E-21	10	-	Bet	105	14:30	Brian Stone
5	"	"	"	E-21	10	-	Bet	105	15:45	Brian Stone
					50					
RESULTS:		LANDFARM EMPLOYEE:		NOTES: <span style="float: right;">ROC</span>						
4292	CHLORIDE TEST									
	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.

NAME

NAME Brian Stover

**SIGNATURE**

SIGNATURE Brian Stover

## COMPANY CONTACT

**PHONE**

PHONE 419-8745

DATE \_\_\_\_\_

DATE 10-11-12

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# Bill of Lading

MANIFEST # 44870

DATE 10-11-13

JOB # 92057-0597

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

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.

NAME \_\_\_\_\_

**SIGNATURE**

## COMPANY CONTACT

**PHONE**

DATE \_\_\_\_\_

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# Bill of Lading

MANIFEST # 44871

DATE 10-11-13 JOB # 97057-0597

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	E-tech	ENTREPRENEUR Lot 2B-17	Classy Fill	-	10	-	MOSS	47	13:05	Lee Moss
2	"	"	"	-	10	-	MOSS	47	14:45	Lee Moss
RESULTS:		LANDFARM EMPLOYEE:  <i>[Signature]</i>	NOTES:  <i>[Signature]</i>							
CHLORIDE TEST										
PAIN FILTER TEST		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. Moss Excavation NAME Lee Moss SIGNATURE Lee Moss

COMPANY CONTACT Gary Maestas PHONE \_\_\_\_\_ DATE 10-11-13

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# Bill of Lading

MANIFEST # 44872

DATE 10-11-13 JOB # 97057-0597

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 CAT 2B17	LFI	Cont SOIL	E-21	10	-	MOSS	47	10:05	Lee Moss
2	" "	" "	" "	E-21	10	-	MOSS	47	13:05	Lee Moss
3	" "	" "	" "	E-21	10	-	MOSS	47	14:45	Lee Moss
4	" "	" "	" "	E-21	10	-	MOSS	47	16:40	Lee Moss
					40					
RESULTS:		LANDFARM EMPLOYEE: <i>Dave L</i> <i>(Rev)</i>	NOTES:  roc							
292	CHLORIDE TEST									
	PAINT FILTER TEST	1	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. Moss Excavation NAME Lee Moss SIGNATURE Lee Moss

COMPANY CONTACT Gary Moester PHONE \_\_\_\_\_ DATE 10-11-13

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# Bill of Lading

MANIFEST # 44878

DATE 10-11-13 JOB # 97057-0597

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

[illegible]

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. Flying M NAME 1054 Walter SIGNATURE Tony Walter  
COMPANY CONTACT \_\_\_\_\_ PHONE \_\_\_\_\_ DATE \_\_\_\_\_

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San Juan condensation 578.124



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# Bill of Lading

MANIFEST # 44884

DATE 10-14-13 JOB # 97057-0597

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

[illegible]

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.

TRANSPORTER CO. 13 E. 13th NAME David McDaniel  
COMPANY CONTACT BET PHONE

### COMPANY CONTACT

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**SIGNATURE**

DATE \_\_\_\_\_

White - Company Records, Yellow - Billing, Pink - Customer





# Bill of Lading

MANIFEST # 44886

DATE 10-14-13 JOB # 97057-0597

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

[illegible]

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.

NAME

**SIGNATURE**

**COMPANY CONTACT**

**PHONE**

DATE \_\_\_\_\_

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# Bill of Lading

MANIFEST # 44887

DATE 10-14-13 JOB # 97057-0597

**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 2B-17	LF II	CON + SOIL	E-21	12	-	FLYING M	14	1123	Toby Walker
2	" "	" "	" "	E-21	12	-	"	14	1300	Toby Walker
					24					
RESULTS:		LANDFARM EMPLOYEE:	NOTES:  <div style="text-align: right;">RDC</div>							
L299	CHLORIDE TEST									
	PAINT FILTER TEST	1	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. Flying m. NAME Toby Wehler SIGNATURE Toby Wehler  
COMPANY CONTACT \_\_\_\_\_ PHONE \_\_\_\_\_ DATE 10-14-13

***Signatures required prior to distribution of the legal document.***

**White - Company Records, Yellow - Billing, Pink - Customer**

San Juan del Rio 57A, 12A



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# Bill of Lading

MANIFEST # 44894

DATE 10-15-13 JOB # 917057-0597

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	Entire PRISC Cat 2B-17	LF#	cont Soil	B-22	10	-	Flying M	14	9:45	John Wheeler
2	"	"	"	B-22	10	-	"	14	11:10	John Wheeler
3	"	"	"	B-22	10	-	"	14	12:25	John Wheeler
4	"	"	"	B-22	10	-	"	14	13:45	John Wheeler
5	"	"	"	B-22	10	-	"	14	16:00	John Wheeler
					50					
RESULTS:		LANDFARM EMPLOYEE: <i>Dave L</i>	NOTES:							
L299	CHLORIDE TEST									
	PAINT FILTER TEST	2	Certification of above receipt & placement							

RDC

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. Flying M NAME Toby Walker SIGNATURE Toby Walker  
COMPANY CONTACT \_\_\_\_\_ PHONE \_\_\_\_\_ DATE 10/15/13

***Signatures required prior to distribution of the legal document.***

**White - Company Records. Yellow - Billing. Pink - Customer**

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# Bill of Lading

MANIFEST # 44895

DATE 10-15-13 JOB # 97057-0597

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

[illegible]

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. Flying M NAME Toby Wahler SIGNATURE Toby Wahler  
COMPANY CONTACT \_\_\_\_\_ PHONE \_\_\_\_\_ DATE 10/15/13

***Signatures required prior to distribution of the legal document.***

**White - Company Records. Yellow - Billing, Pink - Customer**

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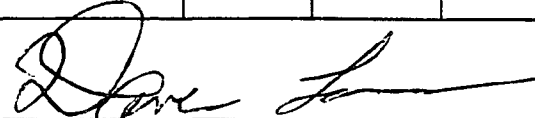


# Bill of Lading

MANIFEST # 44896

DATE 10-15-13 JOB # 97057-0597

**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 LAF 2B-12	LF II	Cent. 50. C	B-22	10	-	Bet	105	9:50	Brian Store
2	"	"	"	B-22	10	-	Bet	105	11:35	Brian Store
3	"	"	"	B-22	10	-	Bet	105	12:55	Brian Store
4	"	"	"	B-22	10	-	Bet	105	14:10	Brian Store
5	"	"	"	B-22	10	-	Bet	105	15:25	Brian Store
6	"	"	"	B-22	10	-	Bet	105	16:40	Brian Store
						60				
RESULTS:		LANDFARM EMPLOYEE:					NOTES:			
1299	CHLORIDE TEST									
	PAINT FILTER TEST	2	Certification of above receipt & placement				RDC			

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.

NAME

**SIGNATURE**

## COMPANY CONTACT

**PHONE**

DATE \_\_\_\_\_

**Signatures required prior to distribution of the legal document.**

**White - Company Records, Yellow - Billing, Pink - Customer**

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envirotech

# Bill of Lading

MANIFEST # 44901

DATE 10-15-13 JOB # 97057-0597

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 CPL 2B-17	LFI	CORR SIL	B-22	10	-	MOSS	15	15:15	[Signature]		
2	"	"	"	B-22	10	-	MOSS	15	16:45	[Signature]		
<b>RESULTS:</b>		LANDFARM EMPLOYEE:	<div style="text-align: center;">             Certification of above receipt &amp; placement         </div>								<b>NOTES:</b>	
L299	CHLORIDE TEST											
	PAINT FILTER TEST	1									RDC	

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 WATHAN BEN KANE SIGNATURE Wathan Ben K

COMPANY CONTACT Lambert PHONE \_\_\_\_\_ DATE 10-15-13

***Signatures required prior to distribution of the legal document.***

**White - Company Records, Yellow - Billing, Pink - Customer**

San Juan Construction 57A-126



# Bill of Lading

MANIFEST # 44905DATE 10-16-13 JOB # 97057-0597

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 2B-17	LFTI	cont soil	B-23	12	-	Flying M	17	930	Toby Wahler
2	"	"	"	B-23	12	-	"	17	1118	Toby Wahler
3	"	"	"	B-23	12	-	"	17	1320	Toby Wahler
4	"	"	"	B-23	12	-	"	17	1457	Toby Wahler
5	"	"	"	B-23	12	-	"	17	1635	Toby Wahler
					60					
RESULTS:			LANDFARM EMPLOYEE:	NOTES:						
299	CHLORIDE TEST	2	Garry Robinson Certification of above receipt & placement				RDC			
	PAINT FILTER TEST	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. Flying M NAME Toby Wahler SIGNATURE Toby Wahler  
COMPANY CONTACT \_\_\_\_\_ PHONE \_\_\_\_\_ DATE 10-16-13

Signatures required prior to distribution of the legal document.



envirotech

# Bill of Lading

MANIFEST # 44906

DATE 10-16-13 JOB # 97057-0597

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	LF II	Cons + 50. L	B-23	12	—	MOSS	47	930	Lee Moss
2	"	"	"	B-23	12	—	MOSS	47	1118	Lee Moss
3	"	"	"	B-23	12	—	MOSS	47	1300	Lee Moss
4	"	"	"	B-23	12	—	MOSS	47	1450	Lee Moss
5	"	"	"	B-23	12	—	MOSS	47	1647	Lee Moss
					60					
RESULTS:		LANDFARM EMPLOYEE: Gary Robinson	NOTES:							
L299	CHLORIDE TEST									
	PAINT FILTER TEST	2	Certification of above receipt & placement							
			RDC							

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 Lee Moss SIGNATURE Lee Moss

COMPANY CONTACT Gary Maestas PHONE \_\_\_\_\_ DATE 10-16-13

***Signatures required prior to distribution of the legal document.***

White - Company Records, Yellow - Billing, Pink - Customer

san juan reproduction 578-126

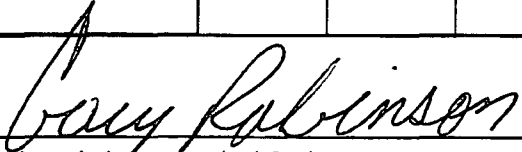


# Bill of Lading

MANIFEST # 44907

DATE 10-16-13 JOB # 97057-0597

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 2 B-17	LF II	Con't 50.6	B-23	12	-	BET	105	940	Brian Stover
2	" "	" "	" "	B-23	12	-	BET	105	1120	Brian Stover
3	" "	" "	" "	B-23	12	-	BET	105	1315	Brian Stover
4	" "	" "	" "	B-23	12	-	BET	105	1452	Brian Stover
5	" "	" "	" "	B-23	12	-	BET	105	1647	Brian Stover
					60					
RESULTS:		LANDFARM EMPLOYEE:				NOTES:				
1299	CHLORIDE TEST									
	PAINT FILTER TEST	2	Certification of above receipt & placement			RDC				

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. BET NAME BRYAN STOVER SIGNATURE Bryan Stover  
COMPANY CONTACT David McDonald PHONE 419-8745 DATE 10-16-13

**Signatures required prior to distribution of the legal document.**

**White - Company Records, Yellow - Billing, Pink - Customer**

510 1181 reproduction 578-126



# Bill of Lading

MANIFEST # 44909

DATE 10-16-13 JOB # 47057-0597

**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	E-Tech	Enterprise	Clean Fill	-	12	-	MOSS	47	1115	Leo Moss
2	"	Lat 2B-17	Soil	-	120	-	MOSS	47	1300	Leo Moss
3	"	"	"	-	12	-	MOSS	47	1450	Leo Moss
					36					
RESULTS:		LANDFARM	GARY ROLINSON				NOTES:			
/	CHLORIDE TEST	EMPLOYEE:								
/	PAINT FILTER TEST									
			Certification of above receipt & placement				RD			

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 Lee Moss SIGNATURE Lee Moss  
COMPANY CONTACT Gary Moestas PHONE \_\_\_\_\_ DATE 10-16-13

***Signatures required prior to distribution of the legal document.***



MANIFEST # 44910

DATE 10-16-13 JOB # 97057-0597

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

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. Flying M NAME Toby Walker SIGNATURE Toby Walker

COMPANY CONTACT \_\_\_\_\_ PHONE \_\_\_\_\_ DATE 10/14/12

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# Bill of Lading

MANIFEST # 44911

DATE 10-16-13 JOB # 97057-0597

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	Eteeh	Enterprise	Clean	—	12	—	BET	105	1120	Brian Stover
2	"	Lat 2B-17	Fill	—	12	—	BET	105	1315	Brian Stover
3	"	"	SOIL	—	12	—	BET	105	1454	Brian Stover
					36					
RESULTS:		LANDFARM EMPLOYEE: Gary Robinson				NOTES:				
CHLORIDE TEST		Certification of above receipt & placement				RD				
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.

NAME

**SIGNATURE**

## COMPANY CONTACT

**PHONE**

DATE \_\_\_\_\_

**Signatures required prior to distribution of the legal document.**

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San Juan construction 57B-128





## Bill of Lading

MANIFEST # 44920

DATE 10-17-13 JOB # 97057-0597

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

[illegible]

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 Lee Moss SIGNATURE Lee Moss  
COMPANY CONTACT Gary Maestas PHONE \_\_\_\_\_ DATE 10-17-13

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**White - Company Records. Yellow - Billing. Pink - Customer**

See also reproduction 578-126

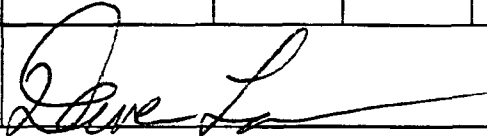


# Bill of Lading

MANIFEST # 44921

DATE 10-17-13 JOB # 97057-0597

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 Cm + 2B-17	CFII	cont 50:2	B-22	12	-	MOSS	47	10:11	Lee Moss
2	"	"	"	B-22	12	-	MOSS	47	12:15	Lee Moss
3	"	"	"	B-22	12	-	MOSS	47	13:15	Lee Moss
					36					
RESULTS:		LANDFARM EMPLOYEE: 				NOTES:				
4299	CHLORIDE TEST									
	PAINT FILTER TEST	1	Certification of above receipt & placement				R			

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. \_\_\_\_\_ NAME Lee Moss SIGNATURE Lee Moss

**COMPANY CONTACT** \_\_\_\_\_ **PHONE** \_\_\_\_\_ **DATE** \_\_\_\_\_

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# Bill of Lading

MANIFEST # 44922

DATE 10-17-13 JOB # 97057-0597

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	E-tech	<sup>Enterprise</sup> LAT 2B-17	CLEAN FILL	—	12	—	Flying m.	14	800	Toby Wahler
2	"	" "	" "	—	12	—	"	14	1011	Toby Wahler
3	"	" "	" "	—	12	—	"	14	12:15	Toby Wahler
4	"	" "	" "	—	12	—	"	14	13:45	Toby Wahler
RESULTS:		LANDFARM EMPLOYEE:					NOTES:			
/	CHLORIDE TEST	/								
/	PAINT FILTER TEST	/	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. Flying M NAME Toby Wahler SIGNATURE Toby Wahler  
COMPANY CONTACT \_\_\_\_\_ PHONE \_\_\_\_\_ DATE \_\_\_\_\_

***Signatures required prior to distribution of the legal document.***

**White - Company Records. Yellow - Billing. Pink - Customer**

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# Bill of Lading

MANIFEST # 44923

DATE 10-17-13 JOB # 97057-0597

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

[illegible]

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. Flying in NAME Toby Wahler SIGNATURE Toby Wahler  
COMPANY CONTACT \_\_\_\_\_ PHONE \_\_\_\_\_ DATE \_\_\_\_\_

***Signatures required prior to distribution of the legal document.***

**White - Company Records, Yellow - Billing, Pink - Customer**

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# Bill of Lading

MANIFEST # 44931

DATE 10-18-13

JOB # 97057-0597

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	E-Tech	Enterprise Clean	—	12	—	MOSS	2	800		<i>[Signature]</i>
2	"	"	"	—	12	MOSS	2	1000		<i>[Signature]</i>
3	"	"	"	—	12	MOSS	2	1236		<i>[Signature]</i>
4	"	"	"	—	12	MOSS	2	14:30		<i>[Signature]</i>
					48					
RESULTS:		LANDFARM	<i>[Signature]</i>			NOTES:				
CHLORIDE TEST	EMPLOYEE:									
PAINT FILTER TEST	Certification of above receipt & placement									
RD										

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 Y. H. B. [Signature]

COMPANY CONTACT Lambert

**PHONE**

DATE 10-28-13

***Signatures required prior to distribution of the legal document.***



# Bill of Lading

MANIFEST # 44932

DATE 10-18-13 JOB # 97057-0597

**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	E-Tech.	Enterprise Leon		-	12	-	Flying M	14	8:05	Toby Wahler
2	"	Kat 2B-17 Fill	Soil	-	12	-	"	14	10:05	Toby Wahler
3	"	" "	" "	-	12	-	"	14	11:35	Toby Wahler
4	"	" "	" "	-	12	-	"	14	13:05	Toby Wahler
RESULTS:		LANDFARM EMPLOYEE:  Garry Robinson	NOTES:							
/	CHLORIDE TEST /									
/	PAINT FILTER TEST /									
		Certification of above receipt & placement B.G.W. RD								

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. \_\_\_\_\_ NAME Toby Wahler SIGNATURE Toby Wahler  
COMPANY CONTACT \_\_\_\_\_ PHONE \_\_\_\_\_ DATE \_\_\_\_\_

***Signatures required prior to distribution of the legal document.***



# Bill of Lading

MANIFEST # 46340DATE 3/25/14 JOB # 97057-0597

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 lateral 2B-17	LFII-5	cont. soil	B-21	10	-	Moss Excavation	47	950	Lee Moss
2	" "	LFII-5	" "	B-21	10	-	" "	17	950	cy Kobz
3	" "	LFII-5	" "	B-21	10	-	" "	47	1150	Lee Moss
4	" "	LFII-5	" "	B-21	10	-	" "	17	1155	cy Kobz
5	" "	LFII-5	" "	B-21	10	-	" "	47	1330	Lee Moss
6	" "	LFII-5	" "	B-21	10	-	" "	17	1335	cy Kobz
7	" "	LFII-5	" "	B-21	10	-	" "	47	1520	Lee Moss
8	" "	LFII-5	" "	B-21	10	-	" "	17	1525	cy Kobz
					80					
RESULTS:			LANDFARM EMPLOYEE: <u>Patrick Bateman</u> <sup>Brow</sup>			NOTES:				
4286	CHLORIDE TEST	2	Certification of above receipt & placement							
	PAINT FILTER TEST	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 Excavation NAME Lee Moss SIGNATURE Lee Moss  
COMPANY CONTACT Gary Maestas PHONE \_\_\_\_\_ DATE 3-25-14

Signatures required prior to distribution of the legal document.



# Bill of Lading

MANIFEST # 46341DATE 3/25/14 JOB # 97057-0597

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 CAT 2B17	CLEAN Fill	—	10	—	Moss Excavation	47	950	Lee Moss
2	"	"	"	—	10	—	"	17	950	G. Kobza
3	"	"	"	—	10	—	"	47	1150	Lee Moss
4	"	"	"	—	10	—	"	17	1155	G. Kobza
5	"	"	"	—	10	—	"	47	1330	Lee Moss
6	"	"	"	—	10	—	"	17	1335	G. Kobza
					60					
RESULTS:		LANDFARM EMPLOYEE: <u>Patrick Lateman</u>				NOTES:				
<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. Moss Excavation NAME Lee Moss SIGNATURE Lee Moss  
COMPANY CONTACT Gary Maestas PHONE \_\_\_\_\_ DATE 3-25-14

Signatures required prior to distribution of the legal document.





# Bill of Lading

MANIFEST # 46342  
DATE 3/25/14 JOB # 97057-0597

**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 Lateral 2B-17	LFIH-5	Cont. Soil	A-21	10	-	Flying M	15	1000	Mankberg	
2	" "	" "	" "	A-21	10	-	" "	15	1200	Mankberg	
3	" "	" "	" "	A-21	10	-	Flying M	15	1340	Mankberg	
4	" "	" "	" "	A-21	10	-	Flying M	15	1530	Mankberg	
					<del>40</del>						
<b>RESULTS:</b>								<b>NOTES:</b>			
4286	CHLORIDE TEST	1	LANDFARM EMPLOYEE: Patrick Latman BOW								
	PAINT FILTER TEST	1	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. FLYING M NAME MARK LOPEZ SIGNATURE Mark Lopez  
COMPANY CONTACT RUSS MOSS PHONE 326 0254 DATE 3-25-14

***Signatures required prior to distribution of the legal document.***



# Bill of Lading

MANIFEST # 46343

DATE 3/25/14 JOB # 97057-0597

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

[illegible]

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. FLYING M NAME MARK LOPEZ SIGNATURE Mark Lopez  
COMPANY CONTACT PUSS MOSS PHONE 3200254 DATE 3-25-14

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san juan reproduction 578-128



envirotech

# Bill of Lading

MANIFEST # 46344

DATE 3/25/14 JOB # 97057-0597

**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	Enviroteam	ENTERPRISE LOT 2B 17	clean Fill	—	10	—	Westates	515	1000	Manul M. [Signature]
2	"	"	"	—	10	—	"	515	1155	Manul M. [Signature]
3	"	"	"	—	10	—	Westates	515	1345	Manul M. [Signature]
					30					
RESULTS:		LANDFARM EMPLOYEE: [Signature] Blaw				NOTES:				
/	CHLORIDE TEST									
/	PAINT FILTER TEST	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. WSEC NAME Manuel M Gutierrez SIGNATURE Manuel M Gutierrez  
COMPANY CONTACT Aery Maestas PHONE (970) 309 6783 DATE 3-25-14

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**White - Company Records, Yellow - Billing, Pink - Customer**

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# Bill of Lading

MANIFEST # 46345DATE 3/25/14 JOB # 97057-0597

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 lateral 2B-17	LFII-5	Cont. Soil	A-21	10	-	Weststates	515	1000	Manuel M. Gutierrez
2	"	"	LFII-5	"	"	"	Weststates	515	1155	Manuel M. Gutierrez
3	"	"	LFII-5	"	"	"	Weststates	515	1345	Manuel M. Gutierrez
4	"	"	"	"	"	"	Weststates	515	1530	Manuel M. Gutierrez
					40					
RESULTS:			LANDFARM EMPLOYEE:			NOTES:				
4286	CHLORIDE TEST	1	Patrick J. Stemann							
	PAINT FILTER TEST	1								
			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. WSSC NAME Manuel M. Gutierrez SIGNATURE Manuel M. Gutierrez  
COMPANY CONTACT Greg Maestas PHONE (970) 309 6783 DATE 3-25-14  
Signatures required prior to distribution of the legal document.



MANIFEST # 46354

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

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. West States NAME Manuel M. Gutierrez SIGNATURE Manuel M. Gut  
COMPANY CONTACT Gary Maestas PHONE (505) 860 9984 DATE 3-26-14  
Signatures required prior to distribution of the legal document.



MANIFEST # 46356  
DATE 3-26-14 JOB # 97057-0597

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.

***Signatures required prior to distribution of the legal document.***



# Bill of Lading

MANIFEST # 46357DATE 3/26/14 JOB # 97257-0597

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	E Tech	Enterprise Clean	Fill	-	10	-	Moss Excavation	17	820	Oj Kobza
2	"	"	"	-	10	-	"	47	820	Lee Moss
3	"	"	"	-	10	-	"	47	950	Lee Moss
4	"	"	"	-	10	-	"	17		Oj Kobza
5	"	"	"	-	10	-	"	47	1155	Lee Moss
6	"	"	"	-	10	-	"	17		Oj Kobza
7	"	"	"	-	10	-	"	17	1345	Oj Kobza
8	"	"	"	-	10	-	"	47	1345	Lee Moss
9	"	"	"	-	10	-	"	47	15:15	Lee Moss
					90					
RESULTS:										
CHLORIDE TEST			LANDFARM EMPLOYEE: <u>Patrock</u>			NOTES:				
PAINT FILTER TEST			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. MOSS EX NAME Oj Kobza SIGNATURE Oj Kobza  
COMPANY CONTACT Lee Moss PHONE 505-801-1803 DATE 3/26/14  
Signatures required prior to distribution of the legal document.



# Bill of Lading

MANIFEST # 46360DATE 3-26-14 JOB # 97257-0597

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 2B-17	LF II-5	CON. F Soil	D-20	10	-	MOSS	47	950	Lee Moss
2	" "	" "	" "	D-20	10	-	MOSS	17	950	g Kobza
3	" "	" "	" "	D-20	10	-	MOSS	47	1155	Lee Moss
4	" "	" "	" "	D-20	10	-	MOSS	17	1155	g Kobza
5	" "	" "	" "	D-20	10	-	MOSS	17	1335	g Kobza
6	" "	" "	" "	D-20	10	-	MOSS	17	1345	Lee Moss
	void this line	_____	_____	_____	10	-	MOSS	47	1545	Lee Moss
					10					
RESULTS:			LANDFARM EMPLOYEE: <u>Patrick B. Hansen</u>			NOTES: <u>CL test strips on load 1 + 6</u>				
<286	CHLORIDE TEST	2	Certification of above receipt & placement							
	PAINT FILTER TEST	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 Excavation NAME Lee Moss SIGNATURE Lee Moss  
COMPANY CONTACT Lee Moss PHONE 801-1803 DATE 3-26-14

Signatures required prior to distribution of the legal document.





envirotech

# Bill of Lading

MANIFEST # 46361

DATE 3-26-14 JOB # 97457-0597

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 2B-17	LFII-5	Con't 3012	D-20	10	-	West States	515	950	Manuel M. Gtz
2	" "	"		D-20	10	-	" "	515	1151	Manuel M. Gtz
					20					
RESULTS:		LANDFARM		NOTES: <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">             Certification of above receipt &amp; placement           </div>						
< 28le	CHLORIDE TEST	1	EMPLOYEE:							
	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. West states NAME Manuel M. Gutierrez SIGNATURE Manuel M. Gutierrez  
COMPANY CONTACT Fony PHONE (505)-860-8984 DATE 3-26-19

***Signatures required prior to distribution of the legal document.***

**White - Company Records, Yellow - Billing, Pink - Customer**

San Juan reproduction 578-126



## Bill of Lading

MANIFEST # 46362

DATE 3-26-14 JOB # 97257-2597

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

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.

SIGNATURE Mark L. [Signature]

DATE 3-26-14

***Signatures required prior to distribution of the legal document:***



# Bill of Lading

MANIFEST # 46366

DATE 3-26-14 JOB # 97057-0597

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

[illegible]

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. \_\_\_\_\_ NAME Mike Sanchez SIGNATURE [Signature]

COMPANY CONTACT EMS USA PHONE (505) 793-4426 DATE 3-26-14

***Signatures required prior to distribution of the legal document.***

**White - Company Records, Yellow - Billing, Pink - Customer**

520 4480 reproduction 57A-126



# Bill of Lading

MANIFEST # 46373DATE 3/27/14 JOB # 97057-0597

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 213 1-7	Clean Fill	—	10	—	Flying M	15	800	<i>[Signature]</i>
2	"	"	Clean Fill	—	10	—	Flying M	15	955	<i>[Signature]</i>
3	"	"	Clean Fill	—	10	—	Flying M	15	1115	<i>[Signature]</i>
4	"	"	Clean Fill	—	10	—	Flying M	15	1235	<i>[Signature]</i>
5	"	"	Clean Fill	—	10	—	Flying M	15	1400	<i>[Signature]</i>
6	"	"	Clean Fill	—	10	—	"	15	15:20	<i>[Signature]</i>
					60					
RESULTS:			LANDFARM EMPLOYEE: <i>[Signature]</i> EL			NOTES:				
<input checked="" type="checkbox"/>	CHLORIDE TEST	<input checked="" type="checkbox"/>	Certification of above receipt & placement							
<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. FLYING M NAME MARK LOPEZ SIGNATURE *[Signature]*  
COMPANY CONTACT RUSS MOSS PHONE \_\_\_\_\_ DATE MARCH 27/14

Signatures required prior to distribution of the legal document.



# Bill of Lading

MANIFEST # 46374  
DATE 3/27/14 JOB # 97057-0597

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 Lab. 2317	Clean Fill	—	10	—	Moss	47	805	Lee Moss
2	"	"	clean fill	—	10	—	Moss	17	810	Og Kobza
3	"	"	Clean Fill	—	10	—	Moss	17	955	Og Kobza
4	"	"	Clean Fill	—	10	—	Moss	47	1000	Lee Moss
5	"	"	Clean Fill	—	10	—	Moss	47	1130	Lee Moss
6	"	"	Clean Fill	—	10	—	Moss	17	1130	Og Kobza
7	"	"	Clean Fill	—	10	—	Moss	47	1308	Lee Moss
8	"	"	Clean Fill	—	10	—	Moss	17	1310	Og Kobza
9	"	"	Clean Fill	—	10	—	Moss	47	1500	Lee Moss
10	"	"	Clean Fill	—	10	—	Moss	17	1500	Og Kobza
					100					
RESULTS:		LANDFARM EMPLOYEE:		EL		NOTES:				
<input checked="" type="checkbox"/>	CHLORIDE TEST	<input checked="" type="checkbox"/>	Patrick B. Berman							
<input checked="" type="checkbox"/>	PAINT FILTER TEST	<input checked="" type="checkbox"/>	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. Moss Excavation NAME Lee Moss SIGNATURE Lee Moss  
COMPANY CONTACT Lee Moss PHONE 801-1803 DATE 3-27-14

Signatures required prior to distribution of the legal document.



MANIFEST # 46384

DATE 3-28-14 JOB # 97057-0597

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. West States NAME Zack Toney SIGNATURE [Signature]  
COMPANY CONTACT \_\_\_\_\_ PHONE 505-436-9448 DATE 3-28-14

***Signatures required prior to distribution of the legal document.***



## Bill of Lading

MANIFEST # 46385

DATE 3-28-14 JOB # 97057-0597

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

[illegible]

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 Lee Moss SIGNATURE Lee Moss  
COMPANY CONTACT Lee Moss PHONE 801-1803 DATE 3-28-14

***Signatures required prior to distribution of the legal document.***

**White - Company Records, Yellow - Billing, Pink - Customer**



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# Bill of Lading

MANIFEST # 46386

DATE 3-28-14 JOB # 97057-0597

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

[illegible]

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.

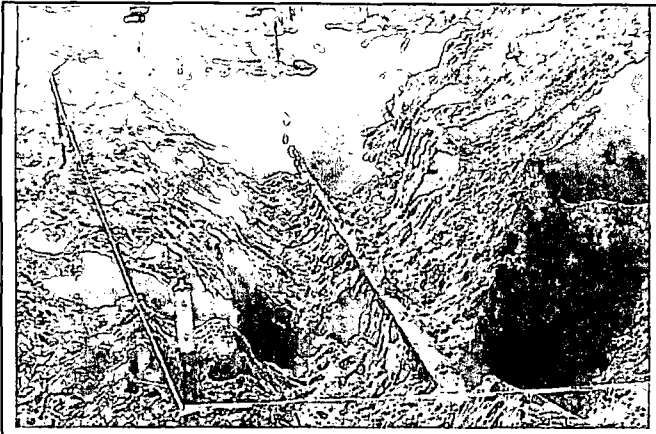
TRANSPORTER CO. \_\_\_\_\_ NAME \_\_\_\_\_ SIGNATURE \_\_\_\_\_

COMPANY CONTACT \_\_\_\_\_ PHONE \_\_\_\_\_ DATE 2-28-17

***Signatures required prior to distribution of the legal document.***

**White - Company Records, Yellow - Billing, Pink - Customer**

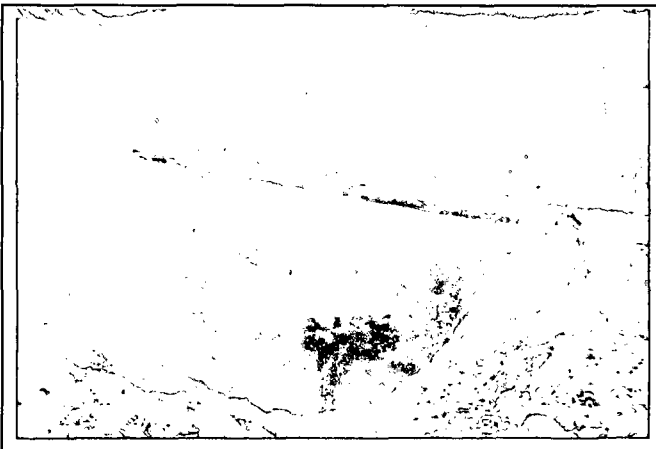




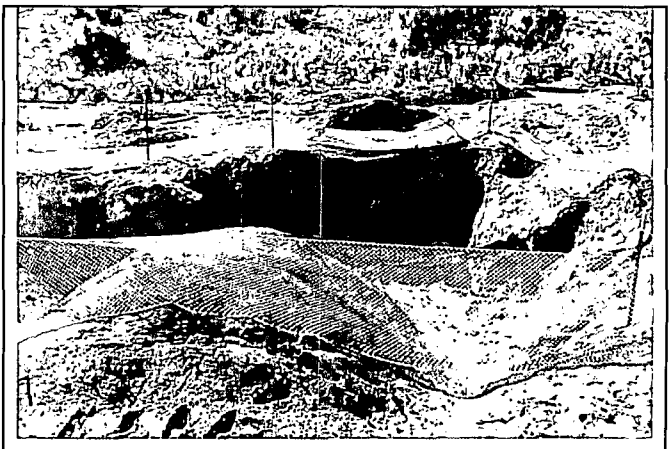
1.) Early stages of excavation. Clean fill (reddish soil) was placed on pipeline for equipment support.



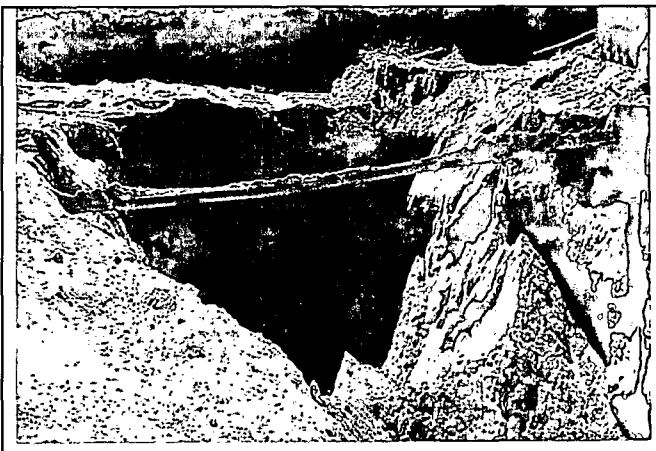
2.) View of excavation of apparent historic release at northeast portion of excavation (note apparent staining).



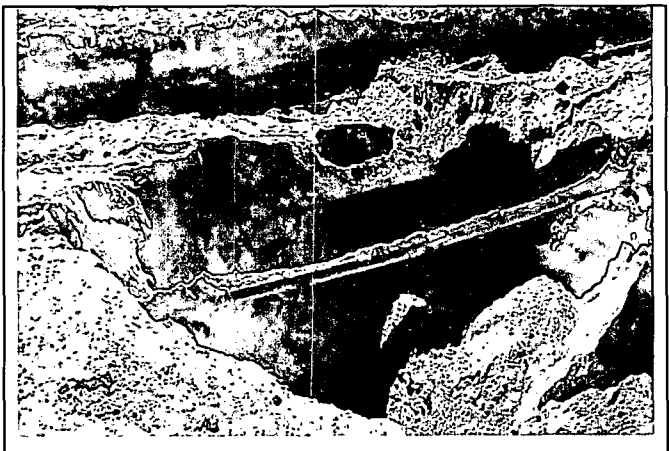
3.) Limit of excavation (15') reached with on-site equipment in October 2013.



4.) View of fencing being removed prior to resumption of excavation activities in March 2013.



5.) Excessive sloughing continues to challenge excavation activities.



6.) A total depth of 21 feet is achieved in the source area, and soil stability continues to provide challenges (note exposed adjacent pipeline).

TABLE 1-Draft  
Lateral 2B-17 Pipeline Release  
SOIL ANALYTICAL RESULTS

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 Energy, Minerals & Natural Resources Department, Oil Conservation Division, Remediation Action Level								100	
			10	NE	NE	NE	50		
Confirmation Samples From Soils Which Were Removed by Excavation for Disposal/Treatment									
S-1	10.13.13	4.0	<0.05	<0.05	<0.05	0.08	0.08	<5.06	<30.5
S-2	10.13.13	4.0	<0.05	0.13	0.06	0.95	1.13	8.95	213
S-3	10.13.13	3.5	<0.05	<0.05	<0.05	0.51	0.51	12.6	193
S-4	10.13.13	4.0	<0.05	<0.05	<0.05	<0.05	<0.05	5.65	<29.9
S-5	10.13.13	7.0	Not Analyzed - exceedance based on PID reading						
Conf-14	10.17.13	15.0	0.79	8.14	3.21	38.3	50.4	249	3,580
Confirmation Samples From Soils Removed as Overburden									
Conf-6	10.15.13	5.0	<0.05	<0.05	<0.05	<0.05	<0.05	<4.99	<30.0
Confirmation Samples From Soils Remaining in Place									
Conf-7	10.15.13	6.0	<0.05	<0.05	<0.05	<0.05	<0.05	<5.0	<29.9
Conf-8	10.15.13	4.0	<0.05	<0.05	<0.05	<0.05	<0.05	<4.99	<30.0
Conf-9	10.15.13	4.0	<0.05	<0.05	<0.05	<0.05	<0.05	<5.0	<30.0
Conf-10	10.16.13	3.0	<0.05	<0.05	<0.05	<0.05	<0.05	<4.99	<29.9
Conf-11	10.16.13	4.0	<0.05	<0.05	<0.05	<0.05	<0.05	7.97	<30.0
Conf-12	10.16.13	3.0	<0.05	<0.05	<0.05	<0.05	<0.05	<4.98	<29.9
Conf-13	10.16.13	3.0	<0.05	<0.05	<0.05	<0.05	<0.05	<4.99	<30.0
Conf-15	3.24.14	14.0	<0.05	<0.05	<0.05	<0.05	<0.05	<4.99	<30.0
Conf-16	3.24.14	12.0-18.0	<0.05	<0.05	<0.05	<0.05	<0.05	<5.00	<29.9
Conf-17	3.24.14	12.0-16.0	<0.05	<0.05	<0.05	<0.05	<0.05	<5.00	<30.0
Conf-18	3.24.14	North Floor Comp. 21.0	<0.05	<0.05	<0.05	<0.05	<0.05	<4.99	<30.0
Conf-19	3.24.14	16.0-20.0	<0.05	<0.05	<0.05	<0.05	<0.05	<5.0	<30.0
Conf-20	3.26.14	SE Wall Composite	<0.05	<0.05	<0.05	<0.05	<0.05	<4.99	<29.9
Conf-21	3.26.14	S Wall Composite	<0.05	<0.05	<0.05	<0.05	<0.05	<4.99	<29.9
Conf-22	3.26.14	South Floor Comp. 21.0	<0.05	<0.05	<0.05	<0.05	<0.05	<4.99	<30.0
Conf-23	3.26.14	SW Wall Composite	<0.05	<0.05	<0.05	<0.05	<0.05	<4.99	<30.0

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

NE = Not Established

\* = This area was subsequently over-excavated



## Analytical Report

### Report Summary

Client: Southwest Geoscience  
Chain Of Custody Number: 16203  
Samples Received: 10/8/2013 3:01:00PM  
Job Number: 07174-0003  
Work Order: P310030  
Project Name/Location: 2B-17

Entire Report Reviewed By:

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

Date: 10/10/13

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.



Southwest Geoscience  
2351 W. Northwest Hwy  
Dallas TX, 75220

Project Name: 2B-17  
Project Number: 07174-0003  
Project Manager: Kyle Summers

Reported:  
10-Oct-13 08:45

### Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
S-1	P310030-01A	Soil	10/08/13	10/08/13	Glass Jar, 4 oz.
S-2	P310030-02A	Soil	10/08/13	10/08/13	Glass Jar, 4 oz.
S-3	P310030-03A	Soil	10/08/13	10/08/13	Glass Jar, 4 oz.
S-4	P310030-04A	Soil	10/08/13	10/08/13	Glass Jar, 4 oz.

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5796 US Highway 64, Farmington, NM 87401

Three Springs - 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (505) 632-0615 Fx (505) 632-1865

Ph (970) 259-0615 Fr (800) 362-1879

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

Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: 2B-17  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 10-Oct-13 08:45

**S-1**
**P310030-01 (Solid)**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1	1341022	10/09/13	10/09/13	10/09/13	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1341022	10/09/13	10/09/13	10/09/13	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1341022	10/09/13	10/09/13	10/09/13	EPA 8021B	
p,m-Xylene	0.08	0.05	mg/kg	1	1341022	10/09/13	10/09/13	10/09/13	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1341022	10/09/13	10/09/13	10/09/13	EPA 8021B	
Total Xylenes	0.08	0.05	mg/kg	1	1341022	10/09/13	10/09/13	10/09/13	EPA 8021B	
Total BTEX	0.08	0.05	mg/kg	1	1341022	10/09/13	10/09/13	10/09/13	EPA 8021B	
Surrogate: Bromochlorobenzene		83.7 %		80-120	1341022	10/09/13	10/09/13	10/09/13	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		81.4 %		80-120	1341022	10/09/13	10/09/13	10/09/13	EPA 8021B	
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	5.06	mg/kg	1	1341022	10/09/13	10/09/13	10/09/13	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.5	mg/kg	1	1341023	10/09/13	10/09/13	10/09/13	EPA 8015D	
GRO and DRO Combined Fractions	ND	5.06	mg/kg		[CALC]	10/09/13	10/09/13	10/09/13	EPA 8015D	

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Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: 2B-17  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 10-Oct-13 08:45

**S-2**
**P310030-02 (Solid)**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1	1341022	10/09/13	10/09/13	EPA 8021B		
Toluene	0.13	0.05	mg/kg	1	1341022	10/09/13	10/09/13	EPA 8021B		
Ethylbenzene	0.06	0.05	mg/kg	1	1341022	10/09/13	10/09/13	EPA 8021B		
p,m-Xylene	0.69	0.05	mg/kg	1	1341022	10/09/13	10/09/13	EPA 8021B		
o-Xylene	0.26	0.05	mg/kg	1	1341022	10/09/13	10/09/13	EPA 8021B		
Total Xylenes	0.95	0.05	mg/kg	1	1341022	10/09/13	10/09/13	EPA 8021B		
Total BTEX	1.13	0.05	mg/kg	1	1341022	10/09/13	10/09/13	EPA 8021B		
Surrogate: Bromochlorobenzene		100 %		80-120	1341022	10/09/13	10/09/13	EPA 8021B		
Surrogate: 1,3-Dichlorobenzene		94.6 %		80-120	1341022	10/09/13	10/09/13	EPA 8021B		
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	8.95	4.97	mg/kg	1	1341022	10/09/13	10/09/13	EPA 8015D		
Diesel Range Organics (C10-C28)	213	30.1	mg/kg	1	1341023	10/09/13	10/09/13	EPA 8015D		
GRO and DRO Combined Fractions	222	4.97	mg/kg		[CALC]	10/09/13	10/09/13	EPA 8015D		

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Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: 2B-17  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 10-Oct-13 08:45

**S-3**
**P310030-03 (Solid)**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1	1341022	10/09/13	10/09/13	10/09/13	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1341022	10/09/13	10/09/13	10/09/13	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1341022	10/09/13	10/09/13	10/09/13	EPA 8021B	
p,m-Xylene	0.40	0.05	mg/kg	1	1341022	10/09/13	10/09/13	10/09/13	EPA 8021B	
o-Xylene	0.11	0.05	mg/kg	1	1341022	10/09/13	10/09/13	10/09/13	EPA 8021B	
Total Xylenes	0.51	0.05	mg/kg	1	1341022	10/09/13	10/09/13	10/09/13	EPA 8021B	
Total BTEX	0.51	0.05	mg/kg	1	1341022	10/09/13	10/09/13	10/09/13	EPA 8021B	
Surrogate: Bromochlorobenzene		92.9 %		80-120	1341022	10/09/13	10/09/13	10/09/13	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		84.5 %		80-120	1341022	10/09/13	10/09/13	10/09/13	EPA 8021B	
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	12.6	5.07	mg/kg	1	1341022	10/09/13	10/09/13	10/09/13	EPA 8015D	
Diesel Range Organics (C10-C28)	193	30.3	mg/kg	1	1341023	10/09/13	10/09/13	10/09/13	EPA 8015D	
GRO and DRO Combined Fractions	206	5.07	mg/kg		[CALC]	10/09/13	10/09/13	10/09/13	EPA 8015D	

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Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: 2B-17  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 10-Oct-13 08:45

**S-4**
**P310030-04 (Solid)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b><u>Volatile Organics by EPA 8021</u></b>									
Benzene	ND	0.05	mg/kg	1	1341022	10/09/13	10/09/13	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1341022	10/09/13	10/09/13	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1341022	10/09/13	10/09/13	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1341022	10/09/13	10/09/13	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1341022	10/09/13	10/09/13	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1341022	10/09/13	10/09/13	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1341022	10/09/13	10/09/13	EPA 8021B	
Surrogate: Bromochlorobenzene		82.9 %	80-120		1341022	10/09/13	10/09/13	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		81.2 %	80-120		1341022	10/09/13	10/09/13	EPA 8021B	
<b><u>Nonhalogenated Organics by 8015</u></b>									
Gasoline Range Organics (C6-C10)	5.65	5.00	mg/kg	1	1341022	10/09/13	10/09/13	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1341023	10/09/13	10/09/13	EPA 8015D	
GRO and DRO Combined Fractions	5.65	5.00	mg/kg		[CALC]	10/09/13	10/09/13	EPA 8015D	

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Southwest Geoscience  
2351 W. Northwest Hwy  
Dallas TX, 75220

Project Name: 2B-17  
Project Number: 07174-0003  
Project Manager: Kyle Summers

Reported:  
10-Oct-13 08:45

### 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 1341022 - Purge and Trap EPA 5030A

##### Blank (1341022-BLK1)

Prepared & Analyzed: 09-Oct-13

Benzene	ND	0.05	mg/kg							
Toluene	ND	0.05	"							
Ethylbenzene	ND	0.05	"							
p,m-Xylene	ND	0.05	"							
o-Xylene	ND	0.05	"							
Total Xylenes	ND	0.05	"							
Total BTEX	ND	0.05	"							
Surrogate: 1,3-Dichlorobenzene	45.5		ug/L	50.0		90.9	80-120			
Surrogate: Bromochlorobenzene	46.4		"	50.0		92.8	80-120			

##### Duplicate (1341022-DUP1)

Source: P310030-01

Prepared & Analyzed: 09-Oct-13

Benzene	ND	0.05	mg/kg		ND				30	
Toluene	ND	0.05	"		ND				30	
Ethylbenzene	ND	0.05	"		ND				30	
p,m-Xylene	0.09	0.05	"		0.08			15.1	30	
o-Xylene	ND	0.05	"		ND				30	
Surrogate: 1,3-Dichlorobenzene	44.9		ug/L	50.0		89.7	80-120			
Surrogate: Bromochlorobenzene	47.1		"	50.0		94.2	80-120			

##### Matrix Spike (1341022-MS1)

Source: P310030-01

Prepared & Analyzed: 09-Oct-13

Benzene	45.2		ug/L	50.0	0.36	89.8	39-150			
Toluene	45.6		"	50.0	0.63	89.9	46-148			
Ethylbenzene	45.7		"	50.0	0.21	91.0	32-160			
p,m-Xylene	92.4		"	100	1.56	90.9	46-148			
o-Xylene	46.6		"	50.0	0.65	91.8	46-148			
Surrogate: 1,3-Dichlorobenzene	45.2		"	50.0		90.3	80-120			
Surrogate: Bromochlorobenzene	47.8		"	50.0		95.6	80-120			

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laboratory@envirotech-inc.com

Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: 2B-17  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 10-Oct-13 08:45

**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 1341022 - Purge and Trap EPA 5030A**
**Blank (1341022-BLK1)**

Prepared &amp; Analyzed: 09-Oct-13

Gasoline Range Organics (C6-C10)	5.79	4.95	mg/kg							B
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**Duplicate (1341022-DUP1)**
**Source: P310030-01**

Prepared &amp; Analyzed: 09-Oct-13

Gasoline Range Organics (C6-C10)	ND	5.05	mg/kg		ND				30	
----------------------------------	----	------	-------	--	----	--	--	--	----	--

**Matrix Spike (1341022-MS1)**
**Source: P310030-01**

Prepared &amp; Analyzed: 09-Oct-13

Gasoline Range Organics (C6-C10)	0.39		mg/L	0.450	0.08	69.0	75-125			SPK1
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Southwest Geoscience  
2351 W. Northwest Hwy  
Dallas TX, 75220

Project Name: 2B-17  
Project Number: 07174-0003  
Project Manager: Kyle Summers

**Reported:**  
10-Oct-13 08:45

### 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 1341023 - DRO Extraction EPA 3550C</b>										
<b>Blank (1341023-BLK1)</b>				Prepared & Analyzed: 09-Oct-13						
Diesel Range Organics (C10-C28)	ND	30.1	mg/kg							
<b>Duplicate (1341023-DUP1)</b>				Source: P310030-01 Prepared & Analyzed: 09-Oct-13						
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg		ND				30	
<b>Matrix Spike (1341023-MS1)</b>				Source: P310030-01 Prepared & Analyzed: 09-Oct-13						
Diesel Range Organics (C10-C28)	244		mg/L	250	10.6	93.3	75-125			

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Southwest Geoscience  
2351 W. Northwest Hwy  
Dallas TX, 75220

Project Name: 2B-17  
Project Number: 07174-0003  
Project Manager: Kyle Summers

**Reported:**  
10-Oct-13 08:45

#### Notes and Definitions

SPK1 The spike recovery for this QC sample is outside of control limits.

B Analyte is found in the associated blank as well as in the sample.

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

16203

Page 11 of 11

Client: <b>SWH / EPROD</b>			Project Name / Location: <b>2B-17</b>			ANALYSIS / PARAMETERS																																																					
Email results to: <b>KYLE SUMMERS</b>			Sampler Name: <b>AARON BRYANT</b>			<table border="1"> <tr> <td>TPH (Method 8015)</td> <td>BTEX (Method 8021)</td> <td>VOC (Method 8260)</td> <td>RCRA 8 Metals</td> <td>Cation / Anion</td> <td>RCI</td> <td>TCLP with H/P</td> <td>CO Table 910-1</td> <td>TPH (418.1)</td> <td>CHLORIDE</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></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																														
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																																				
Client Phone No.: <b>903-821-5603</b>			Client No.: <b>07174-0003</b>																																																								
Sample No. / Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative			TPH	BTEX	VOC	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	10/8/13	1330	P310030-01	1x40Z				X	X												X	X																																					
S-2		1335	P310030-02					X	X												X	X																																					
S-3		1340	P310030-03					X	X												X	X																																					
S-4		1345	P310030-04					X	X												X	X																																					
Relinquished by: (Signature) <i>[Signature]</i>					Date: 10/8/13	Time: 15:01	Received by: (Signature) <i>[Signature]</i>										Date: 10/8/13	Time: 15:01																																									
Relinquished by: (Signature)							Received by: (Signature)																																																				
Sample Matrix							RUSH																																																				
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.



**envirotech**  
Analytical Laboratory

R1321200  
CL15405



## Analytical Report

### Report Summary

Client: Southwest Geoscience  
Chain Of Custody Number: 16206  
Samples Received: 10/14/2013 4:14:00PM  
Job Number: 07174-0003  
Work Order: P310054  
Project Name/Location: 2B-17

Entire Report Reviewed By:

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

Date: 10/16/13

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.



Southwest Geoscience  
2351 W. Northwest Hwy  
Dallas TX, 75220

Project Name: 2B-17  
Project Number: 07174-0003  
Project Manager: Kyle Summers

**Reported:**  
16-Oct-13 15:13

### Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Conf-10	P310054-01A	Soil	10/14/13	10/14/13	Glass Jar, 4 oz.
Conf-11	P310054-02A	Soil	10/14/13	10/14/13	Glass Jar, 4 oz.
Conf-12	P310054-03A	Soil	10/14/13	10/14/13	Glass Jar, 4 oz.
Conf-13	P310054-04A	Soil	10/14/13	10/14/13	Glass Jar, 4 oz.

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Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: 2B-17  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 16-Oct-13 15:13

**Conf-10**  
**P310054-01 (Solid)**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1	1342005	10/15/13	10/15/13	10/15/13	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1342005	10/15/13	10/15/13	10/15/13	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1342005	10/15/13	10/15/13	10/15/13	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1342005	10/15/13	10/15/13	10/15/13	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1342005	10/15/13	10/15/13	10/15/13	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1342005	10/15/13	10/15/13	10/15/13	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1342005	10/15/13	10/15/13	10/15/13	EPA 8021B	
Surrogate: Bromochlorobenzene		97.7 %		80-120	1342005	10/15/13	10/15/13	10/15/13	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		94.2 %		80-120	1342005	10/15/13	10/15/13	10/15/13	EPA 8021B	
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1342005	10/15/13	10/15/13	10/15/13	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1342004	10/15/13	10/15/13	10/15/13	EPA 8015D	
GRO and DRO Combined Fractions	ND	4.99	mg/kg		[CALC]	10/15/13	10/15/13	10/15/13	EPA 8015D	

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Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: 2B-17  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 16-Oct-13 15:13

**Conf-11**
**P310054-02 (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	1342005	10/15/13	10/15/13	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1342005	10/15/13	10/15/13	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1342005	10/15/13	10/15/13	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1342005	10/15/13	10/15/13	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1342005	10/15/13	10/15/13	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1342005	10/15/13	10/15/13	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1342005	10/15/13	10/15/13	EPA 8021B	
Surrogate: Bromochlorobenzene		101 %	80-120		1342005	10/15/13	10/15/13	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		98.2 %	80-120		1342005	10/15/13	10/15/13	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	7.97	4.98	mg/kg	1	1342005	10/15/13	10/15/13	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1342004	10/15/13	10/15/13	EPA 8015D	
GRO and DRO Combined Fractions	7.97	4.98	mg/kg		[CALC]	10/15/13	10/15/13	EPA 8015D	

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Southwest Geoscience  
2351 W. Northwest Hwy  
Dallas TX, 75220

Project Name: 2B-17  
Project Number: 07174-0003  
Project Manager: Kyle Summers

Reported:  
16-Oct-13 15:13

**Conf-12**  
**P310054-03 (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	1342005	10/15/13	10/15/13	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1342005	10/15/13	10/15/13	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1342005	10/15/13	10/15/13	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1342005	10/15/13	10/15/13	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1342005	10/15/13	10/15/13	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1342005	10/15/13	10/15/13	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1342005	10/15/13	10/15/13	EPA 8021B	
Surrogate: Bromochlorobenzene		92.7 %	80-120		1342005	10/15/13	10/15/13	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		94.0 %	80-120		1342005	10/15/13	10/15/13	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	4.98	mg/kg	1	1342005	10/15/13	10/15/13	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1342004	10/15/13	10/15/13	EPA 8015D	
GRO and DRO Combined Fractions	ND	4.98	mg/kg		[CALC]	10/15/13	10/15/13	EPA 8015D	

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 Project Name: 2B-17  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 16-Oct-13 15:13

**Conf-13**  
**P310054-04 (Solid)**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1	1342005	10/15/13	10/15/13	10/15/13	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1342005	10/15/13	10/15/13	10/15/13	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1342005	10/15/13	10/15/13	10/15/13	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1342005	10/15/13	10/15/13	10/15/13	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1342005	10/15/13	10/15/13	10/15/13	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1342005	10/15/13	10/15/13	10/15/13	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1342005	10/15/13	10/15/13	10/15/13	EPA 8021B	
Surrogate: Bromochlorobenzene		101 %		80-120	1342005	10/15/13	10/15/13	10/15/13	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		101 %		80-120	1342005	10/15/13	10/15/13	10/15/13	EPA 8021B	
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1342005	10/15/13	10/15/13	10/15/13	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1342004	10/15/13	10/15/13	10/15/13	EPA 8015D	
GRO and DRO Combined Fractions	ND	4.99	mg/kg		[CALC]	10/15/13	10/15/13	10/15/13	EPA 8015D	

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Southwest Geoscience 2351 W. Northwest Hwy Dallas TX, 75220	Project Name: 2B-17 Project Number: 07174-0003 Project Manager: Kyle Summers	Reported: 16-Oct-13 15:13
---	--	------------------------------

### 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 1342005 - Purge and Trap EPA 5030A

##### Blank (1342005-BLK1)

Prepared: 14-Oct-13 Analyzed: 16-Oct-13

Benzene	ND	0.05	mg/kg							
Toluene	ND	0.05	"							
Ethylbenzene	ND	0.05	"							
p,m-Xylene	ND	0.05	"							
o-Xylene	ND	0.05	"							
Total Xylenes	ND	0.05	"							
Total BTEX	ND	0.05	"							
Surrogate: 1,3-Dichlorobenzene	47.0		ug/L	50.0		94.0	80-120			
Surrogate: Bromochlorobenzene	45.9		"	50.0		91.8	80-120			

##### Duplicate (1342005-DUP1)

Source: P310047-01

Prepared: 14-Oct-13 Analyzed: 16-Oct-13

Benzene	ND	0.05	mg/kg		ND				30	
Toluene	ND	0.05	"		ND				30	
Ethylbenzene	ND	0.05	"		ND				30	
p,m-Xylene	ND	0.05	"		ND				30	
o-Xylene	ND	0.05	"		ND				30	
Surrogate: 1,3-Dichlorobenzene	43.9		ug/L	50.0		87.9	80-120			
Surrogate: Bromochlorobenzene	43.7		"	50.0		87.4	80-120			

##### Matrix Spike (1342005-MS1)

Source: P310047-01

Prepared: 14-Oct-13 Analyzed: 16-Oct-13

Benzene	55.0		ug/L	50.0	0.21	109	39-150			
Toluene	55.6		"	50.0	0.43	110	46-148			
Ethylbenzene	53.6		"	50.0	0.08	107	32-160			
p,m-Xylene	107		"	100	0.46	106	46-148			
o-Xylene	53.6		"	50.0	0.19	107	46-148			
Surrogate: 1,3-Dichlorobenzene	50.6		"	50.0		101	80-120			
Surrogate: Bromochlorobenzene	48.9		"	50.0		97.7	80-120			

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Southwest Geoscience	Project Name:	2B-17	
2351 W. Northwest Hwy	Project Number:	07174-0003	<b>Reported:</b>
Dallas TX, 75220	Project Manager:	Kyle Summers	16-Oct-13 15:13

### 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 1342004 - DRO Extraction EPA 3550C

<b>Blank (1342004-BLK1)</b>				Prepared: 14-Oct-13 Analyzed: 15-Oct-13						
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg							
<b>Duplicate (1342004-DUP1)</b>				Source: P310047-01 Prepared: 14-Oct-13 Analyzed: 15-Oct-13						
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg		ND				30	
<b>Matrix Spike (1342004-MS1)</b>				Source: P310047-01 Prepared: 14-Oct-13 Analyzed: 15-Oct-13						
Diesel Range Organics (C10-C28)	236		mg/L	250	2.96	93.4	75-125			

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Southwest Geoscience  
2351 W. Northwest Hwy  
Dallas TX, 75220

Project Name: 2B-17  
Project Number: 07174-0003  
Project Manager: Kyle Summers

**Reported:**  
16-Oct-13 15:13

### 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 1342005 - Purge and Trap EPA 5030A</b>										
<b>Blank (1342005-BLK1)</b>				Prepared: 14-Oct-13 Analyzed: 16-Oct-13						
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg							
<b>Duplicate (1342005-DUP1)</b>				Source: P310047-01 Prepared: 14-Oct-13 Analyzed: 16-Oct-13						
Gasoline Range Organics (C6-C10)	ND	4.98	mg/kg		ND				30	
<b>Matrix Spike (1342005-MS1)</b>				Source: P310047-01 Prepared: 14-Oct-13 Analyzed: 16-Oct-13						
Gasoline Range Organics (C6-C10)	0.64		mg/L	0.450	0.04	132	75-125			SPK1

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Southwest Geoscience  
2351 W. Northwest Hwy  
Dallas TX, 75220

Project Name: 2B-17  
Project Number: 07174-0003  
Project Manager: Kyle Summers

**Reported:**  
16-Oct-13 15:13

#### Notes and Definitions

SPK1 The spike recovery for this QC sample is outside of control limits.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

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# CHAIN OF CUSTODY RECORD

16206

Page 11 of 11

Client: <b>SWG/EROD</b>			Project Name / Location: <b>2B-17</b>			ANALYSIS / PARAMETERS														
Email results to: <b>Ryle Summers</b>			Sampler Name: <b>Aaron Bryant</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>07174-0003</b>																	
Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative															
					HNO <sub>3</sub>	HCl														
CONF -10	10/14/13	1400	P310054-01	1X402				X	X										✓	✓
CONF -11	↓	1405	P310054-02	↓				X	X										✓	✓
CONF -12	↓	1410	P310054-03	↓				X	X										✓	✓
CONF -13	↓	1515	P310054-04	↓				X	X										✓	✓
<div style="position: relative; width: 100%; height: 100%;"> <div style="position: absolute; top: 0; left: 0; width: 100%; height: 100%; border: 1px solid black; transform: rotate(45deg);"></div> <div style="position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%); font-size: 2em; font-weight: bold;">NFS</div> <div style="position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%); font-size: 1.5em;">AB</div> </div>																				
Relinquished by: (Signature)					Date	Time	Received by: (Signature)					Date	Time							
					10/14/13	4:14						10/14/13	4:14							
Relinquished by: (Signature)							Received by: (Signature)													
Sample Matrix							RUSH													
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.																				

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Pay Ref: RB 21200  
 AC 15404

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## Analytical Report

### Report Summary

Client: Southwest Geoscience  
Chain Of Custody Number: 16219  
Samples Received: 10/15/2013 11:00:00AM  
Job Number: 07174-0003  
Work Order: P310057  
Project Name/Location: 2B-17

Entire Report Reviewed By:

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

Date: 10/17/13

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.



Southwest Geoscience  
2351 W. Northwest Hwy  
Dallas TX, 75220

Project Name: 2B-17  
Project Number: 07174-0003  
Project Manager: Kyle Summers

**Reported:**  
17-Oct-13 08:57

### Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Conf-14	P310057-01A	Soil	10/15/13	10/15/13	Glass Jar, 4 oz.

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Southwest Geoscience  
2351 W. Northwest Hwy  
Dallas TX, 75220

Project Name: 2B-17  
Project Number: 07174-0003  
Project Manager: Kyle Summers

Reported:  
17-Oct-13 08:57

**Conf-14**  
**P310057-01 (Solid)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Volatile Organics by EPA 8021</b>									
Benzene	0.79	0.10	mg/kg	2	1342012	10/15/13	10/16/13	EPA 8021B	
Toluene	8.14	0.10	mg/kg	2	1342012	10/15/13	10/16/13	EPA 8021B	
Ethylbenzene	3.21	0.10	mg/kg	2	1342012	10/15/13	10/16/13	EPA 8021B	
p,m-Xylene	27.4	0.10	mg/kg	2	1342012	10/15/13	10/16/13	EPA 8021B	
o-Xylene	10.9	0.10	mg/kg	2	1342012	10/15/13	10/16/13	EPA 8021B	
Total Xylenes	38.3	0.10	mg/kg	2	1342012	10/15/13	10/16/13	EPA 8021B	
Total BTEX	50.4	0.10	mg/kg	2	1342012	10/15/13	10/16/13	EPA 8021B	
Surrogate: Bromochlorobenzene		171 %	80-120		1342012	10/15/13	10/16/13	EPA 8021B	Surr1
Surrogate: 1,3-Dichlorobenzene		246 %	80-120		1342012	10/15/13	10/16/13	EPA 8021B	Surr1
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	249	9.98	mg/kg	2	1342012	10/15/13	10/16/13	EPA 8015D	
Diesel Range Organics (C10-C28)	3580	30.0	mg/kg	1	1342014	10/15/13	10/16/13	EPA 8015D	
GRO and DRO Combined Fractions	3820	9.98	mg/kg		[CALC]	10/15/13	10/16/13	EPA 8015D	

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Southwest Geoscience	Project Name:	2B-17	Reported: 17-Oct-13 08:57
2351 W. Northwest Hwy	Project Number:	07174-0003	
Dallas TX, 75220	Project Manager:	Kyle Summers	

### 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 1342012 - Purge and Trap EPA 5030A

<b>Blank (1342012-BLK1)</b>				Prepared: 15-Oct-13 Analyzed: 16-Oct-13						
Benzene	ND	0.05	mg/kg							
Toluene	ND	0.05	"							
Ethylbenzene	ND	0.05	"							
p,m-Xylene	ND	0.05	"							
o-Xylene	ND	0.05	"							
Total Xylenes	ND	0.05	"							
Total BTEX	ND	0.05	"							
Surrogate: 1,3-Dichlorobenzene	45.3		ug/L	50.0		90.6	80-120			
Surrogate: Bromochlorobenzene	46.1		"	50.0		92.2	80-120			

<b>Duplicate (1342012-DUP1)</b>				Source: P310055-01		Prepared: 15-Oct-13 Analyzed: 16-Oct-13				
Benzene	ND	0.05	mg/kg		ND				30	
Toluene	ND	0.05	"		ND				30	
Ethylbenzene	ND	0.05	"		ND				30	
p,m-Xylene	ND	0.05	"		ND				30	
o-Xylene	ND	0.05	"		ND				30	
Surrogate: 1,3-Dichlorobenzene	45.5		ug/L	50.0		90.9	80-120			
Surrogate: Bromochlorobenzene	44.6		"	50.0		89.2	80-120			

<b>Matrix Spike (1342012-MS1)</b>				Source: P310055-01		Prepared: 15-Oct-13 Analyzed: 16-Oct-13				
Benzene	53.5		ug/L	50.0	0.14	107	39-150			
Toluene	54.3		"	50.0	0.48	108	46-148			
Ethylbenzene	52.7		"	50.0	0.09	105	32-160			
p,m-Xylene	105		"	100	0.25	104	46-148			
o-Xylene	52.6		"	50.0	0.17	105	46-148			
Surrogate: 1,3-Dichlorobenzene	49.7		"	50.0		99.4	80-120			
Surrogate: Bromochlorobenzene	48.5		"	50.0		97.0	80-120			

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Southwest Geoscience  
2351 W. Northwest Hwy  
Dallas TX, 75220

Project Name: 2B-17  
Project Number: 07174-0003  
Project Manager: Kyle Summers

Reported:  
17-Oct-13 08:57

### 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 1342012 - Purge and Trap EPA 5030A

##### Blank (1342012-BLK1)

Prepared: 15-Oct-13 Analyzed: 16-Oct-13

Gasoline Range Organics (C6-C10) ND 5.00 mg/kg

##### Duplicate (1342012-DUP1)

Source: P310055-01

Prepared: 15-Oct-13 Analyzed: 16-Oct-13

Gasoline Range Organics (C6-C10) ND 5.00 mg/kg ND 30

##### Matrix Spike (1342012-MS1)

Source: P310055-01

Prepared: 15-Oct-13 Analyzed: 16-Oct-13

Gasoline Range Organics (C6-C10) 0.71 mg/L 0.450 0.08 140 75-125 SPK1

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Southwest Geoscience	Project Name:	2B-17	
2351 W. Northwest Hwy	Project Number:	07174-0003	<b>Reported:</b>
Dallas TX, 75220	Project Manager:	Kyle Summers	17-Oct-13 08:57

### 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 1342014 - DRO Extraction EPA 3550C</b>										
<b>Blank (1342014-BLK1)</b>				Prepared: 15-Oct-13 Analyzed: 16-Oct-13						
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg							
<b>Duplicate (1342014-DUP1)</b>				Source: P310055-01 Prepared: 15-Oct-13 Analyzed: 16-Oct-13						
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg		ND				30	
<b>Matrix Spike (1342014-MS1)</b>				Source: P310055-01 Prepared: 15-Oct-13 Analyzed: 16-Oct-13						
Diesel Range Organics (C10-C28)	241		mg/L	250	15.1	90.3	75-125			

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Southwest Geoscience  
2351 W. Northwest Hwy  
Dallas TX, 75220

Project Name: 2B-17  
Project Number: 07174-0003  
Project Manager: Kyle Summers

**Reported:**  
17-Oct-13 08:57

#### Notes and Definitions

Surr1 Surrogate recovery was above acceptable limits.

SPK1 The spike recovery for this QC sample is outside of control limits.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

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# CHAIN OF CUSTODY RECORD

16219

Page 8 of 8

Client: <b>SWM / EPROD</b>			Project Name / Location: <b>2B-17</b>			ANALYSIS / PARAMETERS															
Email results to: <b>Kyle Summers</b>			Sampler Name: <b>AARON BRANT</b>			<div style="display: flex; justify-content: space-between;"> <div> TPH (Method 8015) <b>DEQ/12/13</b>  BTX (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 </div> </div>															
Client Phone No.: <b>903-821-5603</b>			Client No.: <b>071174-0003</b>																		
Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative		TPH	BTX	VOC	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															
CONF -14	10-15-13	10:00	P30057-01	1x4oz			X	X												X	X
<div style="position: relative; height: 300px;"> <div style="position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%);"> NFS AB </div> </div>																					
Relinquished by: (Signature) <i>[Signature]</i>					Date	Time	Received by: (Signature) <i>[Signature]</i>					Date	Time								
					10-15-13	11:00						10/15/13	11:00								
Relinquished by: (Signature)							Received by: (Signature)														
Sample Matrix							RUSH														
<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.



**envirotech**  
Analytical Laboratory

PAYKEY R1321200  
CC15404





## Analytical Report

### Report Summary

Client: Southwest Geoscience  
Chain Of Custody Number: 16225  
Samples Received: 10/15/2013 11:00:00AM  
Job Number: 07174-0003  
Work Order: P310058  
Project Name/Location: 2B-17

Entire Report Reviewed By:

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

Date: 10/17/13

Tim Cain, Laboratory Manager

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Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

Project Name: 2B-17  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 17-Oct-13 08:59

### Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Conf-6	P310058-01A	Soil	10/14/13	10/15/13	Glass Jar, 4 oz.
Conf-7	P310058-02A	Soil	10/14/13	10/15/13	Glass Jar, 4 oz.
Conf-8	P310058-03A	Soil	10/14/13	10/15/13	Glass Jar, 4 oz.
Conf-9	P310058-04A	Soil	10/14/13	10/15/13	Glass Jar, 4 oz.

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Southwest Geoscience  
2351 W. Northwest Hwy  
Dallas TX, 75220

Project Name: 2B-17  
Project Number: 07174-0003  
Project Manager: Kyle Summers

**Reported:**  
17-Oct-13 08:59

**Conf-6**

**P310058-01 (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	1342012	10/15/13	10/16/13	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1342012	10/15/13	10/16/13	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1342012	10/15/13	10/16/13	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1342012	10/15/13	10/16/13	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1342012	10/15/13	10/16/13	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1342012	10/15/13	10/16/13	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1342012	10/15/13	10/16/13	EPA 8021B	
<i>Surrogate: Bromochlorobenzene</i>		101 %	80-120		1342012	10/15/13	10/16/13	EPA 8021B	
<i>Surrogate: 1,3-Dichlorobenzene</i>		99.6 %	80-120		1342012	10/15/13	10/16/13	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1342012	10/15/13	10/16/13	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1342014	10/15/13	10/16/13	EPA 8015D	
GRO and DRO Combined Fractions	ND	4.99	mg/kg		[CALC]	10/15/13	10/16/13	EPA 8015D	

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Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: 2B-17  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 17-Oct-13 08:59

**Conf-7**
**P310058-02 (Solid)**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1	1342012	10/15/13	10/16/13	EPA 8021B		
Toluene	ND	0.05	mg/kg	1	1342012	10/15/13	10/16/13	EPA 8021B		
Ethylbenzene	ND	0.05	mg/kg	1	1342012	10/15/13	10/16/13	EPA 8021B		
p,m-Xylene	ND	0.05	mg/kg	1	1342012	10/15/13	10/16/13	EPA 8021B		
o-Xylene	ND	0.05	mg/kg	1	1342012	10/15/13	10/16/13	EPA 8021B		
Total Xylenes	ND	0.05	mg/kg	1	1342012	10/15/13	10/16/13	EPA 8021B		
Total BTEX	ND	0.05	mg/kg	1	1342012	10/15/13	10/16/13	EPA 8021B		
Surrogate: Bromochlorobenzene		97.4 %		80-120	1342012	10/15/13	10/16/13	EPA 8021B		
Surrogate: 1,3-Dichlorobenzene		96.0 %		80-120	1342012	10/15/13	10/16/13	EPA 8021B		
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1342012	10/15/13	10/16/13	EPA 8015D		
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1342014	10/15/13	10/16/13	EPA 8015D		
GRO and DRO Combined Fractions	ND	5.00	mg/kg		[CALC]	10/15/13	10/16/13	EPA 8015D		

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Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: 2B-17  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 17-Oct-13 08:59

**Conf-8**  
**P310058-03 (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	1342012	10/15/13	10/16/13	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1342012	10/15/13	10/16/13	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1342012	10/15/13	10/16/13	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1342012	10/15/13	10/16/13	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1342012	10/15/13	10/16/13	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1342012	10/15/13	10/16/13	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1342012	10/15/13	10/16/13	EPA 8021B	
<i>Surrogate: Bromochlorobenzene</i>		99.2 %	80-120		1342012	10/15/13	10/16/13	EPA 8021B	
<i>Surrogate: 1,3-Dichlorobenzene</i>		98.1 %	80-120		1342012	10/15/13	10/16/13	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1342012	10/15/13	10/16/13	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1342014	10/15/13	10/16/13	EPA 8015D	
GRO and DRO Combined Fractions	ND	4.99	mg/kg		[CALC]	10/15/13	10/16/13	EPA 8015D	

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Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: 2B-17  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 17-Oct-13 08:59

**Conf-9**  
**P310058-04 (Solid)**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1	1342012	10/15/13	10/15/13	10/16/13	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1342012	10/15/13	10/15/13	10/16/13	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1342012	10/15/13	10/15/13	10/16/13	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1342012	10/15/13	10/15/13	10/16/13	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1342012	10/15/13	10/15/13	10/16/13	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1342012	10/15/13	10/15/13	10/16/13	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1342012	10/15/13	10/15/13	10/16/13	EPA 8021B	
Surrogate: Bromochlorobenzene		96.0 %	80-120		1342012	10/15/13	10/15/13	10/16/13	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		95.7 %	80-120		1342012	10/15/13	10/15/13	10/16/13	EPA 8021B	
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1342012	10/15/13	10/15/13	10/16/13	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1342014	10/15/13	10/15/13	10/16/13	EPA 8015D	
GRO and DRO Combined Fractions	ND	5.00	mg/kg		[CALC]	10/15/13	10/15/13	10/16/13	EPA 8015D	

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Southwest Geoscience 2351 W. Northwest Hwy Dallas TX, 75220	Project Name: 2B-17 Project Number: 07174-0003 Project Manager: Kyle Summers	Reported: 17-Oct-13 08:59
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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 1342012 - Purge and Trap EPA 5030A

##### Blank (1342012-BLK1)

Prepared: 15-Oct-13 Analyzed: 16-Oct-13

Benzene	ND	0.05	mg/kg							
Toluene	ND	0.05	"							
Ethylbenzene	ND	0.05	"							
p,m-Xylene	ND	0.05	"							
o-Xylene	ND	0.05	"							
Total Xylenes	ND	0.05	"							
Total BTEX	ND	0.05	"							
Surrogate: 1,3-Dichlorobenzene	45.3		ug/L	50.0		90.6	80-120			
Surrogate: Bromochlorobenzene	46.1		"	50.0		92.2	80-120			

##### Duplicate (1342012-DUP1)

Source: P310055-01

Prepared: 15-Oct-13 Analyzed: 16-Oct-13

Benzene	ND	0.05	mg/kg		ND				30	
Toluene	ND	0.05	"		ND				30	
Ethylbenzene	ND	0.05	"		ND				30	
p,m-Xylene	ND	0.05	"		ND				30	
o-Xylene	ND	0.05	"		ND				30	
Surrogate: 1,3-Dichlorobenzene	45.5		ug/L	50.0		90.9	80-120			
Surrogate: Bromochlorobenzene	44.6		"	50.0		89.2	80-120			

##### Matrix Spike (1342012-MS1)

Source: P310055-01

Prepared: 15-Oct-13 Analyzed: 16-Oct-13

Benzene	53.5		ug/L	50.0	0.14	107	39-150			
Toluene	54.3		"	50.0	0.48	108	46-148			
Ethylbenzene	52.7		"	50.0	0.09	105	32-160			
p,m-Xylene	105		"	100	0.25	104	46-148			
o-Xylene	52.6		"	50.0	0.17	105	46-148			
Surrogate: 1,3-Dichlorobenzene	49.7		"	50.0		99.4	80-120			
Surrogate: Bromochlorobenzene	48.5		"	50.0		97.0	80-120			

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Southwest Geoscience	Project Name:	2B-17	Reported: 17-Oct-13 08:59
2351 W. Northwest Hwy	Project Number:	07174-0003	
Dallas TX, 75220	Project Manager:	Kyle Summers	

### 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 1342012 - Purge and Trap EPA 5030A</b>										
<b>Blank (1342012-BLK1)</b>				Prepared: 15-Oct-13 Analyzed: 16-Oct-13						
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg							
<b>Duplicate (1342012-DUP1)</b>				Source: P310055-01 Prepared: 15-Oct-13 Analyzed: 16-Oct-13						
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg		ND				30	
<b>Matrix Spike (1342012-MS1)</b>				Source: P310055-01 Prepared: 15-Oct-13 Analyzed: 16-Oct-13						
Gasoline Range Organics (C6-C10)	0.71		mg/L	0.450	0.08	140	75-125			SPK1

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Southwest Geoscience	Project Name:	2B-17	Reported: 17-Oct-13 08:59
2351 W. Northwest Hwy	Project Number:	07174-0003	
Dallas TX, 75220	Project Manager:	Kyle Summers	

### 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 1342014 - DRO Extraction EPA 3550C</b>										
<b>Blank (1342014-BLK1)</b>				Prepared: 15-Oct-13 Analyzed: 16-Oct-13						
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg							
<b>Duplicate (1342014-DUP1)</b>				Source: P310055-01 Prepared: 15-Oct-13 Analyzed: 16-Oct-13						
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg		ND				30	
<b>Matrix Spike (1342014-MS1)</b>				Source: P310055-01 Prepared: 15-Oct-13 Analyzed: 16-Oct-13						
Diesel Range Organics (C10-C28)	241		mg/L	250	15.1	90.3	75-125			

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Southwest Geoscience  
2351 W. Northwest Hwy  
Dallas TX, 75220

Project Name: 2B-17  
Project Number: 07174-0003  
Project Manager: Kyle Summers

**Reported:**  
17-Oct-13 08:59

#### Notes and Definitions

SPK1 The spike recovery for this QC sample is outside of control limits.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

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# CHAIN OF CUSTODY RECORD

16225

Page 11 of 11

Client: <b>JW G EPADD</b>			Project Name / Location: <b>213-17</b>			ANALYSIS / PARAMETERS													
Email results to: <b>KYLE SUMMERS</b>			Sampler Name: <b>AARON BRYANT</b>			<div style="display: flex; justify-content: space-between; font-size: 0.8em;"> <div>TPH (Method 8015)</div> <div>BTEX (Method 8021)</div> <div>VOC (Method 8260)</div> <div>PCRA 8 Metals</div> <div>Cation / Anion</div> <div>PCI</div> <div>TCLP with H/P</div> <div>CO Table 910-1</div> <div>TPH (418.1)</div> <div>CHLORIDE</div> <div>Sample Cool</div> <div>Sample Intact</div> </div>													
Client Phone No.: <b>903-821-5603</b>			Client No.: <b>07174-0003</b>																

Sample No. / Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative			TPH	BTEX	VOC	PCRA 8 Metals	Cation / Anion	PCI	TCLP with H/P	CO Table 910-1	TPH (418.1)	CHLORIDE			Sample Cool	Sample Intact
					HNO <sub>3</sub>	HCl															
CONF - 6	10-14-13	1300	P310058-01	1x40Z				X	X											X	X
CONF - 7	↓	1305	P310058-02	↓				X	X											X	X
CONF - 8	↓	1310	P310058-03	↓				X	X											X	X
CONF - 9	↓	1315	P310058-04	↓				X	X											X	X
<div style="position: relative;"> <div style="position: absolute; top: 0; left: 0; width: 100%; height: 100%; border-left: 2px solid black; border-bottom: 2px solid black;"></div> <div style="position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%); font-size: 2em;">NFS.</div> <div style="position: absolute; top: 60%; left: 50%; transform: translate(-50%, -50%); font-size: 2em;">AB</div> </div>																					

Relinquished by: (Signature)		Date: 10-15-13	Time: 11:00	Received by: (Signature)		Date: 10-15-13	Time: 11:00
Relinquished by: (Signature)				Received by: (Signature)			
Sample Matrix				RUSH			
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.

PAYKEY RB21200  
 CC15404



## Analytical Report

### Report Summary

Client: Southwest Geoscience  
Chain Of Custody Number: 16776  
Samples Received: 3/24/2014 4:16:00PM  
Job Number: 07174-0003  
Work Order: P403083  
Project Name/Location: 2B-17

Entire Report Reviewed By:

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

Date: 3/26/14

Tim Cain, Laboratory Manager

Supplement to analytical report generated on: 3/26/14 11:21 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.

Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

Project Name: 2B-17  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 26-Mar-14 11:24

### Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
CONF-15	P403083-01A	Soil	03/24/14	03/24/14	Glass Jar, 4 oz.
CONF-16	P403083-02A	Soil	03/24/14	03/24/14	Glass Jar, 4 oz.
CONF-17	P403083-03A	Soil	03/24/14	03/24/14	Glass Jar, 4 oz.
CONF-18	P403083-04A	Soil	03/24/14	03/24/14	Glass Jar, 4 oz.
CONF-19	P403083-05A	Soil	03/24/14	03/24/14	Glass Jar, 4 oz.

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Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: 2B-17  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

 Reported:  
 26-Mar-14 11:24

**CONF-15**  
**P403083-01 (Solid)**

Analyte	Reporting			Dilution	Batch	Prepared	Analyzed	Method	Notes
	Result	Limit	Units						
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8021B	
Surrogate: Bromochlorobenzene		96.6 %	80-120		1413003	03/25/14	03/25/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		94.6 %	80-120		1413003	03/25/14	03/25/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1413002	03/25/14	03/25/14	EPA 8015D	

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Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: 2B-17  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 26-Mar-14 11:24

**CONF-16**  
**P403083-02 (Solid)**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		98.8 %		80-120	1413003	03/25/14	03/25/14	EPA 8021B	
Surrogate: Bromochlorobenzene		100 %		80-120	1413003	03/25/14	03/25/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1413002	03/25/14	03/25/14	EPA 8015D	

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Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: 2B-17  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

 Reported:  
 26-Mar-14 11:24

**CONF-17**  
**P403083-03 (Solid)**

Analyte	Reporting			Dilution	Batch	Prepared	Analyzed	Method	Notes
	Result	Limit	Units						
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8021B	
Surrogate: Bromochlorobenzene		101 %		80-120	1413003	03/25/14	03/25/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		95.9 %		80-120	1413003	03/25/14	03/25/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1413002	03/25/14	03/25/14	EPA 8015D	

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Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: 2B-17  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 26-Mar-14 11:24

**CONF-18**  
**P403083-04 (Solid)**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1		1413003	03/25/14	03/25/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1		1413003	03/25/14	03/25/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1		1413003	03/25/14	03/25/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1		1413003	03/25/14	03/25/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1		1413003	03/25/14	03/25/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1		1413003	03/25/14	03/25/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1		1413003	03/25/14	03/25/14	EPA 8021B	
Surrogate: Bromochlorobenzene		96.5 %		80-120		1413003	03/25/14	03/25/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		97.3 %		80-120		1413003	03/25/14	03/25/14	EPA 8021B	
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1		1413003	03/25/14	03/25/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1		1413002	03/25/14	03/25/14	EPA 8015D	

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Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: 2B-17  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 26-Mar-14 11:24

**CONF-19**  
**P403083-05 (Solid)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b><u>Volatile Organics by EPA 8021</u></b>									
Benzene	ND	0.05	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8021B	
<i>Surrogate: 1,3-Dichlorobenzene</i>		96.6 %		80-120	1413003	03/25/14	03/25/14	EPA 8021B	
<i>Surrogate: Bromochlorobenzene</i>		97.7 %		80-120	1413003	03/25/14	03/25/14	EPA 8021B	
<b><u>Nonhalogenated Organics by 8015</u></b>									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1413003	03/25/14	03/25/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1413002	03/25/14	03/25/14	EPA 8015D	

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Southwest Geoscience  
2351 W. Northwest Hwy  
Dallas TX, 75220

Project Name: 2B-17  
Project Number: 07174-0003  
Project Manager: Kyle Summers

Reported:  
26-Mar-14 11:24

### 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 1413003 - Purge and Trap EPA 5030A

##### Blank (1413003-BLK1)

Prepared: 24-Mar-14 Analyzed: 25-Mar-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	46.5		ug/L	50.0		93.1	80-120			
Surrogate: Bromochlorobenzene	47.2		"	50.0		94.3	80-120			

##### Duplicate (1413003-DUP1)

Source: P403073-02

Prepared: 24-Mar-14 Analyzed: 25-Mar-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	50.0		ug/L	50.0		100	80-120			
Surrogate: Bromochlorobenzene	50.0		"	50.0		100	80-120			

##### Matrix Spike (1413003-MS1)

Source: P403073-02

Prepared: 24-Mar-14 Analyzed: 25-Mar-14

Benzene	50.0		ug/L	50.0	ND	99.9	39-150			
Toluene	49.5		"	50.0	ND	99.0	46-148			
Ethylbenzene	49.3		"	50.0	ND	98.6	32-160			
p,m-Xylene	97.6		"	100	ND	97.6	46-148			
o-Xylene	48.7		"	50.0	ND	97.3	46-148			
Surrogate: 1,3-Dichlorobenzene	52.0		"	50.0		104	80-120			
Surrogate: Bromochlorobenzene	51.9		"	50.0		104	80-120			

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laboratory@envirotech-inc.com



Southwest Geoscience  
2351 W. Northwest Hwy  
Dallas TX, 75220

Project Name: 2B-17  
Project Number: 07174-0003  
Project Manager: Kyle Summers

**Reported:**  
26-Mar-14 11:24

### 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 1413002 - DRO Extraction EPA 3550C

##### Blank (1413002-BLK1)

Prepared: 24-Mar-14 Analyzed: 25-Mar-14

Diesel Range Organics (C10-C28) ND 30.0 mg/kg

##### Duplicate (1413002-DUP1)

Source: P403073-02

Prepared: 24-Mar-14 Analyzed: 25-Mar-14

Diesel Range Organics (C10-C28) ND 30.0 mg/kg ND 30

##### Matrix Spike (1413002-MS1)

Source: P403073-02

Prepared: 24-Mar-14 Analyzed: 25-Mar-14

Diesel Range Organics (C10-C28) 44.3 mg/L 250 ND 17.7 75-125

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Southwest Geoscience	Project Name:	2B-17	Reported: 26-Mar-14 11:24
2351 W. Northwest Hwy	Project Number:	07174-0003	
Dallas TX, 75220	Project Manager:	Kyle Summers	

### 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 1413003 - Purge and Trap EPA 5030A

<b>Blank (1413003-BLK1)</b>				Prepared: 24-Mar-14 Analyzed: 25-Mar-14						
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg							
<b>Duplicate (1413003-DUP1)</b>				Source: P403073-02 Prepared: 24-Mar-14 Analyzed: 25-Mar-14						
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg		ND				30	
<b>Matrix Spike (1413003-MS1)</b>				Source: P403073-02 Prepared: 24-Mar-14 Analyzed: 25-Mar-14						
Gasoline Range Organics (C6-C10)	0.49		mg/L	0.450	0.01	106	75-125			

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Southwest Geoscience  
2351 W. Northwest Hwy  
Dallas TX, 75220

Project Name: 2B-17  
Project Number: 07174-0003  
Project Manager: Kyle Summers

**Reported:**  
26-Mar-14 11:24

### 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

16776

Client: <b>SWG</b>			Project Name / Location: <b>2B-17</b>			ANALYSIS / PARAMETERS														
Email results to: <b>Kyle Summers</b>			Sampler Name: <b>AARON BRYANT</b>			<div style="display: flex; flex-direction: row;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: small;">TPH (Method 8015) <b>0.26/0.25</b></div> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: small;">BTX (Method 8021)</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: small;">VOC (Method 8260)</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: small;">RCRA 8 Metals</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: small;">Cation / Anion</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: small;">RCI</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: small;">TCLP with H/P</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: small;">CO Table 910-1</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: small;">TPH (418.1)</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: small;">CHLORIDE</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: small;">Sample Cool</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: small;">Sample Intact</div> </div>														
Client Phone No.: <b>903-821-5603</b>			Client No.: <b>07174-0063</b>																	

Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative			TPH	BTX	VOC	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															
CONF -15	3/24/14	1200	P403083-01	1 X 4 oz				X	X												✓
CONF -16	↓	1230	P403083-02	↓				X	X												✓
CONF -17	↓	1300	P403083-03	↓				X	X												✓
CONF -18	↓	1400	P403083-04	↓				X	X												✓
CONF -19	↓	1500	P403083-05	↓				X	X												✓

Relinquished by: (Signature) <i>[Signature]</i>		Date: <b>3/24/14</b>	Time: <b>4:16</b>	Received by: (Signature) <i>[Signature]</i>		Date: <b>3/24/14</b>	Time: <b>4:16</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"/>							

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

**RUSH**

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**envirotech**  
Analytical Laboratory

3.3  
5.5  
5.8



## Analytical Report

### Report Summary

Client: Southwest Geoscience  
Chain Of Custody Number: 16780  
Samples Received: 3/25/2014 1:27:00PM  
Job Number: 07174-0003  
Work Order: P403090  
Project Name/Location: 2B-17

Entire Report Reviewed By:

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

Tim Cain, Laboratory Manager

Date: 3/27/14

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.



Southwest Geoscience  
2351 W. Northwest Hwy  
Dallas TX, 75220

Project Name: 2B-17  
Project Number: 07174-0003  
Project Manager: Kyle Summers

**Reported:**  
27-Mar-14 11:35

### Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
CONF-20	P403090-01A	Soil	03/25/14	03/25/14	Glass Jar, 4 oz.
CONF-21	P403090-02A	Soil	03/25/14	03/25/14	Glass Jar, 4 oz.
CONF-22	P403090-03A	Soil	03/25/14	03/25/14	Glass Jar, 4 oz.
CONF-23	P403090-04A	Soil	03/25/14	03/25/14	Glass Jar, 4 oz.

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Southwest Geoscience	Project Name:	2B-17	Reported: 27-Mar-14 11:35
2351 W. Northwest Hwy	Project Number:	07174-0003	
Dallas TX, 75220	Project Manager:	Kyle Summers	

**CONF-20**  
**P403090-01 (Solid)**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1413014	03/25/14	03/25/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1413014	03/25/14	03/25/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1413014	03/25/14	03/25/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1413014	03/25/14	03/25/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1413014	03/25/14	03/25/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1413014	03/25/14	03/25/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1413014	03/25/14	03/25/14	EPA 8021B	
Surrogate: Bromochlorobenzene		94.1 %		80-120	1413014	03/25/14	03/25/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		91.3 %		80-120	1413014	03/25/14	03/25/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1413014	03/25/14	03/25/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1413013	03/25/14	03/25/14	EPA 8015D	

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Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: 2B-17  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 27-Mar-14 11:35

**CONF-21**  
**P403090-02 (Solid)**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1413014	03/25/14	03/25/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1413014	03/25/14	03/25/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1413014	03/25/14	03/25/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1413014	03/25/14	03/25/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1413014	03/25/14	03/25/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1413014	03/25/14	03/25/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1413014	03/25/14	03/25/14	EPA 8021B	
Surrogate: Bromochlorobenzene		96.2 %	80-120		1413014	03/25/14	03/25/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		93.3 %	80-120		1413014	03/25/14	03/25/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1413014	03/25/14	03/25/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1413013	03/25/14	03/25/14	EPA 8015D	

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Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: 2B-17  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 27-Mar-14 11:35

**CONF-22**
**P403090-03 (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	1413014	03/25/14	03/25/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1413014	03/25/14	03/25/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1413014	03/25/14	03/25/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1413014	03/25/14	03/25/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1413014	03/25/14	03/25/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1413014	03/25/14	03/25/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1413014	03/25/14	03/25/14	EPA 8021B	
<i>Surrogate: Bromochlorobenzene</i>		89.3 %			1413014	03/25/14	03/25/14	EPA 8021B	
<i>Surrogate: 1,3-Dichlorobenzene</i>		85.1 %			1413014	03/25/14	03/25/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1413014	03/25/14	03/25/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1413013	03/25/14	03/25/14	EPA 8015D	

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Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: 2B-17  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 27-Mar-14 11:35

**CONF-23**  
**P403090-04 (Solid)**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1		1413014	03/25/14	03/25/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1		1413014	03/25/14	03/25/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1		1413014	03/25/14	03/25/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1		1413014	03/25/14	03/25/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1		1413014	03/25/14	03/25/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1		1413014	03/25/14	03/25/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1		1413014	03/25/14	03/25/14	EPA 8021B	
Surrogate: Bromochlorobenzene		86.7 %		80-120		1413014	03/25/14	03/25/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		86.3 %		80-120		1413014	03/25/14	03/25/14	EPA 8021B	
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1		1413014	03/25/14	03/25/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1		1413013	03/25/14	03/25/14	EPA 8015D	

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Southwest Geoscience  
2351 W. Northwest Hwy  
Dallas TX, 75220

Project Name: 2B-17  
Project Number: 07174-0003  
Project Manager: Kyle Summers

Reported:  
27-Mar-14 11:35

### 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 1413014 - Purge and Trap EPA 5030A

##### Blank (1413014-BLK1)

Prepared & Analyzed: 25-Mar-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	46.3		ug/L	50.0		92.5	80-120			
Surrogate: Bromochlorobenzene	47.3		"	50.0		94.7	80-120			

##### Duplicate (1413014-DUP1)

Source: P403090-01

Prepared & Analyzed: 25-Mar-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	48.6		ug/L	50.0		97.1	80-120			
Surrogate: Bromochlorobenzene	49.3		"	50.0		98.6	80-120			

##### Matrix Spike (1413014-MS1)

Source: P403090-01

Prepared & Analyzed: 25-Mar-14

Benzene	46.5		ug/L	50.0	ND	93.0	39-150			
Toluene	46.4		"	50.0	ND	92.7	46-148			
Ethylbenzene	46.0		"	50.0	ND	92.0	32-160			
p,m-Xylene	92.1		"	100	ND	92.1	46-148			
o-Xylene	46.5		"	50.0	ND	92.9	46-148			
Surrogate: 1,3-Dichlorobenzene	47.6		"	50.0		95.2	80-120			
Surrogate: Bromochlorobenzene	47.3		"	50.0		94.5	80-120			

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5796 US Highway 64, Farmington, NM 87401

Ph (505) 632-0615 Fx (505) 632-1865

Three Springs - 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (970) 259-0615 Fr (800) 362-1879

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

Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

Project Name: 2B-17  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 27-Mar-14 11:35

### 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 1413013 - DRO Extraction EPA 3550C

##### Blank (1413013-BLK1)

Prepared & Analyzed: 25-Mar-14

Diesel Range Organics (C10-C28) ND 29.9 mg/kg

##### Duplicate (1413013-DUP1)

Source: P403090-01

Prepared & Analyzed: 25-Mar-14

Diesel Range Organics (C10-C28) ND 29.9 mg/kg ND 30

##### Matrix Spike (1413013-MS1)

Source: P403090-01

Prepared & Analyzed: 25-Mar-14

Diesel Range Organics (C10-C28) 60.4 mg/L 250 ND 24.2 75-125 SPK1

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Southwest Geoscience  
2351 W. Northwest Hwy  
Dallas TX, 75220

Project Name: 2B-17  
Project Number: 07174-0003  
Project Manager: Kyle Summers

Reported:  
27-Mar-14 11:35

### 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 1413014 - Purge and Trap EPA 5030A

##### Blank (1413014-BLK1)

Prepared & Analyzed: 25-Mar-14

Gasoline Range Organics (C6-C10) ND 4.98 mg/kg

##### Duplicate (1413014-DUP1)

Source: P403090-01

Prepared & Analyzed: 25-Mar-14

Gasoline Range Organics (C6-C10) ND 4.99 mg/kg ND 30

##### Matrix Spike (1413014-MS1)

Source: P403090-01

Prepared & Analyzed: 25-Mar-14

Gasoline Range Organics (C6-C10) 0.46 mg/L 0.450 ND 102 75-125

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



Southwest Geoscience  
2351 W. Northwest Hwy  
Dallas TX, 75220

Project Name: 2B-17  
Project Number: 07174-0003  
Project Manager: Kyle Summers

**Reported:**  
27-Mar-14 11:35

#### Notes and Definitions

SPK1 The spike recovery for this QC sample is outside of control limits.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

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16780

5795 US Highway 64 • Farmington, NM 87401 • 505-632-0615 • Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301 • [laboratory@envirotech-inc.com](mailto:laboratory@envirotech-inc.com)

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

State of New Mexico  
Energy Minerals and Natural Resources

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

Form C-141  
Revised August 8, 2011

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

**Release Notification and Corrective Action**

**OPERATOR**

☐ Initial Report ☒ Final Report

Name of Company: Enterprise Field Services LLC	Contact: Thomas Long	
Address: 614 Reilly Ave, Farmington, NM 87401	Telephone No. 505-599-2286	
Facility Name: Gerk Gas Com #1	Facility Type: Well Tie/Gathering Line	
Surface Owner: Private	Mineral Owner: BLM	API No.

**LOCATION OF RELEASE**

Unit Letter <b>B</b>	Section <b>30</b>	Township <b>29N</b>	Range <b>9W</b>	Feet from the	North/South Line	Feet from the	East/West Line	County <b>San Juan</b>
-------------------------	----------------------	------------------------	--------------------	---------------	------------------	---------------	----------------	---------------------------

Latitude 36.700710 Longitude -107.817140

**NATURE OF RELEASE**

Type of Release: Natural Gas and Natural Gas Liquids	Volume of Release: <b>Unknown amount of natural gas; estimated 3 to 5 bbls of liquids</b>	Volume Recovered: <b>Unknown</b>
Source of Release: External Damage to the Pipeline	Date and Hour of Occurrence: <b>1/14/2014 @ 1:15p.m.</b>	Date and Hour of Discovery: <b>1/14/2014 @ 1:15p.m.</b>
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 - Jonathan Kelly	
By Whom? Thomas Long	Date and Hour: <b>1/22/2014 @ 1:00 p.m.</b>	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

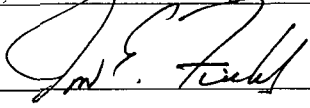
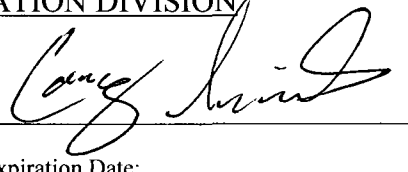
OIL CONS. DIV DIST. 3  
MAY 05 2014

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* A release from the well tie to the Gerk Gas Com #1. The release was due external damage to the pipeline. The well was isolated and LOTO (lock out tag out) was applied. Repairs were complete the week of January 13, 2014. Remediation was complete the week of February 3, 2014.

Describe Area Affected and Cleanup Action Taken.\* An area of estimated twenty-five (25) feet by twenty-five (25) feet was impacted. Third party environmental contractor oversaw remediation activities and collected closure samples. Approximately one hundred-eighty (180) cubic yards of impacted soil was excavated and transported to a NMOCD land farm facility. Potassium permanganate was applied to the excavation prior to backfill. 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>5/14/14</u>	Expiration Date:
E-mail Address: jefields@eprod.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: <u>4-30-2014</u> Phone: (713)381-6684	See Adjusted Site Ranking	

\* Attach Additional Sheets If Necessary

#NCS 141 3434 716

54

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CORRECTIVE ACTION REPORT

OIL CONS. DIV DIST. 3

MAY 05 2014

Property:

Gerck Com #1 Pipeline Release  
NE 1/4, S30 T29N R9W  
San Juan County, New Mexico

April 4, 2014  
SWG Project No. 0414G002

Prepared for:

Enterprise Products Operating LLC  
614 Reilly Avenue  
Farmington, NM 87401  
Attn: Mr. Tom Long

Prepared by:

  
\_\_\_\_\_  
Kyle Summers, C.P.G.  
Branch Manager

  
\_\_\_\_\_  
B. Chris Mitchell, P.G.  
Principal Geoscientist

**Southwest**  
GEOSCIENCE

606 S. Rio Grande Avenue  
Unit A, Downstairs West  
Aztec, NM 87410  
Ph: (505) 334-5200  
Fax: (505) 334-5204

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              Figure 2 – Site Vicinity Map  
              Figure 3 – Site Map

Appendix B: Executed C-138 Solid Waste Acceptance Forms

Appendix C: Photographic Documentation

Appendix D: Tables

Appendix E: Laboratory Analytical Reports &  
              Chain of Custody Documentation

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## CORRECTIVE ACTION REPORT

Gerk Com #1 Pipeline Release Site  
NE 1/4, S30 T29N R9W  
San Juan County, New Mexico

SWG Project No. 0414G002

### 1.0 INTRODUCTION

#### 1.1 Site Description & Background

The Gerk Com #1 Pipeline Release Site is located within the Enterprise Products Operating LLC (Enterprise) pipeline right-of-way (ROW) in the northeast (NE) ¼ of Section 30 in Township 29 North and Range 9 West in rural San Juan County, New Mexico, referred to hereinafter as the "Site" or "subject Site". The Site is located on private property owned by B. McCarthy and consists of native vegetation rangeland periodically interrupted with oil and gas gathering facilities, including one (1) Enterprise natural gas gathering pipeline which traverses the area from east to west.

On January 17th, 2014, Enterprise shut in the Gerk Com #1 pipeline and initiated excavation activities at the Site in an attempt to locate a potential leak. The leak was subsequently identified and repaired. An estimated five (5) barrels of condensate/water mixture was potentially released from the pipeline as a result of internal corrosion. The leak was identified by a release of natural gas at the ground surface. Very slight soil discoloration was visible at the surface.

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 chemicals 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.

#### 1.3 Standard of Care

Southwest Geoscience's (SWG'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. SWG makes no warranties, expressed or implied, as to the services performed hereunder. Additionally, SWG 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.

#### 1.4 Additional Limitations

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 SWG 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. SWG's findings and recommendations are based solely upon data available to SWG at the time of these services.

#### 1.5 Reliance

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 express written authorization of Enterprise and SWG. 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 SWG's Agreement. The limitation of liability defined in the agreement is the aggregate limit of SWG's liability to the client.

#### 2.0 SITE RANKING

In accordance with the New Mexico ENMRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases*, SWG 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 table below:

Ranking Criteria			Ranking Score
Depth to Groundwater	<50 feet	20	CS 10* 0 5/14/14
	<del>50 to 99 feet</del>	<del>10</del>	
	>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
	<del>200 to 1,000 feet</del>	<del>10</del>	
	>1,000 feet	0	
Total Ranking Score			0

\*Based on an anticipated groundwater depth of <100 feet below grade surface (bgs).

Based on SWG's evaluation of the scoring criteria, the Site would have a Total Ranking Score of 10. This ranking is based on the following:

- The nearest identified water well documented by the Office of the State Engineer website database is located over 2,000 feet west of the Site, with a recorded depth to water of 450 feet. However, due to the proximity of the valley floor a depth to water of approximately 100 feet bgs is possible.
- No surface water body was identified within 1,000 feet of the site. Two unnamed ephemeral washes are located within 600 feet and 800 feet, respectively, from the Site, but appear to only convey water during significant rain events.

### **3.0 RESPONSE ACTIONS**

#### **3.1 Soil Excavation Activities**

On January 17th, 2014, Enterprise shut in the Gerk Com #1 pipeline and initiated excavation activities at the Site to locate and repair a potential leak. During the corrective action activities, West States Energy Contractors provided heavy equipment and labor support, and Kyle Summers and Aaron Bryant, SWG environmental professionals, provided environmental support.

During the first stage of corrective action, approximately 180 cubic yards of hydrocarbon affected soils were excavated at the Site. Based on initial sampling results, the excavation was extended approximately 10 feet from the initial point of release to the north and south, after which additional confirmation samples were collected.

Analytical results for soils remaining in place indicate remaining hydrocarbon impact on the excavation floor directly below the point of release; however, competent sandstone rendered further excavation impracticable. All other areas of the excavation exhibited COC levels below the OCD Remediation Action Levels (RALs).

Enterprise obtained permission from the OCD to apply potassium permanganate to the floor of the excavation prior to backfilling and closing the Site.

The total depth of the final excavation reached approximately 6 feet bgs near the source of the release, and approximately 5 feet bgs in the remaining original excavation footprint. The overall average surface expression of the excavation measured approximately 25 feet long by 20 feet wide.

A total of approximately 180 cubic yards of hydrocarbon affected soils were transported to the Envirotech landfarm near Hilltop, NM for disposal/remediation. The executed C-138 forms are provided in Appendix B. The excavation was backfilled with clean imported fill and contoured to surrounding grade.

During excavation activities, air in the breathing zone was monitored to ensure that the Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL) of 200 parts per million (ppm) Time Weighted Average (TWA) for an 8-hour work day was not exceeded. Additionally, Enterprise monitored the excavation for explosive atmosphere conditions and oxygen deficiency prior to any entries into the excavation.

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



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

SWG screened head-space samples of the impacted soils with a photoionization detector (PID) fitted with a 10.6 eV lamp to estimate excavation limits.

SWG's soil sampling program included the collection of thirteen (13) discrete confirmation samples (S-1 through S-13) from the side walls and bottom of the excavation for laboratory analysis. The soil sample locations were selected based on visual, olfactory and/or PID evidence of potential impairment and excavation dimensions.

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 label, 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 Farmington, New Mexico for 24-hr rush analysis.

### 4.0 LABORATORY ANALYTICAL METHODS

Confirmation soil samples were 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 (GRO) 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.

### 5.0 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.

#### 5.1 Confirmation Soil Samples

SWG compared the BTEX and TPH concentrations or reporting limits (RLs) associated with the thirteen (13) confirmation samples collected from the excavated area to the OCD *Remediation Action Levels* for sites having a total ranking score of "10".

- The laboratory analyses of the confirmation samples collected from soils remaining in place did not exhibit benzene concentrations above the OCD *Remediation Action Level*.
- The laboratory analyses of the confirmation samples S-2, S-4, and S-6 through S-12 collected from soils remaining in place did not exhibit total BTEX concentrations above the OCD *Remediation Action Level*.
- The laboratory analysis of confirmation sample S-13 exhibited a total BTEX concentration remaining in soil of 121 mg/Kg, which is above the OCD *Remediation Action Level* of 50 mg/Kg.
- The laboratory analyses of confirmation samples S-2, S-4, and S-6 through S-13 collected from soils remaining in place did not exhibit TPH GRO/DRO concentrations above the OCD *Remediation Action Level* of 1,000 mg/Kg for a Site ranking of "10".
- The laboratory analyses of confirmation samples S-1, S-3, and S-5 exhibited total BTEX and/or TPH GRO/DRO concentrations above the OCD *Remediation Action Levels*, however, these affected soils were removed for disposal/treatment during the excavation activities.

Based on analytical and screening results, confirmation sample S-13 exhibited total BTEX concentrations above the OCD *Remediation Action Levels*. The other soils which remain in-place at the Site did not exhibit COC concentrations above the OCD *Remediation Action Levels* for a Site ranking of "10". Confirmation sample results are provided in Table 1 in Appendix D.

## 6.0 FINDINGS AND RECOMMENDATIONS

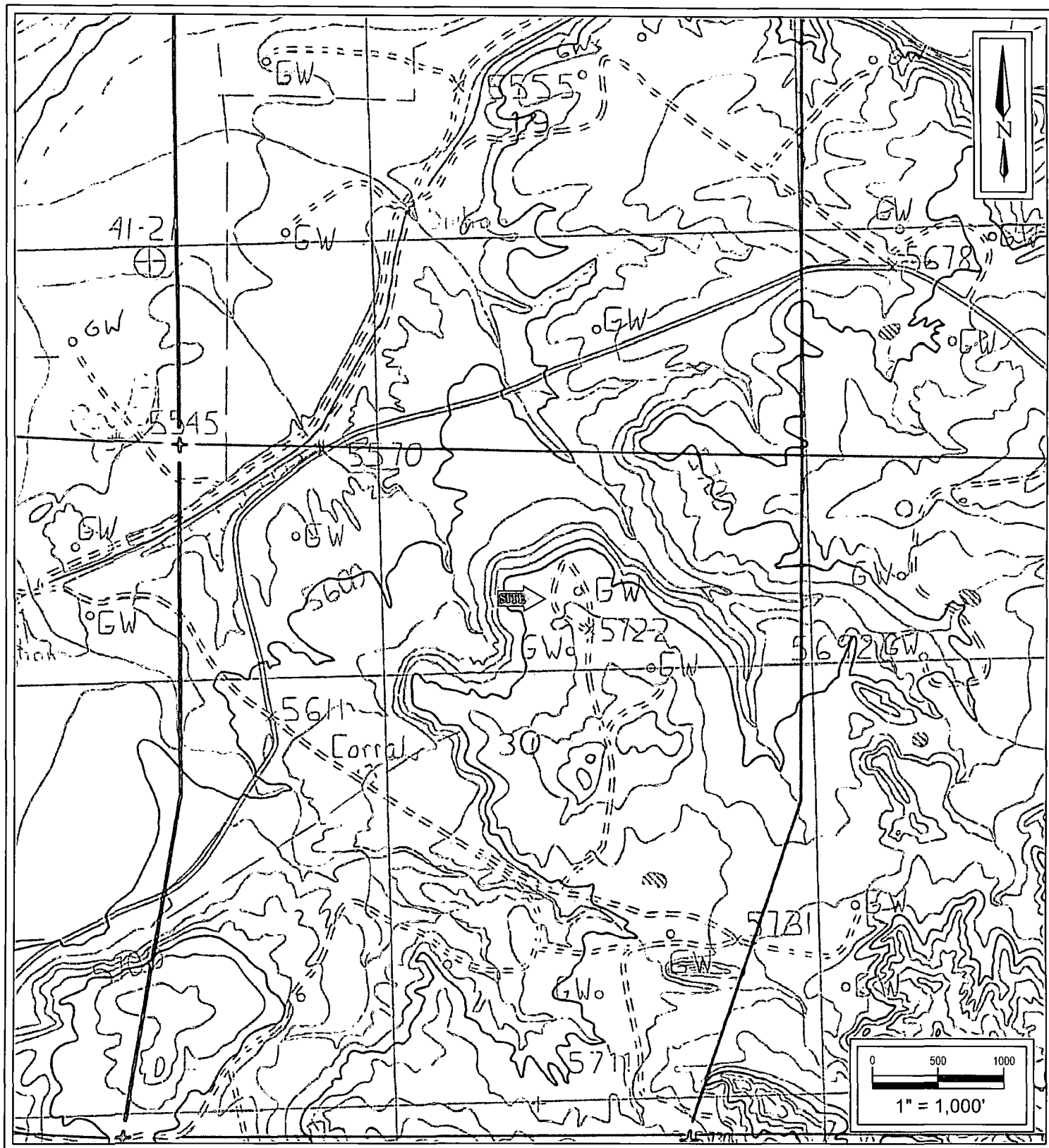
The Gerk Com #1 Pipeline Release Site is located within the Enterprise pipeline ROW in the NE  $\frac{1}{4}$  of Section 30 in Township 29 North and Range 9 West in rural San Juan County, New Mexico. The Site is located on private land belonging to B. McCarthy, and consists of native vegetation rangeland periodically interrupted with oil and gas gathering facilities, including one (1) Enterprise natural gas gathering pipeline which traverses the area from east to west.

On January 17th, 2014, Enterprise shut in the Gerk Com #1 pipeline and initiated excavation activities at the Site to locate and repair a potential leak. The leak was subsequently identified and repaired. An estimated five (5) barrels of condensate/water mixture was potentially released from the pipeline as a result of internal corrosion. The leak was identified by a release of natural gas at the ground surface. No significant liquids were evident at the surface.

- 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 6 feet bgs near the source of the release, and approximately 5 feet bgs in the remaining original excavation footprint. The overall average surface expression of the excavation measured approximately 25 feet long by 20 feet wide.

- A total of approximately 180 cubic yards of hydrocarbon affected soils were transported to the Envirotech landfarm near Hilltop, NM for disposal/remediation. Subsequent to the OCD-approved application of potassium permanganate to the floor of the excavation, the excavation was backfilled with clean imported fill and contoured to the approximate surrounding grade.
- The lithology encountered during the completion of corrective action activities consisted primarily of loose silty-sands and sandstone.
- Prior to applying potassium permanganate and backfilling the excavation, discrete and confirmation samples were collected from the floor and sidewalls of the excavation. Based on analytical and screening results, confirmation soil sample S-13 exhibited a total BTEX concentration above the OCD *Remediation Action Level* of 50 mg/Kg. The remaining confirmation samples for soils which remain in-place at the Site did not exhibit COC concentrations above the OCD *Remediation Action Levels* for a Site ranking of "10".

Based on the laboratory analytical results and the OCD-approved treatment of the excavation with potassium permanganate, no additional investigation or corrective action appears warranted at this time.



Gerk Com #1 Pipeline Release  
 NE 1/4 Sec 30 T29N R9W  
 Rural San Juan County, New Mexico  
 36.70065N, -107.81704W

SWG Project No. 0414G002

Southwest  
 GEOSCIENCE

Figure 1  
 Topographic Map  
 Blanco Quadrangle  
 1985

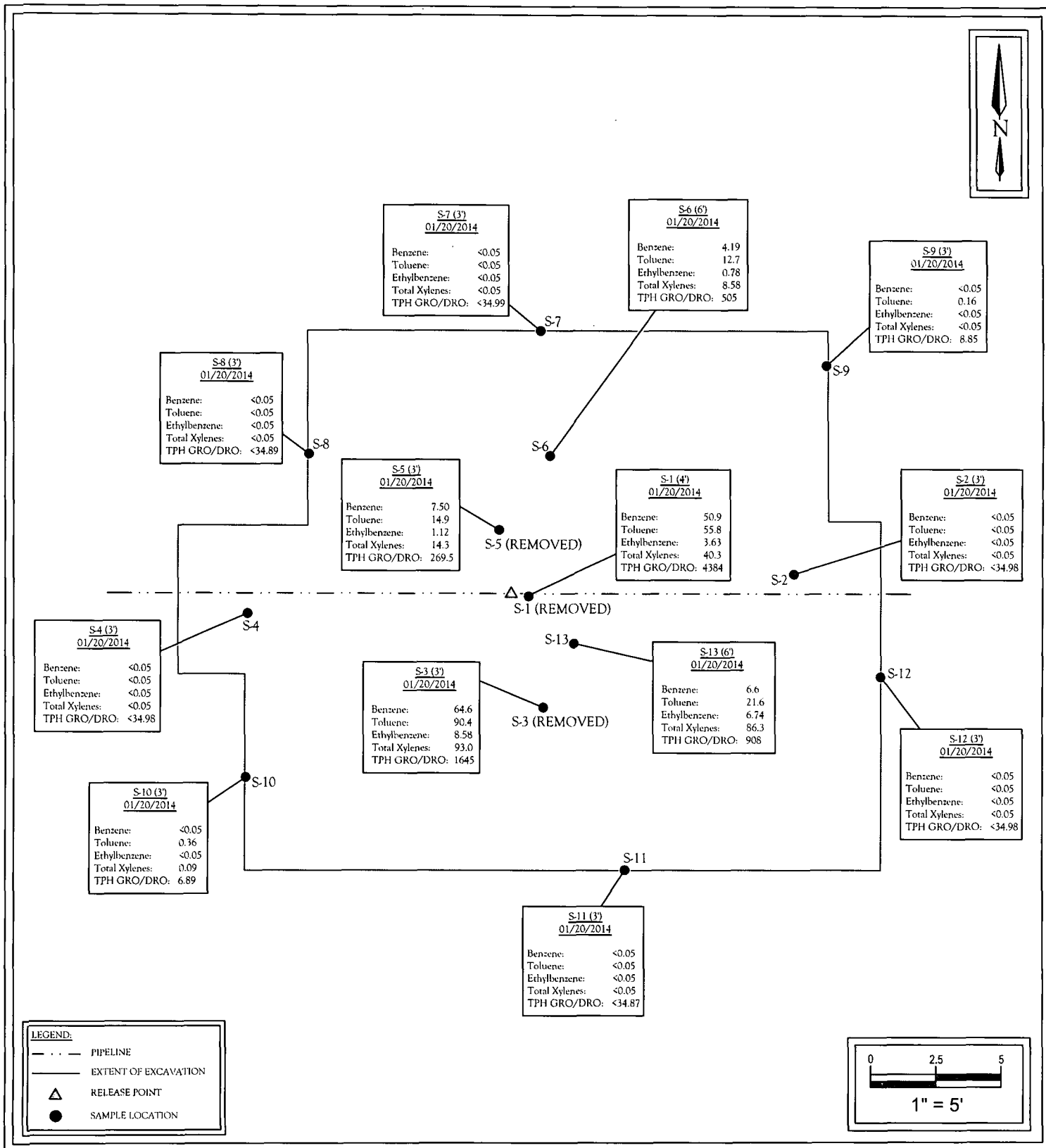


Gerk Com #1 Pipeline Release  
NE 1/4 Sec 30 T29N R9W  
Rural San Juan County, New Mexico  
36.70065N, -107.81704W

SWG Project No. 0414G002

Southwest  
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Figure 2  
Site Vicinity Map  
2013 Aerial Photograph



Gerk Com #1 Pipeline Release  
NE 1/4 Sec 30 T29N R9W  
Rural San Juan County, New Mexico  
36.70065N, -107.81704W

SWG Project No. 0414G002

Southwest  
GEOSCIENCE

Figure 3  
Site Map with Soil  
Analytical Results

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-138  
Revised August 1, 2011  
97057-0618  
\*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 Avenue, Farmington, NM 87401
2. Originating Site: Gerk Com #1 Natural Gas Gathering Line Jan '14
3. Location of Material (Street Address, City, State or ULSTR): Unit B, Section 30, T29N, R9W; 36.700710, -107.817140
4. Source and Description of Waste: Hydrocarbon impacted soils associated with a release from a natural gas gathering line. 5. Estimated Volume 20 yd <sup>3</sup> bbls Known Volume (to be entered by the operator at the end of the haul) 180 yd <sup>3</sup> bbls
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS I, <u>Thomas Long</u> representative or authorized agent for <u>Enterprise Field Services, LLC</u> do hereby PRINT & SIGN NAME COMPANY NAME 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 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 type="checkbox"/> Process Knowledge <input type="checkbox"/> Other (Provide description in Box 4) GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS I, <u>Thomas Long</u> , representative for <u>Enterprise Field Services, LLC</u> authorize Envirotech to Generator Signature complete the required testing/sign the Generator Waste Testing Certification. I, <u>Angela</u> , representative for <u>Envirotech</u> do hereby certify that 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.
6. Transporter: West States Energy Contractors (WSEC)

### OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Envirotech Inc. Soil Remediation Facility Permit # NM-01-0011  
Address of Facility: #43 Road 7175, South of Bloomfield 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 Crabtree

TITLE: Environmental Manager DATE: 1/22/14

SIGNATURE: Angela  
Surface Waste Management Facility Authorized Agent

TELEPHONE NO.: (505) 632-0615








envirotech

# Bill of Lading

MANIFEST # 45677

DATE 1-22-14 JOB # 97057-0618

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 GORRUM	IL	LFH-5	cont Soil	E-29	12	-	MOSS	47	11:20	Lee Moss
2	"	"	"	"	E-29	12	-	MOSS	47	13:55	Lee Moss
3	"	"	"	"	E-29	12	-	MOSS	47	16:00	Lee Moss
						36					
RESULTS:		LANDFARM EMPLOYEE:		NOTES:							
< 292	CHLORIDE TEST	1									
	PAINT FILTER TEST	1									
			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. Moss Excavation NAME Lee Moss SIGNATURE Lee Moss  
COMPANY CONTACT \_\_\_\_\_ PHONE \_\_\_\_\_ DATE 1-22-14

***Signatures required prior to distribution of the legal document.***

**White - Company Records, Yellow - Billing, Pink - Customer**





# Bill of Lading

MANIFEST # 45683

DATE 1-23-14 JOB # 97057-0618

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 L <del>1</del> =	ENTERPRISE Clean GerK com #1	Fill	-	12	-	MOSS	47	8:40	Lee Moss
2	"	"	"	-	12	-	MOSS	47	10:30	Lee Moss
3	"	"	"	-	12	-	MOSS	47	12:35	Lee Moss
4	"Void this" Line "						-	12	-	MOSS 47
					36					
RESULTS:		LANDFARM				NOTES: Driver + K# States GerK B1				
	CHLORIDE TEST	EMPLOYEE: Gary Robinson EL								
	PAINT FILTER TEST	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. Moss Excavation NAME Lee Moss SIGNATURE Lee Moss

COMPANY CONTACT \_\_\_\_\_ PHONE \_\_\_\_\_ DATE 1-23-14

***Signatures required prior to distribution of the legal document.***

White - Company Records, Yellow - Billing, Pink - Customer

530 530 introduction 530 17



# Bill of Lading

MANIFEST # 45684

DATE 1-23-14 JOB # 97057-0618

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 GCH Com #2	LFD-5	cont Soil	H-29	12	—	West States	515	10:00	[Signature]
2	"	"	"	H-29	12	—	"	515	11:50	[Signature]
3	"	"	"	H-29	12	—	"	515	13:25	[Signature]
4	"	"	"	H-29	12	—	"	515	15:00	[Signature]
					48					
RESULTS:		LANDFARM EMPLOYEE: [Signature] EL	NOTES:							
<292	CHLORIDE TEST									
	PAINT FILTER TEST	1	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. West states NAME FRANK COLIETTA SIGNATURE Frank Colietta  
COMPANY CONTACT \_\_\_\_\_ PHONE \_\_\_\_\_ DATE 1-23-14

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# Bill of Lading

MANIFEST # 45685

DATE 1-23-14 JOB # 97057-0618

**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 GRRK COM #1	LFH-5	CONF SOIL	H-29	12	—	MOSS	47	10:30	Lee Moss
2	"	"	"	H-29	12	—	MOSS	47	12:35	Lee Moss
3	"	"	"	H-29	12	—	MOSS	47	14:36	Lee Moss
					36					
RESULTS:		LANDFARM					NOTES:			
< 292 CHLORIDE TEST 1 PAINT FILTER TEST 1		EMPLOYEE: <i>Steve L</i> EL 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. Moss Excavation NAME Lee Moss SIGNATURE Lee Moss

COMPANY CONTACT \_\_\_\_\_ PHONE \_\_\_\_\_ DATE 1-23-14

***Signatures required prior to distribution of the legal document.***



# Bill of Lading

DATE 1-24-14 JOB # 97057-0618

DATE 1-24-14 JOB # 97057-0618

[illegible]

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. West States NAME FRANK COLLETTE SIGNATURE [Signature]  
COMPANY CONTACT \_\_\_\_\_ PHONE \_\_\_\_\_ DATE 1-24-14

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# Bill of Lading

MANIFEST # 45702

DATE 1-24-14 JOB # 97057-0618

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

[illegible]

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 Lee Moss SIGNATURE Lee Moss  
COMPANY CONTACT \_\_\_\_\_ PHONE \_\_\_\_\_ DATE 1-24-14

***Signatures required prior to distribution of the legal document.***

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## Bill of Lading

MANIFEST # 45704

DATE 1-24-14 JOB # 97057-0618

**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 Genk Com 1	LFII-5	CON'T SOIL	G-29	12	—	West States	545	9:35	[Signature]	
2	" "	" "	" "	G-29	12	—	West States	515	11:15	[Signature]	
3	" "	" "	" "	G-29	12	—	West States	515	12:55	[Signature]	
					36						
RESULTS:		LANDFARM EMPLOYEE:	<div> <div>EL</div> <div>Gary Robinson</div> </div> <div>Certification of above receipt &amp; placement</div>								
< 292	CHLORIDE TEST										1
	PAINT FILTER TEST										1
			NOTES:								

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. West States NAME FRANK COLLETTA SIGNATURE [Signature]  
COMPANY CONTACT \_\_\_\_\_ PHONE \_\_\_\_\_ DATE \_\_\_\_\_

***Signatures required prior to distribution of the legal document.***





# Bill of Lading

MANIFEST # 45706

DATE 1-24-14 JOB # 97057-0618

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

[illegible]

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 Lee Moss SIGNATURE Lee Moss

COMPANY CONTACT \_\_\_\_\_ PHONE \_\_\_\_\_ DATE 1-24-14

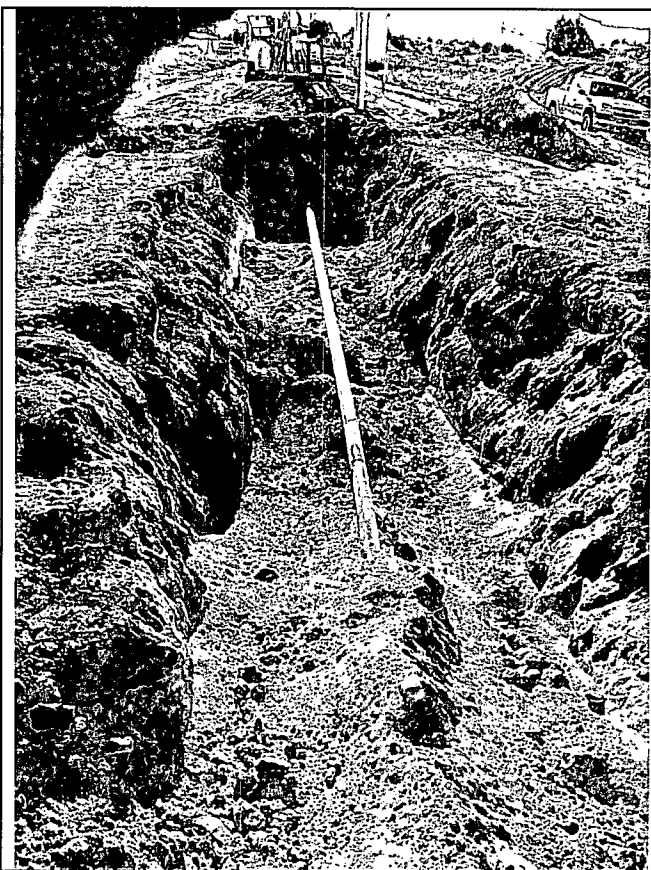
***Signatures required prior to distribution of the legal document:***

**White - Company Records, Yellow - Billing, Pink - Customer**

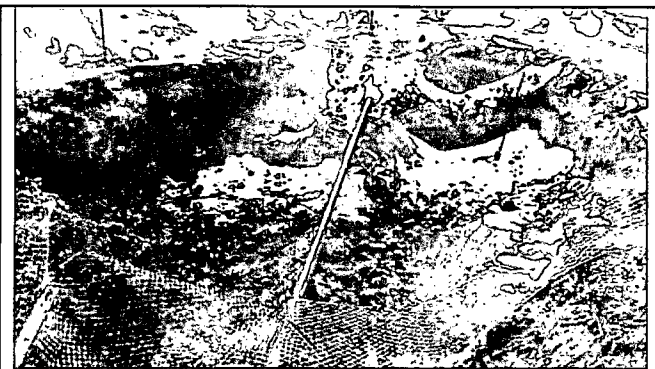
570.132



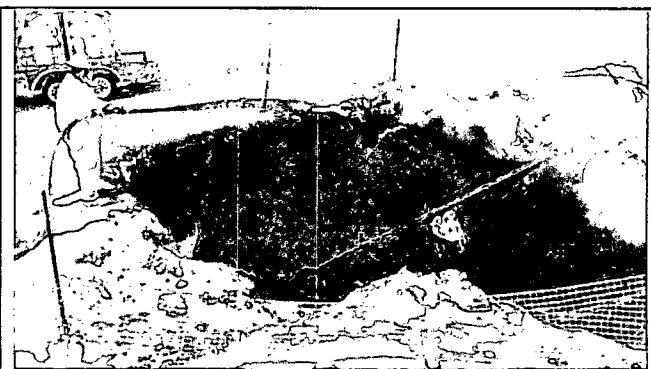
1.) Early stages of excavation facing to the west. Showing where the pipeline had been struck by something in the past (source of leak).



2.) View of excavation facing the east after repairs were completed and new coating applied to the pipeline.



3.) Final extent of excavation, approximately 25 feet long x 20 feet wide, and 5 feet deep.



4.) Envirotech, Inc. applying potassium permanganate to the affected sandstone on the excavation floor.

TABLE 1  
Gerk Com #1  
SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Type	Sample Depth	Benzene	Toluene	Ethylbenzene	Xylenes	Total BTEX	TPH	TPH
		C- Composite G - Grab	(feet)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	GRO (mg/kg)	DRO (mg/kg)
New Mexico Entergy, Mineral & Natural Resources Department, Oil Conservation Division, Remediation Action Level				10	NE	NE	NE	50	100	
Composite Stock Pile Samples - Transported to Landfarm for Disposal/Treatment										
W-1	1/20/2013	C		44.1	57.7	5.93	64.0	172	304	2940
W-2	1/20/2013	C		0.82	5.85	0.65	9.65	17.0	54.9	50.9
Samples for Soils which were Removed by Excavation										
S-1	1/20/2014	G		50.9	55.8	3.63	40.3	151	224	4160
S-3	1/20/2014	G		64.6	90.4	8.58	93.0	257	435	1210
S-5	1/20/2014	G		7.5	14.9	1.12	14.3	37.9	81.5	188
Final Confirmation Samples for Soils Remaining in Place										
S-2	1/20/2014	G		<0.05	<0.05	<0.05	<0.05	ND	<4.98	<30.0
S-4	1/20/2014	G		<0.05	<0.05	<0.05	<0.05	ND	<4.98	<30.0
S-6	1/23/2014	G		4.19	12.7	0.78	8.58	26.20	133	372
S-7	1/23/2014	G		<0.05	<0.05	<0.05	<0.05	ND	<4.99	<30.0
S-8	1/23/2014	G		<0.05	<0.05	<0.05	<0.05	ND	<4.99	<29.9
S-9	1/23/2014	G		<0.05	0.16	<0.05	<0.05	0.16	8.85	<29.9
S-10	1/23/2014	G		<0.05	0.36	<0.05	0.09	0.44	6.89	<30.0
S-11	1/23/2014	G		<0.05	<0.05	<0.05	<0.05	ND	<4.97	<29.9
S-12	1/23/2014	G		<0.05	<0.05	<0.05	<0.05	ND	<4.98	<30.0
S-13	1/23/2014	G		6.6	21.6	6.74	86.3	121	401	507

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

NA = Not Analyzed

NE = Not Established



## Analytical Report

### Report Summary

Client: Southwest Geoscience  
Chain Of Custody Number: 16531  
Samples Received: 1/20/2014 11:00:00AM  
Job Number: 07174-0003  
Work Order: P401050  
Project Name/Location: Gerk Com #1

Entire Report Reviewed By:

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

Date: 1/22/14

Tim Cain, Laboratory Manager

Supplement to analytical report generated on: 1/22/14 8:41 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.



Southwest Geoscience  
2351 W. Northwest Hwy  
Dallas TX, 75220

Project Name: Gerk Com #1  
Project Number: 07174-0003  
Project Manager: Kyle Summers

**Reported:**  
22-Jan-14 09:06

### Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
S-1	P401050-01A	Soil	01/20/14	01/20/14	Glass Jar, 4 oz.
S-2	P401050-02A	Soil	01/20/14	01/20/14	Glass Jar, 4 oz.
S-3	P401050-03A	Soil	01/20/14	01/20/14	Glass Jar, 4 oz.
S-4	P401050-04A	Soil	01/20/14	01/20/14	Glass Jar, 4 oz.
W-1	P401050-05A	Soil	01/20/14	01/20/14	Glass Jar, 4 oz.
W-2	P401050-06A	Soil	01/20/14	01/20/14	Glass Jar, 4 oz.
S-5	P401050-07A	Soil	01/20/14	01/20/14	Glass Jar, 4 oz.

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5796 US Highway 64, Farmington, NM 87401

Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (505) 632-0615 Fx (505) 632-1865

Ph (970) 259-0615 Fr (800) 362-1879

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

Southwest Geoscience  
 2351 W, Northwest Hwy  
 Dallas TX, 75220

 Project Name: Gerk Com #1  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 22-Jan-14 09:06

**S-1**
**P401050-01 (Solid)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Volatile Organics by EPA 8021</b>									
Benzene	50.9	0.05	mg/kg	1	1404001	01/21/14	01/21/14	EPA 8021B	
Toluene	55.8	0.05	mg/kg	1	1404001	01/21/14	01/21/14	EPA 8021B	
Ethylbenzene	3.63	0.05	mg/kg	1	1404001	01/21/14	01/21/14	EPA 8021B	
p,m-Xylene	31.9	0.05	mg/kg	1	1404001	01/21/14	01/21/14	EPA 8021B	
o-Xylene	8.43	0.05	mg/kg	1	1404001	01/21/14	01/21/14	EPA 8021B	
Total Xylenes	40.3	0.05	mg/kg	1	1404001	01/21/14	01/21/14	EPA 8021B	
Total BTEX	151	0.05	mg/kg	1	1404001	01/21/14	01/21/14	EPA 8021B	
Surrogate: Bromochlorobenzene		190 %		80-120	1404001	01/21/14	01/21/14	EPA 8021B	S-02
Surrogate: 1,3-Dichlorobenzene		218 %		80-120	1404001	01/21/14	01/21/14	EPA 8021B	S-02
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	224	4.99	mg/kg	1	1404001	01/21/14	01/21/14	EPA 8015D	
Diesel Range Organics (C10-C28)	4160	30.0	mg/kg	1	1404002	01/21/14	01/21/14	EPA 8015D	

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Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: Gerk Com #1  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 22-Jan-14 09:06

**S-2**
**P401050-02 (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	1404001	01/21/14	01/21/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1404001	01/21/14	01/21/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1404001	01/21/14	01/21/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1404001	01/21/14	01/21/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1404001	01/21/14	01/21/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1404001	01/21/14	01/21/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1404001	01/21/14	01/21/14	EPA 8021B	
<i>Surrogate: Bromochlorobenzene</i>		110 %		80-120	1404001	01/21/14	01/21/14	EPA 8021B	
<i>Surrogate: 1,3-Dichlorobenzene</i>		108 %		80-120	1404001	01/21/14	01/21/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	4.98	mg/kg	1	1404001	01/21/14	01/21/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1404002	01/21/14	01/21/14	EPA 8015D	

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Southwest Geoscience  
2351 W. Northwest Hwy  
Dallas TX, 75220

Project Name: Gerk Com #1  
Project Number: 07174-0003  
Project Manager: Kyle Summers

Reported:  
22-Jan-14 09:06

### S-3

#### P401050-03 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Volatile Organics by EPA 8021</b>									
Benzene	64.6	0.10	mg/kg	2	1404001	01/21/14	01/21/14	EPA 8021B	
Toluene	90.4	0.10	mg/kg	2	1404001	01/21/14	01/21/14	EPA 8021B	
Ethylbenzene	8.58	0.10	mg/kg	2	1404001	01/21/14	01/21/14	EPA 8021B	
p,m-Xylene	76.2	0.10	mg/kg	2	1404001	01/21/14	01/21/14	EPA 8021B	
o-Xylene	16.8	0.10	mg/kg	2	1404001	01/21/14	01/21/14	EPA 8021B	
Total Xylenes	93.0	0.10	mg/kg	2	1404001	01/21/14	01/21/14	EPA 8021B	
Total BTEX	257	0.10	mg/kg	2	1404001	01/21/14	01/21/14	EPA 8021B	
Surrogate: Bromochlorobenzene		231 %		80-120	1404001	01/21/14	01/21/14	EPA 8021B	S-02
Surrogate: 1,3-Dichlorobenzene		178 %		80-120	1404001	01/21/14	01/21/14	EPA 8021B	S-02
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	435	9.99	mg/kg	2	1404001	01/21/14	01/21/14	EPA 8015D	
Diesel Range Organics (C10-C28)	1210	30.0	mg/kg	1	1404002	01/21/14	01/21/14	EPA 8015D	

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laboratory@envirotech-inc.com



Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: Gerk Com #1  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 22-Jan-14 09:06

**S-4**
**P401050-04 (Solid)**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1		1404001	01/21/14	01/21/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1		1404001	01/21/14	01/21/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1		1404001	01/21/14	01/21/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1		1404001	01/21/14	01/21/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1		1404001	01/21/14	01/21/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1		1404001	01/21/14	01/21/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1		1404001	01/21/14	01/21/14	EPA 8021B	
Surrogate: Bromochlorobenzene		108 %		80-120		1404001	01/21/14	01/21/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		101 %		80-120		1404001	01/21/14	01/21/14	EPA 8021B	
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	4.98	mg/kg	1		1404001	01/21/14	01/21/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1		1404002	01/21/14	01/21/14	EPA 8015D	

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Southwest Geoscience  
2351 W. Northwest Hwy  
Dallas TX, 75220

Project Name: Gerk Com #1  
Project Number: 07174-0003  
Project Manager: Kyle Summers

Reported:  
22-Jan-14 09:06

### W-1

#### P401050-05 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Volatile Organics by EPA 8021</b>									
Benzene	44.1	0.10	mg/kg	2	1404001	01/21/14	01/21/14	EPA 8021B	
Toluene	57.7	0.10	mg/kg	2	1404001	01/21/14	01/21/14	EPA 8021B	
Ethylbenzene	5.93	0.10	mg/kg	2	1404001	01/21/14	01/21/14	EPA 8021B	
p,m-Xylene	51.4	0.10	mg/kg	2	1404001	01/21/14	01/21/14	EPA 8021B	
o-Xylene	12.7	0.10	mg/kg	2	1404001	01/21/14	01/21/14	EPA 8021B	
Total Xylenes	64.0	0.10	mg/kg	2	1404001	01/21/14	01/21/14	EPA 8021B	
Total BTEX	172	0.10	mg/kg	2	1404001	01/21/14	01/21/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		166 %		80-120	1404001	01/21/14	01/21/14	EPA 8021B	S-02
Surrogate: Bromochlorobenzene		152 %		80-120	1404001	01/21/14	01/21/14	EPA 8021B	S-02
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	304	9.98	mg/kg	2	1404001	01/21/14	01/21/14	EPA 8015D	
Diesel Range Organics (C10-C28)	2940	30.0	mg/kg	1	1404002	01/21/14	01/21/14	EPA 8015D	

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Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: Gerk Com #1  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 22-Jan-14 09:06

**W-2**
**P401050-06 (Solid)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Volatile Organics by EPA 8021</b>									
Benzene	0.82	0.05	mg/kg	1	1404001	01/21/14	01/21/14	EPA 8021B	
Toluene	5.85	0.05	mg/kg	1	1404001	01/21/14	01/21/14	EPA 8021B	
Ethylbenzene	0.65	0.05	mg/kg	1	1404001	01/21/14	01/21/14	EPA 8021B	
p,m-Xylene	7.94	0.05	mg/kg	1	1404001	01/21/14	01/21/14	EPA 8021B	
o-Xylene	1.70	0.05	mg/kg	1	1404001	01/21/14	01/21/14	EPA 8021B	
Total Xylenes	9.65	0.05	mg/kg	1	1404001	01/21/14	01/21/14	EPA 8021B	
Total BTEX	17.0	0.05	mg/kg	1	1404001	01/21/14	01/21/14	EPA 8021B	
Surrogate: Bromochlorobenzene		146 %		80-120	1404001	01/21/14	01/21/14	EPA 8021B	S-02
Surrogate: 1,3-Dichlorobenzene		147 %		80-120	1404001	01/21/14	01/21/14	EPA 8021B	S-02
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	54.9	4.99	mg/kg	1	1404001	01/21/14	01/21/14	EPA 8015D	
Diesel Range Organics (C10-C28)	50.9	29.9	mg/kg	1	1404002	01/21/14	01/21/14	EPA 8015D	

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Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: Gerk Com #1  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 22-Jan-14 09:06

**S-5**
**P401050-07 (Solid)**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	7.50	0.05	mg/kg	1		1404001	01/21/14	01/21/14	EPA 8021B	
Toluene	14.9	0.05	mg/kg	1		1404001	01/21/14	01/21/14	EPA 8021B	
Ethylbenzene	1.12	0.05	mg/kg	1		1404001	01/21/14	01/21/14	EPA 8021B	
p,m-Xylene	11.7	0.05	mg/kg	1		1404001	01/21/14	01/21/14	EPA 8021B	
o-Xylene	2.64	0.05	mg/kg	1		1404001	01/21/14	01/21/14	EPA 8021B	
Total Xylenes	14.3	0.05	mg/kg	1		1404001	01/21/14	01/21/14	EPA 8021B	
Total BTEX	37.9	0.05	mg/kg	1		1404001	01/21/14	01/21/14	EPA 8021B	
Surrogate: Bromochlorobenzene		129 %		80-120		1404001	01/21/14	01/21/14	EPA 8021B	S-02
Surrogate: 1,3-Dichlorobenzene		132 %		80-120		1404001	01/21/14	01/21/14	EPA 8021B	S-02
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	81.5	5.00	mg/kg	1		1404001	01/21/14	01/21/14	EPA 8015D	
Diesel Range Organics (C10-C28)	188	30.0	mg/kg	1		1404002	01/21/14	01/21/14	EPA 8015D	

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Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: Gerk Com #1  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 22-Jan-14 09:06

**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 1404001 - Purge and Trap EPA 5030A**
**Blank (1404001-BLK1)**

Prepared: 20-Jan-14 Analyzed: 21-Jan-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	45.7		ug/L	50.0		91.5	80-120			
Surrogate: Bromochlorobenzene	46.7		"	50.0		93.5	80-120			

**Duplicate (1404001-DUP1)**

Source: P401044-01

Prepared &amp; Analyzed: 20-Jan-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	46.6		ug/L	50.0		93.3	80-120			
Surrogate: Bromochlorobenzene	47.8		"	50.0		95.6	80-120			

**Matrix Spike (1404001-MS1)**

Source: P401044-01

Prepared &amp; Analyzed: 20-Jan-14

Benzene	50.3		ug/L	50.0	ND	101	39-150			
Toluene	50.1		"	50.0	ND	100	46-148			
Ethylbenzene	50.3		"	50.0	ND	101	32-160			
p,m-Xylene	100		"	100	ND	100	46-148			
o-Xylene	49.7		"	50.0	ND	99.3	46-148			
Surrogate: 1,3-Dichlorobenzene	50.8		"	50.0		102	80-120			
Surrogate: Bromochlorobenzene	50.1		"	50.0		100	80-120			

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 laboratory@envirotech-inc.com



Southwest Geoscience	Project Name:	Gerk Com #1	Reported: 22-Jan-14 09:06
2351 W. Northwest Hwy	Project Number:	07174-0003	
Dallas TX, 75220	Project Manager:	Kyle Summers	

### 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 1404001 - Purge and Trap EPA 5030A

<b>Blank (1404001-BLK1)</b>		Prepared: 20-Jan-14 Analyzed: 21-Jan-14								
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg							
<b>Duplicate (1404001-DUP1)</b>		<b>Source: P401044-01</b>		Prepared & Analyzed: 20-Jan-14						
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg		ND				30	
<b>Matrix Spike (1404001-MS1)</b>		<b>Source: P401044-01</b>		Prepared & Analyzed: 20-Jan-14						
Gasoline Range Organics (C6-C10)	0.49		mg/L	0.450	0.02	106	75-125			

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Southwest Geoscience 2351 W. Northwest Hwy Dallas TX, 75220	Project Name: Gerk Com #1 Project Number: 07174-0003 Project Manager: Kyle Summers	Reported: 22-Jan-14 09:06
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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 1404002 - DRO Extraction EPA 3550C

<b>Blank (1404002-BLK1)</b>		Prepared & Analyzed: 20-Jan-14								
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg							
<b>Duplicate (1404002-DUP1)</b>		<b>Source: P401044-01</b>		Prepared & Analyzed: 20-Jan-14						
Diesel Range Organics (C10-C28)	126	29.9	mg/kg		202			46.2	30	D1
<b>Matrix Spike (1404002-MS1)</b>		<b>Source: P401044-01</b>		Prepared & Analyzed: 20-Jan-14						
Diesel Range Organics (C10-C28)	370	31.6	mg/kg	263	202	63.7	75-125			SPK1

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Southwest Geoscience  
2351 W. Northwest Hwy  
Dallas TX, 75220

Project Name: Gerk Com #1  
Project Number: 07174-0003  
Project Manager: Kyle Summers

**Reported:**  
22-Jan-14 09:06

#### Notes and Definitions

SPK1 The spike recovery for this QC sample is outside of control limits.

S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.

D1 Duplicates or Matrix Spike Duplicates Relative Percent Difference exceeds 30%.

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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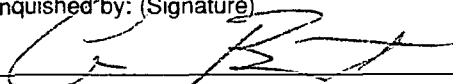
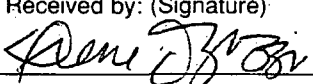
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# CHAIN OF CUSTODY RECORD

16531

Client: <b>SWH</b>			Project Name / Location: <b>GERK com #1</b>			ANALYSIS / PARAMETERS																
Email results to: <b>KYLE SUMMERS</b>			Sampler Name: <b>AARON BRYANT</b>			<div style="display: flex; flex-direction: row-reverse; justify-content: space-between; padding: 5px;"> <div>Sample Cool</div> <div>Sample Intact</div> <div>TPH (418.1)</div> <div>CHLORIDE</div> <div>CO Table 910-1</div> <div>TCLP with H/P</div> <div>RCI</div> <div>Cation / Anion</div> <div>RCRA 8 Metals</div> <div>VOC (Method 8260)</div> <div>BTEX (Method 8021)</div> <div>TPH (Method 8015)</div> </div>																
Client Phone No.: <b>903-821-5603</b>			Client No.: <b>07174-0003</b>																			
Sample No. / Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative			TPH	BTEX	VOC	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	1/20/14	930		1x402				X	X												✓	✓
S-2	1	935		1				X	X													
S-3	1	940		1				X	X													
S-4	1	945		1				X	X													
S-5	1 <sup>AB</sup>	950		1				X	X													
W-1	1	955		1				X	X													
W-2	1	1000		1				X	X													
			NFS	AB																		
Relinquished by: (Signature) 					Date	Time	Received by: (Signature) 										Date	Time				
					1/24/14	11:00											1/25/14	11:00				
Relinquished by: (Signature)							Received by: (Signature)															
Sample Matrix							PO# 04149002 <sup>AB</sup>															
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.																						

**RUSH**



**envirotech**  
Analytical Laboratory

S-3 7.5  
S-2 8.5  
W-2 7.2



## Analytical Report

### Report Summary

Client: Southwest Geoscience  
Chain Of Custody Number: 16565  
Samples Received: 1/23/2014 2:52:00PM  
Job Number: 07174-0003  
Work Order: P401066  
Project Name/Location: The Gerk Com #1

Entire Report Reviewed By:

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

Date: 1/27/14

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.



Southwest Geoscience  
2351 W. Northwest Hwy  
Dallas TX, 75220

Project Name: The Gerk Com #1  
Project Number: 07174-0003  
Project Manager: Kyle Summers

Reported:  
27-Jan-14 07:48

### Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
S-6	P401066-01A	Soil	01/23/14	01/23/14	Glass Jar, 4 oz.
S-7	P401066-02A	Soil	01/23/14	01/23/14	Glass Jar, 4 oz.
S-8	P401066-03A	Soil	01/23/14	01/23/14	Glass Jar, 4 oz.
S-9	P401066-04A	Soil	01/23/14	01/23/14	Glass Jar, 4 oz.
S-10	P401066-05A	Soil	01/23/14	01/23/14	Glass Jar, 4 oz.
S-11	P401066-06A	Soil	01/23/14	01/23/14	Glass Jar, 4 oz.
S-12	P401066-07A	Soil	01/23/14	01/23/14	Glass Jar, 4 oz.
S-13	P401066-08A	Soil	01/23/14	01/23/14	Glass Jar, 4 oz.

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Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: The Gerk Com #1  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 27-Jan-14 07:48

**S-6**
**P401066-01 (Solid)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Volatile Organics by EPA 8021</b>									
Benzene	4.19	0.05	mg/kg	1	1404027	01/23/14	01/24/14	EPA 8021B	
Toluene	12.7	0.05	mg/kg	1	1404027	01/23/14	01/24/14	EPA 8021B	
Ethylbenzene	0.78	0.05	mg/kg	1	1404027	01/23/14	01/24/14	EPA 8021B	
p,m-Xylene	7.47	0.05	mg/kg	1	1404027	01/23/14	01/24/14	EPA 8021B	
o-Xylene	1.11	0.05	mg/kg	1	1404027	01/23/14	01/24/14	EPA 8021B	
Total Xylenes	8.58	0.05	mg/kg	1	1404027	01/23/14	01/24/14	EPA 8021B	
Total BTEX	26.2	0.05	mg/kg	1	1404027	01/23/14	01/24/14	EPA 8021B	
Surrogate: Bromochlorobenzene		149 %		80-120	1404027	01/23/14	01/24/14	EPA 8021B	S-02
Surrogate: 1,3-Dichlorobenzene		408 %		80-120	1404027	01/23/14	01/24/14	EPA 8021B	S-02
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	133	5.00	mg/kg	1	1404027	01/23/14	01/24/14	EPA 8015D	
Diesel Range Organics (C10-C28)	372	30.0	mg/kg	1	1404026	01/23/14	01/24/14	EPA 8015D	

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Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: The Gerk Com #1  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 27-Jan-14 07:48

S-7

**P401066-02 (Solid)**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1404027	01/23/14	01/24/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1404027	01/23/14	01/24/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1404027	01/23/14	01/24/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1404027	01/23/14	01/24/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1404027	01/23/14	01/24/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1404027	01/23/14	01/24/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1404027	01/23/14	01/24/14	EPA 8021B	
Surrogate: Bromochlorobenzene		104 %		80-120	1404027	01/23/14	01/24/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		99.9 %		80-120	1404027	01/23/14	01/24/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1404027	01/23/14	01/24/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1404026	01/23/14	01/24/14	EPA 8015D	

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Southwest Geoscience 2351 W. Northwest Hwy Dallas TX, 75220	Project Name: The Gerk Com #1 Project Number: 07174-0003 Project Manager: Kyle Summers	Reported: 27-Jan-14 07:48
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**S-8**
**P401066-03 (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	1404027	01/23/14	01/24/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1404027	01/23/14	01/24/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1404027	01/23/14	01/24/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1404027	01/23/14	01/24/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1404027	01/23/14	01/24/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1404027	01/23/14	01/24/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1404027	01/23/14	01/24/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		101 %		80-120	1404027	01/23/14	01/24/14	EPA 8021B	
Surrogate: Bromochlorobenzene		105 %		80-120	1404027	01/23/14	01/24/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1404027	01/23/14	01/24/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1404026	01/23/14	01/24/14	EPA 8015D	

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Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: The Gerk Com #1  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 27-Jan-14 07:48

**S-9**
**P401066-04 (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	1404027	01/24/14	01/24/14	EPA 8021B	
Toluene	0.16	0.05	mg/kg	1	1404027	01/24/14	01/24/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1404027	01/24/14	01/24/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1404027	01/24/14	01/24/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1404027	01/24/14	01/24/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1404027	01/24/14	01/24/14	EPA 8021B	
Total BTEX	0.16	0.05	mg/kg	1	1404027	01/24/14	01/24/14	EPA 8021B	
Surrogate: Bromochlorobenzene		102 %		80-120	1404027	01/24/14	01/24/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		105 %		80-120	1404027	01/24/14	01/24/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	8.85	5.00	mg/kg	1	1404027	01/24/14	01/24/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1404026	01/24/14	01/24/14	EPA 8015D	

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Southwest Geoscience 2351 W. Northwest Hwy Dallas TX, 75220	Project Name: The Gerk Com #1 Project Number: 07174-0003 Project Manager: Kyle Summers	Reported: 27-Jan-14 07:48
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### S-10

#### P401066-05 (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	1404027	01/24/14	01/24/14	EPA 8021B	
Toluene	0.36	0.05	mg/kg	1	1404027	01/24/14	01/24/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1404027	01/24/14	01/24/14	EPA 8021B	
p,m-Xylene	0.09	0.05	mg/kg	1	1404027	01/24/14	01/24/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1404027	01/24/14	01/24/14	EPA 8021B	
Total Xylenes	0.09	0.05	mg/kg	1	1404027	01/24/14	01/24/14	EPA 8021B	
Total BTEX	0.44	0.05	mg/kg	1	1404027	01/24/14	01/24/14	EPA 8021B	
Surrogate: Bromochlorobenzene		105 %	80-120		1404027	01/24/14	01/24/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		103 %	80-120		1404027	01/24/14	01/24/14	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	6.89	5.00	mg/kg	1	1404027	01/24/14	01/24/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1404026	01/24/14	01/24/14	EPA 8015D	

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laboratory@envirotech-inc.com



Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: The Gerk Com #1  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 27-Jan-14 07:48

**S-11**
**P401066-06 (Solid)**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1		1404027	01/24/14	01/24/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1		1404027	01/24/14	01/24/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1		1404027	01/24/14	01/24/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1		1404027	01/24/14	01/24/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1		1404027	01/24/14	01/24/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1		1404027	01/24/14	01/24/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1		1404027	01/24/14	01/24/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		96.0 %		80-120		1404027	01/24/14	01/24/14	EPA 8021B	
Surrogate: Bromochlorobenzene		103 %		80-120		1404027	01/24/14	01/24/14	EPA 8021B	
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	4.97	mg/kg	1		1404027	01/24/14	01/24/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1		1404026	01/24/14	01/24/14	EPA 8015D	

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Southwest Geoscience 2351 W. Northwest Hwy Dallas TX, 75220	Project Name: The Gerk Com #1 Project Number: 07174-0003 Project Manager: Kyle Summers	Reported: 27-Jan-14 07:48
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**S-12**
**P401066-07 (Solid)**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1		1404027	01/24/14	01/24/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1		1404027	01/24/14	01/24/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1		1404027	01/24/14	01/24/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1		1404027	01/24/14	01/24/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1		1404027	01/24/14	01/24/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1		1404027	01/24/14	01/24/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1		1404027	01/24/14	01/24/14	EPA 8021B	
Surrogate: Bromochlorobenzene		99.3 %		80-120		1404027	01/24/14	01/24/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		96.4 %		80-120		1404027	01/24/14	01/24/14	EPA 8021B	
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	4.98	mg/kg	1		1404027	01/24/14	01/24/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1		1404026	01/24/14	01/24/14	EPA 8015D	

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Southwest Geoscience  
 2351 W. Northwest Hwy  
 Dallas TX, 75220

 Project Name: The Gerk Com #1  
 Project Number: 07174-0003  
 Project Manager: Kyle Summers

**Reported:**  
 27-Jan-14 07:48

**S-13**
**P401066-08 (Solid)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Volatile Organics by EPA 8021</b>									
Benzene	6.60	0.05	mg/kg	1	1404027	01/24/14	01/24/14	EPA 8021B	
Toluene	21.6	0.05	mg/kg	1	1404027	01/24/14	01/24/14	EPA 8021B	
Ethylbenzene	6.74	0.05	mg/kg	1	1404027	01/24/14	01/24/14	EPA 8021B	
p,m-Xylene	63.4	0.05	mg/kg	1	1404027	01/24/14	01/24/14	EPA 8021B	
o-Xylene	22.9	0.05	mg/kg	1	1404027	01/24/14	01/24/14	EPA 8021B	
Total Xylenes	86.3	0.05	mg/kg	1	1404027	01/24/14	01/24/14	EPA 8021B	
Total BTEX	121	0.05	mg/kg	1	1404027	01/24/14	01/24/14	EPA 8021B	
Surrogate: Bromochlorobenzene		148 %		80-120	1404027	01/24/14	01/24/14	EPA 8021B	S-02
Surrogate: 1,3-Dichlorobenzene		198 %		80-120	1404027	01/24/14	01/24/14	EPA 8021B	S-02
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	401	5.00	mg/kg	1	1404027	01/24/14	01/24/14	EPA 8015D	
Diesel Range Organics (C10-C28)	507	29.9	mg/kg	1	1404026	01/24/14	01/24/14	EPA 8015D	

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Southwest Geoscience	Project Name:	The Gerk Com #1	Reported: 27-Jan-14 07:48
2351 W. Northwest Hwy	Project Number:	07174-0003	
Dallas TX, 75220	Project Manager:	Kyle Summers	

### 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 1404027 - Purge and Trap EPA 5030A

<b>Blank (1404027-BLK1)</b>			Prepared: 23-Jan-14 Analyzed: 24-Jan-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	52.6		ug/L	50.0		105	80-120			
Surrogate: Bromochlorobenzene	54.5		"	50.0		109	80-120			

<b>Duplicate (1404027-DUP1)</b>			Source: P401066-01		Prepared: 23-Jan-14 Analyzed: 24-Jan-14					
Benzene	4.84	0.05	mg/kg		4.19			14.5	30	
Toluene	12.4	0.05	"		12.7			2.09	30	
Ethylbenzene	0.81	0.05	"		0.78			3.59	30	
p,m-Xylene	7.34	0.05	"		7.47			1.79	30	
o-Xylene	1.11	0.05	"		1.11			0.436	30	
Surrogate: 1,3-Dichlorobenzene	202		ug/L	50.0		404	80-120			S-02
Surrogate: Bromochlorobenzene	68.3		"	50.0		137	80-120			S-02

<b>Matrix Spike (1404027-MS1)</b>			Source: P401066-01		Prepared: 23-Jan-14 Analyzed: 24-Jan-14					
Benzene	7.68	0.05	mg/kg	2.50	4.19	140	39-150			
Toluene	16.3	0.05	"	2.50	12.7	144	46-148			
Ethylbenzene	3.49	0.05	"	2.50	0.78	108	32-160			
p,m-Xylene	13.0	0.05	"	5.00	7.47	111	46-148			
o-Xylene	3.91	0.05	"	2.50	1.11	112	46-148			
Surrogate: 1,3-Dichlorobenzene	221		ug/L	50.0		443	80-120			S-02
Surrogate: Bromochlorobenzene	72.1		"	50.0		144	80-120			S-02

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Southwest Geoscience	Project Name:	The Gerk Com #1	Reported: 27-Jan-14 07:48
2351 W. Northwest Hwy	Project Number:	07174-0003	
Dallas TX, 75220	Project Manager:	Kyle Summers	

### 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 1404026 - DRO Extraction EPA 3550C

##### Blank (1404026-BLK1)

Prepared: 23-Jan-14 Analyzed: 24-Jan-14

Diesel Range Organics (C10-C28)	ND	30.0	mg/kg							
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##### Duplicate (1404026-DUP1)

Source: P401066-01

Prepared: 23-Jan-14 Analyzed: 24-Jan-14

Diesel Range Organics (C10-C28)	340	29.9	mg/kg		372			9.05	30	
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##### Matrix Spike (1404026-MS1)

Source: P401066-01

Prepared: 23-Jan-14 Analyzed: 24-Jan-14

Diesel Range Organics (C10-C28)	605	31.6	mg/kg	263	372	88.5	75-125			
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Southwest Geoscience	Project Name:	The Gerk Com #1	Reported: 27-Jan-14 07:48
2351 W. Northwest Hwy	Project Number:	07174-0003	
Dallas TX, 75220	Project Manager:	Kyle Summers	

### 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 1404027 - Purge and Trap EPA 5030A

<b>Blank (1404027-BLK1)</b>		Prepared: 23-Jan-14 Analyzed: 24-Jan-14								
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg							
<b>Duplicate (1404027-DUP1)</b>		<b>Source: P401066-01</b>		Prepared: 23-Jan-14 Analyzed: 24-Jan-14						
Gasoline Range Organics (C6-C10)	133	4.99	mg/kg		133			0.0246	30	
<b>Matrix Spike (1404027-MS1)</b>		<b>Source: P401066-01</b>		Prepared: 23-Jan-14 Analyzed: 24-Jan-14						
Gasoline Range Organics (C6-C10)	159	5.00	mg/kg	22.5	133	118	75-125			

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Southwest Geoscience  
2351 W. Northwest Hwy  
Dallas TX, 75220

Project Name: The Gerk Com #1  
Project Number: 07174-0003  
Project Manager: Kyle Summers

**Reported:**  
27-Jan-14 07:48

#### Notes and Definitions

S-02      The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.

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

16565

Client: <b>SWIN</b>			Project Name / Location: <b>THE MERKCOM #1</b>			ANALYSIS / PARAMETERS											
Email results to: <b>KYLE SUMMERS</b>			Sampler Name: <b>AARON BRYANT</b>			<div style="display: flex; justify-content: space-between; font-size: small;"> <div>TPH (Method 8015)</div> <div>BTEX (Method 8021)</div> <div>VOC (Method 8260)</div> <div>RCRA 8 Metals</div> <div>Cation / Anion</div> <div>RCI</div> <div>TCLP with H/P</div> <div>CO Table 910-1</div> <div>TPH (418.1)</div> <div>CHLORIDE</div> <div>Sample Cool</div> <div>Sample Intact</div> </div>											
Client Phone No.: <b>903-821-5603</b>			Client No.: <b>07174-0003</b>														

Sample No. / Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative			TPH	BTEX	VOC	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-6	1-23-14	1200	P4010106-01					X	X											X	X	
S-7		1205	P4010106-02					X	X													
S-8		1210	P4010106-03					X	X													
S-9		1215	P4010106-04					X	X													
S-10		1220	P4010106-05					X	X													
S-11		1225	P4010106-06					X	X													
S-12		1230	P4010106-07					X	X													
S-13		1235	P4010106-08					X	X													
			NFS																			
			A13																			

Relinquished by: (Signature)		Date: 1-23-14	Time: 1452	Received by: (Signature)		Date: 1-23-14	Time: 14:52
Relinquished by: (Signature)				Received by: (Signature)			

Sample Matrix				PO # 04149002			
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**

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**envirotech**  
Analytical Laboratory

13.0 °C    11.1 °C

11.3 °C



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 3D Pipeline	Facility Type: Natural Gas Gathering Line	
Surface Owner: NAPI	Mineral Owner: BLM	API No.

**LOCATION OF RELEASE**

Unit Letter <b>B</b>	Section <b>7</b>	Township <b>27N</b>	Range <b>11W</b>	Feet from the	North/South Line	Feet from the	East/West Line	County <b>San Juan</b>
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Latitude 36.594801 Longitude -108.044628

**NATURE OF RELEASE**

Type of Release: natural gas liquids	Volume of Release: <b>Unknown</b>	Volume Recovered: <b>Unknown</b>
Source of Release: Accidental discharge	Date and Hour of Occurrence: <b>3/25/2014 @ 6:15 p.m.</b>	Date and Hour of Discovery: <b>3/25/2014 @ 6:15 p.m.</b>
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	Jonathan Kelly – NMOCD, NAPI Safety – Eric Trevizo	
By Whom? Thomas Long	3/25/14 @ 7:00 p.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

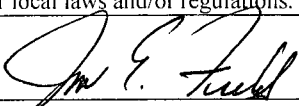
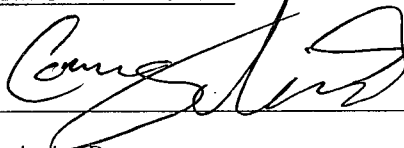
If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* During maintenance activities of blowing down the Lateral 3D Loop Pipeline, a release occurred on the Trunk 3D. Natural gas liquids (condensate, water and oil) were released from the valve on the Trunk 3D. An area of approximately 20 feet wide by 75 feet long was affected including a paved county road. The remediation activities were completed on March 28, 2014.

**APR 11 2014**

Describe Area Affected and Cleanup Action Taken.\* The remediation activities were completed on March 28, 2014. County Road 7010 was steamed cleaned with a simple green and water mixture. The impacted soil was removed and transported to an NMOCD approved land farm facility. 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: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Jon E. Fields	Approved by Environmental Specialist: 	
Title: Director, Environmental	Approval Date: <u>5/15/14</u>	Expiration Date:
E-mail Address: jefields@eprod.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: <u>4-7-2014</u> Phone: (713)381-6684		

\* Attach Additional Sheets If Necessary

#NCS 1413531395

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

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: Howell M#1A Well Site	Facility Type: Well Site Meter Run/Meter Tube

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

**LOCATION OF RELEASE**

Unit Letter <b>M</b>	Section <b>31</b>	Township <b>30N</b>	Range <b>8W</b>	Feet from the	North/South Line	Feet from the	East/West Line	County <b>San Juan</b>
-------------------------	----------------------	------------------------	--------------------	---------------	------------------	---------------	----------------	---------------------------

Latitude 36.762424 Longitude -107.718116

**NATURE OF RELEASE**

Type of Release: Natural gas and condensate liquids	Volume of Release: 772 MCF	Volume Recovered: Unknown
Source of Release: Broken Methanol Injector	Date and Hour of Occurrence: 3/26/14 @ 1:15 p.m.	Date and Hour of Discovery: 3/26/14 @ 1:15 p.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Jonathan Kelly - NMOCD	
By Whom? Thomas Long	Date and Hour 3/26/14 4:30 p.m. by phone; 3/27/14 by 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.\*

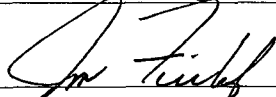
Describe Cause of Problem and Remedial Action Taken.\* A well producer discovered gas leaking from a methanol injector. An Enterprise technician was dispatched to isolate the injector and make repairs.

OIL CONSERV. DIV DIST. 3

APR 11 2014

Describe Area Affected and Cleanup Action Taken.\* An area of approximately two feet by two feet was affected below the methanol tank. The affected soil will be removed by hand tools and transported to the nearest Enterprise Compressor station to be stored in a petroleum contaminated soil box for later disposal at a NMOCD approved land farm facility.

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: 5/15/14	Expiration Date:
E-mail Address: jefields@eprod.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 4-7-2014 Phone: (713)381-6684		

\* Attach Additional Sheets If Necessary

# NCS 141 3529 445

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 3D Loop Pipeline	Facility Type: Natural Gas Gathering Line	
Surface Owner: NAPI	Mineral Owner: BLM	API No.

**LOCATION OF RELEASE**

Unit Letter D	Section 2	Township 27N	Range 12W	Feet from the	North/South Line	Feet from the	East/West Line	County San Juan
------------------	--------------	-----------------	--------------	---------------	------------------	---------------	----------------	--------------------

Latitude 36.61015 Longitude -107.089064

**NATURE OF RELEASE**

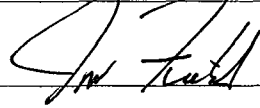
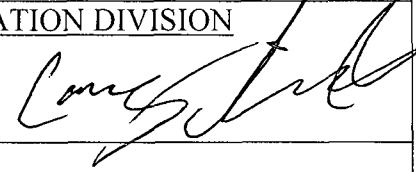
Type of Release: natural gas and natural gas liquids	Volume of Release: Unknown	Volume Recovered: Unknown
Source of Release: Suspected internal corrosion	Date and Hour of Occurrence: 3/18/2014 @ 3:40 p.m.	Date and Hour of Discovery: 3/18/2014 @ 3:40p.m.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	ROVD APR 7 '14	
By Whom?	OIL CONSERV. DIV.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	DIST. 3

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* A release was discovered on the Lateral 3D Loop pipeline by third party. There were no surface impacts. The line was blown down, taken out of service and LOTO (lock out tag out) was applied. The repairs/remediation activities began on March 25, 2014.

Describe Area Affected and Cleanup Action Taken.\* The repairs/remediation activities began on March 25, 2014. Approximately 100 cubic yards of hydrocarbon impacted soil has been removed and transported to an NMOCD approved land farm facility. 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: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Jon Fields	Approved by Environmental Specialist: 	
Title: Director, Environmental	Approval Date: 5/9/14	Expiration Date:
E-mail Address: jefields@eprod.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 4-2-2014	Phone: (713)381-6684	

\* Attach Additional Sheets If Necessary

#NCS 141 2927528

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

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 <b>Enterprise Field Services LLC</b>	Contact <b>Thomas Long</b>
Address <b>614 Reilly Ave, Farmington, NM 87401</b>	Telephone No. <b>(505) 599-2124</b>
Facility Name <b>Trunk K Pipeline</b>	Facility Type <b>Pipeline</b>

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

Unit Letter <b>B</b>	Section <b>26</b>	Township <b>27N</b>	Range <b>8W</b>	Feet from the	North/South Line	Feet from the	East/West Line	County <b>San Juan</b>
-------------------------	----------------------	------------------------	--------------------	---------------	------------------	---------------	----------------	---------------------------

Latitude: **36.54831** Longitude: **-107.64863**

**NATURE OF RELEASE**

Type of Release <b>Natural Gas condensate and produced water</b>	Volume of Release <b>10bbbls &amp; 50+MCF</b>	Volume Recovered: <b>Unknown</b>
Source of Release <b>Internal corrosion of the 16" spiral weld pipeline</b>	Date and Hour of Occurrence <b>9/4/2013 @ 6:00 p.m.</b>	Date and Hour of Discovery <b>9/4/2013 @ 6:00 p.m.</b>
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? <b>Brandon Powell, NMOCD, notified by email</b>	
By Whom? <b>Runell Seale</b>	Date and Hour <b>9/5/13 16:46</b>	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

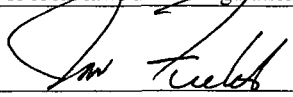
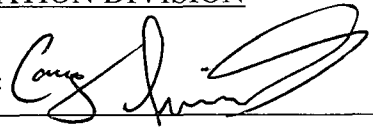
If a Watercourse was Impacted, Describe Fully.\*

RCVD APR 7 '14  
OIL CONS. DIV.  
DIST. 3

Describe Cause of Problem and Remedial Action Taken.\* After the pipeline leak was detected, the line was blown down and Lock Out Tag Out (LOTO) was applied. The cause of the release was internal corrosion of the 16" natural gas pipeline. Repair and Remediation activities were completed on September 11, 2013.

Describe Area Affected and Cleanup Action Taken.\* Repair and Remediation activities were completed on September 11, 2013. An area of approximately 42 feet long by 17 feet wide by 14 feet deep was affected. Approximately 150 cubic yard of hydrocarbon contaminated soil was excavated and transported to an approved 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: <b>Jon Fields</b>	Approved by Environmental Specialist: 	
Title: <b>Director, Environmental</b>	Approval Date: <b>4/21/14</b>	Expiration Date:
E-mail Address: <b>jefields@eprod.com</b>	Conditions of Approval:	Attached <input type="checkbox"/>
Date: <b>4-2-2014</b> Phone: <b>(713)381-6684</b>		

\* Attach Additional Sheets If Necessary

Incident # **NES 141 114 2604**

320



Animas Environmental Services, LLC

www.animasenvironmental.com

March 13, 2014

Thomas Long  
Enterprise Field Services, LLC  
614 Reilly Avenue  
Farmington, New Mexico 87401

624 E. Comanche  
Farmington, NM 87401  
505-564-2281

Durango, Colorado  
970-403-3084

*Via electronic mail with delivery confirmation receipt to:*  
[tjlong@eprod.com](mailto:tjlong@eprod.com)

**RE: Release Assessment Report  
Trunk K Pipeline Release  
NW¼ NE¼, Section 26, T27N, R8W  
San Juan County, New Mexico**

RCVD APR 7 '14  
OIL CONS. DIV.  
DIST. 3

Dear Mr. Long:

On September 9 through 11, 2013, Animas Environmental Services, LLC (AES) completed a release assessment associated with a pipeline release of pipeline liquids and natural gas of unknown volume at the Enterprise Field Services, LLC (Enterprise) Trunk K 16-inch diameter spiral-weld pipeline. The release was discovered on September 4, 2013, and resulted from pipeline corrosion.

---

## 1.0 Site Information

### 1.1 Location

Location – NW¼ NE¼, Section 26, T27N, R8W, San Juan County, New Mexico

Latitude/Longitude – N36.54831 and W107.64863, respectively

Surface Owner – Bureau of Land Management (BLM)

Figure 1. Topographic Site Location Map

Figure 2. Aerial Site Map, September 2013

### 1.2 NMOCD Ranking

In accordance with New Mexico Oil Conservation Division (NMOCD) release protocols, action levels were established per NMOCD *Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993) prior to the assessment. The release was given a ranking score of 30 based on the following factors:

- **Depth to Groundwater:** An NMOCD C-144 form dated March 2006 for the Marron #12, located approximately 2,600 feet north and at a similar elevation,

reported the depth to groundwater at less than 50 feet below ground surface (bgs). (20 points)

- **Wellhead Protection Area:** The release location is not within a wellhead protection area. (0 points)
- **Distance to Surface Water Body:** The wash in Largo Canyon is located approximately 420 feet east-northeast of the location. (10 points)

The ranking score of 30 dictates that concentrations for impacted soils left in place must be below the NMOCD action levels of 10 mg/kg benzene, 50 mg/kg total benzene, toluene, ethylbenzene, and xylenes (BTEX), and 100 mg/kg total petroleum hydrocarbons (TPH) as gasoline range organics (GRO) and diesel range organics (DRO).

### *1.3 Assessment and Mitigation*

On September 9 to 11, 2013, Enterprise contractors completed an excavation along the pipeline and determined the release was the result of a pipeline leak caused by corrosion. The pipeline was repaired, and AES collected soil samples from the walls and base of the excavation. Soil samples were also collected from a soil boring advanced in the base of the excavation near the release location to aid in determination of vertical extent of petroleum hydrocarbon impacted soil. Based on laboratory analytical results, the excavation was extended an additional 2 feet to the northeast, and approximately 3.5 feet of soil was removed from the base of the excavation on September 11, 2013. Prior to backfilling, AES collected two samples from the northeast wall and base of the excavation.

The final excavation measured approximately 42.5 feet by 17 feet by 14 feet deep. The excavation was backfilled with clean, imported material, and the impacted soil was transported to the Envirotech Landfarm for proper disposal. Soil sample locations and final excavation extents are included on Figure 3. The Envirotech Bills of Lading and a photograph log are included in the Appendix.

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## **2.0 Soil Sampling**

Five soil samples (CS-1 through CS-5) were collected from the walls and base of the initial excavation. Additionally, one soil boring (SB-1) was advanced into the base of the initial excavation near the release location. Following additional excavation, two soil samples (CS-6 and CS-7) were collected from the northeast wall and base of the final excavation. Each sample was field screened for volatile organic compounds (VOCs) and submitted for laboratory analysis. Soil samples CS-6 and CS-7 were also field screened for TPH.

## 2.1 Field Screening

### 2.1.1 Volatile Organic Compounds

Field screening for VOC vapors was conducted with a photo-ionization detector (PID) organic vapor meter (OVM). Before beginning field screening, the PID-OVM was first calibrated with 100 parts per million (ppm) isobutylene gas.

### 2.1.2 Total Petroleum Hydrocarbons

Selected soil samples were also analyzed in the field for TPH per U.S. Environmental Protection Agency (USEPA) Method 418.1 using a Buck Scientific Model HC-404 Total Hydrocarbon Analyzer Infrared Spectrometer (Buck). A 3-point calibration was completed prior to conducting soil analyses. Field analytical protocol followed AES's *Standard Operating Procedure: Field Analysis Total Petroleum Hydrocarbons per EPA Method 418.1*.

## 2.2 Laboratory Analyses

Samples collected for laboratory analysis were placed into new, clean, laboratory-supplied containers, which were then labeled, placed on ice, and logged onto a sample chain of custody record. Samples were maintained on ice until delivery to the analytical laboratory, Envirotech Analytical Laboratory (Envirotech), in Farmington, New Mexico. Soil samples were laboratory analyzed for:

- BTEX per USEPA Method 8021; and
- TPH (GRO/DRO) per USEPA Method 8015.

## 2.3 Field Screening and Laboratory Analytical Results

Soil field screening results showed that VOC concentrations via OVM ranged from 0.0 ppm in CS-3 up to 1,847 ppm in CS-2. Field TPH concentrations ranged from 78.9 mg/kg in CS-7 up to 156 mg/kg in CS-6. Field screening results are summarized in Table 1 and presented on Figure 3. The AES Field Screening Report is attached.

Table 1. Soil Field Screening VOC and TPH Results  
Trunk K Pipeline Release Assessment, September 2013

Sample ID	Date Sampled	Sample Depth (ft bgs)	VOCs via OVM (ppm)	Field TPH (mg/kg)
NMOCD Action Level*			100	100
SB-1	9/10/13	12	845	NA
	9/10/13	18	587	NA
CS-1	9/10/13	0 to 10.5	1,365	NA

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Sample Depth (ft bgs)</i>	<i>VOCs via OVM (ppm)</i>	<i>Field TPH (mg/kg)</i>
<b>NMOCD Action Level*</b>			<b>100</b>	<b>100</b>
CS-2	9/10/13	0 to 10.5	<b>1,847</b>	NA
CS-3	9/10/13	0 to 10.5	0.0	NA
CS-4	9/10/13	0 to 10.5	13.4	NA
CS-5	9/10/13	10.5	15.7	NA
CS-6	9/11/13	14.5	<b>293</b>	<b>156</b>
CS-7	9/11/13	0 to 14.5	42.5	78.9

\*Action level determined by the NMOCD ranking score per NMOCD *Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993)

Laboratory analytical results showed that benzene concentrations ranged from below laboratory detection limits for all the samples, except CS-1 (0.18 mg/kg) and CS-5 (1.25 mg/kg). Total BTEX concentrations ranged from below laboratory detection limits in five samples up to 29.3 mg/kg in CS-5. TPH concentrations ranged from below laboratory detection limits in CS-3, CS-4, and CS-7, up to 1,770 mg/kg in CS-5. Laboratory analytical results are included in Table 2 and on Figure 3. The laboratory analytical reports are attached.

Table 2. Laboratory Analytical Results – Benzene, Total BTEX, and TPH  
Trunk K Pipeline Release Assessment, September 2013

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Sample Depth (ft bgs)</i>	<i>Benzene (mg/kg)</i>	<i>Total BTEX (mg/kg)</i>	<i>TPH – GRO (mg/kg)</i>	<i>TPH – DRO (mg/kg)</i>
<b>NMOCD Action Level*</b>			<b>10</b>	<b>50</b>	<b>100</b>	
SB-1	9/10/13	12	<0.05	1.59	<b>42.2</b>	<b>237</b>
	9/10/13	18	<0.05	1.18	15.1	80.4
CS-1	9/10/13	0 to 10.5	0.18	10.2	<b>144</b>	<b>1,160</b>
CS-2	9/10/13	0 to 10.5	<0.05	<0.20	<5.00	10.7
CS-3	9/10/13	0 to 10.5	<0.05	<0.20	<5.00	<5.00
CS-4	9/10/13	0 to 10.5	<0.05	<0.20	<4.99	<4.99
CS-5	9/10/13	10.5	1.25	29.3	<b>514</b>	<b>1,260</b>
CS-6	9/11/13	14.5	<0.05	<0.20	<5.00	33.3
CS-7	9/11/13	0 to 14.5	<0.50	<2.00	<4.98	<4.98

\*Action level determined by the NMOCD ranking score per NMOCD *Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993)



### 3.0 Conclusions and Recommendations

Action levels for releases determined by NMOCD ranking score per *NMOCD Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993), and the release was assigned a ranking score of 30. Field screening showed VOC concentrations above the NMOCD action level of 100 ppm in SB-1, CS-1, CS-2, and CS-6, with the highest concentration in CS-2 with 1,847 ppm. Field TPH concentrations were below the NMOCD action level of 100 ppm in CS-7 with 78.9 mg/kg but exceeded the action level in CS-6 with 156 mg/kg.

Laboratory analytical results for the samples collected from the initial excavation (CS-1 through CS-5) reported benzene and total BTEX below the applicable NMOCD action levels. TPH concentrations were below the NMOCD action level in CS-2 through CS-4 but exceeded the NMOCD action level in CS-1 (northeast wall) and CS-5 (excavation base at 10.5 feet bgs). Based on field screening results, soil boring SB-1 was advanced into the base of the initial excavation. Laboratory analytical results reported benzene and total BTEX concentrations below applicable NMOCD action levels for the 12 and 18 foot bgs samples from SB-1. TPH concentrations for SB-1 exceeded the NMOCD action level at 12 feet (279 mg/kg) but were below the action level at 18 feet (95.5 mg/kg). Following additional excavation, laboratory analytical results reported benzene, total BTEX and TPH concentrations below applicable NMOCD action levels in CS-6 (base at 14 feet bgs) and CS-7 (northeast wall).

Based on field screening and laboratory analytical results of the final walls of the excavation, benzene, total BTEX, and TPH concentrations are below the applicable NMOCD action levels. No further work is recommended for the Trunk K Pipeline Release.

If you have any questions about this report or site conditions, please do not hesitate to contact Heather Woods at (505) 564-2281.

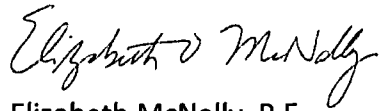
Sincerely,



David J. Reese  
Environmental Scientist



Heather M. Woods, P.G.  
Project Manager

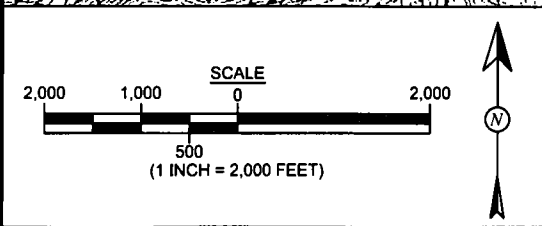


Elizabeth McNally, P.E.

**Attachments:**

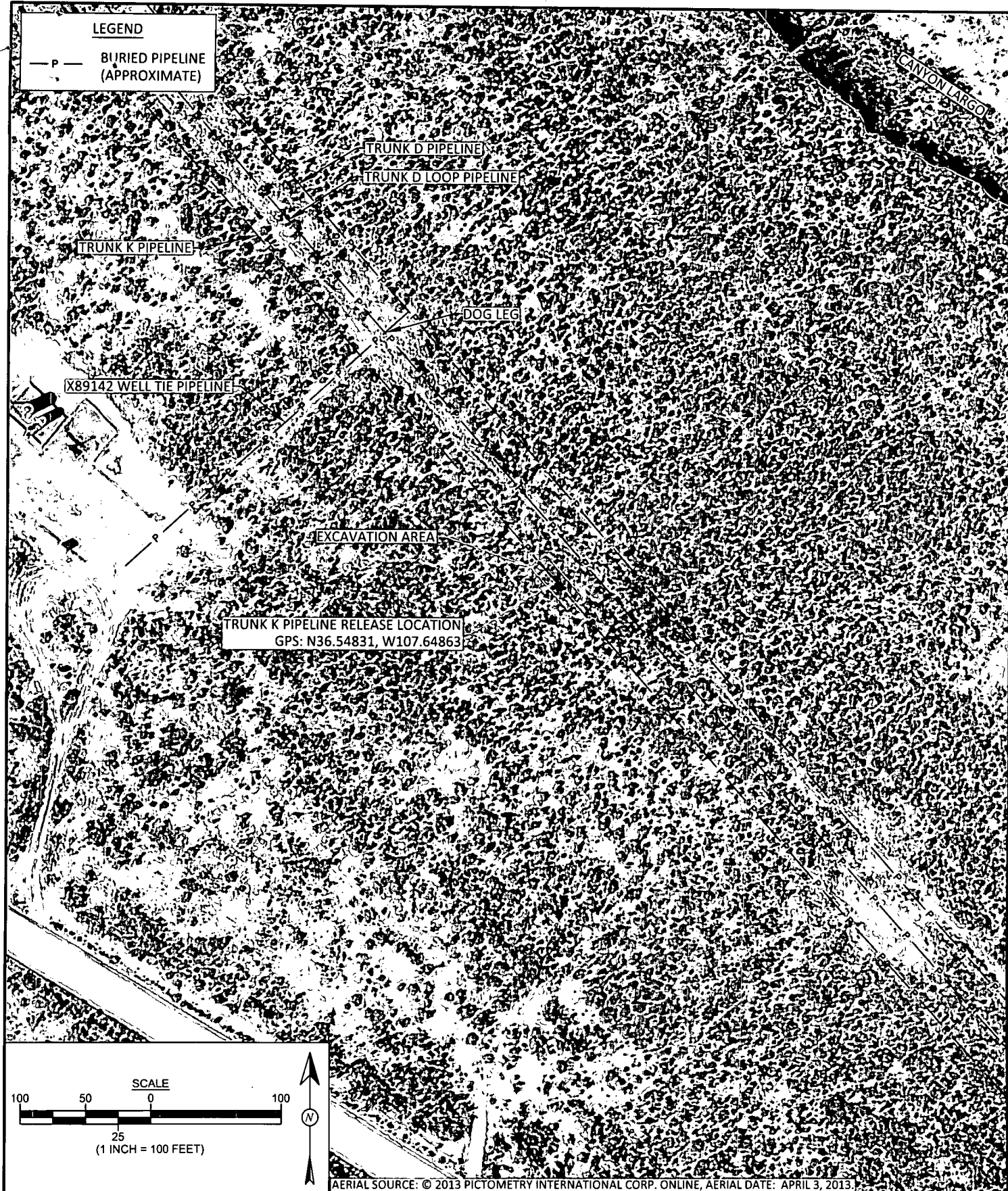
Figure 1. Topographic Site Location Map  
Figure 2. Aerial Site Map, September 2013  
Figure 3. Final Excavation Sample Locations and Results, September 2013  
Bills of Lading (Envirotech 44629, 44630, 44634, 44636, 44637, 44639, 44640,  
44645, 44647 through 44650, 44652, 44653, and 44655)  
Photograph Log  
AES Field Screening Report 091013-091113  
Laboratory Analytical Reports (Envirotech P309048 and P309055)

R:\Animas 2000\Dropbox\0000 Animas Server Dropbox EM\2014 Projects\Enterprise\Trunk K\Enterprise  
Trunk K Release Report 031314.docx



<b>DRAWN BY:</b> S. Glasses	<b>DATE DRAWN:</b> February 12, 2014
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> February 12, 2014
<b>CHECKED BY:</b> D. Watson	<b>DATE CHECKED:</b> February 12, 2014
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> February 12, 2014

**TOPOGRAPHIC SITE LOCATION MAP**  
**ENTERPRISE FIELD SERVICE LLC**  
**TRUNK K PIPELINE RELEASE**  
**NW¼, NE¼, SECTION 26, T27N, R8W**  
**SAN JUAN COUNTY, NEW MEXICO**  
**N36.54831, W107.64863**



Animas Environmental Services, LLC

**DRAWN BY:**  
C. Lameman

**DATE DRAWN:**  
February 12, 2014

**REVISIONS BY:**  
C. Lameman

**DATE REVISED:**  
February 12, 2014

**CHECKED BY:**  
D. Watson

**DATE CHECKED:**  
February 12, 2014

**APPROVED BY:**  
E. McNally

**DATE APPROVED:**  
February 12, 2014

## FIGURE 2

**AERIAL SITE MAP**  
ENTERPRISE FIELD SERVICE LLC  
TRUNK K PIPELINE RELEASE - SEPTEMBER 2013  
NW¼ NE¼, SECTION 26, T27N, R8W  
SAN JUAN COUNTY, NEW MEXICO  
N36.54831, W107.64863

FIGURE 3

EXCAVATION SAMPLE  
LOCATIONS AND RESULTS  
SEPTEMBER 2013  
ENTERPRISE FIELD SERVICE LLC  
TRUNK K PIPELINE RELEASE  
NW¼ NE¼, SECTION 26, T27N, R8W  
SAN JUAN COUNTY, NEW MEXICO  
N36.54831, W107.64863

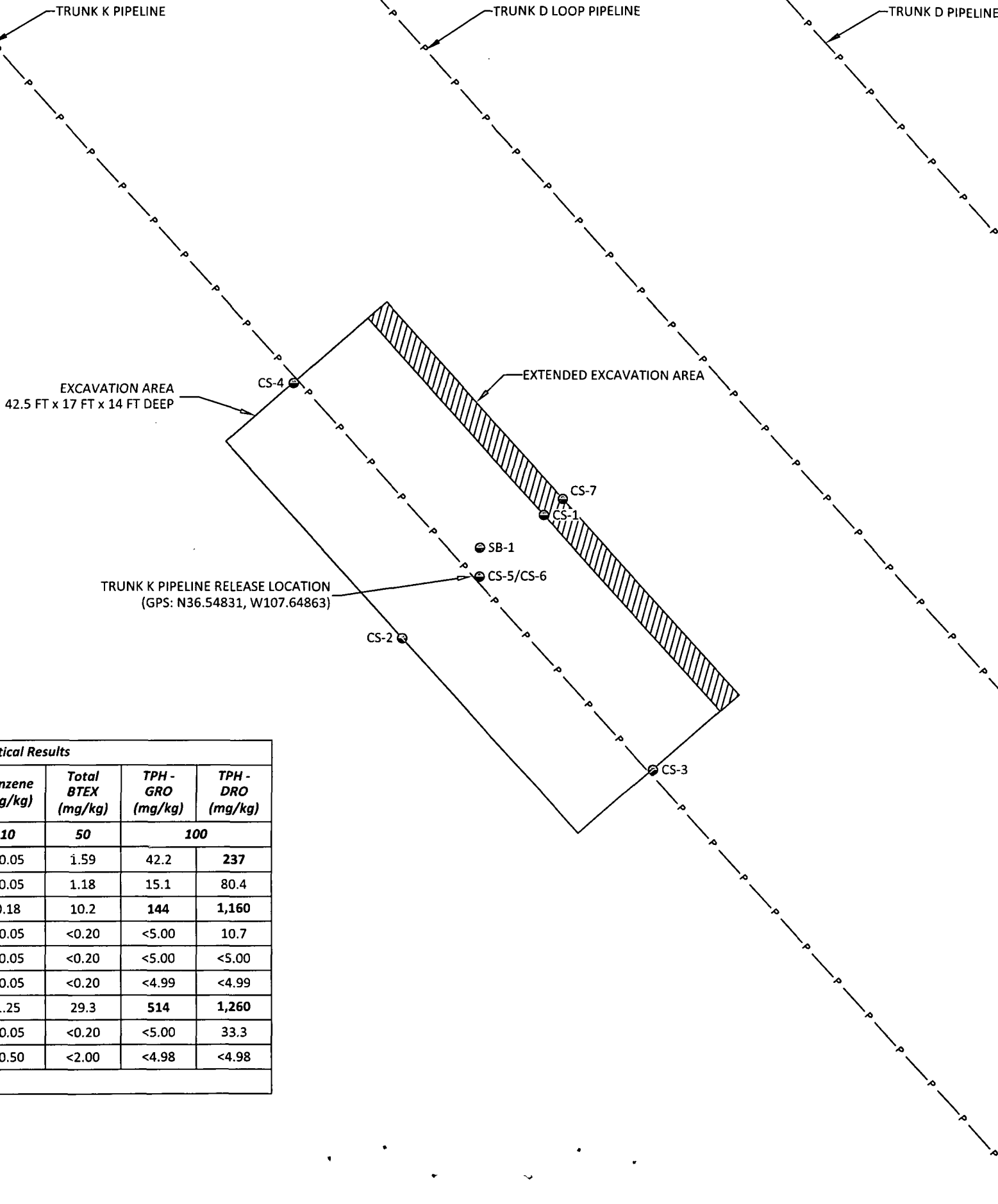
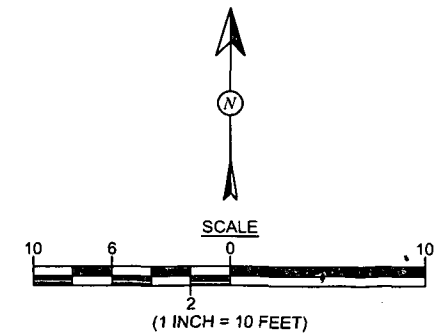


Animas Environmental Services, LLC

<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> February 12, 2014
<b>REVISIONS BY:</b> S. Glasses	<b>DATE REVISED:</b> March 10, 2014
<b>CHECKED BY:</b> H. Woods	<b>DATE CHECKED:</b> March 10, 2014
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> March 10, 2014

LEGEND

- SAMPLE LOCATIONS
- x — BURIED PIPELINE (APPROXIMATE)



Field Screening and Laboratory Analytical Results								
Sample ID	Date	Depth (ft)	OVM-PID (ppm)	TPH 418.1 (mg/kg)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH - GRO (mg/kg)	TPH - DRO (mg/kg)
NMOCD ACTION LEVEL			100	100	10	50	100	
SB-1	9/10/13	12	845	NA	<0.05	1.59	42.2	237
	9/10/13	18	587	NA	<0.05	1.18	15.1	80.4
CS-1	9/10/13	1 to 10.5	1,365	NA	0.18	10.2	144	1,160
CS-2	9/10/13	1 to 10.5	1,847	NA	<0.05	<0.20	<5.00	10.7
CS-3	9/10/13	1 to 10.5	0.0	NA	<0.05	<0.20	<5.00	<5.00
CS-4	9/10/13	1 to 10.5	13.4	NA	<0.05	<0.20	<4.99	<4.99
CS-5	9/10/13	10.5	15.7	NA	1.25	29.3	514	1,260
CS-6	9/11/13	14	293	156	<0.05	<0.20	<5.00	33.3
CS-7	9/11/13	1 to 14	42.5	78.9	<0.50	<2.00	<4.98	<4.98

ALL SAMPLES WERE ANALYZED PER EPA METHOD 8021 AND 8015.



# Bill of Lading

MANIFEST # 44629

DATE 9-10-13 JOB # 97057-0537

**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	E-tech	<del>Ex-1000</del>	Clean Fill	-	10	-	Richt Trucking	3	11:00	Curtis A. Birch
2	" "	Trunk Line SWB K 16"	" "	-	10	-	" "	3	1440	Curtis A. Birch
					20					
RESULTS:		LANDFARM EMPLOYEE:	NOTES:							
/	CHLORIDE TEST	/								
/	PAINT FILTER TEST	/								
			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. Riehl Trucking LLC NAME Curtis Riehl SIGNATURE Curtis Riehl

COMPANY CONTACT Charlie Dean PHONE 505 330 4089 DATE 9-10-13

***Signatures required prior to distribution of the legal document.***



# Bill of Lading

MANIFEST # 44630

DATE 9-10-13 JOB # 97057-0587

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

[illegible]

**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 Lee Moss SIGNATURE Lee Moss

COMPANY CONTACT Allan Doyle PHONE 333-2003 DATE 9-10-13

***Signatures required prior to distribution of the legal document.***

White - Company Records Yellow - Billing Pink - Customer



# Bill of Lading

MANIFEST # 44634

DATE 9-10-13 JOB # 97057-0587

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

[illegible]

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. Ricki Trucking NAME Curtis Ricki SIGNATURE Curtis A. Ricki

COMPANY CONTACT Charlie Dean PHONE 505 330 4089 DATE 9-10-13

***Signatures required prior to distribution of the legal document.***







MANIFEST # 44637  
DATE 9-10-13 JOB # 97057-0587

DATE 9-10-13 JOB # 97057-0587

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. Ritchey Trucking NAME Elmer Ritchey SIGNATURE Elmer Ritchey  
COMPANY CONTACT \_\_\_\_\_ PHONE 632 3550 DATE Apr 9 13  
*Signatures required prior to distribution of the legal document.*



# Bill of Lading

MANIFEST # 44639

DATE 9-10-73 JOB # 97057-0587

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

[illegible]

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 Lee Moss SIGNATURE Lee Moss

COMPANY CONTACT Allan Doyle PHONE 333-2003 DATE 9-10-13

***Signatures required prior to distribution of the legal document.***





# Bill of Lading

MANIFEST # 44645

DATE 9-11-13 JOB # 97057-0587

**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	S-tech	ENTERPRISE PUMP K-16"	eleph Fill	-	12	-	MOSS	47	8:00	Lee Moss
2	"	" SW "	"	-	12	-	MOSS	47	12:17	Lee Moss
					<u>24</u>					
RESULTS:		LANDFARM EMPLOYEE:	<i>Dave La</i> BGW			NOTES:				
/	CHLORIDE TEST	/								
/	PAINT FILTER TEST	/	Certification of above receipt & placement			RDC				

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 Lee Moss SIGNATURE Lee Moss

COMPANY CONTACT Allan Doyle PHONE 486-2754 DATE 9-11-13

***Signatures required prior to distribution of the legal document.***





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

# Bill of Lading

MANIFEST # 44648

DATE 9.11-13 JOB # 97057-0587

[illegible]

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 Christa A. Brall

COMPANY CONTACT Charlie Dean

PHONE 505 330 4089

DATE 9-11-13

***Signatures required prior to distribution of the legal document.***

**White - Company Records, Yellow - Billing, Pink - Customer**

579.1238 reproduction 579.12







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

# Bill of Lading

MANIFEST # 44650

DATE 9.11.13 JOB # 97057-0587

LOAD NO.	COMPLETE DESCRIPTION OF SHIPMENT						TRANSPORTING COMPANY			
	POINT OF ORIGIN	DESTINATION	MATERIAL	GRID	YDS	BBLs	COMPANY	TRK#	TIME	DRIVER SIGNATURE
1	Etech	Enterprise Trunk-K	Clean	-	10	-	Yucca	AF4	1135	[Signature]
2	"	16SW	Fill Soil	-	10	-	"	AF6	1135	[Signature]
					20					
RESULTS:		LANDFARM EMPLOYEE:	Certification of above receipt & placement			NOTES:				
/	CHLORIDE TEST									
/	PAINT FILTER TEST					[Signature]				

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.

NAME \_\_\_\_\_

**SIGNATURE**

## COMPANY CONTACT

**PHONE**

DATE \_\_\_\_\_

***Signatures required prior to distribution of the legal document.***

**White - Company Records, Yellow - Billing, Pink - Customer**



# Bill of Lading

MANIFEST # 44652

DATE 9.11.13 JOB # 97057-0587

**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	<del>Enterprise</del>	LFII	CONIT SOIL	A23	10	-	Ritchey	471	1155	<i>[Signature]</i>
2	Enterprise TRUNK K-1650		" "	A23	10	-	Ritchey	471	1545	<i>[Signature]</i>
					20					
RESULTS:		LANDFARM EMPLOYEE:	<i>Gary Robinson</i> BGW Certification of above receipt & placement			NOTES:  <div style="text-align: right;"><i>RDC</i></div>				
<292	CHLORIDE 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. Ritchey NAME Elmer T. Ritchey SIGNATURE [Signature]

COMPANY CONTACT Allen. PHONE 632 3558 DATE Sept 11 13

***Signatures required prior to distribution of the legal document.***



# Bill of Lading

MANIFEST # 44653

DATE 9-11-13 JOB # 97057-0587

**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	Estatech L.F	Enterprise Trunk K 16-SW	Clean Fill Soil	-	10 <hr/> 10	-	Ritchey	L71	1155	
RESULTS:		LANDFARM EMPLOYEE:	<div>Gary Roberts</div> <div>BLOW</div> <div>Certification of above receipt &amp; placement</div>							
/	CHLORIDE TEST /									
			NOTES: <div>ROC</div>							

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. RiteLoy NAME ELVIN RITCHIE SIGNATURE Elvin Ritchie

COMPANY CONTACT \_\_\_\_\_ PHONE 632 3534 DATE 8-27-13 ( )

***Signatures required prior to distribution of the legal document.***



# Bill of Lading

MANIFEST # 44655

DATE 9-11-13 JOB # 97057-0587

**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 Trunk K-16546	LFH	Cont. Soil	A-23	10	-	MOSS	47	12:18	Lee Moss
2	"	"	"	A23	10	-	MOSS	47	1605	Lee Moss
					20					
RESULTS:			LANDFARM EMPLOYEE: Gary Robinson BSW	NOTES:						
<292	CHLORIDE TEST	1								
	PAINT FILTER TEST	1	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. Moss Excavation NAME Lee Moss SIGNATURE Lee Moss

COMPANY CONTACT Allen Doyle PHONE 486-2754 DATE 9-11-13

***Signatures required prior to distribution of the legal document.***


Photo #1	
Client: Enterprise Field Services, LLC	
Project: Trunk K Pipeline Release	
Taken by: Heather Woods	
Date: September 9, 2013	
AES Project No. 130908	<b>Description:</b> View looking west of initial excavation prior to pipeline repair.

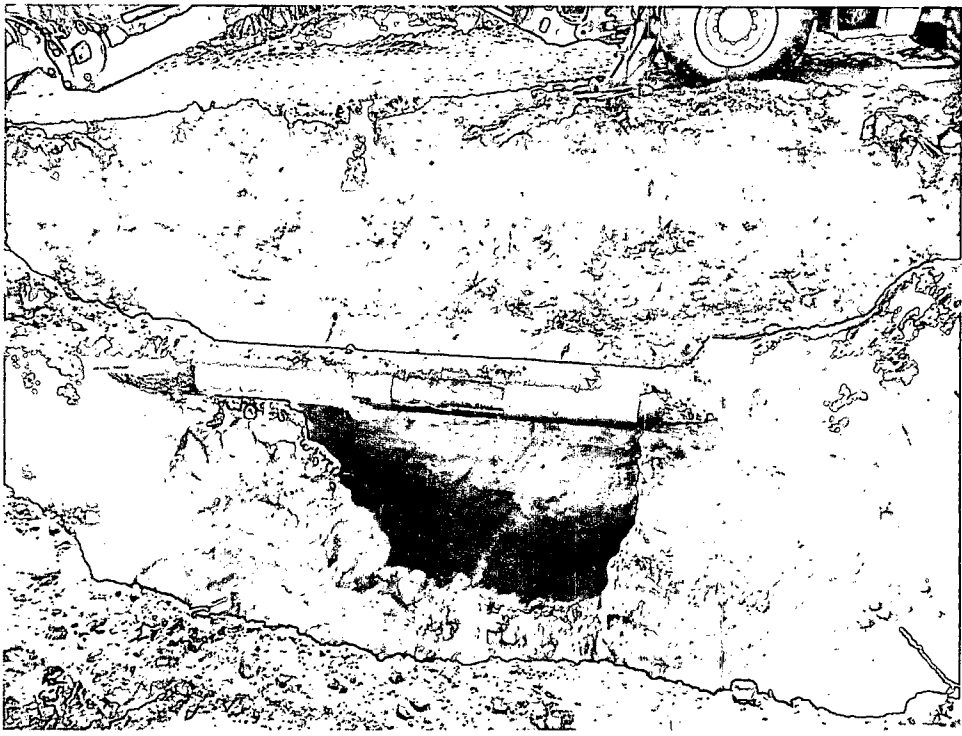

Photo #2	
Client: Enterprise Field Services, LLC	
Project: Trunk K Pipeline Release	
Taken by: Heather Woods	
Date: September 9, 2013	
AES Project No. 130908	<b>Description:</b> View looking southwest of final excavation extents following pipeline repair.

Photo #3	
Client: Enterprise Field Services, LLC	
Project: Trunk K Pipeline Release	
Taken by: Heather Woods	
Date: September 11, 2013	
AES Project No. 130908	Description: View looking northwest of final excavation extents following pipeline repair.

# AES Field Screening Report



Animas Environmental Services, LLC

www.animasenvironmental.com

624 E. Comanche  
Farmington, NM 87401  
505-564-2281

Durango, Colorado  
970-403-3084

Client: Enterprise Field Services, LLC

Project Location: Trunk K Pipeline Release

Date: 9/10/2013 - 9/11/2013

Matrix: Soil

Sample ID	Collection Date	Collection Time	OVM (ppm)	Field TPH* (mg/kg)	Field TPH Analysis Time	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SB-1 @ 12'	9/10/2013	13:22	845	Not Analyzed for TPH				
SB-1 @ 18'	9/10/2013	13:25	587	Not Analyzed for TPH				
CS-1	9/10/2013	9:37	1,365	Not Analyzed for TPH				
CS-2	9/10/2013	9:40	1,847	Not Analyzed for TPH				
CS-3	9/10/2013	9:43	0.0	Not Analyzed for TPH				
CS-4	9/10/2013	9:47	13.4	Not Analyzed for TPH				
CS-5	9/10/2013	9:50	15.7	Not Analyzed for TPH				
CS-6	9/11/2013	14:39	293	156	14:58	20.0	1	HMW
CS-7	9/11/2013	14:40	42.5	78.9	15:01	20.0	1	HMW

DF Dilution Factor

NA Not Analyzed

ND Not Detected at the Reporting Limit

PQL Practical Quantitation Limit

\*Field TPH concentrations recorded may be below PQL.

Total Petroleum Hydrocarbons - USEPA 418.1

Analyst: *Heather M. Woods*



## Analytical Report

### Report Summary

Client: Animas Environmental Services

Chain Of Custody Number: 16068

Samples Received: 9/10/2013 11:15:00AM

Job Number: 99083-0001

Work Order: P309048

Project Name/Location: Enterprise Trunk K

Entire Report Reviewed By:

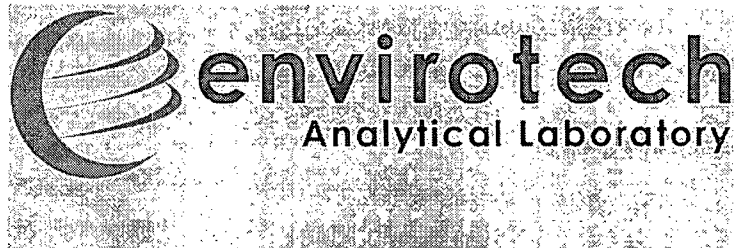
A handwritten signature in black ink, appearing to read 'Tim Cain', is written over a horizontal line.

Date: 9/11/13

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.





Animas Environmental Services  
624 E. Comanche St.  
Farmington NM, 87401-6815

Project Name: Enterprise Trunk K  
Project Number: 99083-0001  
Project Manager: Heather Woods

Reported: 11-Sep-13 14:03

### Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SB-1@12'	P309048-01A	Soil	09/10/13	09/10/13	Glass Jar, 4 oz.
SB-1@18'	P309048-02A	Soil	09/10/13	09/10/13	Glass Jar, 4 oz.
CS-1	P309048-03A	Soil	09/10/13	09/10/13	Glass Jar, 4 oz.
CS-2	P309048-04A	Soil	09/10/13	09/10/13	Glass Jar, 4 oz.
CS-3	P309048-05A	Soil	09/10/13	09/10/13	Glass Jar, 4 oz.
CS-4	P309048-06A	Soil	09/10/13	09/10/13	Glass Jar, 4 oz.
CS-5	P309048-07A	Soil	09/10/13	09/10/13	Glass Jar, 4 oz.

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5796 US Highway 64, Farmington, NM 87401

Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (505) 632-0615 Fx (505) 632-1865

Ph (970) 259-0615 Fx (800) 362-1879

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



Animas Environmental Services  
624 E. Comanche St.  
Farmington NM, 87401-6815

Project Name: Enterprise Trunk K  
Project Number: 99083-0001  
Project Manager: Heather Woods

Reported:  
11-Sep-13 14:03

**SB-1@12'**  
**P309048-01 (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	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Toluene	0.18	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Ethylbenzene	0.09	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
p,m-Xylene	1.04	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
o-Xylene	0.28	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Total Xylenes	1.32	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Total BTEX	1.59	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Surrogate: Bromochlorobenzene		102 %	80-120		1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		90.4 %	80-120		1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Surrogate: Fluorobenzene		90.5 %	80-120		1337004	10-Sep-13	11-Sep-13	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	42.2	5.00	mg/kg	1	1337005	10-Sep-13	10-Sep-13	EPA 8015D	
Diesel Range Organics (C10-C28)	237	5.00	mg/kg	1	1337005	10-Sep-13	10-Sep-13	EPA 8015D	
GRO and DRO Combined Fractions	279	5.00	mg/kg	1	1337005	10-Sep-13	10-Sep-13	EPA 8015D	

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Animas Environmental Services  
624 E. Comanche St.  
Farmington NM, 87401-6815

Project Name: Enterprise Trunk K  
Project Number: 99083-0001  
Project Manager: Heather Woods

Reported:  
11-Sep-13 14:03

**SB-1@18'**  
**P309048-02 (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	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Toluene	0.12	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Ethylbenzene	0.06	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
p,m-Xylene	0.79	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
o-Xylene	0.21	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Total Xylenes	0.99	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Total BTEX	1.18	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Surrogate: Bromochlorobenzene		105 %	80-120		1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		94.0 %	80-120		1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Surrogate: Fluorobenzene		94.9 %	80-120		1337004	10-Sep-13	11-Sep-13	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	15.1	5.00	mg/kg	1	1337005	10-Sep-13	10-Sep-13	EPA 8015D	
Diesel Range Organics (C10-C28)	80.4	5.00	mg/kg	1	1337005	10-Sep-13	10-Sep-13	EPA 8015D	
GRO and DRO Combined Fractions	95.5	5.00	mg/kg	1	1337005	10-Sep-13	10-Sep-13	EPA 8015D	

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Animas Environmental Services  
624 E. Comanche St.  
Farmington NM, 87401-6815

Project Name: Enterprise Trunk K  
Project Number: 99083-0001  
Project Manager: Heather Woods

Reported:  
11-Sep-13 14:03

## CS-1

### P309048-03 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Volatile Organics by EPA 8021</b>									
Benzene	0.18	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Toluene	1.92	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Ethylbenzene	1.04	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
p,m-Xylene	5.61	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
o-Xylene	1.45	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Total Xylenes	7.06	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Total BTEX	10.2	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Surrogate: Bromochlorobenzene		113 %	80-120		1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		91.6 %	80-120		1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Surrogate: Fluorobenzene		97.9 %	80-120		1337004	10-Sep-13	11-Sep-13	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	144	4.99	mg/kg	1	1337005	10-Sep-13	10-Sep-13	EPA 8015D	
Diesel Range Organics (C10-C28)	1160	4.99	mg/kg	1	1337005	10-Sep-13	10-Sep-13	EPA 8015D	
GRO and DRO Combined Fractions	1310	4.99	mg/kg	1	1337005	10-Sep-13	10-Sep-13	EPA 8015D	

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Animas Environmental Services  
624 E. Comanche St.  
Farmington NM, 87401-6815

Project Name: Enterprise Trunk K  
Project Number: 99083-0001  
Project Manager: Heather Woods

Reported:  
11-Sep-13 14:03

**CS-2**  
**P309048-04 (Solid)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**Volatile Organics by EPA 8021**

Benzene	ND	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Surrogate: Bromochlorobenzene		102 %	80-120		1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		97.0 %	80-120		1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Surrogate: Fluorobenzene		97.2 %	80-120		1337004	10-Sep-13	11-Sep-13	EPA 8021B	

**Nonhalogenated Organics by 8015**

Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1337005	10-Sep-13	10-Sep-13	EPA 8015D	
Diesel Range Organics (C10-C28)	10.7	5.00	mg/kg	1	1337005	10-Sep-13	10-Sep-13	EPA 8015D	
GRO and DRO Combined Fractions	10.7	5.00	mg/kg	1	1337005	10-Sep-13	10-Sep-13	EPA 8015D	

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Animas Environmental Services  
 624 E. Comanche St.  
 Farmington NM, 87401-6815

 Project Name: Enterprise Trunk K  
 Project Number: 99083-0001  
 Project Manager: Heather Woods

 Reported:  
 11-Sep-13 14:03

**CS-3**  
**P309048-05 (Solid)**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B		
Toluene	ND	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B		
Ethylbenzene	ND	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B		
p,m-Xylene	ND	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B		
o-Xylene	ND	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B		
Total Xylenes	ND	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B		
Total BTEX	ND	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B		
Surrogate: Bromochlorobenzene		97.8 %		80-120	1337004	10-Sep-13	11-Sep-13	EPA 8021B		
Surrogate: 1,4-Difluorobenzene		95.8 %		80-120	1337004	10-Sep-13	11-Sep-13	EPA 8021B		
Surrogate: Fluorobenzene		97.1 %		80-120	1337004	10-Sep-13	11-Sep-13	EPA 8021B		
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1337005	10-Sep-13	10-Sep-13	EPA 8015D		
Diesel Range Organics (C10-C28)	ND	5.00	mg/kg	1	1337005	10-Sep-13	10-Sep-13	EPA 8015D		
DRO and DRO Combined Fractions	ND	5.00	mg/kg	1	1337005	10-Sep-13	10-Sep-13	EPA 8015D		

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Animas Environmental Services  
624 E. Comanche St.  
Farmington NM, 87401-6815

Project Name: Enterprise Trunk K  
Project Number: 99083-0001  
Project Manager: Heather Woods

Reported:  
11-Sep-13 14:03

CS-4  
P309048-06 (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	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Surrogate: Bromochlorobenzene		95.2 %	80-120		1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		102 %	80-120		1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Surrogate: Fluorobenzene		103 %	80-120		1337004	10-Sep-13	11-Sep-13	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1337005	10-Sep-13	10-Sep-13	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	4.99	mg/kg	1	1337005	10-Sep-13	10-Sep-13	EPA 8015D	
GRO and DRO Combined Fractions	ND	4.99	mg/kg	1	1337005	10-Sep-13	10-Sep-13	EPA 8015D	

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Animas Environmental Services  
624 E. Comanche St.  
Farmington NM, 87401-6815

Project Name: Enterprise Trunk K  
Project Number: 99083-0001  
Project Manager: Heather Woods

Reported:  
11-Sep-13 14:03

**CS-5**  
**P309048-07 (Solid)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Volatile Organics by EPA 8021</b>									
Benzene	1.25	0.50	mg/kg	10	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Toluene	6.48	0.50	mg/kg	10	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Ethylbenzene	2.19	0.50	mg/kg	10	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
p,m-Xylene	16.0	0.50	mg/kg	10	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
o-Xylene	3.44	0.50	mg/kg	10	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Total Xylenes	19.4	0.50	mg/kg	10	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Total BTEX	29.3	0.50	mg/kg	10	1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Surrogate: Bromochlorobenzene		100 %	80-120		1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		92.2 %	80-120		1337004	10-Sep-13	11-Sep-13	EPA 8021B	
Surrogate: Fluorobenzene		94.5 %	80-120		1337004	10-Sep-13	11-Sep-13	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	514	5.00	mg/kg	1	1337005	10-Sep-13	10-Sep-13	EPA 8015D	
Diesel Range Organics (C10-C28)	1260	5.00	mg/kg	1	1337005	10-Sep-13	10-Sep-13	EPA 8015D	
GRO and DRO Combined Fractions	1770	5.00	mg/kg	1	1337005	10-Sep-13	10-Sep-13	EPA 8015D	

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Animas Environmental Services  
624 E. Comanche St.  
Farmington NM, 87401-6815

Project Name: Enterprise Trunk K  
Project Number: 99083-0001  
Project Manager: Heather Woods

Reported:  
11-Sep-13 14:03

## 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 1337004 - Purge and Trap EPA 5030A

##### Blank (1337004-BLK1)

Prepared: 09-Sep-13 Analyzed: 10-Sep-13

Benzene	ND	0.05	mg/kg							
Toluene	ND	0.05	"							
Ethylbenzene	ND	0.05	"							
p,m-Xylene	ND	0.05	"							
o-Xylene	ND	0.05	"							
Total Xylenes	ND	0.05	"							
Total BTEX	ND	0.05	"							
Surrogate: Bromochlorobenzene	51.0		ug/L	50.0		102	80-120			
Surrogate: 1,4-Difluorobenzene	54.1		"	50.0		108	80-120			
Surrogate: Fluorobenzene	53.1		"	50.0		106	80-120			

##### Duplicate (1337004-DUP1)

Source: P309022-01

Prepared: 09-Sep-13 Analyzed: 10-Sep-13

Benzene	ND	0.05	mg/kg		ND				30	
Toluene	ND	0.05	"		ND				30	
Ethylbenzene	ND	0.05	"		ND				30	
p,m-Xylene	ND	0.05	"		ND				30	
o-Xylene	ND	0.05	"		ND				30	
Surrogate: Bromochlorobenzene	43.8		ug/L	50.0		87.7	80-120			
Surrogate: 1,4-Difluorobenzene	43.8		"	50.0		87.6	80-120			
Surrogate: Fluorobenzene	43.6		"	50.0		87.2	80-120			

##### Matrix Spike (1337004-MS1)

Source: P309022-01

Prepared: 09-Sep-13 Analyzed: 10-Sep-13

Benzene	2.59	0.05	mg/kg	2.50	ND	104	39-150			
Toluene	2.58	0.05	"	2.50	ND	103	46-148			
Ethylbenzene	2.58	0.05	"	2.50	ND	103	32-160			
p,m-Xylene	5.15	0.05	"	5.00	ND	103	46-148			
o-Xylene	2.57	0.05	"	2.50	ND	103	46-148			
Surrogate: Bromochlorobenzene	53.2		ug/L	50.0		106	80-120			
Surrogate: 1,4-Difluorobenzene	51.8		"	50.0		104	80-120			
Surrogate: Fluorobenzene	51.8		"	50.0		104	80-120			

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Animas Environmental Services  
624 E. Comanche St.  
Farmington NM, 87401-6815

Project Name: Enterprise Trunk K  
Project Number: 99083-0001  
Project Manager: Heather Woods

Reported:  
11-Sep-13 14:03

**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 1337005 - GRO/DRO Extraction EPA 3550C</b>										
<b>Blank (1337005-BLK1)</b>				Prepared: 09-Sep-13 Analyzed: 10-Sep-13						
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg							
Diesel Range Organics (C10-C28)	ND	5.00	"							
GRO and DRO Combined Fractions	ND	5.00	"							
<b>Duplicate (1337005-DUP1)</b>				Source: P309022-01 Prepared: 09-Sep-13 Analyzed: 10-Sep-13						
Gasoline Range Organics (C6-C10)	ND	4.98	mg/kg		ND				30	
Diesel Range Organics (C10-C28)	ND	4.98	"		ND				30	
<b>Matrix Spike (1337005-MS1)</b>				Source: P309022-01 Prepared: 09-Sep-13 Analyzed: 10-Sep-13						
Gasoline Range Organics (C6-C10)	262	5.26	mg/kg	263	ND	99.4	75-125			
Diesel Range Organics (C10-C28)	265	5.26	"	263	ND	101	75-125			

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Animas Environmental Services  
624 E. Comanche St.  
Farmington NM, 87401-6815

Project Name: Enterprise Trunk K  
Project Number: 99083-0001  
Project Manager: Heather Woods

**Reported:**  
11-Sep-13 14:03

#### 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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RUSH

## CHAIN OF CUSTODY RECORD

16068

Page 13 of 13

Client: Animas Environmental Services			Project Name / Location: Enterprise Trunk K			ANALYSIS / PARAMETERS															
Email results to: hwoods@animasenvironmental.com			Sampler Name: Heather Woods																		
Client Phone No.: 505-564-2281			Client No.: 99063-0001																		
Sample No. / Identification	Sample Date	Sample Time	Lab No.	No./Volume of Containers	Preservative			TPH (Method 8015) (300/DeG)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCPL with H/P	CO Table 910-1	TPH (418.1)	CHLORIDE			Sample Cool	Sample Intact
					HNO <sub>3</sub>	HCl	Cold/None														
SB-1 @ 12'	9/10/13	849	P309048-01	1-4oz			X	X	X											✓	✓
SB-1 @ 18'	9/10/13	900	P309048-02	1-4oz			X	X	X											✓	✓
CS-1	9/10/13	937	P309048-03	1-4oz			X	X	X											✓	✓
CS-2	9/10/13	940	P309048-04	1-4oz			X	X	X											✓	✓
CS-3	9/10/13	943	P309048-05	1-4oz			X	X	X											✓	✓
CS-4	9/10/13	947	P309048-06	1-4oz			X	X	X											✓	✓
CS-5	9/10/13	950	P309048-07	1-4oz			X	X	X											✓	✓

Relinquished by: (Signature) Heather M. Woods	Date 9/10/13	Time 11:15	Received by: (Signature) <i>[Signature]</i>	Date 9/10/13	Time 11:15
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.



## Analytical Report

### Report Summary

Client: Animas Environmental Services

Chain Of Custody Number: 16076

Samples Received: 9/11/2013 4:20:00PM

Job Number: 99083-0001

Work Order: P309055

Project Name/Location: Enterprise Trunk K

Entire Report Reviewed By:

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

Date: 9/12/13

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.

Animas Environmental Services  
624 E. Comanche St.  
Farmington NM, 87401-6815

Project Name: Enterprise Trunk K  
Project Number: 99083-0001  
Project Manager: Heather Woods

**Reported:**  
12-Sep-13 10:42

### Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
CS-6	P309055-01A	Soil	09/11/13	09/11/13	Glass Jar, 4 oz.
CS-7	P309055-02A	Soil	09/11/13	09/11/13	Glass Jar, 4 oz.

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Animas Environmental Services  
624 E. Comanche St.  
Farmington NM, 87401-6815

Project Name: Enterprise Trunk K  
Project Number: 99083-0001  
Project Manager: Heather Woods

Reported:  
12-Sep-13 10:42

**CS-6**  
**P309055-01 (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	1337027	11-Sep-13	11-Sep-13	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1337027	11-Sep-13	11-Sep-13	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1337027	11-Sep-13	11-Sep-13	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1337027	11-Sep-13	11-Sep-13	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1337027	11-Sep-13	11-Sep-13	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1337027	11-Sep-13	11-Sep-13	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1337027	11-Sep-13	11-Sep-13	EPA 8021B	
Surrogate: Bromochlorobenzene		100 %	80-120		1337027	11-Sep-13	11-Sep-13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		95.4 %	80-120		1337027	11-Sep-13	11-Sep-13	EPA 8021B	
Surrogate: Fluorobenzene		93.9 %	80-120		1337027	11-Sep-13	11-Sep-13	EPA 8021B	
<b>Nonhalogenated Organics by 8015</b>									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1337026	11-Sep-13	12-Sep-13	EPA 8015D	
Diesel Range Organics (C10-C28)	33.3	5.00	mg/kg	1	1337026	11-Sep-13	12-Sep-13	EPA 8015D	
ARO and DRO Combined Fractions	33.3	5.00	mg/kg	1	1337026	11-Sep-13	12-Sep-13	EPA 8015D	

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laboratory@envirotech-inc.com

Animas Environmental Services  
 624 E. Comanche St.  
 Farmington NM, 87401-6815

 Project Name: Enterprise Trunk K  
 Project Number: 99083-0001  
 Project Manager: Heather Woods

 Reported:  
 12-Sep-13 10:42

**CS-7**  
**P309055-02 (Solid)**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Volatile Organics by EPA 8021										
Benzene	ND	0.50	mg/kg	10	1337027	11-Sep-13	11-Sep-13	EPA 8021B		
Toluene	ND	0.50	mg/kg	10	1337027	11-Sep-13	11-Sep-13	EPA 8021B		
Ethylbenzene	ND	0.50	mg/kg	10	1337027	11-Sep-13	11-Sep-13	EPA 8021B		
p,m-Xylene	ND	0.50	mg/kg	10	1337027	11-Sep-13	11-Sep-13	EPA 8021B		
o-Xylene	ND	0.50	mg/kg	10	1337027	11-Sep-13	11-Sep-13	EPA 8021B		
Total Xylenes	ND	0.50	mg/kg	10	1337027	11-Sep-13	11-Sep-13	EPA 8021B		
Total BTEX	ND	0.50	mg/kg	10	1337027	11-Sep-13	11-Sep-13	EPA 8021B		
Surrogate: Bromochlorobenzene		90.7 %		80-120	1337027	11-Sep-13	11-Sep-13	EPA 8021B		
Surrogate: 1,4-Difluorobenzene		93.0 %		80-120	1337027	11-Sep-13	11-Sep-13	EPA 8021B		
Surrogate: Fluorobenzene		91.1 %		80-120	1337027	11-Sep-13	11-Sep-13	EPA 8021B		
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	4.98	mg/kg	1	1337026	11-Sep-13	12-Sep-13	EPA 8015D		
Diesel Range Organics (C10-C28)	ND	4.98	mg/kg	1	1337026	11-Sep-13	12-Sep-13	EPA 8015D		
GRO and DRO Combined Fractions	ND	4.98	mg/kg	1	1337026	11-Sep-13	12-Sep-13	EPA 8015D		

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Animas Environmental Services  
624 E. Comanche St.  
Farmington NM, 87401-6815

Project Name: Enterprise Trunk K  
Project Number: 99083-0001  
Project Manager: Heather Woods

Reported:  
12-Sep-13 10:42

### 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 1337027 - Purge and Trap EPA 5030A

##### Blank (1337027-BLK1)

Prepared & Analyzed: 11-Sep-13

Benzene	ND	0.05	mg/kg							
Toluene	ND	0.05	"							
Ethylbenzene	ND	0.05	"							
m-Xylene	ND	0.05	"							
p-Xylene	ND	0.05	"							
Total Xylenes	ND	0.05	"							
Total BTEX	ND	0.05	"							
Surrogate: Bromochlorobenzene	49.8		ug/L	50.0		99.7	80-120			
Surrogate: 1,4-Difluorobenzene	50.2		"	50.0		100	80-120			
Surrogate: Fluorobenzene	49.9		"	50.0		99.7	80-120			

##### Duplicate (1337027-DUP1)

Source: P309035-01

Prepared & Analyzed: 11-Sep-13

Benzene	ND	0.05	mg/kg		ND				30	
Toluene	ND	0.05	"		ND				30	
Ethylbenzene	ND	0.05	"		ND				30	
m-Xylene	ND	0.05	"		ND				30	
p-Xylene	ND	0.05	"		ND				30	
Surrogate: Bromochlorobenzene	46.5		ug/L	50.0		93.1	80-120			
Surrogate: 1,4-Difluorobenzene	49.6		"	50.0		99.3	80-120			
Surrogate: Fluorobenzene	49.1		"	50.0		98.2	80-120			

##### Matrix Spike (1337027-MS1)

Source: P309035-01

Prepared & Analyzed: 11-Sep-13

Benzene	47.7		ug/L	50.0	0.59	94.3	39-150			
Toluene	49.0		"	50.0	0.94	96.2	46-148			
Ethylbenzene	48.7		"	50.0	0.15	97.2	32-160			
m-Xylene	97.6		"	100	0.75	96.9	46-148			
p-Xylene	48.7		"	50.0	0.24	97.0	46-148			
Surrogate: Bromochlorobenzene	46.5		"	50.0		93.1	80-120			
Surrogate: 1,4-Difluorobenzene	49.0		"	50.0		98.0	80-120			
Surrogate: Fluorobenzene	48.8		"	50.0		97.5	80-120			

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Animas Environmental Services  
624 E. Comanche St.  
Farmington NM, 87401-6815

Project Name: Enterprise Trunk K  
Project Number: 99083-0001  
Project Manager: Heather Woods

Reported:  
12-Sep-13 10:42

## 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 1337026 - GRO/DRO Extraction EPA 3550C

##### Blank (1337026-BLK1)

Prepared & Analyzed: 11-Sep-13

Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg							
Diesel Range Organics (C10-C28)	ND	5.00	"							
GRO and DRO Combined Fractions	ND	5.00	"							

##### Duplicate (1337026-DUP1)

Source: P309035-01

Prepared & Analyzed: 11-Sep-13

Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg		ND				30	
Diesel Range Organics (C10-C28)	149	4.99	"		1010			149	30	D1

##### Matrix Spike (1337026-MS1)

Source: P309035-01

Prepared & Analyzed: 11-Sep-13

Gasoline Range Organics (C6-C10)	254	5.26	mg/kg	263	ND	96.4	75-125			
Diesel Range Organics (C10-C28)	1080	5.26	"	263	1010	25.8	75-125			SPK1

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Animas Environmental Services  
624 E. Comanche St.  
Farmington NM, 87401-6815

Project Name: Enterprise Trunk K  
Project Number: 99083-0001  
Project Manager: Heather Woods

Reported:  
12-Sep-13 10:42

#### 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 30%.

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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RUSH

## CHAIN OF CUSTODY RECORD

16076

Page 8 of 8

Client: Animas Environmental Services			Project Name / Location: Enterprise Trunk K			ANALYSIS / PARAMETERS															
Email results to: hwoods@animasenvironmental.com			Sampler Name: Heather Woods																		
Client Phone No.: 505-564-2201			Client No.: 99053-0001																		
Sample No. / Identification	Sample Date	Sample Time	Lab No.	No. / Volume of Containers	Preservative			TPH (Method 8015) CLP (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	acid														
CS-6	9/11/13	1439	P309055-01	1-4oz			X	X	X											Y	Y
CS-7	9/11/13	1440	P309055-02	1-4oz			X	X	X											Y	Y
Relinquished by: (Signature) Heather M. Woods					Date 9/11/13	Time 1620	Received by: (Signature) 										Date 9/11/13	Time 1620			
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.envirotech  
Analytical Laboratory

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 10A	Facility Type: Natural Gas Gathering Line

Surface Owner: NAPI/Navajo Nation	Mineral Owner: BLM	API No.
-----------------------------------	--------------------	---------

**LOCATION OF RELEASE**

Unit Letter N	Section 27	Township 26N	Range 12W	Feet from the 1201	North <u>South</u> Line	Feet from the 1874	East <u>West</u> Line	County San Juan
------------------	---------------	-----------------	--------------	-----------------------	-------------------------	-----------------------	-----------------------	--------------------

Latitude 36.455278 Longitude -108.101562

**NATURE OF RELEASE**

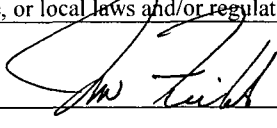
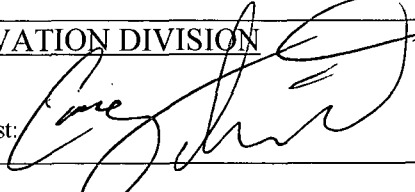
Type of Release: Natural Gas and Natural gas liquids	Volume of Release: <b>Unknown</b> about of gas; Estimated to be 1- 2 bbls of fluids	Volume Recovered: <b>Unknown</b>
Source of Release: Internal Corrosion of the Pipeline	Date and Hour of Occurrence: 2/19/2014 @ 12:30 p.m.	Date and Hour of Discovery: 2/19/2014 @ 12:30 p.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? NMOCD - Jonathan Kelly, NNEPA - Steve Austin, Greg Yazzie and Mike Freeman - NAPI	
By Whom? Thomas Long	Date and Hour 2/19/2014 @ 9:18 ~1:30 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 Taken. \* A release was discovered on the Trunk 10A. The release was a suspected internal corrosion of the pipeline. Initially a surface area of approximately 12 feet by 25 feet was affected. The line was blown down, taken out of service and LOTO (lock out tag out) was applied. The repairs/remediation activities were completed on February 27, 2014.

Describe Area Affected and Cleanup Action Taken. \* Assessment and remediation activities were completed February 27, 2014. The excavation remained open until April due to scheduling conflicts. The stockpile soil was resampled to determine contaminant concentrations. Laboratory analysis indicated contaminant concentrations were below New Mexico Oil Conservation Division remediation standards and stockpile soils were used as backfill. 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: Jon Fields	Approved by Environmental Specialist: 	
Title: Director, Environmental	Approval Date: 6/10/14	Expiration Date:
E-mail Address: jefields@eprod.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 6-3-2014	Phone: (713)381-6684	

\* Attach Additional Sheets If Necessary

# NCS 141 6151 739

29



Animas Environmental Services, LLC

www.animasenvironmental.com

May 20, 2014

Thomas Long  
Enterprise Field Services, LLC  
614 Reilly Avenue  
Farmington, New Mexico 87401

624 E. Comanche  
Farmington, NM 87401  
505-564-2281

Durango, Colorado  
970-403-3084

*Via electronic mail with delivery confirmation receipt to:*  
tjlong@eprod.com

**OIL CONS. DIV DIST. 3**

**JUN 09 2014**

**RE: Release Assessment Report  
Trunk 10A February 2014 Pipeline Release  
SE¼ SW¼, Section 27, T26N, R12W  
N36.455278, W108.10156  
San Juan County, New Mexico**

Dear Mr. Long:

On February 27, 2014, Animas Environmental Services, LLC (AES) completed an assessment associated with a release of natural gas and pipeline liquids from the Enterprise Field Services, LLC (Enterprise) 4-inch diameter Trunk 10A pipeline. The release was discovered on February 19, 2014, and resulted from pipeline corrosion.

---

## **1.0 Site Information**

### **1.1 Location**

Location – Unit Letter N, Section 27, T26N, R12W, San Juan County, New Mexico

Latitude/Longitude – N36.455278 and W108.101562, respectively

Surface Owner – Navajo Agricultural Products Industry (NAPI)

Figure 1. Topographic Site Location Map

Figure 2. Aerial Site Map, February 2014

### **1.2 NMOCD Ranking**

In accordance with Navajo Nation Environmental Protection Agency (NNEPA) release protocols, action levels were established per New Mexico Oil Conservation Division (NMOCD) *Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993) prior to the assessment. The release was given a ranking score of 40 based on the following factors:

- **Depth to Groundwater:** A perched groundwater table associated with percolation of irrigation water is often observed at less than 10 feet below ground surface (bgs) in the surrounding area. (20 points)
- **Wellhead Protection Area:** The release location is not within a wellhead protection area. (0 points)
- **Distance to Surface Water Body:** The release is located approximately 90 feet to the north of an ephemeral wash which discharges to West Fork Gallegos Canyon. (20 points)

The ranking score of 40 dictates that concentrations for impacted soils left in place must be below the NMOCD action levels of 10 mg/kg benzene, 50 mg/kg total benzene, toluene, ethylbenzene, and xylenes (BTEX), and 100 mg/kg total petroleum hydrocarbons (TPH) as gasoline range organics (GRO) and diesel range organics (DRO). An action level of 100 parts per million (ppm) volatile organic compound (VOCs) concentrations via organic vapor meter (OVM) may be substituted for laboratory analysis of benzene and total BTEX.

### *1.3 Assessment and Mitigation*

On February 27, 2014, Enterprise contractors completed an excavation along the pipeline and determined the release was the result of a pipeline leak caused by internal corrosion. The pipeline was repaired, and prior to backfilling the excavation AES collected soil samples from the walls and base of the excavation, as well two composite samples from the stockpiled soils for field sampling and laboratory analysis. The backfill material was sampled by AES on April 23, 2014, to confirm the natural attenuation of petroleum hydrocarbon impact through natural attenuation. The final excavation measured approximately 23.5 feet by 55 feet by 5 feet deep and was backfilled with the stockpiled soils. Soil sample locations and final excavation extents are included on Figure 3. A photograph log is included in the Appendix.

---

## **2.0 Soil Sampling**

Five soil samples (S-1 through S-5) were collected from the walls and the base of the final excavation, and two composite samples (SC-1 and SC-2) were collected from the stockpiles during the initial assessment. Additionally, one composite sample (SC-3) was collected from the backfill material to confirm natural attenuation of petroleum hydrocarbon impacts. Each sample was field sampled for VOCs and submitted for laboratory analysis.

## 2.1 Field Sampling

### 2.1.1 Volatile Organic Compounds

Field sampling for VOC vapors was conducted with a photo-ionization detector (PID) OVM. Before beginning field sampling, the PID-OVM was first calibrated with 100 ppm isobutylene gas.

## 2.2 Laboratory Analyses

Soil samples collected for laboratory analysis were placed into new, clean, laboratory-supplied containers, which were then labeled, placed on ice, and logged onto a sample chain of custody record. Samples were maintained on ice until delivery to the analytical laboratory, Hall Environmental Analysis Laboratory (Hall), in Albuquerque, New Mexico. Soil samples were laboratory analyzed for:

- BTEX per U.S. Environmental Protection Agency (USEPA) Method 8021B; and
- TPH (GRO/DRO) per USEPA Method 8015D.

## 2.3 Field Sampling and Laboratory Analytical Results

Soil field sampling results showed that VOC concentrations via OVM ranged from 0.8 ppm in S-5 up to 11.8 ppm in S-4. Results are included in Table 1 and on Figure 3.

Table 1. Soil Field Sampling – VOCs  
Trunk 10A Release Assessment, February and April, 2014

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Sample Depth (ft bgs)</i>	<i>VOCs via OVM (ppm)</i>
<b>NMOCD Action Level*</b>			<b>100</b>
S-1	2/27/14	5	7.2
S-2	2/27/14	1 to 5	2.2
S-3	2/27/14	1 to 5	1.7
S-4	2/27/14	1 to 5	11.8
S-5	2/27/14	1 to 5	0.8
SC-1	2/27/14	Stockpile	3.1
SC-2	2/27/14	Stockpile	6.8
SC-3	4/23/14	Backfill	NA

NA – Not Analyzed

\*NNEPA action levels determined by the NMOCD ranking score per *NMOCD Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993)



Laboratory analytical results showed that benzene and total BTEX concentrations were below laboratory detection limits in all samples. TPH concentrations (GRO/DRO) were also below laboratory detection limits in all samples, except SC-2 with 270 mg/kg. Laboratory analytical results are included in Table 2 and on Figure 3. Laboratory analytical reports are attached.

Table 2. Laboratory Analytical Results – Benzene, Total BTEX, and TPH  
Trunk 10A Release Assessment, February and April 2014

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Sample Depth (ft bgs)</i>	<i>Benzene (mg/kg)</i>	<i>Total BTEX (mg/kg)</i>	<i>TPH – GRO (mg/kg)</i>	<i>TPH – DRO (mg/kg)</i>
<i>NMOCD Action Level*</i>			<b>10</b>	<b>50</b>	<b>100</b>	
S-1	2/27/14	5	<0.049	<0.245	<4.9	<9.9
S-2	2/27/14	1 to 5	<0.046	<0.231	<4.6	<10
S-3	2/27/14	1 to 5	<0.048	<0.241	<4.8	<9.9
S-4	2/27/14	1 to 5	<0.049	<0.245	<4.9	<9.9
S-5	2/27/14	1 to 5	<0.049	<0.246	<4.9	<9.9
SC-1	2/27/14	Stockpile	<0.048	<0.239	<4.8	<9.9
SC-2	2/27/14	Stockpile	<0.048	<0.240	<b>&lt;4.8</b>	<b>270</b>
SC-3	4/23/14	Backfill	NA	NA	<4.8	<10

NA – Not Analyzed

\*Action level determined by the NMOCD ranking score per *NMOCD Guidelines for Leaks, Spills, and Releases* (August 1993)

### 3.0 Conclusions and Recommendations

On February 27, 2014, AES conducted an assessment associated with a pipeline release on the Trunk 10A. NNEPA utilizes action levels for releases determined by NMOCD ranking score per *NMOCD Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993), and the release was assigned a ranking score of 40. Field sampling of S-1 through S-5 and composite soil samples SC-1 and SC-2 showed VOC concentrations below the NMOCD action level of 100 ppm, with the highest VOC concentration reported in S-4 with 11.8 ppm. Soil laboratory analytical results showed that benzene, total BTEX, and TPH concentrations were below laboratory detection limits in all samples except SC-2, which had a TPH concentration above the NMOCD action level of 100 mg/kg with 270 mg/kg. The backfill material associated with SC-2 was subsequently resampled on April 23, 2014, and laboratory analytical results showed that TPH (GRO/DRO) concentrations were below the NMOCD action level and laboratory

detection limits confirming that natural attenuation of petroleum hydrocarbons had occurred.

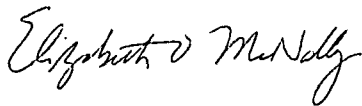
Based on field sampling and laboratory results of the final excavation extents for petroleum contaminated soils, VOCs, benzene, total BTEX, and TPH concentrations are below the applicable NMOCD action levels. No further work is recommended for the Trunk 10A February 2014 Pipeline Release.

If you have any questions about this report or site conditions, please do not hesitate to contact Kelsey Christiansen or Elizabeth McNally at (505) 564-2281.

Sincerely,



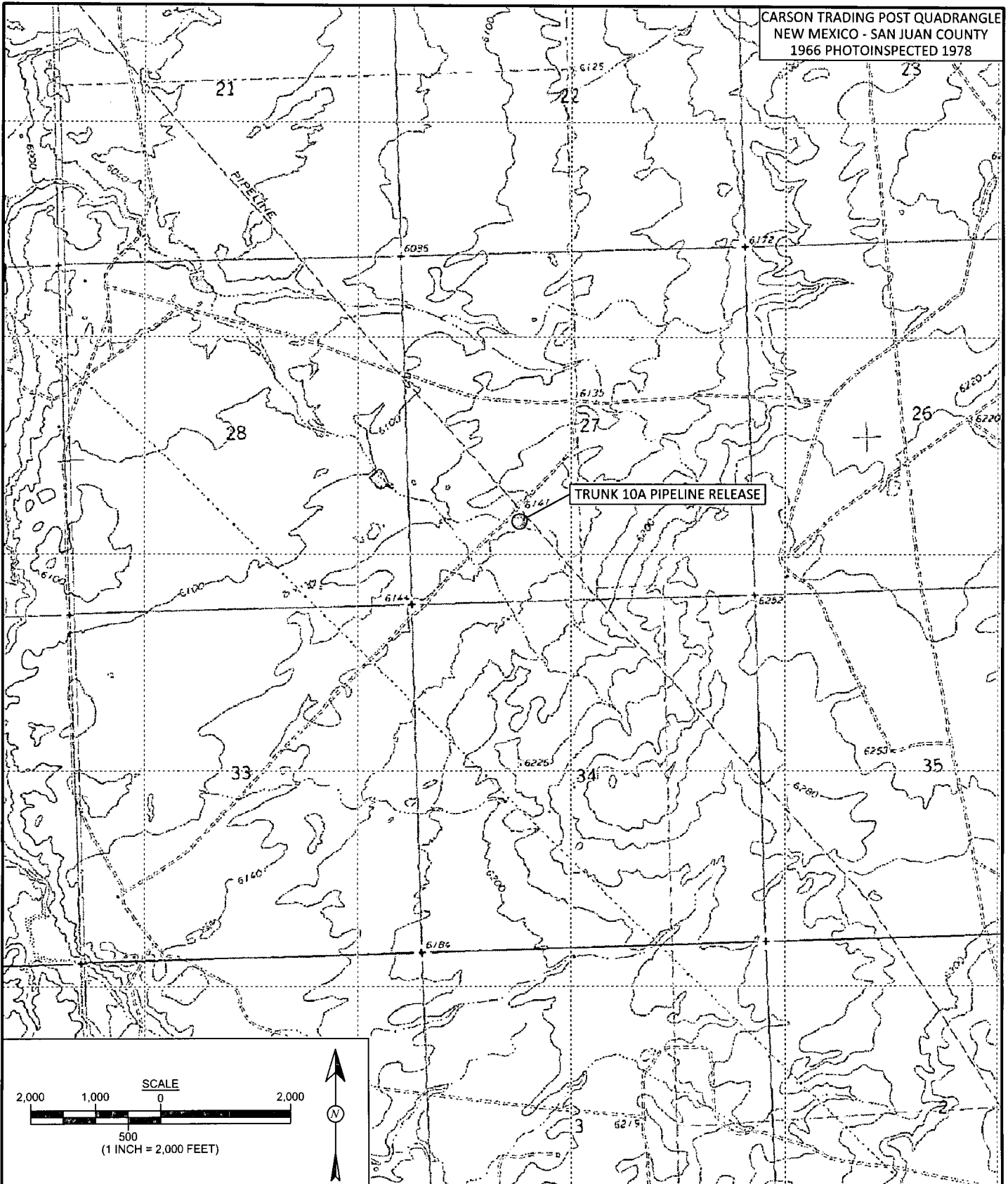
Kelsey Christiansen  
Environmental Scientist  
Project Manager



Elizabeth McNally, P.E.

Attachments:

- Figure 1. Topographic Site Location Map
- Figure 2. Aerial Site Map, February 2014
- Figure 3. Final Excavation Sample Locations and Results, February and April 2014
- Photograph Log
- Laboratory Analytical Reports (Hall 1402B37 and 1404A72)



Animas Environmental Services, LLC

**DRAWN BY:**

S. Glasses

**DATE DRAWN:**

March 7, 2014

**REVISIONS BY:**

C. Lameman

**DATE REVISED:**

May 8, 2014

**CHECKED BY:**

H. Woods

**DATE CHECKED:**

May 8, 2014

**APPROVED BY:**

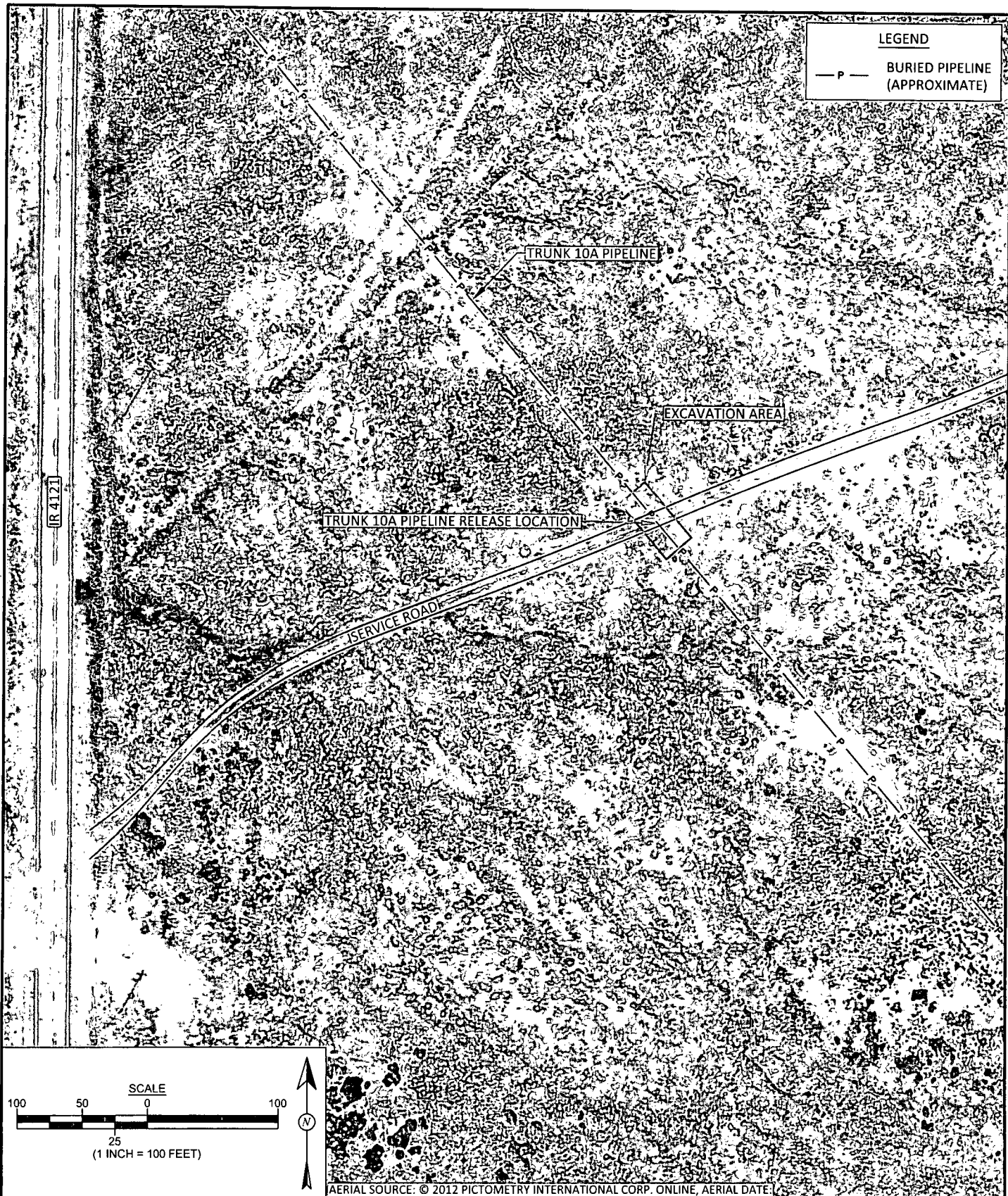
E. McNally

**DATE APPROVED:**

May 8, 2014

## FIGURE 1

**TOPOGRAPHIC SITE LOCATION MAP**  
ENTERPRISE FIELD SERVICES LLC  
TRUNK 10A PIPELINE RELEASE ASSESSMENT  
SE¼ SW¼, SECTION 27, T26N, R12W  
SAN JUAN COUNTY, NEW MEXICO  
N36.455278, W108.101562



<b>DRAWN BY:</b>	<b>DATE DRAWN:</b>
S. Glasses	March 7, 2014
<b>REVISIONS BY:</b>	<b>DATE REVISED:</b>
C. Lameman	May 8, 2014
<b>CHECKED BY:</b>	<b>DATE CHECKED:</b>
H. Woods	May 8, 2014
<b>APPROVED BY:</b>	<b>DATE APPROVED:</b>
E. McNally	May 8, 2014

## FIGURE 2

**AERIAL SITE MAP  
FEBRUARY 2014**

ENTERPRISE FIELD SERVICES LLC  
TRUNK 10A PIPELINE RELEASE ASSESSMENT  
SE¼ SW¼, SECTION 27, T26N, R12W  
SAN JUAN COUNTY, NEW MEXICO  
N36.455278, W108.101562

FIGURE 3

FINAL EXCAVATION SAMPLE  
LOCATIONS AND RESULTS  
FEBRUARY AND APRIL 2014  
ENTERPRISE FIELD SERVICES LLC  
TRUNK 10A PIPELINE RELEASE ASSESSMENT  
SE¼ SW¼, SECTION 27, T26N, R12W  
SAN JUAN COUNTY, NEW MEXICO  
N36.455278, W108.101562

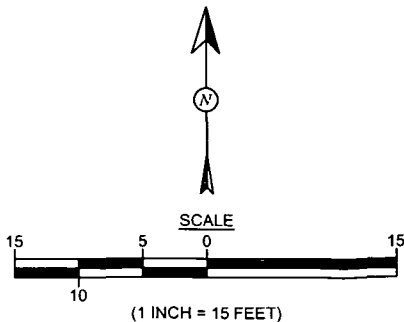


Animas Environmental Services, LLC

<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> March 14, 2014
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> May 8, 2014
<b>CHECKED BY:</b> H. Woods	<b>DATE CHECKED:</b> May 8, 2014
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> May 8, 2014

LEGEND

- SAMPLE LOCATIONS
- P — BURIED PIPELINE (APPROXIMATE)



Field Sampling and Laboratory Results							
Sample ID	Date	Depth (ft)	OVM-PID (ppm)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH - GRO (mg/kg)	TPH - DRO (mg/kg)
NMOCD ACTION LEVEL			100	10	50	100	
S-1	2/27/14	5	7.2	<0.049	<0.245	<4.9	<9.9
S-2	2/27/14	1 to 5	2.2	<0.046	<0.231	<4.6	<10
S-3	2/27/14	1 to 5	1.7	<0.048	<0.241	<4.8	<9.9
S-4	2/27/14	1 to 5	11.8	<0.049	<0.245	<4.9	<9.9
S-5	2/27/14	1 to 5	0.8	<0.049	<0.246	<4.9	<9.9
SC-1	2/27/14	Stockpile	3.1	<0.048	<0.239	<4.8	<9.9
SC-2	2/27/14	Stockpile	6.8	<0.048	<0.240	<4.8	<270
SC-3	4/23/14	Backfill	NA	NA	NA	<4.8	<10

SC-1, SC-2, AND SC-3 WERE COMPOSITE SAMPLES. ALL SAMPLES WERE ANALYZED PER EPA METHOD 8021B AND 8015D.  
NA - NOT ANALYZED

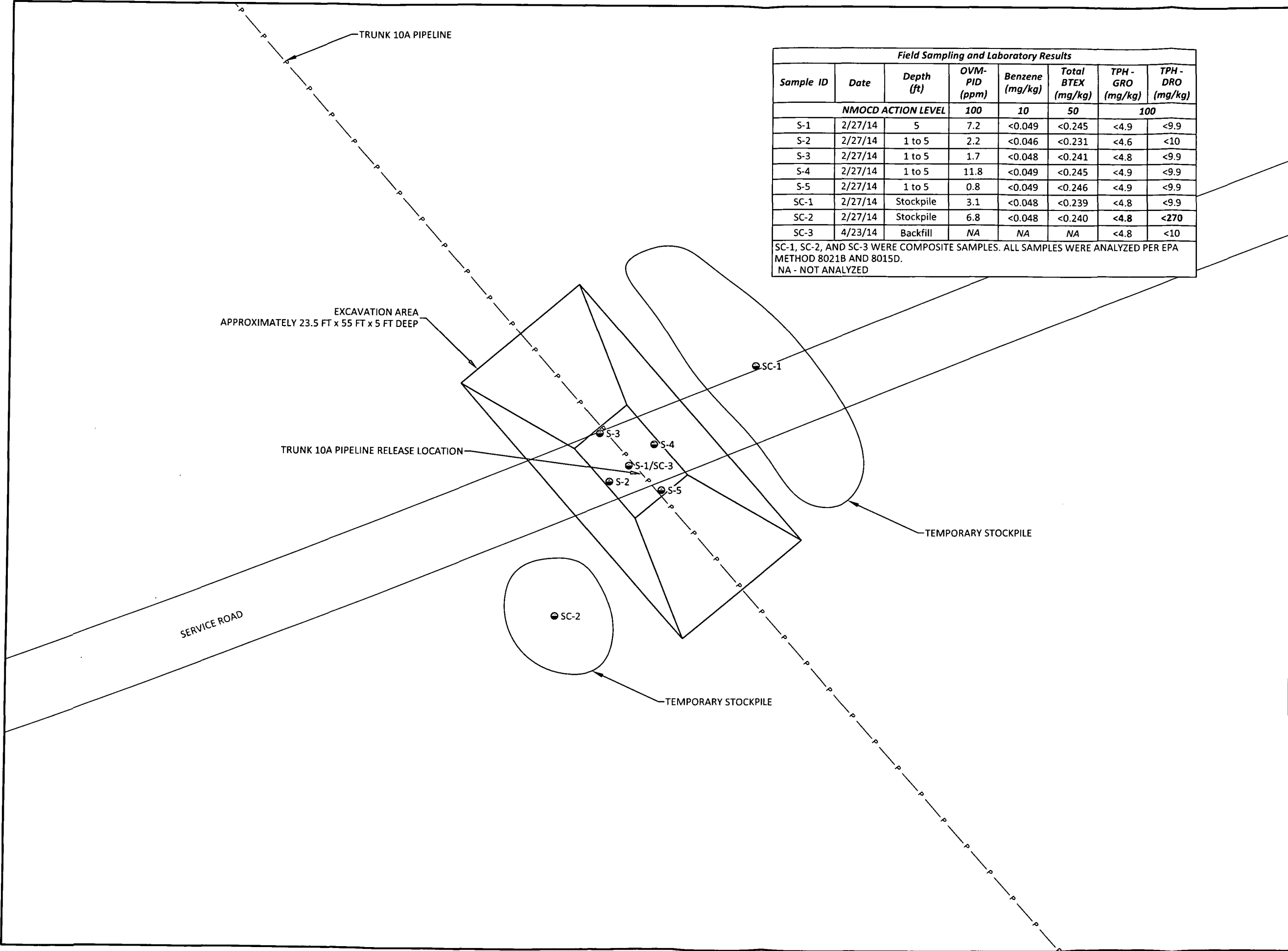




Photo #1	
Client: Enterprise Field Services, LLC	
Project: Trunk 10A Pipeline Release	
Taken by: Heather Woods	
Date: February 27, 2014	
AES Project No. 140224	Description: View of final excavation looking southeast.

Photo #2	
Client: Enterprise Field Services, LLC	
Project: Trunk 10A Pipeline Release	
Taken by: Heather Woods	
Date: February 27, 2014	
AES Project No. 140224	Description: View of final excavation looking northeast.



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)

March 06, 2014

Heather Woods

Animas Environmental Services  
624 East Comanche  
Farmington, NM 87401  
TEL: (505) 716-2787  
FAX (505) 324-2022

RE: Enterprise Trunk 10A

OrderNo.: 1402B37

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 7 sample(s) on 2/28/2014 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,

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1402B37

Date Reported: 3/6/2014

CLIENT: Animas Environmental Services

Client Sample ID: S-1

Project: Enterprise Trunk 10A

Collection Date: 2/27/2014 2:12:00 PM

Lab ID: 1402B37-001

Matrix: SOIL

Received Date: 2/28/2014 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	3/4/2014 10:02:39 AM	11965
Surr: DNOP	112	66-131		%REC	1	3/4/2014 10:02:39 AM	11965
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JMP</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/4/2014 2:00:52 PM	11962
Surr: BFB	90.6	74.5-129		%REC	1	3/4/2014 2:00:52 PM	11962
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JMP</b>
Benzene	ND	0.049		mg/Kg	1	3/4/2014 2:00:52 PM	11962
Toluene	ND	0.049		mg/Kg	1	3/4/2014 2:00:52 PM	11962
Ethylbenzene	ND	0.049		mg/Kg	1	3/4/2014 2:00:52 PM	11962
Xylenes, Total	ND	0.098		mg/Kg	1	3/4/2014 2:00:52 PM	11962
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	3/4/2014 2:00:52 PM	11962

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: Animas Environmental Services

Client Sample ID: S-2

Project: Enterprise Trunk 10A

Collection Date: 2/27/2014 2:14:00 PM

Lab ID: 1402B37-002

Matrix: SOIL

Received Date: 2/28/2014 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	10		mg/Kg	1	3/4/2014 10:33:25 AM	11965
Surr: DNOP	90.8	66-131		%REC	1	3/4/2014 10:33:25 AM	11965
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JMP</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	3/4/2014 3:31:42 PM	11962
Surr: BFB	83.1	74.5-129		%REC	1	3/4/2014 3:31:42 PM	11962
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JMP</b>
Benzene	ND	0.046		mg/Kg	1	3/4/2014 3:31:42 PM	11962
Toluene	ND	0.046		mg/Kg	1	3/4/2014 3:31:42 PM	11962
Ethylbenzene	ND	0.046		mg/Kg	1	3/4/2014 3:31:42 PM	11962
Xylenes, Total	ND	0.093		mg/Kg	1	3/4/2014 3:31:42 PM	11962
Surr: 4-Bromofluorobenzene	91.6	80-120		%REC	1	3/4/2014 3:31:42 PM	11962

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 2 of 12
	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 1402B37  
Date Reported: 3/6/2014

CLIENT: Animas Environmental Services

Client Sample ID: S-3

Project: Enterprise Trunk 10A

Collection Date: 2/27/2014 2:16:00 PM

Lab ID: 1402B37-003

Matrix: SOIL

Received Date: 2/28/2014 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	3/4/2014 11:04:10 AM	11965
Surr: DNOP	109	66-131		%REC	1	3/4/2014 11:04:10 AM	11965
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JMP</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/4/2014 4:01:45 PM	11962
Surr: BFB	87.9	74.5-129		%REC	1	3/4/2014 4:01:45 PM	11962
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JMP</b>
Benzene	ND	0.048		mg/Kg	1	3/4/2014 4:01:45 PM	11962
Toluene	ND	0.048		mg/Kg	1	3/4/2014 4:01:45 PM	11962
Ethylbenzene	ND	0.048		mg/Kg	1	3/4/2014 4:01:45 PM	11962
Xylenes, Total	ND	0.097		mg/Kg	1	3/4/2014 4:01:45 PM	11962
Surr: 4-Bromofluorobenzene	99.2	80-120		%REC	1	3/4/2014 4:01:45 PM	11962

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		

# Analytical Report

Lab Order 1402B37

Date Reported: 3/6/2014

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services

Client Sample ID: S-4

Project: Enterprise Trunk 10A

Collection Date: 2/27/2014 2:18:00 PM

Lab ID: 1402B37-004

Matrix: SOIL

Received Date: 2/28/2014 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	3/4/2014 11:34:38 AM	11965
Surr: DNOP	104	66-131		%REC	1	3/4/2014 11:34:38 AM	11965
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JMP</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/5/2014 1:03:12 PM	11962
Surr: BFB	87.9	74.5-129		%REC	1	3/5/2014 1:03:12 PM	11962
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JMP</b>
Benzene	ND	0.049		mg/Kg	1	3/5/2014 1:03:12 PM	11962
Toluene	ND	0.049		mg/Kg	1	3/5/2014 1:03:12 PM	11962
Ethylbenzene	ND	0.049		mg/Kg	1	3/5/2014 1:03:12 PM	11962
Xylenes, Total	ND	0.098		mg/Kg	1	3/5/2014 1:03:12 PM	11962
Surr: 4-Bromofluorobenzene	96.2	80-120		%REC	1	3/5/2014 1:03:12 PM	11962

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	Page 4 of 12
	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 1402B37

Date Reported: 3/6/2014

CLIENT: Animas Environmental Services

Client Sample ID: S-5

Project: Enterprise Trunk 10A

Collection Date: 2/27/2014 2:20:00 PM

Lab ID: 1402B37-005

Matrix: SOIL

Received Date: 2/28/2014 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	3/4/2014 12:05:25 PM	11965
Surr: DNOP	95.6	66-131		%REC	1	3/4/2014 12:05:25 PM	11965
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JMP</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	3/4/2014 5:01:57 PM	11962
Surr: BFB	91.2	74.5-129		%REC	1	3/4/2014 5:01:57 PM	11962
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JMP</b>
Benzene	ND	0.049		mg/Kg	1	3/4/2014 5:01:57 PM	11962
Toluene	ND	0.049		mg/Kg	1	3/4/2014 5:01:57 PM	11962
Ethylbenzene	ND	0.049		mg/Kg	1	3/4/2014 5:01:57 PM	11962
Xylenes, Total	ND	0.099		mg/Kg	1	3/4/2014 5:01:57 PM	11962
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	3/4/2014 5:01:57 PM	11962

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.

## Analytical Report

Lab Order 1402B37

Date Reported: 3/6/2014

**CLIENT:** Animas Environmental Services

**Client Sample ID:** SC-1

**Project:** Enterprise Trunk 10A

**Collection Date:** 2/27/2014 2:25:00 PM

**Lab ID:** 1402B37-006

**Matrix:** SOIL

**Received Date:** 2/28/2014 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	3/4/2014 12:36:16 PM	11965
Surr: DNOP	96.5	66-131		%REC	1	3/4/2014 12:36:16 PM	11965
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JMP</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/4/2014 5:32:13 PM	11962
Surr: BFB	89.7	74.5-129		%REC	1	3/4/2014 5:32:13 PM	11962
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JMP</b>
Benzene	ND	0.048		mg/Kg	1	3/4/2014 5:32:13 PM	11962
Toluene	ND	0.048		mg/Kg	1	3/4/2014 5:32:13 PM	11962
Ethylbenzene	ND	0.048		mg/Kg	1	3/4/2014 5:32:13 PM	11962
Xylenes, Total	ND	0.095		mg/Kg	1	3/4/2014 5:32:13 PM	11962
Surr: 4-Bromofluorobenzene	96.8	80-120		%REC	1	3/4/2014 5:32:13 PM	11962

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:** Animas Environmental Services **Client Sample ID:** SC-2  
**Project:** Enterprise Trunk 10A **Collection Date:** 2/27/2014 2:29:00 PM  
**Lab ID:** 1402B37-007 **Matrix:** SOIL **Received Date:** 2/28/2014 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)	270	10		mg/Kg	1	3/4/2014 1:06:56 PM	11965
Surr: DNOP	119	66-131		%REC	1	3/4/2014 1:06:56 PM	11965
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>JMP</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	3/5/2014 1:31:51 PM	11962
Surr: BFB	84.4	74.5-129		%REC	1	3/5/2014 1:31:51 PM	11962
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JMP</b>
Benzene	ND	0.048		mg/Kg	1	3/5/2014 1:31:51 PM	11962
Toluene	ND	0.048		mg/Kg	1	3/5/2014 1:31:51 PM	11962
Ethylbenzene	ND	0.048		mg/Kg	1	3/5/2014 1:31:51 PM	11962
Xylenes, Total	ND	0.096		mg/Kg	1	3/5/2014 1:31:51 PM	11962
Surr: 4-Bromofluorobenzene	96.7	80-120		%REC	1	3/5/2014 1:31:51 PM	11962

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 7 of 12
	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#: 1402B37

06-Mar-14

Client: Animas Environmental Services

Project: Enterprise Trunk 10A

Sample ID	MB-11965	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	11965	RunNo:	17073					
Prep Date:	3/3/2014	Analysis Date:	3/4/2014	SeqNo:	491074	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	9.5		10.00		95.2	66	131			

Sample ID	LCS-11965		SampType: LCS		TestCode: EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 11965		RunNo: 17073					
Prep Date:	3/3/2014		Analysis Date: 3/4/2014		SeqNo: 491080		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	94.4	60.8	145			
Surr: DNOP	3.6		5.000		71.3	66	131			

## 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#: 1402B37

06-Mar-14

Client: Animas Environmental Services

Project: Enterprise Trunk 10A

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	R17094	RunNo:	17094					
Prep Date:		Analysis Date:	3/4/2014	SeqNo:	491583	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	960		1000		96.0	74.5	129			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	R17094	RunNo:	17094					
Prep Date:		Analysis Date:	3/4/2014	SeqNo:	491584	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		102	74.5	129			

Sample ID	MB-11962	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	11962	RunNo:	17086					
Prep Date:	2/28/2014	Analysis Date:	3/4/2014	SeqNo:	491635	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	810		1000		80.6	74.5	129			

Sample ID	LCS-11962	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	11962	RunNo:	17086					
Prep Date:	2/28/2014	Analysis Date:	3/4/2014	SeqNo:	491636	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	109	71.7	134			
Surr: BFB	920		1000		91.5	74.5	129			

Sample ID	MB-12008 MK	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	R17108	RunNo:	17108					
Prep Date:		Analysis Date:	3/5/2014	SeqNo:	492293	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	810		1000		81.1	74.5	129			

Sample ID	LCS-12008 MK	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	R17108	RunNo:	17108					
Prep Date:		Analysis Date:	3/5/2014	SeqNo:	492294	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	910		1000		90.5	74.5	129			

### 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#: 1402B37

06-Mar-14

Client: Animas Environmental Services

Project: Enterprise Trunk 10A

Sample ID	MB-12010		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 12010		RunNo: 17108					
Prep Date:	3/4/2014		Analysis Date: 3/5/2014		SeqNo: 492296		Units: %REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	840		1000		84.1	74.5	129			

Sample ID	LCS-12010		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 12010		RunNo: 17108					
Prep Date:	3/4/2014		Analysis Date: 3/5/2014		SeqNo: 492297		Units: %REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	910		1000		90.6	74.5	129			

## 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#: 1402B37

06-Mar-14

Client: Animas Environmental Services

Project: Enterprise Trunk 10A

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	R17094	RunNo:	17094					
Prep Date:		Analysis Date:	3/4/2014	SeqNo:	491611	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		109	80	120			

Sample ID	100NG BTEX LCS2	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	R17094	RunNo:	17094					
Prep Date:		Analysis Date:	3/4/2014	SeqNo:	491612	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

Sample ID	1402B37-001AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	S-1	Batch ID:	11962	RunNo:	17094					
Prep Date:	2/28/2014	Analysis Date:	3/4/2014	SeqNo:	491621	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.80	0.049	0.9804	0.01766	80.2	67.4	135			
Toluene	0.83	0.049	0.9804	0.01570	82.6	72.6	135			
Ethylbenzene	0.87	0.049	0.9804	0	88.2	69.4	143			
Xylenes, Total	2.7	0.098	2.941	0.02601	90.0	70.8	144			
Surr: 4-Bromofluorobenzene	1.0		0.9804		106	80	120			

Sample ID	1402B37-001AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	S-1	Batch ID:	11962	RunNo:	17094					
Prep Date:	2/28/2014	Analysis Date:	3/4/2014	SeqNo:	491622	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.82	0.049	0.9785	0.01766	81.6	67.4	135	1.57	20	
Toluene	0.81	0.049	0.9785	0.01570	81.5	72.6	135	1.50	20	
Ethylbenzene	0.83	0.049	0.9785	0	85.2	69.4	143	3.75	20	
Xylenes, Total	2.6	0.098	2.935	0.02601	86.9	70.8	144	3.63	20	
Surr: 4-Bromofluorobenzene	1.0		0.9785		105	80	120	0	0	

Sample ID	MB-11962	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	11962	RunNo:	17086					
Prep Date:	2/28/2014	Analysis Date:	3/4/2014	SeqNo:	491658	Units:	mg/Kg			
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.        | 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#: 1402B37

06-Mar-14

Client: Animas Environmental Services

Project: Enterprise Trunk 10A

Sample ID	MB-11962		SampType: MBLK			TestCode: EPA Method 8021B: Volatiles				
Client ID:	PBS		Batch ID: 11962			RunNo: 17086				
Prep Date:	2/28/2014		Analysis Date: 3/4/2014			SeqNo: 491658		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.93		1.000		93.0	80	120			

Sample ID	LCS-11962		SampType: LCS			TestCode: EPA Method 8021B: Volatiles				
Client ID:	LCSS		Batch ID: 11962			RunNo: 17086				
Prep Date:	2/28/2014		Analysis Date: 3/4/2014			SeqNo: 491659		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	112	80	120			
Toluene	1.2	0.050	1.000	0	117	80	120			
Ethylbenzene	1.1	0.050	1.000	0	114	80	120			
Xylenes, Total	3.4	0.10	3.000	0	115	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

## Qualifiers:

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

## Sample Log-In Check List

Client Name: Animas Environmental

Work Order Number: 1402B37

RcptNo: 1

Received by/date:

AG 02/28/14

Logged By:

Lindsay Mangin

2/28/2014 10:00:00 AM

*Lindsay Mangin*

Completed By:

Lindsay Mangin

2/28/2014 2:01:58 PM

*Lindsay Mangin*

Reviewed By:

IO

02/28/14

### 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	1.0	Good	Yes			

# Chain-of-Custody Record

Client: Animas Environmental Services

Mailing Address: 624 E. Comanche  
Farmington, NM 87401

Phone #: 505-564-2281

Email or Fax#:

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

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

☒ EDD (Type) \_\_\_\_\_

Project Name: Enterprise Trunk #10A

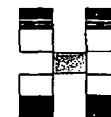
Project #:

Project Manager: H. Woods

Sampler: H. Woods

On Ice: ☒ Yes ☐ No

Sample Temperature: 10



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

### Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No	BTEX + MTBE + TPH (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / <del>8021</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)
12/7/14	1412	Soil	S-1	1-4oz Glass	Cold	-001	X		X									
12/7/14	1414	Soil	S-2	1-4oz Glass	Cold	-002	X		X									
12/7/14	1416	Soil	S-3	1-4oz Glass	Cold	-003	X		X									
12/7/14	1418	Soil	S-4	1-4oz Glass	Cold	-004	X		X									
12/7/14	1420	Soil	S-5	1-4oz Glass	Cold	-005	X		X									
12/7/14	1425	Soil	SC-1	1-4oz Glass	Cold	-006	X		X									
12/7/14	1429	Soil	SC-2	1-4oz Glass	Cold	-007	X		X									

Date: <u>12/7/14</u>	Time: <u>1654</u>	Relinquished by: <u>Heather M. Woods</u>	Received by: <u>Christa Velt</u>	Date: <u>12/7/14</u>	Time: <u>1654</u>	Remarks:
Date: <u>12/7/14</u>	Time: <u>1728</u>	Relinquished by: <u>Christa Velt</u>	Received by: <u>Shirley Gallegos</u>	Date: <u>02/28/14</u>	Time: <u>1000</u>	

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)*

May 05, 2014

Heather Woods  
Animas Environmental Services  
624 East Comanche  
Farmington, NM 87401  
TEL: (505) 716-2787  
FAX

RE: Enterprise Trunk 10A

OrderNo.: 1404A72

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 1 sample(s) on 4/25/2014 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,

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Analytical Report**

Lab Order 1404A72

Date Reported: 5/5/2014

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Animas Environmental Services**Client Sample ID:** SC-3**Project:** Enterprise Trunk 10A**Collection Date:** 4/23/2014 4:15:00 PM**Lab ID:** 1404A72-001**Matrix:** SOIL**Received Date:** 4/25/2014 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	10		mg/Kg	1	4/29/2014 10:25:13 AM	12889
Surr: DNOP	87.3	57.9-140		%REC	1	4/29/2014 10:25:13 AM	12889
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/30/2014 2:25:28 PM	12911
Surr: BFB	85.9	74.5-129		%REC	1	4/30/2014 2:25:28 PM	12911

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 1 of 3
	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#: 1404A72

05-May-14

Client: Animas Environmental Services

Project: Enterprise Trunk 10A

Sample ID	LCS-12889		SampType: LCS		TestCode: EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 12889		RunNo: 18255					
Prep Date:	4/28/2014		Analysis Date: 4/30/2014		SeqNo: 528692		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.00	0	87.6	60.8	145			
Surr: DNOP	4.1		5.000		81.9	57.9	140			

Sample ID	MB-12889		SampType: MBLK		TestCode: EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 12889		RunNo: 18255					
Prep Date:	4/28/2014		Analysis Date: 4/30/2014		SeqNo: 528693		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	8.9		10.00		89.2	57.9	140			

Sample ID	MB-12956		SampType: MBLK		TestCode: EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 12956		RunNo: 18327					
Prep Date:	5/1/2014		Analysis Date: 5/1/2014		SeqNo: 529725		Units: %REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.7		10.00		87.3	57.9	140			

Sample ID	LCS-12956		SampType: LCS		TestCode: EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 12956		RunNo: 18327					
Prep Date:	5/1/2014		Analysis Date: 5/1/2014		SeqNo: 529726		Units: %REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.7		5.000		94.0	57.9	140			

## 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#: 1404A72

05-May-14

Client: Animas Environmental Services

Project: Enterprise Trunk 10A

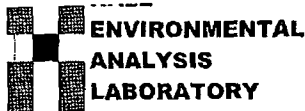
Sample ID	MB-12911	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	12911	RunNo:	18302					
Prep Date:	4/28/2014	Analysis Date:	4/30/2014	SeqNo:	529105	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	850		1000		84.8	74.5	129			

Sample ID	LCS-12911	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	12911	RunNo:	18302					
Prep Date:	4/28/2014	Analysis Date:	4/30/2014	SeqNo:	529106	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.1	71.7	134			
Surr: BFB	940		1000		93.8	74.5	129			

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit



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

## Sample Log-In Check List

Client Name: Animas Environmental

Work Order Number: 1404A72

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

4/25/2014 10:00:00 AM

Completed By: Lindsay Mangin

4/25/2014 10:40:45 AM

Reviewed By:

### 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  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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	2.2	Good	Not Present			

Animas Environmental Services

☒ Standard      ☐ Rush

Mailing Address: 624 E. Comanche

Enterprise Trunk 10A

Farmington, NM 87417

Project #:

Phone #: (505) 564-2261

**Project Manager:**

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

H. Woods

## Accreditation

☐ NELAP      ☐ Other

Sampler: Lavina Lamone

On Ice: ☒ Yes ☐ No

☐ EDD (Type)

Sample Temperature: 21.7


[illegible]

Date:	Time:	Relinquished by:
9/14	1730	Heather M. Woods

Received by:	Date	Time
Christine Waite	4/25/14	1730

Remarks:  
Bill to Enterprise Field Services

ate:	Time:	Relinquished by:
4/14	1750	Master Wale

Received by:  Date: 04/25/14 Time: 1100

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: Lateral 3A Loop	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 P	Section 21	Township 28N	Range 12W	Feet from the 35	North/South Line	Feet from the 853	East/West Line	County San Juan
------------------	---------------	-----------------	--------------	---------------------	------------------	----------------------	----------------	--------------------

Latitude 36.640560 Longitude -108.110925

**NATURE OF RELEASE**

Type of Release: Natural Gas	Volume of Release: Unknown	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	

OIL CONS. DIV DIST. 3


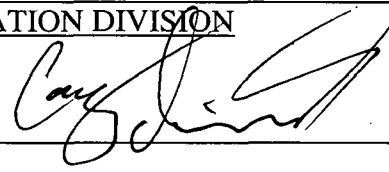
JUN 27 2014

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 possible leak. Technicians used gas detector with limited results due to wind. At that time technicians isolated the Trunk 3A Loop pipeline and applied lock out tag out and monitored pressure loss. A minor leak was confirmed to be on Trunk 3A Loop. There were no environmental surface impacts. The pipeline was depressurized and excavation and repairs of pipeline began June 11, 2014.

Describe Area Affected and Cleanup Action Taken.\*: Technicians isolated the Trunk 3A Loop pipeline and applied LOTO and monitored pressure loss. A minor leak was confirmed to be on Trunk 3A Loop. There were no environmental surface impacts. Repairs and remediation of the release began of June 11, 2014. 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: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Jon Fields	Approved by Environmental Specialist: 	
Title: Director, Environmental	Approval Date: 7/7/14	Expiration Date:
E-mail Address: jefields@eprod.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 6-23-2014 Phone: (713)381-6684		

\* Attach Additional Sheets If Necessary

#NCS 1418831998