



# AE Order Number Banner

## Report Description

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



**App Number:** pJK1424832159

**3RP - 1011**

**ENTERPRISE PRODUCTS OPERATING, LLC**

1/19/2017

**3R-1011**

**Release Report/ General  
Correspondence**

**Enterprise SJ**

**Date: 2012**





Animas Environmental Services, LLC

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

March 27, 2012

Aaron Dailey  
Enterprise Products Company  
614 Reilly Avenue  
Farmington, New Mexico 87401

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

Durango, Colorado  
970-403-3274

**RE: Howell #1 Pipeline Release Report  
San Juan County, New Mexico**

RCVD APR 9 '12  
OIL CONS. DIV.  
DIST. 8

Dear Mr. Dailey:

On February 22, 2012, Animas Environmental Services, LLC (AES) completed a release assessment for a release of natural gas condensate from Enterprise Products Company (Enterprise) 4-inch diameter Howell #1 pipeline. The release is located approximately 3.5 miles northeast of Navajo Dam Community, San Juan County, New Mexico. The release resulted from corrosion in the pipeline.

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## 1.0 Site Information

### 1.1 Location

Location - SW¼ SW¼, Section 3, T30N, R8W, San Juan County, New Mexico

Latitude/Longitude - N36.83609 and W107.66946, respectively

Surface Owner – Federal (Bureau of Land Management)

Figure 1 - Topographic Site Location Map

Figure 2 – Aerial Site Map

Figure 3- Excavation Sample Locations and Analytical Results, February 2012

### 1.2 NMOCD Ranking

Prior to site work, the New Mexico Oil Conservation Division (NMOCD) database was reviewed, and no records for nearby well locations with similar surface elevations were found to assist in determining NMOCD ranking. Additionally, the New Mexico Office of the State Engineer (NMOSE) database was reviewed for nearby private domestic water wells, and no nearby water well records were located.

Once on-site, Tom Long of AES assessed the NMOCD ranking criteria using topographical interpretation, Global Position System (GPS) elevation readings, and visual reconnaissance. Based on an elevation differential between the release location (6,224 feet above mean sea level (amsl)) and Simon Canyon Wash (5,797 feet amsl),

groundwater is estimated to be greater than 100 feet below ground surface (bgs). Distance to the nearest surface water body, Simon Canyon Wash, is approximately 1,200 feet east of the release location. No domestic or private water sources were identified within 1,000 feet of the location. The location was assessed a NMOCD ranking score of zero.

### **1.3 Assessment and Mitigation**

On February 21 and 22, 2012, Enterprise contractor West States Energy Contractors (WSEC) completed an excavation around the Howell #1 pipeline. Upon inspection, Enterprise determined that the release resulted from corrosion within the pipeline, and it was immediately repaired.

WSEC also expanded the excavation at the direction of AES to remove petroleum hydrocarbon contaminated soil. AES collected field screening samples to measure the remaining soil concentrations present along the walls and base of the excavation as it was completed. Bedrock was encountered between 2 and 4 feet bgs at various locations within the excavation.

The final excavation measured approximately 75 feet by 22 feet (1,175 square feet) with an average 3 feet depth. Bedrock was encountered at approximately 2 to 4 feet bgs along the east and west side walls, and excavation was terminated at the depth of bedrock. Approximately 160 cubic yards of hydrocarbon contaminated soil were transported by WSEC to Industrial Ecosystems, Inc. (IEI), near Aztec, New Mexico, for disposal. Following the collection of soil confirmation samples, the excavation was backfilled with approximately 192 cubic yards of clean fill. A photograph log and waste manifests are attached.

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## **2.0 Soil Sampling**

Prior to backfilling the excavation, AES personnel collected six composite soil samples (SC-1 through and SC-6) from the southern portion of the excavation for field screening and laboratory analysis. No soil samples were collected from the northern portion of the excavation because the excavation was inadvertently backfilled before samples could be collected. Soil sample locations are included on Figure 3.

### **2.1 Field Screening**

#### **2.1.1 Volatile Organic Compounds**

Field-screening for volatile organic compounds (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

Six composite soil samples (SC-1 through and SC-6) were collected for laboratory analysis from approximately 4 feet bgs at the base of the excavation and from the side walls of the excavation. The 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:

- Benzene, toluene, ethylbenzene, and xylene (BTEX) per U.S. Environmental Protection Agency (USEPA) Method 8021B;
- TPH for gasoline range organics (GRO) and diesel range organics (DRO) per USEPA Method 8015B.

## 2.3 Soil Field Screening and Laboratory Analytical Results

Soil field screening results showed that VOC vapor concentrations ranged from 92 ppm in SC-1 up to 2,463 ppm in SC-1. Soil analytical results showed that concentrations for benzene were below the NMOCD action level of 10 mg/kg. All soil samples analyzed for total BTEX results were reported below the NMOCD action level of 50 mg/kg, except for SC-1 with a concentration of 938.2 mg/kg. All soil TPH concentrations were below the NMOCD action level of 5,000 mg/kg, except for SC-1 with a combined concentration of 6,180 mg/kg. Soil field screening results and laboratory analytical results for benzene, total BTEX and TPH for soil samples SC-1 through SC-6 are included in Table 1 and on Figure 3. Laboratory analytical reports are attached.

Table 1. Soil Field Screening and Laboratory Analytical Results  
Howell #1 February 2012 Release

Sample ID	Date	Depth (ft bgs)	VOCs OVM (ppm)	Benzene (mg/kg)	BTEX (mg/kg)	TPH- GRO (mg/kg)	TPH- DRO (mg/kg)
<b>NMOCD Action Level</b>			<b>100</b>	<b>10</b>	<b>50</b>	<b>5,000*</b>	
SC-1	2/21/12	3	2,463	8.2	938.2	5,900	380
SC-2	2/22/12	NA	228	<0.049	0.95	<10	6.0
SC-3	2/22/12	NA	281	<0.050	1.78	<9.7	21
SC-4	2/22/12	NA	287	<0.049	5.74	29	25
SC-5	2/22/12	NA	213	0.055	8.97	48	37
SC-6	2/22/12	NA	92	<0.049	0.407	<10	<4.9

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

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### 3.0 Conclusions and Recommendations

AES conducted a release assessment for the Howell #1 on February 21 and 22, 2012. VOC vapor concentrations exceeded the NMOCD action level of 100 ppm in SC-1 through SC-5, with the highest concentration noted at SC-1 (2,463 ppm). Soil total BTEX and TPH concentrations also exceeded the NMOCD action level in SC-1 with 938.2 mg/kg total BTEX and 6,280 mg/kg TPH as GRO/DRO. No soil samples were collected from the northern portion of the excavation because the excavation was inadvertently backfilled before samples could be collected. Therefore, petroleum hydrocarbon impacted soils may exist and exceed NMOCD actions levels in the northern portion of the former excavation.

AES recommends the following:

1. Conduct assessment of northern portion of the former excavation area to determine residual contaminant concentrations of benzene, total BTEX, and TPH.
2. Further assess and mitigate the release in the area of SC-1.

AES will prepare and submit a workplan for the proposed work identified above. If you have any questions about this report or site conditions, please do not hesitate to contact me or Ross Kennemer at (505) 564-2281.

Sincerely,



Thomas Long  
Project Manager



Elizabeth McNally, P.E.

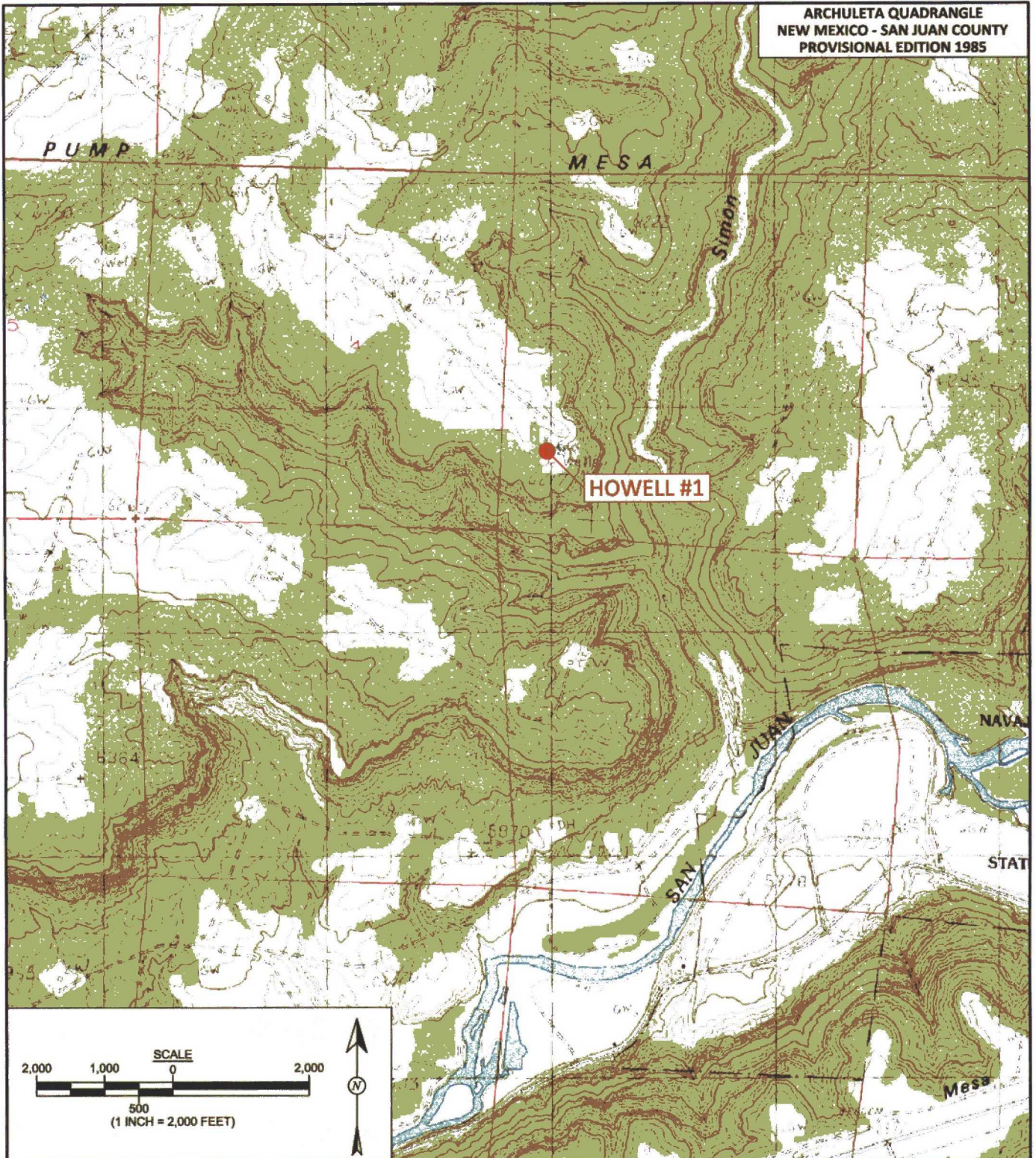
Attachments:

Figure 1. Topographic Site Location Map  
Figure 2. Aerial Site Map  
Figure 3. Excavation Sample Locations and Analytical Results, February 2012  
Photograph Log  
Bills of Lading (IEI C-138)  
Laboratory Analytical Reports (Hall 1202822)

S:\Animas 2000\2012 Projects\Enterprise\Howell #1\Release Report 032712.docx



ARCHULETA QUADRANGLE  
NEW MEXICO - SAN JUAN COUNTY  
PROVISIONAL EDITION 1985



Animas Environmental Services, LLC

DRAWN BY:  
C. Lameman

DATE DRAWN:  
March 7, 2012

REVISIONS BY:  
C. Lameman

DATE REVISED:  
March 7, 2012

CHECKED BY:  
T. Long

DATE CHECKED:  
March 7, 2012

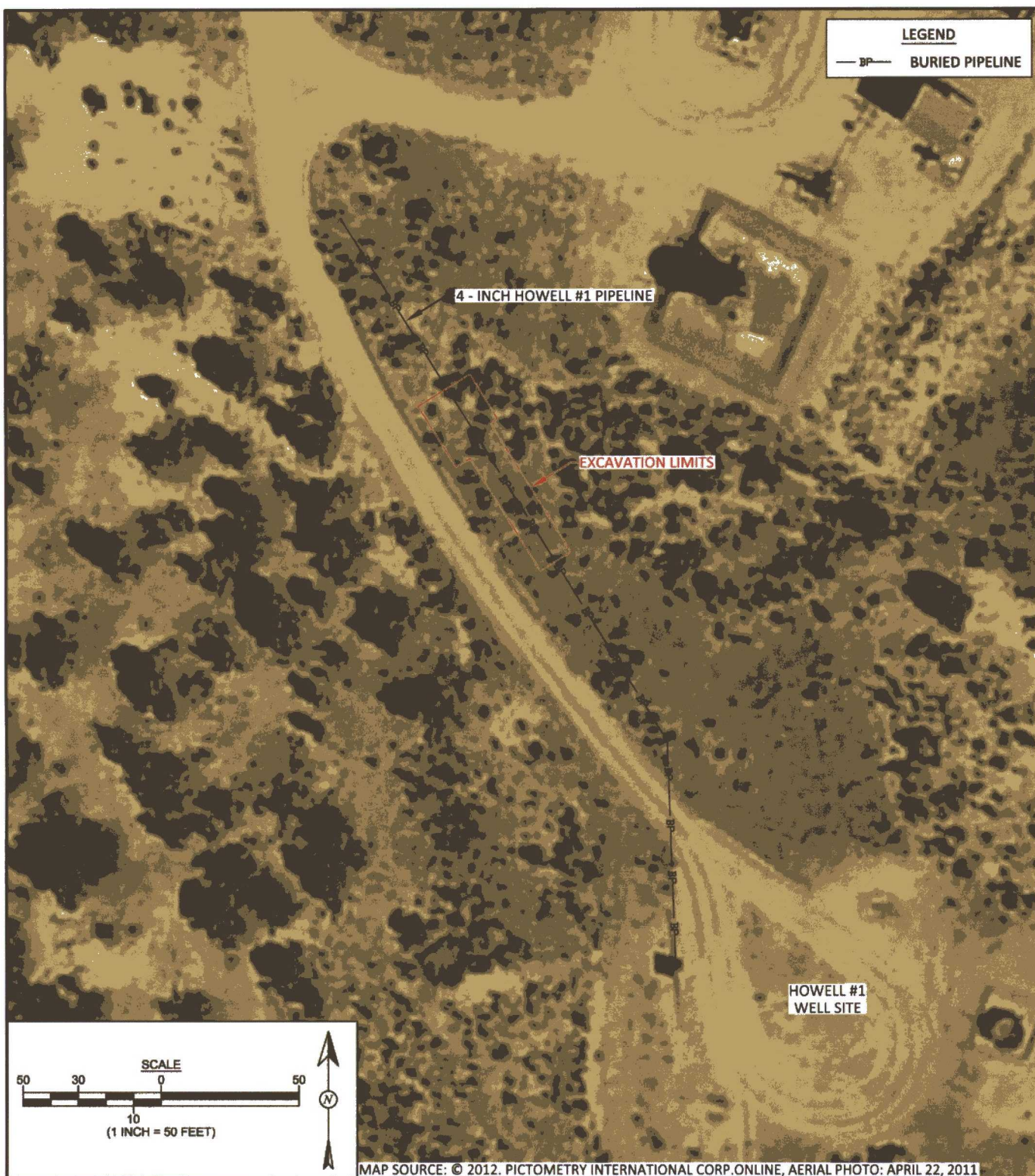
APPROVED BY:  
R. Kennemer

DATE APPROVED:  
March 20, 2012

## FIGURE 1

**TOPOGRAPHIC SITE LOCATION MAP**  
ENTERPRISE PRODUCTS COMPANY  
HOWELL #1 FEBRUARY 2012 RELEASE  
SAN JUAN COUNTY, NEW MEXICO  
SW¼, SW¼, SECTION 3, T30N, R8W  
N36.83609, W107.66946





Animas Environmental Services, LLC

**DRAWN BY:**

C. Lameman

**DATE DRAWN:**

March 7, 2012

**REVISIONS BY:**

C. Lameman

**DATE REVISED:**

March 7, 2012

**CHECKED BY:**

T. Long

**DATE CHECKED:**

March 7, 2012

**APPROVED BY:**

R. Kenemer

**DATE APPROVED:**

March 20, 2012

## FIGURE 2

### AERIAL SITE MAP

ENTERPRISE PRODUCTS COMPANY  
 HOWELL #1 FEBRUARY 2012 RELEASE  
 SAN JUAN COUNTY, NEW MEXICO  
 SW¼, SW¼, SECTION 3, T30N, R8W  
 N36.83609, W107.66946

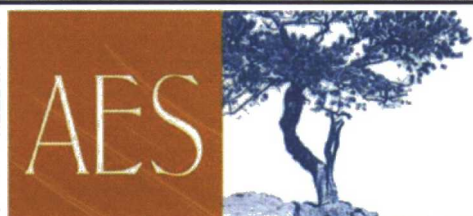
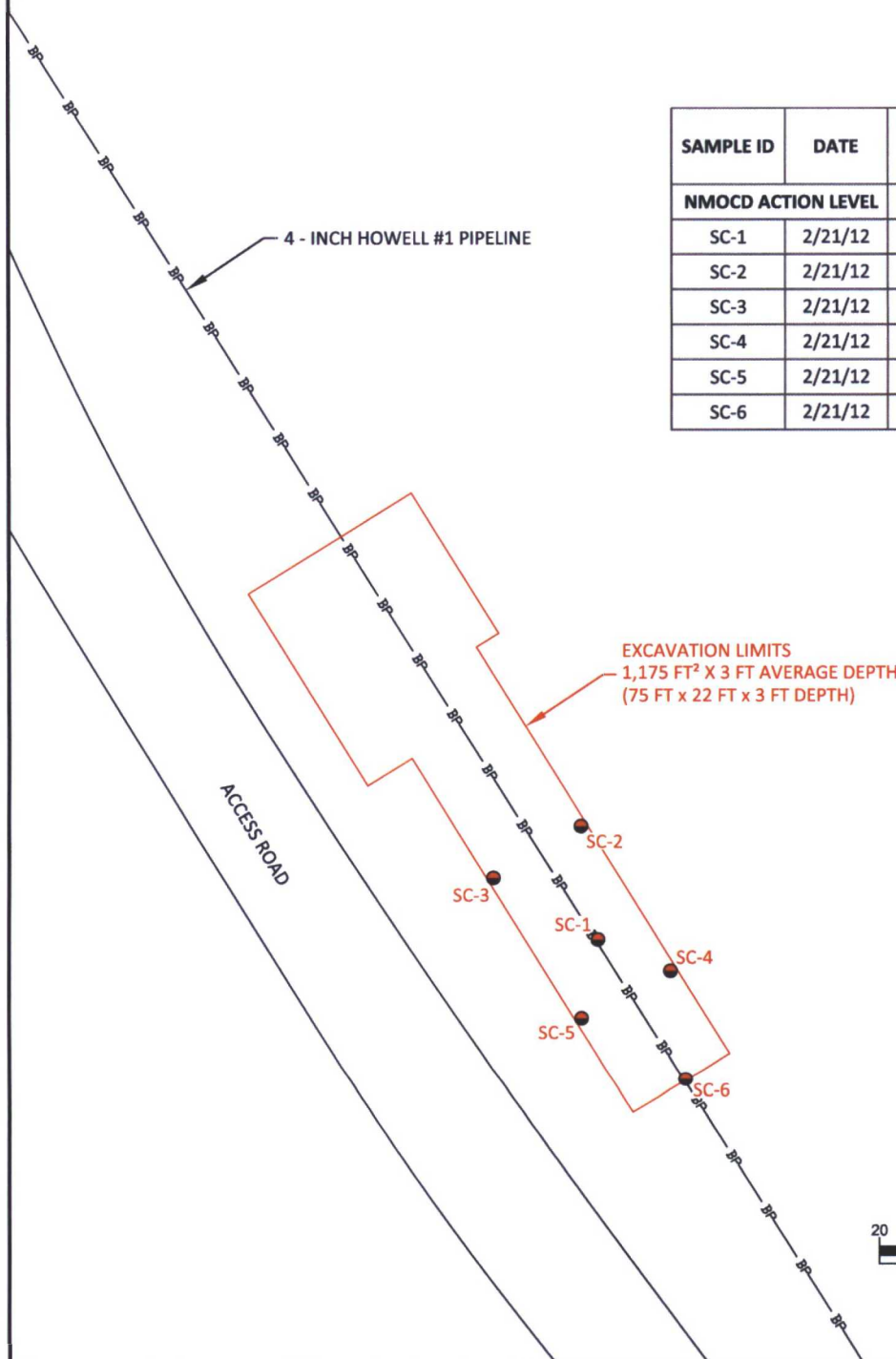


**LEGEND**

● SAMPLE LOCATION

— BP — BURIED PIPELINE

SAMPLE ID	DATE	OVM-PID (ppm)	BENZENE (mg/kg)	TOTAL BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)
<b>NMOCD ACTION LEVEL</b>		<b>100</b>	<b>10</b>	<b>50</b>	<b>5,000</b>	
SC-1	2/21/12	2,463	8.2	938	5,900	380
SC-2	2/21/12	228	<0.049	0.85	6.0	<10
SC-3	2/21/12	281	<0.050	1.78	21	<9.7
SC-4	2/21/12	287	<0.049	5.74	25	29
SC-5	2/21/12	213	0.055	8.97	37	48
SC-6	2/21/12	92	<0.049	0.407	<4.9	<10



Animas Environmental Services, LLC

**DRAWN BY:**  
C. Lameman

**DATE DRAWN:**  
March 7, 2012

**REVISIONS BY:**  
C. Lameman

**DATE REVISED:**  
March 7, 2012

**CHECKED BY:**  
T. Long

**DATE CHECKED:**  
March 7, 2012

**APPROVED BY:**  
E. McNally

**DATE APPROVED:**  
March 27, 2012

### FIGURE 3

**EXCAVATION SAMPLE LOCATIONS  
AND RESULTS, FEBRUARY 2012**  
ENTERPRISE PRODUCTS COMPANY  
HOWELL #1 FEBRUARY 2012 RELEASE  
SAN JUAN COUNTY, NEW MEXICO  
SW¼, SW¼, SECTION 3, T30N, R8W  
N36.83609, W107.66946



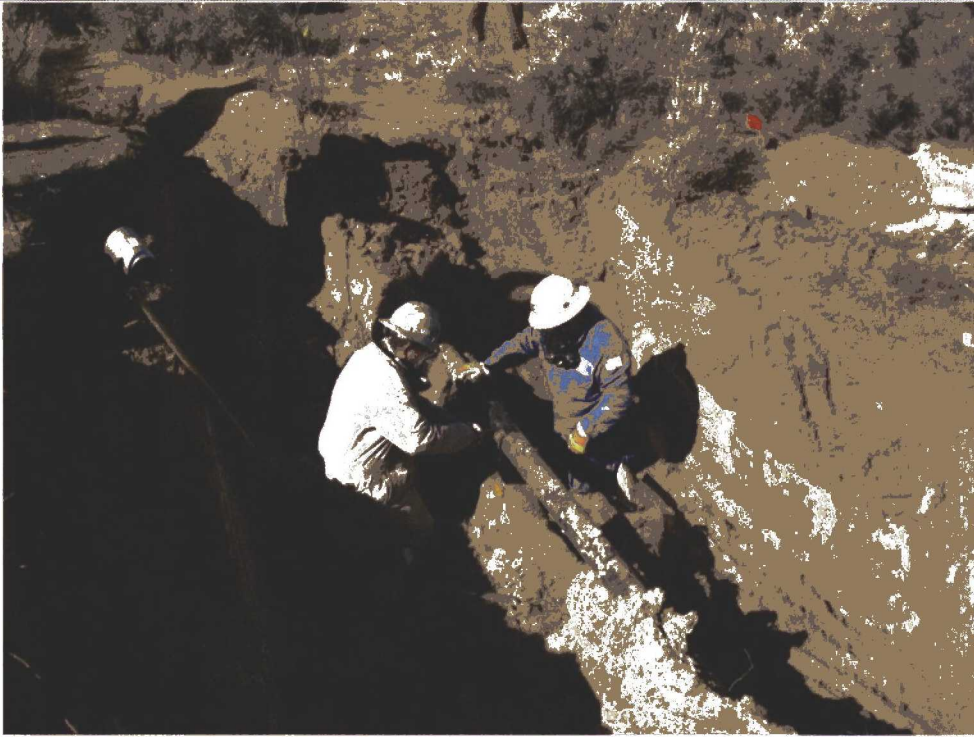
Photo #1	
Client: Enterprise Products Company	
Project: Howell #1 Pipeline Release	
Taken by: Tom Long	
February 21, 2012	
AES Project No: 120226	Description: View of the excavation and repair of the Howell #1 pipeline.

Photo #2	
Client: Enterprise Products Company	
Project: Howell #1 Pipeline Release	
Taken by: Tom Long	
February 22, 2012	
AES Project No: 120226	Description: View of the excavation and repair of the Howell #1 pipeline.


Photo #3	
Client: Enterprise Products Company	
Project: Howell #1 Pipeline Release	
Taken by: Tom Long	
February 22, 2012	
AES Project No: 120226	Description: View of the south side of the excavation of the Howell #1 pipeline.

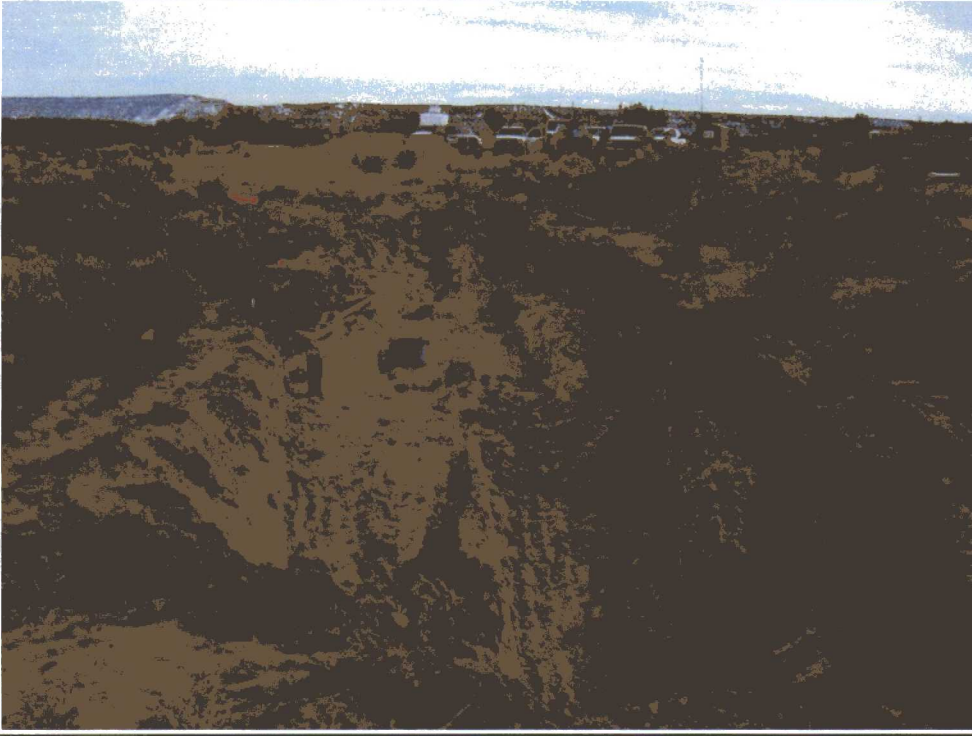
Photo #4	
Client: Enterprise Products Company	
Project: Howell #1 Pipeline Release	
Taken by: Tom Long	
February 6, 2012	
AES Project No: 120226	Description: View of the excavation of Howell #1 pipeline. View to the south.



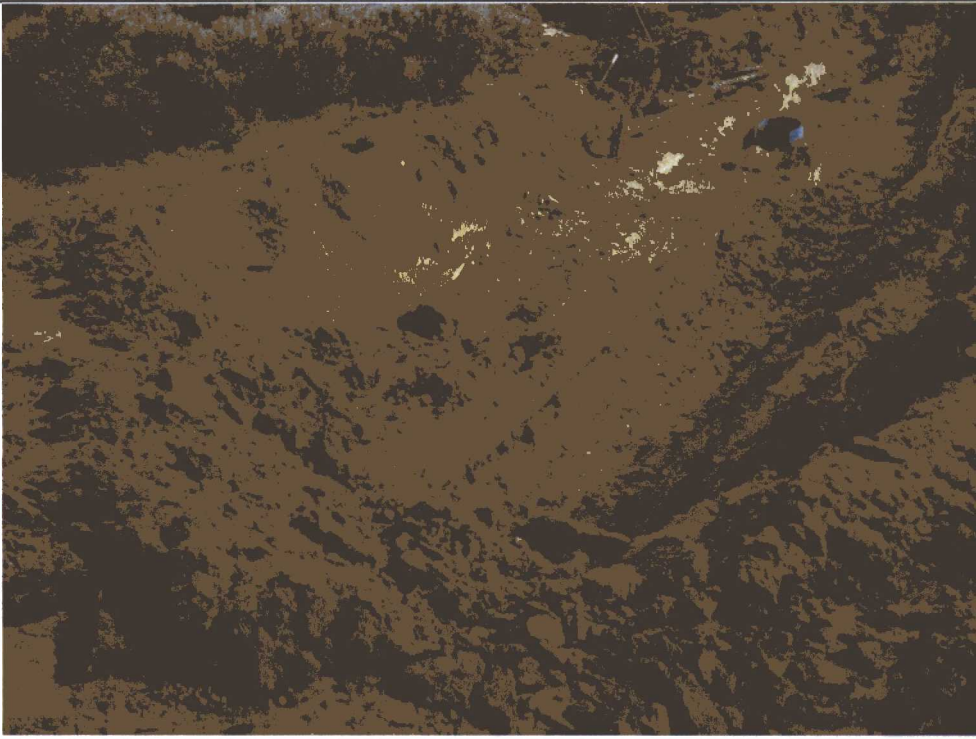
Photo #5	
Client: Enterprise Products Company	
Project: Howell #1 Pipeline Release	
Taken by: Tom Long	
February 22, 2012	
AES Project No: 120226	Description: View of the north side of the excavation of Howell #1 pipeline.


Photo #6	
Client: Enterprise Products Company	
Project: Howell #1 Pipeline Release	
Taken by: Tom Long	
February 22, 2012	
AES Project No: 120226	Description: View of the excavation of the Howell #1 pipeline. View to the north.


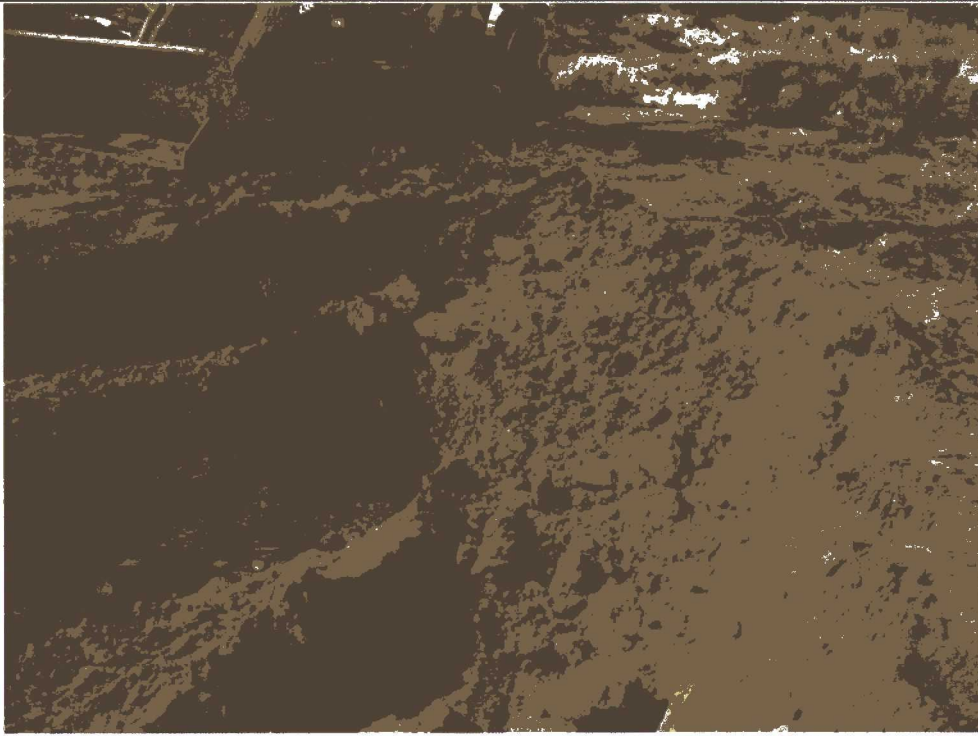
Photo #7	
Client: Enterprise Products Company	
Project: Howell #1 Pipeline Release	
Taken by: Tom Long	
February 22, 2012	
AES Project No: 120226	Description: View of the repair of the Howell #1 pipeline.

Photo #8	
Client: Enterprise Products Company	
Project: Howell #1 Pipeline Release	
Taken by: Tom Long	
February 22, 2012	
AES Project No: 120226	Description: View of the north side of the excavation for the Howell #1 pipeline.




District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
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 Products Operating, L.P.	Paykey: BM 11894
2. Originating Site: Howell #1 Well tie line	
3. Location of Material (Street Address, City, State or ULSTR): Section 3, T30N, R 8W, (36 50.142'N 107 40.160'W) NMPM, San Juan County, NM	2-23-12 100cy 2-22-12 50cy 108
4. Source and Description of Waste: Source: Howell #1 natural gas well tie pipeline Description: Exempt condensate impacted soil from a natural gas line leak at this location Estimated Volume 50 yd <sup>3</sup> / bbls Known Volume (to be entered by the operator at the end of the haul) 108 yd <sup>3</sup> / bbls	
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS	
I, <u>Am Dea</u> , representative or authorized agent for Enterprise Products Operating 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) <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. Operator Use Only: Waste Acceptance Frequency <input checked="" 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 checked="" 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>Am Dea</u> , representative for Enterprise Products Operating authorize JFJ/IEI to complete Generator Signature the required testing/sign the Generator Waste Testing Certification. I, <u>M May</u> representative for <u>IEI</u> do hereby certify that Representative/Agent Signature representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.	
5. Transporter: West States Contractors, Contact Gary Maestas (505) 215-2744 <u>Mass</u>	

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: M. Marquez  
SIGNATURE: M. Marquez  
Surface Waste Management Facility Authorized Agent

TITLE: HSE  
TELEPHONE NO.: 505-632-1782

DATE: 2/21/12

2/21/12



*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 29, 2012

Ross Kennemer

Animas Environmental Services

624 East Comanche

Farmington, NM 87401

TEL: (505) 564-2281

FAX (505) 324-2022

RE: Enterprise Howell #1

OrderNo.: 1202822

Dear Ross Kennemer:

Hall Environmental Analysis Laboratory received 6 sample(s) on 2/24/2012 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. 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. All samples are reported as received unless otherwise indicated.

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

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 1202822

Date Reported: 2/29/2012

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services

Client Sample ID: SC-1

Project: Enterprise Howell #1

Collection Date: 2/21/2012 2:15:00 PM

Lab ID: 1202822-001

Matrix: SOIL

Received Date: 2/24/2012 10:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	380	50		mg/Kg	5	2/27/2012 10:12:16 AM
Surr: DNOP	89.8	77.4-131		%REC	5	2/27/2012 10:12:16 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	5,900	970		mg/Kg	200	2/28/2012 3:03:54 PM
Surr: BFB	147	69.7-121	S	%REC	200	2/28/2012 3:03:54 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	8.2	0.97		mg/Kg	20	2/28/2012 1:31:55 AM
Toluene	260	9.7		mg/Kg	200	2/28/2012 3:03:54 PM
Ethylbenzene	60	0.97		mg/Kg	20	2/28/2012 1:31:55 AM
Xylenes, Total	610	19		mg/Kg	200	2/28/2012 3:03:54 PM
Surr: 4-Bromofluorobenzene	192	85.3-139	S	%REC	20	2/28/2012 1:31:55 AM

**Qualifiers:** \*/X Value exceeds Maximum Contaminant Level.  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 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  
 RL Reporting Detection Limit



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1202822

Date Reported: 2/29/2012

CLIENT: Animas Environmental Services

Client Sample ID: SC-2

Project: Enterprise Howell #1

Collection Date: 2/22/2012 10:42:00 AM

Lab ID: 1202822-002

Matrix: SOIL

Received Date: 2/24/2012 10:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/25/2012 4:12:25 PM
Surr: DNOP	89.5	77.4-131		%REC	1	2/25/2012 4:12:25 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	6.0	4.9		mg/Kg	1	2/28/2012 4:30:15 PM
Surr: BFB	109	69.7-121		%REC	1	2/28/2012 4:30:15 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.049		mg/Kg	1	2/28/2012 4:30:15 PM
Toluene	0.10	0.049		mg/Kg	1	2/28/2012 4:30:15 PM
Ethylbenzene	ND	0.049		mg/Kg	1	2/28/2012 4:30:15 PM
Xylenes, Total	0.75	0.097		mg/Kg	1	2/28/2012 4:30:15 PM
Surr: 4-Bromofluorobenzene	107	85.3-139		%REC	1	2/28/2012 4:30:15 PM

**Qualifiers:** \*/X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit



# Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services

Client Sample ID: SC-3

Project: Enterprise Howell #1

Collection Date: 2/22/2012 10:47:00 AM

Lab ID: 1202822-003

Matrix: SOIL

Received Date: 2/24/2012 10:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	2/25/2012 4:33:41 PM
Surr: DNOP	93.5	77.4-131		%REC	1	2/25/2012 4:33:41 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	21	5.0		mg/Kg	1	2/28/2012 2:58:18 AM
Surr: BFB	178	69.7-121	S	%REC	1	2/28/2012 2:58:18 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.050		mg/Kg	1	2/28/2012 2:58:18 AM
Toluene	0.18	0.050		mg/Kg	1	2/28/2012 2:58:18 AM
Ethylbenzene	ND	0.050		mg/Kg	1	2/28/2012 2:58:18 AM
Xylenes, Total	1.5	0.099		mg/Kg	1	2/28/2012 2:58:18 AM
Surr: 4-Bromofluorobenzene	115	85.3-139		%REC	1	2/28/2012 2:58:18 AM

**Qualifiers:** \*/X Value exceeds Maximum Contaminant Level.  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 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  
 RL Reporting Detection Limit

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1202822

Date Reported: 2/29/2012

CLIENT: Animas Environmental Services

Client Sample ID: SC-4

Project: Enterprise Howell #1

Collection Date: 2/22/2012 11:25:00 AM

Lab ID: 1202822-004

Matrix: SOIL

Received Date: 2/24/2012 10:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	29	9.6		mg/Kg	1	2/27/2012 2:30:33 PM
Surr: DNOP	90.3	77.4-131		%REC	1	2/27/2012 2:30:33 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	25	4.9		mg/Kg	1	2/28/2012 3:27:05 AM
Surr: BFB	183	69.7-121	S	%REC	1	2/28/2012 3:27:05 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.049		mg/Kg	1	2/28/2012 3:27:05 AM
Toluene	0.92	0.049		mg/Kg	1	2/28/2012 3:27:05 AM
Ethylbenzene	0.27	0.049		mg/Kg	1	2/28/2012 3:27:05 AM
Xylenes, Total	4.5	0.097		mg/Kg	1	2/28/2012 3:27:05 AM
Surr: 4-Bromofluorobenzene	122	85.3-139		%REC	1	2/28/2012 3:27:05 AM

**Qualifiers:** \* / X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit

# Analytical Report

Lab Order 1202822

Date Reported: 2/29/2012

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services

Client Sample ID: SC-5

Project: Enterprise Howell #1

Collection Date: 2/22/2012 11:28:00 AM

Lab ID: 1202822-005

Matrix: SOIL

Received Date: 2/24/2012 10:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	48	10		mg/Kg	1	2/27/2012 2:52:05 PM
Surr: DNOP	94.4	77.4-131		%REC	1	2/27/2012 2:52:05 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	37	4.7		mg/Kg	1	2/28/2012 3:55:50 AM
Surr: BFB	221	69.7-121	S	%REC	1	2/28/2012 3:55:50 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	0.055	0.047		mg/Kg	1	2/28/2012 3:55:50 AM
Toluene	1.4	0.047		mg/Kg	1	2/28/2012 3:55:50 AM
Ethylbenzene	0.41	0.047		mg/Kg	1	2/28/2012 3:55:50 AM
Xylenes, Total	7.1	0.093		mg/Kg	1	2/28/2012 3:55:50 AM
Surr: 4-Bromofluorobenzene	124	85.3-139		%REC	1	2/28/2012 3:55:50 AM

**Qualifiers:** \*/X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1202822

Date Reported: 2/29/2012

CLIENT: Animas Environmental Services

Client Sample ID: SC-6

Project: Enterprise Howell #1

Collection Date: 2/22/2012 11:55:00 AM

Lab ID: 1202822-006

Matrix: SOIL

Received Date: 2/24/2012 10:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/25/2012 5:16:16 PM
Surr: DNOP	98.4	77.4-131		%REC	1	2/25/2012 5:16:16 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	2/28/2012 4:24:34 AM
Surr: BFB	116	69.7-121		%REC	1	2/28/2012 4:24:34 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.049		mg/Kg	1	2/28/2012 5:27:43 PM
Toluene	ND	0.049		mg/Kg	1	2/28/2012 5:27:43 PM
Ethylbenzene	ND	0.049		mg/Kg	1	2/28/2012 5:27:43 PM
Xylenes, Total	0.26	0.099		mg/Kg	1	2/28/2012 5:27:43 PM
Surr: 4-Bromofluorobenzene	106	85.3-139		%REC	1	2/28/2012 5:27:43 PM

**Qualifiers:** \*/X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1202822

29-Feb-12

Client: Animas Environmental Services

Project: Enterprise Howell #1

Sample ID	MB-842		SampType: MBLK		TestCode: EPA Method 8015B: Diesel Range Organics					
Client ID:	PBS		Batch ID: 842		RunNo: 1128					
Prep Date:	2/24/2012		Analysis Date: 2/25/2012		SeqNo: 31991		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	9.1		10.00		91.4	77.4	131			

Sample ID	LCS-842		SampType: LCS		TestCode: EPA Method 8015B: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 842		RunNo: 1128					
Prep Date:	2/24/2012		Analysis Date: 2/25/2012		SeqNo: 31992		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	87.7	62.7	139			
Surr: DNOP	4.5		5.000		90.4	77.4	131			

Sample ID	1202817-001AMS		SampType: MS		TestCode: EPA Method 8015B: Diesel Range Organics					
Client ID:	BatchQC		Batch ID: 842		RunNo: 1128					
Prep Date:	2/24/2012		Analysis Date: 2/25/2012		SeqNo: 31995		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.86	0	92.3	57.2	146			
Surr: DNOP	4.8		5.086		94.1	77.4	131			

Sample ID	1202817-001AMSD		SampType:	MSD		TestCode:	EPA Method 8015B: Diesel Range Organics				
Client ID:	BatchQC		Batch ID:	842		RunNo:	1128				
Prep Date:	2/24/2012		Analysis Date:	2/25/2012		SeqNo:	31996		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	46	10	50.45	0	91.3	57.2	146	1.88	26.7		
Surr: DNOP	4.8		5.045		94.6	77.4	131	0	0		

### Qualifiers:

\*/X Value exceeds Maximum Contaminant Level.  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 R RPD 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  
 RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1202822

29-Feb-12

Client: Animas Environmental Services

Project: Enterprise Howell #1

Sample ID	MB-844		SampType: MBLK		TestCode: EPA Method 8015B: Gasoline Range					
Client ID:	PBS		Batch ID: 844		RunNo: 1157					
Prep Date:	2/24/2012		Analysis Date: 2/27/2012		SeqNo: 33018		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	980		1,000		98.2	69.7	121			

Sample ID	LCS-844		SampType: LCS		TestCode: EPA Method 8015B: Gasoline Range					
Client ID:	LCSS		Batch ID: 844		RunNo: 1157					
Prep Date:	2/24/2012		Analysis Date: 2/27/2012		SeqNo: 33022		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	107	98.5	133			
Surr: BFB	1,000		1,000		104	69.7	121			

Sample ID	1202813-001AMS		SampType: MS		TestCode: EPA Method 8015B: Gasoline Range					
Client ID:	BatchQC		Batch ID: 844		RunNo: 1157					
Prep Date:	2/24/2012		Analysis Date: 2/27/2012		SeqNo: 33023		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	32	4.7	23.41	9.893	95.9	85.4	147			
Surr: BFB	1,100		936.3		122	69.7	121			S

Sample ID	1202813-001AMSD		SampType: MSD		TestCode: EPA Method 8015B: Gasoline Range					
Client ID:	BatchQC		Batch ID: 844		RunNo: 1157					
Prep Date:	2/24/2012		Analysis Date: 2/27/2012		SeqNo: 33024		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	34	4.7	23.67	9.893	103	85.4	147	5.85	19.2	
Surr: BFB	1,200		947.0		130	69.7	121	0	0	S

### Qualifiers:

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R RPD 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  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1202822

29-Feb-12

**Client:** Animas Environmental Services

**Project:** Enterprise Howell #1

Sample ID <b>MB-844</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>PBS</b>	Batch ID: <b>844</b>	RunNo: <b>1157</b>								
Prep Date: <b>2/24/2012</b>	Analysis Date: <b>2/27/2012</b>	SeqNo: <b>33032</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		109	85.3	139			

Sample ID <b>LCS-844</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>844</b>	RunNo: <b>1157</b>								
Prep Date: <b>2/24/2012</b>	Analysis Date: <b>2/27/2012</b>	SeqNo: <b>33036</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	100	83.3	107			
Toluene	1.0	0.050	1.000	0	102	74.3	115			
Ethylbenzene	1.0	0.050	1.000	0	103	80.9	122			
Xylenes, Total	3.1	0.10	3.000	0	103	85.2	123			
Surr: 4-Bromofluorobenzene	1.1		1.000		112	85.3	139			

Sample ID <b>1202813-001A MS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>BatchQC</b>	Batch ID: <b>844</b>	RunNo: <b>1157</b>								
Prep Date: <b>2/24/2012</b>	Analysis Date: <b>2/27/2012</b>	SeqNo: <b>33037</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.048	0.9506	0.2292	104	67.2	113			
Toluene	1.6	0.048	0.9506	0.6150	109	62.1	116			
Ethylbenzene	1.1	0.048	0.9506	0.06815	104	67.9	127			
Xylenes, Total	3.9	0.095	2.852	0.8944	105	60.6	134			
Surr: 4-Bromofluorobenzene	1.1		0.9506		116	85.3	139			

Sample ID <b>1202813-001A MSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8021B: Volatiles</b>								
Client ID: <b>BatchQC</b>	Batch ID: <b>844</b>	RunNo: <b>1157</b>								
Prep Date: <b>2/24/2012</b>	Analysis Date: <b>2/27/2012</b>	SeqNo: <b>33038</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.047	0.9461	0.2292	107	67.2	113	2.15	14.3	
Toluene	1.8	0.047	0.9461	0.6150	121	62.1	116	6.77	15.9	S
Ethylbenzene	1.1	0.047	0.9461	0.06815	108	67.9	127	2.53	14.4	
Xylenes, Total	4.2	0.095	2.838	0.8944	116	60.6	134	6.89	12.6	
Surr: 4-Bromofluorobenzene	1.1		0.9461		117	85.3	139	0	0	

### Qualifiers:

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 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 R RPD 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  
 RL Reporting Detection Limit





Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87106  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: **Animas Environmental**

Work Order Number: **1202822**

Received by/date:  **2/24/12**

Logged By: **Ashley Gallegos**

**2/24/2012 10:05:00 AM**



Completed By: **Ashley Gallegos**

**2/24/2012 12:02:14 PM**



Reviewed By: **IO 2/24/12**

### Chain of Custody

- |                                  |                |    |               |
|----------------------------------|----------------|----|---------------|
| 1. Were seals intact?            | Yes            | No | Not Present ✓ |
| 2. Is Chain of Custody complete? | Yes ✓          | No | Not Present   |
| 3. How was the sample delivered? | <u>Courier</u> |    |               |

### Log In

- |   |       |      |  |
|---|-------|------|--|
| 4. Coolers are present? (see 19. for cooler specific information)                         | Yes ✓ | No   | NA                                     |
| 5. Was an attempt made to cool the samples?   | Yes ✓ | No   | NA                                     |
| 6. Were all samples received at a temperature of >0° C to 6.0°C                           | Yes ✓ | No   | NA                                     |
| 7. Sample(s) in proper container(s)?  | Yes ✓ | No   |  |
| 8. Sufficient sample volume for indicated test(s)?  | Yes ✓ | No   |  |
| 9. Are samples (except VOA and ONG) properly preserved?                                   | Yes ✓ | No   |  |
| 10. Was preservative added to bottles?  | Yes   | No ✓ | NA                                     |
| 11. VOA vials have zero headspace?  | Yes   | No   | No VOA Vials ✓                         |
| 12. Were any sample containers received broken?   | Yes   | No ✓ |  |
| 13. Does paperwork match bottle labels?<br>(Note discrepancies on chain of custody)       | Yes ✓ | No   | # of preserved bottles checked for pH: |
| 14. Are matrices correctly identified on Chain of Custody?                                | Yes ✓ | No   | (<2 or >12 unless noted)               |
| 15. Is it clear what analyses were requested?   | Yes ✓ | No   | Adjusted?                              |
| 16. Were all holding times able to be met?<br>(If no, notify customer for authorization.) | Yes ✓ | No   | Checked by:                            |

### Special Handling (if applicable)

- |   |     |    |      |
|---|-----|----|------|
| 17. 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: \_\_\_\_\_

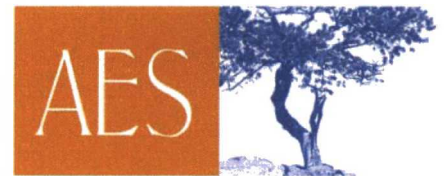
18. Additional remarks:

### 19. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			







Animas Environmental Services, LLC

www.animasenvironmental.com

November 15, 2012

Aaron Dailey  
Enterprise Products Company  
614 Reilly Avenue  
Farmington, New Mexico 87401

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

Durango, Colorado  
970-403-3274

**RE: Multiple Release Assessment Report  
Lateral 2B-24  
San Juan County, New Mexico**

RCVD NOV 29 '12  
OIL CONS. DIV.  
DIST. 3

Mr. Dailey:

On August 6, 2012, Animas Environmental Services, LLC (AES) completed an assessment associated with three separate releases of natural gas from the Enterprise Products Company (Enterprise) Lateral 2B-24 4-inch diameter pipeline. The releases, which are located approximately 6.25 to 7 miles south of Bloomfield, San Juan County, New Mexico, resulted from pipeline leaks caused by corrosion.

---

## 1.0 Site Information

### 1.1 Locations

All locations are illustrated on Figure 1- Topographic Site Location Map.

#### Release #1

Location – NE $\frac{1}{4}$  NE $\frac{1}{4}$ , Section 21, T28N, R10W, San Juan County, New Mexico

Latitude/Longitude - N36.65287 and W107.89455, respectively

Surface Owner – Federal (Bureau of Land Management)

Figure 2a. Aerial Site Map Release #1

#### Release #2

Location – SE $\frac{1}{4}$  NW $\frac{1}{4}$ , Section 22, T28N, R10W, San Juan County, New Mexico

Latitude/Longitude - N36.64828 and W107.88367, respectively

Surface Owner – Federal (Bureau of Land Management)

Figure 2b. Aerial Site Map Release #2

100



### **Release #3**

Location – SW¼ NW¼, Section 22, T28N, R10W, San Juan County, New Mexico

Latitude/Longitude - N36.65040 and W107.88930, respectively

Surface Owner – Federal (Bureau of Land Management)

Figure 2c. Aerial Site Map Release #3

## **1.2 NMOCD Ranking**

In accordance with the New Mexico Oil Conservation Division (NMOCD) *Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993) the release locations were each assigned a ranking score to establish release action levels. The ranking scores were obtained in part by reviewing available records of nearby oil/gas wells using the NMOCD online database. Additionally, the New Mexico Office of the State Engineer (NMOSE) database was reviewed for nearby water wells, and Google Earth and the New Mexico Tech Petroleum Recovery Research Center online mapping tool (<http://ford.nmt.edu/react/project.html>) were accessed to aid in the identification of downgradient surface water.

### **Release #1**

No NMOCD documents were found to assist in determining the ranking score for Release #1. Based on site topography and elevation differentials between the release location and the nearest perennial water sources, depth to groundwater is estimated to be greater than 100 feet below ground surface (bgs). No registered water wells were reported to be located within 1,000 feet of the release area. A small unnamed ephemeral wash is located approximately 400 feet east of Release #1, and a larger unnamed ephemeral wash is located approximately 630 feet to the northwest. Based on this information, Release #1 was assessed a ranking score of 10.

### **Release #2**

No NMOCD documents were found to assist in determining the ranking score for Release #2. Based on site topography and elevation differentials between the release location and the nearest perennial water sources, depth to groundwater is estimated to be greater than 100 feet bgs. No registered water wells were reported to be located within 1,000 feet of the release area. Unnamed ephemeral washes are located approximately 50 feet and 250 feet west and approximately 520 feet east of Release #2. Based on this information, Release #2 was assessed a ranking score of 20.

### **Release #3**

A C-144 form dated August 2007 for the Davidson Gas Com H #1F well located approximately 200 feet northeast of Release #3 reported the depth to groundwater as greater than 100 feet bgs. No registered water wells were reported to be located within 1,000 feet of the release area. Unnamed ephemeral washes are also located

approximately 90 feet northwest and 550 feet southeast of Release #3. Based on this information, Release #3 was assessed a ranking score of 20.

### **1.3 Assessment and Mitigation**

On August 6, 2012, Enterprise contractors completed two excavations (Release #1 and Release #2) along the Lateral 2B-24 pipeline and determined that the releases were the result of pipeline leaks caused by corrosion. A third release area was identified (Release #3) and assessed with the installation of six soil borings. AES collected soil samples for field screening and laboratory analysis; a total of 10 soil samples were collected from the excavation at Release #1, a total of 14 samples from the excavation at Release #2, and 2 samples from the soil borings at Release #3.

The final excavation dimensions for Release #1 measured approximately 44 feet by 12 feet by 6.75 feet deep. Additionally, an area of surface staining approximately 1 foot wide by 75 feet long was observed adjacent to the north side of the excavation at Release #1. The final excavation dimensions for Release #2 measured 74 feet by 10 feet by 5 feet deep. The six soil borings installed in the vicinity of Release #3 were each terminated at sandstone. Soil boring total depths ranged from 0.5 feet bgs to 2.5 bgs.

Soil sample locations are included on Figures 3a, 3b, and 3c, and a photograph log is attached.

---

## **2.0 Soil Sampling**

### **Release #1**

AES personnel collected eight 5-point composite soil samples (SC-1 through SC-8) from the excavation base and sidewalls of Release #1 for field screening and laboratory analysis. Soil samples SC-1 through SC-6 were collected from the sidewalls of the excavation from 0 to 6.75 feet bgs. SC-7 and SC-8 were collected from the excavation base at depths of 6.75 feet. Additionally, AES collected two 5-point composite soil samples (SC-9 and SC-10) at depths of 0.25 feet bgs from the area of surface staining adjacent to the release area.

### **Release #2**

AES personnel collected 14 5-point composite soil samples (SC-1 through SC-14) from the excavation base and sidewalls of Release #2 for field screening and laboratory analysis. Soil samples SC-1 through SC-10 were collected from the sidewalls of the excavation from 0 to 5 feet bgs; and SC-11 through SC-14 were collected from the excavation base at depths of 5 feet bgs.



### **Release #3**

AES personnel collected a total of 11 soil samples for field screening from the six soil borings installed in the vicinity of Release #3. Additionally, two 5-point composite soil samples (SC-1 and SC-2) were collected for field screening and laboratory analysis. Soil sample SC-1 is a composite of SB-2 through SB-6 at 1 foot bgs, and SC-2 is a composite of SB-2 through SB-6 at total depth.

#### **2.1 Field Screening**

Field screening for volatile organic compounds (VOCs) 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**

A total of 26 soil samples (SC-1 through SC-10 for Release #1, SC-1 through SC-14 for Release #2, and SC-1 and SC-2 for Release #3) were collected for laboratory analysis and 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:

- Benzene, toluene, ethylbenzene, and xylene (BTEX) per U.S. Environmental Protection Agency (USEPA) Method 8021B;
- Total petroleum hydrocarbons (TPH) for gasoline range organics (GRO) and diesel range organics (DRO) per USEPA Method 8015B.

#### **2.3 Field Screening and Laboratory Analytical Results**

##### **Release #1**

Soil field screening results showed that VOC concentrations were 0.0 ppm in each soil sample collected from the Release #1 area. Soil analytical results from SC-1 through SC-10 showed that benzene and total BTEX concentrations were below laboratory detection limits. TPH concentrations were below laboratory detection limits in all samples, except for SC-9 with 120 mg/kg DRO.

##### **Release #2**

Field screening VOC concentrations in the samples collected from Release #2 ranged from 0.0 ppm up to 53.6 ppm in SC-1. Soil analytical results from SC-1 through SC-14 showed that benzene and total BTEX concentrations were below laboratory detection limits. TPH concentrations were below laboratory detection limits in all samples, except for SC-2 (170 mg/kg DRO), SC-5 (12 mg/kg DRO), and SC-6 (35 mg/kg DRO).

### Release #3

The VOC concentration was 0.0 ppm in each of the samples collected from the soil borings and 5-point composite samples for Release #3. Soil analytical results from SC-1 and SC-2 showed that benzene, total BTEX, and TPH concentrations were below laboratory detection limits.

Laboratory analytical results are included in Table 1 and on Figures 3a, 3b, and 3c. Laboratory analytical reports are attached.

Table 1. Soil Field Screening and Laboratory Analytical Results  
Lateral 2B-24 Multiple Release Assessment, August 2012

Release ID	Sample ID	Sample Date	Depth (ft)	VOCs OVM (ppm)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)
			<b>NMOCD Action Level</b>	<b>100</b>	<b>10</b>	<b>50</b>	<b>1,000*</b>	
Release #1	SC-1	8/6/12	0 to 6.75	0.0	<0.047	<0.236	<4.7	<10
	SC-2	8/6/12	0 to 6.75	0.0	<0.048	<0.24	<4.8	<9.8
	SC-3	8/6/12	0 to 6.75	0.0	<0.049	<0.246	<4.9	<10
	SC-4	8/6/12	0 to 6.75	0.0	<0.048	<0.24	<4.8	<10
	SC-5	8/6/12	0 to 6.75	0.0	<0.047	<0.235	<4.7	<10
	SC-6	8/6/12	0 to 6.75	0.0	<0.048	<0.241	<4.8	<10
	SC-7	8/6/12	6.75	0.0	<0.047	<0.235	<4.7	<9.7
	SC-8	8/6/12	6.75	0.0	<0.050	<0.25	<5.0	<9.8
	SC-9	8/6/12	0.25	0.0	<0.049	<0.245	<4.9	120
	SC-10	8/6/12	0.25	0.0	<0.048	<0.239	<4.8	<49
			<b>NMOCD Action Level</b>	<b>100</b>	<b>10</b>	<b>50</b>	<b>100*</b>	
Release #2	SC-1	8/6/12	0 to 5	53.6	<0.049	<0.246	<4.9	<9.7
	SC-2	8/6/12	0 to 5	7.0	<0.046	<0.23	<4.6	<b>170</b>
	SC-3	8/6/12	0 to 5	1.5	<0.049	<0.245	<4.9	<9.8
	SC-4	8/6/12	0 to 5	0.2	<0.049	<0.245	<4.9	<10
	SC-5	8/6/12	0 to 5	3.8	<0.046	<0.23	<4.6	12
	SC-6	8/6/12	0 to 5	2.4	<0.047	<0.235	<4.7	35
	SC-7	8/6/12	0 to 5	0.7	<0.050	<0.249	<5.0	<10
	SC-8	8/6/12	0 to 5	0.0	<0.048	<0.24	<4.8	<9.6
	SC-9	8/6/12	0 to 5	0.0	<0.046	<0.23	<4.6	<10
	SC-10	8/6/12	0 to 5	0.6	<0.049	<0.245	<4.9	<9.6



Release ID	Sample ID	Sample Date	Depth (ft)	VOCs OVM (ppm)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)
	SC-11	8/6/12	5	2.9	<0.047	<0.234	<4.7	<9.7
	SC-12	8/6/12	5	0.3	<0.046	<0.231	<4.6	<9.7
	SC-13	8/6/12	5	0.0	<0.049	<0.244	<4.9	<10
	SC-14	8/6/12	5	0.0	<0.049	<0.244	<4.9	<10
<b>NMOCD Action Level</b>				<b>100</b>	<b>10</b>	<b>50</b>	<b>100*</b>	
<b>Release #3</b>	SC-1	8/6/12	1	0.0	<0.047	<0.235	<4.7	<10
	SC-2	8/6/12	TD	0.0	<0.047	<0.235	<4.7	<10

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

### 3.0 Conclusions and Recommendations

NMOCD action levels for releases are specified in NMOCD's *Guidelines for Leaks, Spills, and Releases* (August 1993). Release #1 was assigned a ranking score of 10, and Release #2 and Release #3 were each assigned a ranking score of 20. Based on field observations, field screening values, and laboratory analytical results for VOCs, benzene, BTEX, and TPH, soils have not been impacted above NMOCD action levels within the release areas, with the exception of SC-2 (170 mg/kg DRO) at Release #2. AES recommends application of a dilute Simple Green solution within the vicinity of SC-2 at Release #2 in order to enhance bioremediation of residual petroleum hydrocarbons in the soil.

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

Sincerely,



Landrea Cupps  
Environmental Scientist



Elizabeth McNally, P.E.

Attachments:

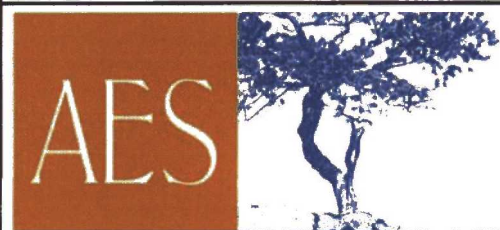
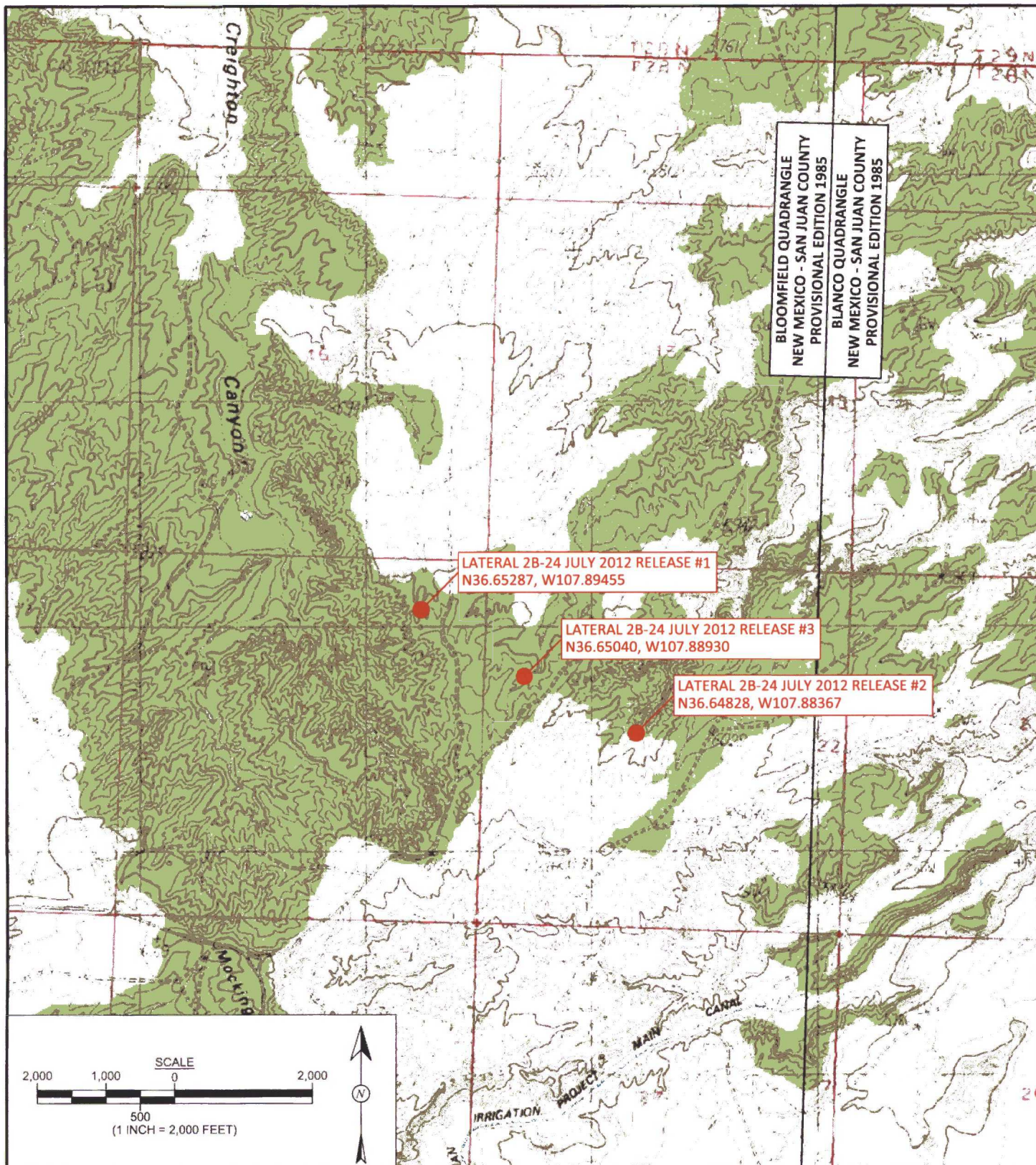
Figure 1. Topographic Site Location Map  
Figure 2a. Aerial Site Map Release #1  
Figure 2b. Aerial Site Map Release #2  
Figure 2c. Aerial Site Map Release #3  
Figure 3a. Release #1 Sample Locations and Results, August 2012  
Figure 3b. Release #2 Sample Locations and Results, August 2012  
Figure 3c. Release #3 Sample Locations and Results, August 2012  
Photograph Log  
Laboratory Analytical Reports (Hall 1208369, 1208371, 1208372)

R:\Animas 2000\2012 Projects\Enterprise\Lateral 2B-24\July 2012\Enterprise Lateral 2B-24 Multiple Release Assessment 111512.docx









Animas Environmental Services, LLC

**DRAWN BY:**

N. Willis

**DATE DRAWN:**

August 8, 2012

**REVISIONS BY:**

C. Lameman

**DATE REVISED:**

November 14, 2012

**CHECKED BY:**

T. Ross

**DATE CHECKED:**

November 14, 2012

**APPROVED BY:**

E. McNally

**DATE APPROVED:**

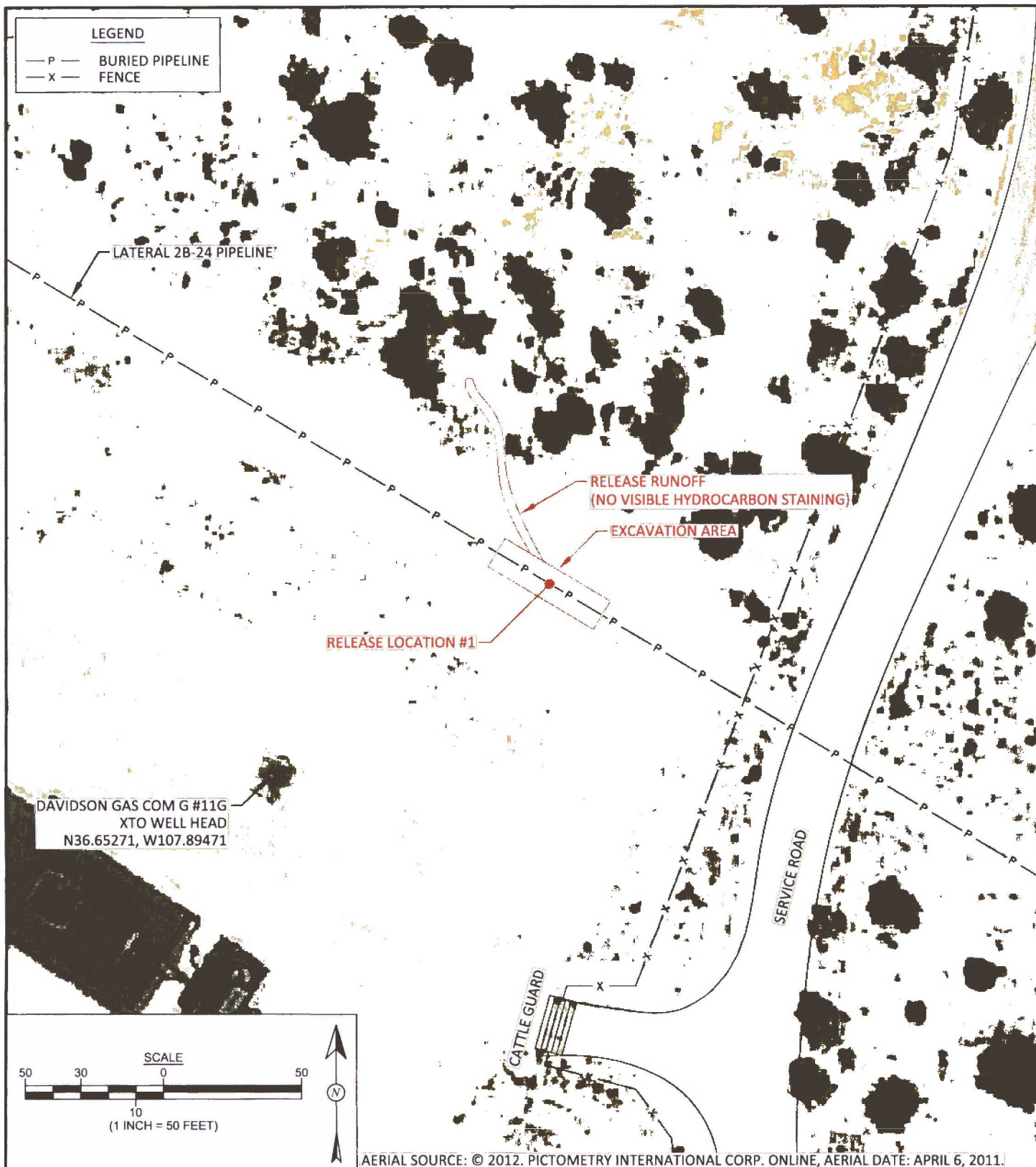
November 14, 2012

## FIGURE 1

**TOPOGRAPHIC SITE LOCATION MAP**  
ENTERPRISE PRODUCTS COMPANY  
LATERAL 2B-24 JULY 2012 RELEASES  
SAN JUAN COUNTY, NEW MEXICO  
SECTIONS 21 AND 22, T28N, R10W







AERIAL SOURCE: © 2012. PICTOMETRY INTERNATIONAL CORP. ONLINE, AERIAL DATE: APRIL 6, 2011.



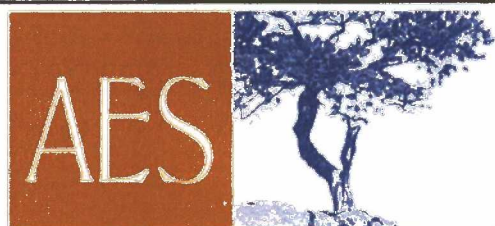
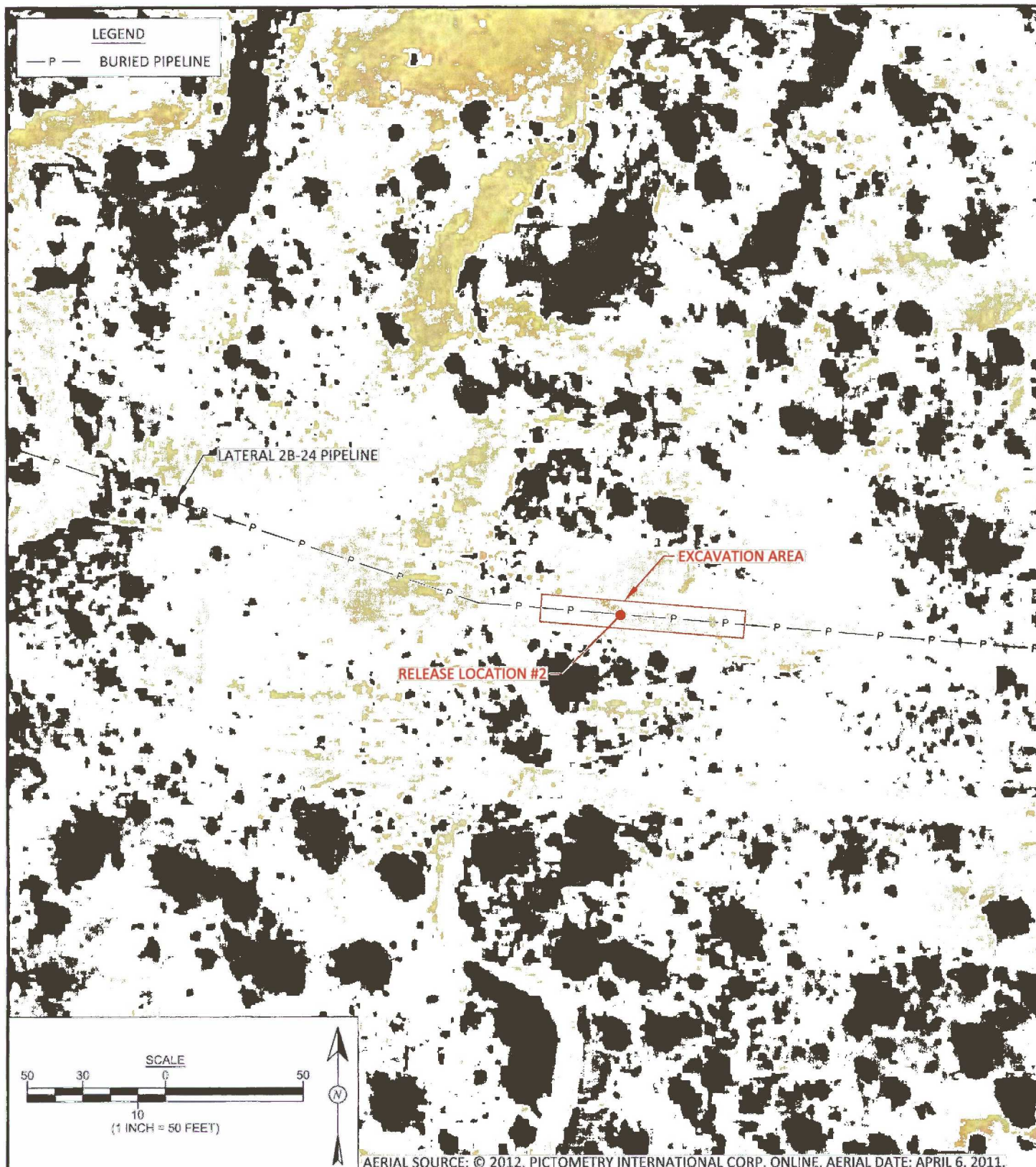
Animas Environmental Services, LLC

<b>DRAWN BY:</b> N. Willis	<b>DATE DRAWN:</b> August 8, 2012
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> November 14, 2012
<b>CHECKED BY:</b> T. Ross	<b>DATE CHECKED:</b> November 14, 2012
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> November 14, 2012

## FIGURE 2A

**AERIAL SITE MAP**  
ENTERPRISE PRODUCTS COMPANY  
LATERAL 2B-24 JULY 2012 RELEASE #1  
SAN JUAN COUNTY, NEW MEXICO  
NE¼ NE¼, SECTION 21, T28N, R10W  
N36.65287, W107.89455





Animas Environmental Services, LLC

**DRAWN BY:**

N. Willis

**DATE DRAWN:**

August 8, 2012

**REVISIONS BY:**

C. Lameman

**DATE REVISED:**

November 14, 2012

**CHECKED BY:**

T. Ross

**DATE CHECKED:**

November 14, 2012

**APPROVED BY:**

E. McNally

**DATE APPROVED:**

November 14, 2012

## FIGURE 2B

**AERIAL SITE MAP**  
ENTERPRISE PRODUCTS COMPANY  
LATERAL 2B-24 JULY 2012 RELEASE #2  
SAN JUAN COUNTY, NEW MEXICO  
SE¼ NW¼, SECTION 22, T28N, R10W  
N36.64828, W107.88367





Animas Environmental Services, LLC

<b>DRAWN BY:</b> N. Willis	<b>DATE DRAWN:</b> August 8, 2012
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> November 14, 2012
<b>CHECKED BY:</b> T. Ross	<b>DATE CHECKED:</b> November 14, 2012
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> November 14, 2012

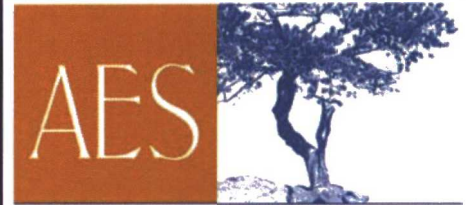
## FIGURE 2C

**AERIAL SITE MAP**  
ENTERPRISE PRODUCTS COMPANY  
LATERAL 2B-24 JULY 2012 RELEASE #3  
SAN JUAN COUNTY, NEW MEXICO  
SW¼ NW¼, SECTION 22, T28N, R10W  
N36.65040, W107.88930

# FIGURE 3A

## SAMPLE LOCATIONS AND RESULTS AUGUST 2012

ENTERPRISE PRODUCTS COMPANY  
LATERAL 2B-24 JULY 2012 RELEASE #1  
SAN JUAN COUNTY, NEW MEXICO  
NE $\frac{1}{4}$  NE $\frac{1}{4}$ , SECTION 21, T28N, R10W  
N36.65287, W107.89455



Animas Environmental Services, LLC

**DRAWN BY:**

N. Willis

**DATE DRAWN:**

August 9, 2012

**REVISIONS BY:**

C. Lameman

**DATE REVISED:**

November 14, 2012

**CHECKED BY:**

T. Ross

**DATE CHECKED:**

November 14, 2012

**APPROVED BY:**

E. McNally

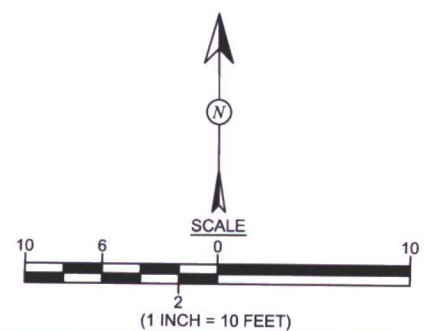
**DATE APPROVED:**

November 14, 2012

**LEGEND**

● SAMPLE LOCATIONS

RELEASE LOCATION #1  
N36.65287, W107.89455



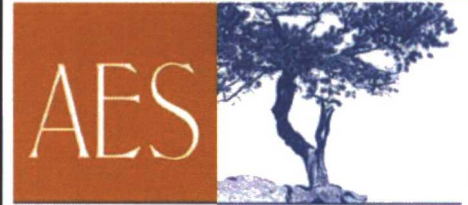




**FIGURE 3B**

**SAMPLE LOCATIONS AND RESULTS  
AUGUST 2012**

ENTERPRISE PRODUCTS COMPANY  
LATERAL 2B-24 JULY 2012 RELEASE #2  
SAN JUAN COUNTY, NEW MEXICO  
SE $\frac{1}{4}$  NW $\frac{1}{4}$ , SECTION 22, T28N, R10W  
N36.64828, W107.88367



Animas Environmental Services, LLC

**DRAWN BY:**

N. Willis

**DATE DRAWN:**

August 9, 2012

**REVISIONS BY:**

C. Lameman

**DATE REVISED:**

November 14, 2012

**CHECKED BY:**

T. Ross

**DATE CHECKED:**

November 14, 2012

**APPROVED BY:**

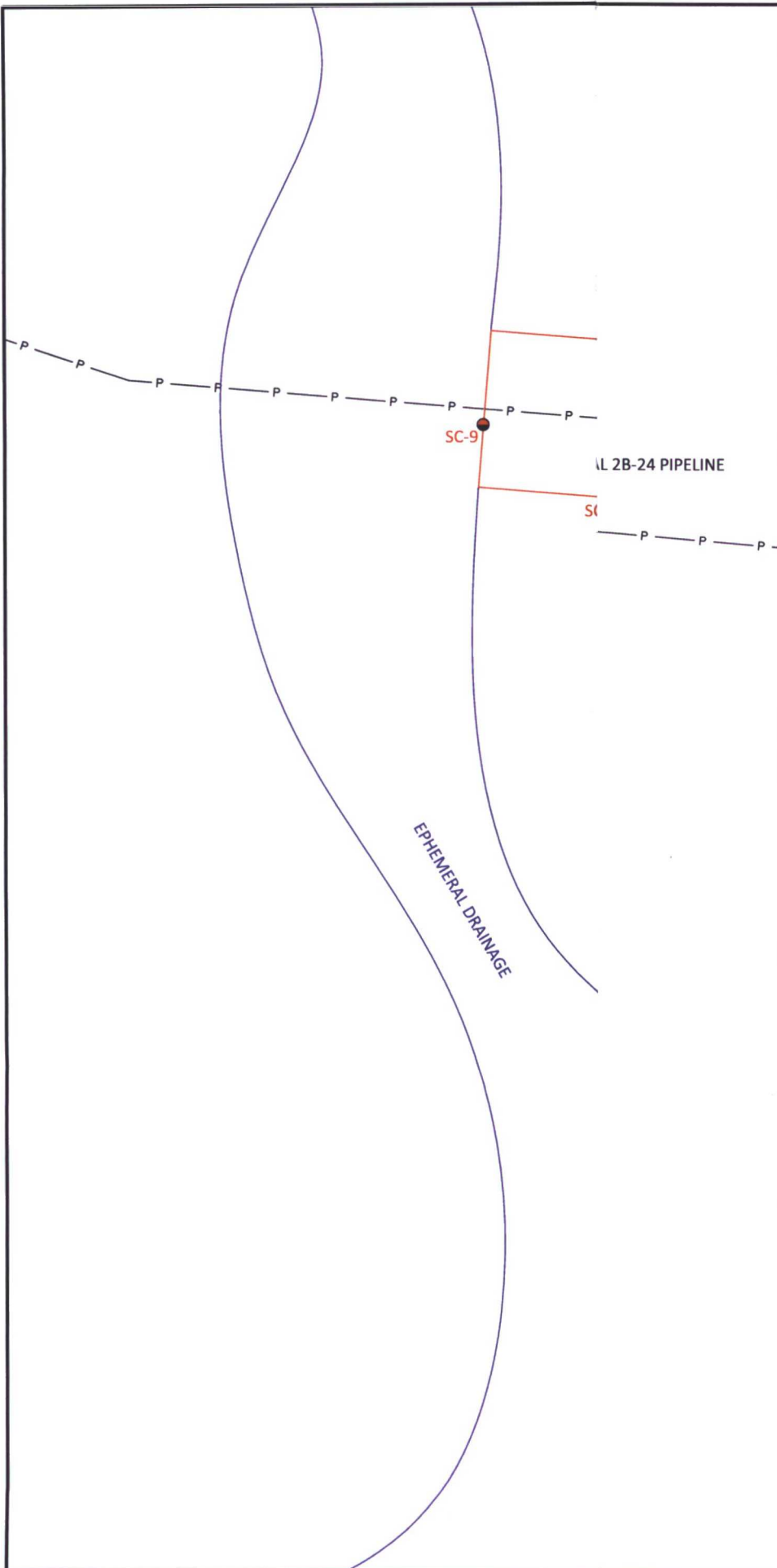
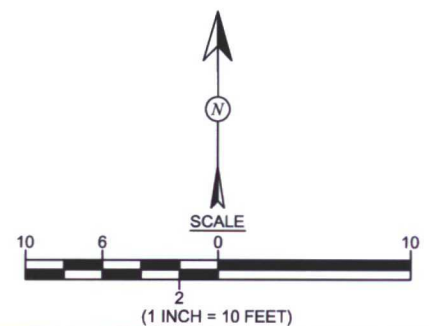
E. McNally

**DATE APPROVED:**

November 14, 2012

**LEGEND**

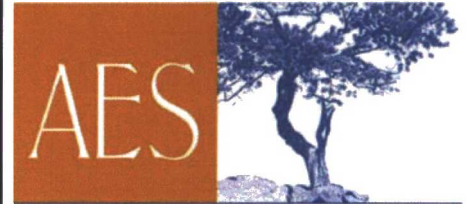
● SAMPLE LOCATIONS



## FIGURE 3C

### SAMPLE LOCATIONS AND RESULTS AUGUST 2012

ENTERPRISE PRODUCTS COMPANY  
LATERAL 2B-24 JULY 2012 RELEASE #3  
SAN JUAN COUNTY, NEW MEXICO  
SW¼ NW¼, SECTION 22, T28N, R10W  
N36.65040, W107.88930



Animas Environmental Services, LLC

#### DRAWN BY:

N. Willis

#### DATE DRAWN:

August 9, 2012

#### REVISIONS BY:

C. Lameman

#### DATE REVISED:

November 14, 2012

#### CHECKED BY:

T. Ross

#### DATE CHECKED:

November 14, 2012

#### APPROVED BY:

E. McNally

#### DATE APPROVED:

November 14, 2012

#### LEGEND

● SAMPLE LOCATIONS

#### Field Screening and Laboratory Analysis

Sample ID	Date	Depth (ft)	OVM-PID (ppm)	Benzene (mg/kg)
<b>NMOCD ACTION LEVEL</b>			<b>100</b>	<b>10</b>
SC-1	8/6/12	1	0.0	<0.047
SC-2	8/6/12	TD	0.0	<0.047

ALL SOIL BORINGS TERMINATED AT SANDSTONE. SC-1 IS SB-6 AT 1 FT BGS. SC-2 IS A COMPOSITE OF SB-2 THROUGH DEPTH. ALL SAMPLES WERE ANALYZED PER EPA METHOD

LATERAL 2B-24 PIPEL



SCALE



(1 INCH = 10 FEET)





Photo #1	
Client: Enterprise Products Company	
Project: Lateral 2B-24 Multiple Release	
Taken by: Tom Long	
August 7, 2012	
AES Project No: 120802	Description: View of Release #1 excavation.


Photo #2	
Client: Enterprise Products Company	
Project: Lateral 2B-24 Multiple Release	
Taken by: Tom Long	
August 7, 2012	
AES Project No: 120802	Description: View of surface staining adjacent to Release #1.







Photo #3	
Client: Enterprise Products Company	
Project: Lateral 2B-24 Multiple Release	
Taken by: Tom Long	
August 7, 2012	
AES Project No: 120802	Description: View of Release #2 excavation.

Photo #4	
Client: Enterprise Products Company	
Project: Lateral 2B-24 Multiple Release	
Taken by: Tom Long	
August 7, 2012	
AES Project No: 120802	Description: View of Release #3 location.



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

August 15, 2012

Tami Ross  
Animas Environmental Services  
624 East Comanche  
Farmington, NM 87401  
TEL: (505) 793-2072  
FAX

RE: Enterprise Lateral 2B-24 Excavation #1

OrderNo.: 1208371

Dear Tami Ross:

Hall Environmental Analysis Laboratory received 10 sample(s) on 8/8/2012 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. 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. 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.

Sincerely,

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208371

Date Reported: 8/15/2012

CLIENT: Animas Environmental Services

Client Sample ID: SC-1

Project: Enterprise Lateral 2B-24 Excavation #1

Collection Date: 8/6/2012 10:50:00 AM

Lab ID: 1208371-001

Matrix: SOIL

Received Date: 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/10/2012 11:20:03 AM
Surr: DNOP	105	77.6-140		%REC	1	8/10/2012 11:20:03 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/10/2012 7:19:01 PM
Surr: BFB	99.7	84-116		%REC	1	8/10/2012 7:19:01 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.047		mg/Kg	1	8/10/2012 7:19:01 PM
Toluene	ND	0.047		mg/Kg	1	8/10/2012 7:19:01 PM
Ethylbenzene	ND	0.047		mg/Kg	1	8/10/2012 7:19:01 PM
Xylenes, Total	ND	0.095		mg/Kg	1	8/10/2012 7:19:01 PM
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1	8/10/2012 7:19:01 PM

**Qualifiers:** \*/X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit  
U Samples with CalcVal < MDL



# Hall Environmental Analysis Laboratory, Inc.

Analytical Report  
Lab Order 1208371  
Date Reported: 8/15/2012

CLIENT: Animas Environmental Services

Client Sample ID: SC-2

Project: Enterprise Lateral 2B-24 Excavation #1

Collection Date: 8/6/2012 10:51:00 AM

Lab ID: 1208371-002

Matrix: SOIL

Received Date: 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/10/2012 11:45:25 AM
Surr: DNOP	106	77.6-140		%REC	1	8/10/2012 11:45:25 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/10/2012 11:37:38 PM
Surr: BFB	99.1	84-116		%REC	1	8/10/2012 11:37:38 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.048		mg/Kg	1	8/10/2012 11:37:38 PM
Toluene	ND	0.048		mg/Kg	1	8/10/2012 11:37:38 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/10/2012 11:37:38 PM
Xylenes, Total	ND	0.096		mg/Kg	1	8/10/2012 11:37:38 PM
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	8/10/2012 11:37:38 PM

**Qualifiers:**   \*/X   Value exceeds Maximum Contaminant Level.  
                  E    Value above quantitation range  
                  J    Analyte detected below quantitation limits  
                  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  
                  RL   Reporting Detection Limit  
                  U    Samples with CalcVal < MDL

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1208371

Date Reported: 8/15/2012

**CLIENT:** Animas Environmental Services

**Client Sample ID:** SC-3

**Project:** Enterprise Lateral 2B-24 Excavation #1

**Collection Date:** 8/6/2012 10:52:00 AM

**Lab ID:** 1208371-003

**Matrix:** SOIL

**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/10/2012 12:37:07 PM
Surr: DNOP	103	77.6-140		%REC	1	8/10/2012 12:37:07 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/11/2012 12:06:24 AM
Surr: BFB	98.8	84-116		%REC	1	8/11/2012 12:06:24 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.049		mg/Kg	1	8/11/2012 12:06:24 AM
Toluene	ND	0.049		mg/Kg	1	8/11/2012 12:06:24 AM
Ethylbenzene	ND	0.049		mg/Kg	1	8/11/2012 12:06:24 AM
Xylenes, Total	ND	0.099		mg/Kg	1	8/11/2012 12:06:24 AM
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	8/11/2012 12:06:24 AM

**Qualifiers:** \* / X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit  
U Samples with CalcVal < MDL

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1208371

Date Reported: 8/15/2012

**CLIENT:** Animas Environmental Services

**Client Sample ID:** SC-4

**Project:** Enterprise Lateral 2B-24 Excavation #1

**Collection Date:** 8/6/2012 10:53:00 AM

**Lab ID:** 1208371-004

**Matrix:** SOIL

**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/10/2012 9:29:44 AM
Surr: DNOP	96.9	77.6-140		%REC	1	8/10/2012 9:29:44 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/11/2012 12:35:04 AM
Surr: BFB	97.6	84-116		%REC	1	8/11/2012 12:35:04 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.048		mg/Kg	1	8/11/2012 12:35:04 AM
Toluene	ND	0.048		mg/Kg	1	8/11/2012 12:35:04 AM
Ethylbenzene	ND	0.048		mg/Kg	1	8/11/2012 12:35:04 AM
Xylenes, Total	ND	0.096		mg/Kg	1	8/11/2012 12:35:04 AM
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	8/11/2012 12:35:04 AM

**Qualifiers:** \* / X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit  
U Samples with CalcVal < MDL



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1208371

Date Reported: 8/15/2012

**CLIENT:** Animas Environmental Services

**Client Sample ID:** SC-5

**Project:** Enterprise Lateral 2B-24 Excavation #1

**Collection Date:** 8/6/2012 10:54:00 AM

**Lab ID:** 1208371-005

**Matrix:** SOIL

**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/10/2012 10:41:22 AM
Surr: DNOP	99.3	77.6-140		%REC	1	8/10/2012 10:41:22 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/11/2012 1:03:44 AM
Surr: BFB	98.5	84-116		%REC	1	8/11/2012 1:03:44 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.047		mg/Kg	1	8/11/2012 1:03:44 AM
Toluene	ND	0.047		mg/Kg	1	8/11/2012 1:03:44 AM
Ethylbenzene	ND	0.047		mg/Kg	1	8/11/2012 1:03:44 AM
Xylenes, Total	ND	0.094		mg/Kg	1	8/11/2012 1:03:44 AM
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	8/11/2012 1:03:44 AM

**Qualifiers:** \*/X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit  
U Samples with CalcVal < MDL

## Analytical Report

Lab Order 1208371

Date Reported: 8/15/2012

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services

Client Sample ID: SC-6

Project: Enterprise Lateral 2B-24 Excavation #1

Collection Date: 8/6/2012 10:55:00 AM

Lab ID: 1208371-006

Matrix: SOIL

Received Date: 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/10/2012 11:54:47 AM
Surr: DNOP	99.2	77.6-140		%REC	1	8/10/2012 11:54:47 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/11/2012 1:32:22 AM
Surr: BFB	99.5	84-116		%REC	1	8/11/2012 1:32:22 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.048		mg/Kg	1	8/11/2012 1:32:22 AM
Toluene	ND	0.048		mg/Kg	1	8/11/2012 1:32:22 AM
Ethylbenzene	ND	0.048		mg/Kg	1	8/11/2012 1:32:22 AM
Xylenes, Total	ND	0.097		mg/Kg	1	8/11/2012 1:32:22 AM
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	8/11/2012 1:32:22 AM

**Qualifiers:** \*/X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit  
U Samples with CalcVal < MDL

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208371

Date Reported: 8/15/2012

**CLIENT:** Animas Environmental Services

**Client Sample ID:** SC-7

**Project:** Enterprise Lateral 2B-24 Excavation #1

**Collection Date:** 8/6/2012 10:57:00 AM

**Lab ID:** 1208371-007

**Matrix:** SOIL

**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/10/2012 12:17:02 PM
Surr: DNOP	101	77.6-140		%REC	1	8/10/2012 12:17:02 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/11/2012 2:01:06 AM
Surr: BFB	99.7	84-116		%REC	1	8/11/2012 2:01:06 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.047		mg/Kg	1	8/11/2012 2:01:06 AM
Toluene	ND	0.047		mg/Kg	1	8/11/2012 2:01:06 AM
Ethylbenzene	ND	0.047		mg/Kg	1	8/11/2012 2:01:06 AM
Xylenes, Total	ND	0.094		mg/Kg	1	8/11/2012 2:01:06 AM
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	8/11/2012 2:01:06 AM

**Qualifiers:** \*/X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit  
U Samples with CalcVal < MDL



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1208371

Date Reported: 8/15/2012

**CLIENT:** Animas Environmental Services

**Client Sample ID:** SC-8

**Project:** Enterprise Lateral 2B-24 Excavation #1

**Collection Date:** 8/6/2012 11:00:00 AM

**Lab ID:** 1208371-008

**Matrix:** SOIL

**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/10/2012 12:39:12 PM
Surr: DNOP	103	77.6-140		%REC	1	8/10/2012 12:39:12 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/11/2012 2:29:52 AM
Surr: BFB	98.3	84-116		%REC	1	8/11/2012 2:29:52 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.050		mg/Kg	1	8/11/2012 2:29:52 AM
Toluene	ND	0.050		mg/Kg	1	8/11/2012 2:29:52 AM
Ethylbenzene	ND	0.050		mg/Kg	1	8/11/2012 2:29:52 AM
Xylenes, Total	ND	0.10		mg/Kg	1	8/11/2012 2:29:52 AM
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	8/11/2012 2:29:52 AM

**Qualifiers:** \*/X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit  
U Samples with CalcVal < MDL

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1208371

Date Reported: 8/15/2012

**CLIENT:** Animas Environmental Services

**Client Sample ID:** SC-9

**Project:** Enterprise Lateral 2B-24 Excavation #1

**Collection Date:** 8/6/2012 11:55:00 AM

**Lab ID:** 1208371-009

**Matrix:** SOIL

**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	120	100		mg/Kg	10	8/12/2012 4:20:52 AM
Surr: DNOP	0	77.6-140	S	%REC	10	8/12/2012 4:20:52 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/14/2012 12:03:31 PM
Surr: BFB	96.1	84-116		%REC	1	8/14/2012 12:03:31 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.049		mg/Kg	1	8/14/2012 12:03:31 PM
Toluene	ND	0.049		mg/Kg	1	8/14/2012 12:03:31 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/14/2012 12:03:31 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/14/2012 12:03:31 PM
Surr: 4-Bromofluorobenzene	99.5	80-120		%REC	1	8/14/2012 12:03:31 PM

**Qualifiers:** \*X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit  
U Samples with CalcVal < MDL

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1208371

Date Reported: 8/15/2012

CLIENT: Animas Environmental Services

Client Sample ID: SC-10

Project: Enterprise Lateral 2B-24 Excavation #1

Collection Date: 8/6/2012 11:56:00 AM

Lab ID: 1208371-010

Matrix: SOIL

Received Date: 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	49		mg/Kg	5	8/13/2012 11:15:27 AM
Surr: DNOP	0	77.6-140	S	%REC	5	8/13/2012 11:15:27 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/14/2012 12:32:18 PM
Surr: BFB	96.5	84-116		%REC	1	8/14/2012 12:32:18 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	8/14/2012 12:32:18 PM
Toluene	ND	0.048		mg/Kg	1	8/14/2012 12:32:18 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/14/2012 12:32:18 PM
Xylenes, Total	ND	0.095		mg/Kg	1	8/14/2012 12:32:18 PM
Surr: 4-Bromofluorobenzene	99.0	80-120		%REC	1	8/14/2012 12:32:18 PM

**Qualifiers:** \*/X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit  
U Samples with CalcVal < MDL



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1208371

15-Aug-12

Client: Animas Environmental Services

Project: Enterprise Lateral 2B-24 Excavation #1

Sample ID	MB-3256	SampType:	MBLK	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	PBS	Batch ID:	3256	RunNo:	4749					
Prep Date:	8/9/2012	Analysis Date:	8/9/2012	SeqNo:	133973	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		94.3	77.6	140			

Sample ID	LCS-3256	SampType:	LCS	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	3256	RunNo:	4749					
Prep Date:	8/9/2012	Analysis Date:	8/9/2012	SeqNo:	133997	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	37	10	50.00	0	73.9	52.6	130			
Surr: DNOP	3.9		5.000		78.2	77.6	140			

Sample ID	MB-3262	SampType:	MBLK	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	PBS	Batch ID:	3262	RunNo:	4775					
Prep Date:	8/9/2012	Analysis Date:	8/10/2012	SeqNo:	134715	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	10		10.00		100	77.6	140			

Sample ID	LCS-3262	SampType:	LCS	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	3262	RunNo:	4775					
Prep Date:	8/9/2012	Analysis Date:	8/10/2012	SeqNo:	134717	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	10	50.00	0	79.5	52.6	130			
Surr: DNOP	5.1		5.000		102	77.6	140			

### Qualifiers:

\* / X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD 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  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1208371

15-Aug-12

Client: Animas Environmental Services

Project: Enterprise Lateral 2B-24 Excavation #1

Sample ID	MB-3261	SampType:	MBLK	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	PBS	Batch ID:	3261	RunNo:	4807					
Prep Date:	8/9/2012	Analysis Date:	8/10/2012	SeqNo:	135513	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	990		1000		98.8	84	116			

Sample ID	LCS-3261	SampType:	LCS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	LCSS	Batch ID:	3261	RunNo:	4807					
Prep Date:	8/9/2012	Analysis Date:	8/10/2012	SeqNo:	135517	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	88.1	85	115			
Surr: BFB	1000		1000		102	84	116			

### Qualifiers:

\* / X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD 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  
RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208371

15-Aug-12

Client: Animas Environmental Services

Project: Enterprise Lateral 2B-24 Excavation #1

Sample ID	MB-3261	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	3261	RunNo:	4807					
Prep Date:	8/9/2012	Analysis Date:	8/10/2012	SeqNo:	135539	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		105	80	120			

Sample ID	LCS-3261	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	3261	RunNo:	4807					
Prep Date:	8/9/2012	Analysis Date:	8/10/2012	SeqNo:	135543	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	92.8	76.3	117			
Toluene	0.94	0.050	1.000	0	94.4	80	120			
Ethylbenzene	0.96	0.050	1.000	0	96.4	77	116			
Xylenes, Total	2.9	0.10	3.000	0	97.3	76.7	117			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

## Qualifiers:

\* / X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD 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  
RL Reporting Detection Limit





Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87105  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: Animas Environmental

Work Order Number: 1208371

Received by/date:

Logged By: Lindsay Mangin

8/8/2012 9:55:00 AM

Completed By: Lindsay Mangin

8/8/2012 3:46:16 PM

Reviewed By:

### Chain of Custody

1. Were seals intact?
2. Is Chain of Custody complete?
3. How was the sample delivered?

Yes No Not Present ☒

Yes ☒ No Not Present

Courier

### Log In

4. Coolers are present? (see 19. for cooler specific information)

Yes ☒ No NA

5. Was an attempt made to cool the samples?

Yes ☒ No NA

6. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$

Yes ☒ No NA

7. Sample(s) in proper container(s)?

Yes ☒ No

8. Sufficient sample volume for indicated test(s)?

Yes ☒ No

9. Are samples (except VOA and ONG) properly preserved?

Yes ☒ No

10. Was preservative added to bottles?

Yes No ☒ NA

11. VOA vials have zero headspace?

Yes No No VOA Vials ☒

12. Were any sample containers received broken?

Yes No ☒

13. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody)

Yes ☒ No

# of preserved  
bottles checked  
for pH:

14. Are matrices correctly identified on Chain of Custody?

Yes ☒ No

(<2 or >12 unless noted)

15. Is it clear what analyses were requested?

Yes ☒ No

Adjusted?

16. Were all holding times able to be met?  
(If no, notify customer for authorization.)

Yes ☒ No

Checked by:

### Special Handling (if applicable)

17. 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:

18. Additional remarks:

### 19. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.0	Good	Yes			

# Chain-of-Custody Record

Client: Animas Environmental Services

Mailing Address: 624 E. Concho

Phone #: 505-564-2281

email or Fax#:

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP

☐ Other

☐ EDD (Type)

Turn-Around Time:

☒ Standard ☐ Rush

Project Name: Enterprise lateral

Project #: 2B-24 Excavation #1

Project #:

Project Manager:

Tami Ross

Sampler: Tom Long

On-site: Yes

Container Type and #

Preservative Type

HEALING

BTEX + MTBE + TMB's (8021)  
BTEX + MTBE + TPH (Gas only)  
TPH Method 8015B (Gas/Diesel)  
TPH (Method 418.1)  
EDB (Method 504.1)  
8310 (PNA or PAH)  
RCRA 8 Metals  
Anions (F, Cl, NO<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)



**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	Remarks
3/6/12	1050	50:1	SC-1	4ozes	-	
	1051		SC-2		-001	X
	1052		SC-3		-002	X
	1053		SC-4		-003	X
	1054		SC-5		-004	X
	1055		SC-6		-005	X
	1056		SC-7		-006	X
	1100		SC-8		-007	X
	1155		SC-9		-008	X
	1156		SC-10		-009	X
					-010	X

Date: 3/12/12 Time: 1737 Relinquished by: Mike Tom

Received by: Mike Tom

Date: 8/12/12 Time: 1737

Remarks:

Date: 3/12/12 Time: 1758 Relinquished by: Mike Tom

Received by: Mike Tom

Date: 8/12/12 Time: 1737

Remarks:

Bill to Enterprise

Air Bubbles (Y or N)





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

August 13, 2012

Tami Ross  
Animas Environmental Services  
624 East Comanche  
Farmington, NM 87401  
TEL: (505) 793-2072  
FAX

RE: Enterprise Lateral 2B-24 Release #3

OrderNo.: 1208369

Dear Tami Ross:

Hall Environmental Analysis Laboratory received 2 sample(s) on 8/8/2012 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. 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. 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.

Sincerely,

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1208369

Date Reported: 8/13/2012

**CLIENT:** Animas Environmental Services

**Client Sample ID:** SC-1

**Project:** Enterprise Lateral 2B-24 Release #3

**Collection Date:** 8/6/2012 3:16:00 PM

**Lab ID:** 1208369-001

**Matrix:** SOIL

**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/10/2012 8:48:09 AM
Surr: DNOP	107	77.6-140		%REC	1	8/10/2012 8:48:09 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/10/2012 4:26:22 PM
Surr: BFB	103	84-116		%REC	1	8/10/2012 4:26:22 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.047		mg/Kg	1	8/10/2012 4:26:22 PM
Toluene	ND	0.047		mg/Kg	1	8/10/2012 4:26:22 PM
Ethylbenzene	ND	0.047		mg/Kg	1	8/10/2012 4:26:22 PM
Xylenes, Total	ND	0.094		mg/Kg	1	8/10/2012 4:26:22 PM
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	8/10/2012 4:26:22 PM

**Qualifiers:**

- \* / X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 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
- RL Reporting Detection Limit
- U Samples with CalcVal < MDL

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 1208369

Date Reported: 8/13/2012

**CLIENT:** Animas Environmental Services**Client Sample ID:** SC-2**Project:** Enterprise Lateral 2B-24 Release #3**Collection Date:** 8/6/2012 3:18:00 PM**Lab ID:** 1208369-002**Matrix:** SOIL**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/10/2012 9:13:28 AM
Surr: DNOP	109	77.6-140		%REC	1	8/10/2012 9:13:28 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/10/2012 4:55:05 PM
Surr: BFB	101	84-116		%REC	1	8/10/2012 4:55:05 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.047		mg/Kg	1	8/10/2012 4:55:05 PM
Toluene	ND	0.047		mg/Kg	1	8/10/2012 4:55:05 PM
Ethylbenzene	ND	0.047		mg/Kg	1	8/10/2012 4:55:05 PM
Xylenes, Total	ND	0.094		mg/Kg	1	8/10/2012 4:55:05 PM
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	8/10/2012 4:55:05 PM

**Qualifiers:** \*/X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit  
U Samples with CalcVal < MDL

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1208369

13-Aug-12

**Client:** Animas Environmental Services  
**Project:** Enterprise Lateral 2B-24 Release #3

Sample ID <b>MB-3256</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015B: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>3256</b>	RunNo: <b>4749</b>								
Prep Date: <b>8/9/2012</b>	Analysis Date: <b>8/9/2012</b>	SeqNo: <b>133973</b>		Units: <b>mg/Kg</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	9.4		10.00		94.3	77.6	140			

Sample ID <b>LCS-3256</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015B: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>3256</b>	RunNo: <b>4749</b>								
Prep Date: <b>8/9/2012</b>	Analysis Date: <b>8/9/2012</b>	SeqNo: <b>133997</b>		Units: <b>mg/Kg</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	37	10	50.00	0	73.9	52.6	130			
Surr: DNOP	3.9		5.000		78.2	77.6	140			

### Qualifiers:

\* / X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD 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  
RL Reporting Detection Limit



# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208369

13-Aug-12

Client: Animas Environmental Services  
Project: Enterprise Lateral 2B-24 Release #3

Sample ID	MB-3261	SampType:	MBLK	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	PBS	Batch ID:	3261	RunNo:	4807					
Prep Date:	8/9/2012	Analysis Date:	8/10/2012	SeqNo:	135513	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	990		1000		98.8	84	116			

Sample ID	LCS-3261	SampType:	LCS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	LCSS	Batch ID:	3261	RunNo:	4807					
Prep Date:	8/9/2012	Analysis Date:	8/10/2012	SeqNo:	135517	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	88.1	85	115			
Surr: BFB	1000		1000		102	84	116			

## Qualifiers:

\*X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD 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  
RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208369

13-Aug-12

Client: Animas Environmental Services

Project: Enterprise Lateral 2B-24 Release #3

Sample ID	<b>MB-3261</b>		SampType:	<b>MBLK</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>PBS</b>		Batch ID:	<b>3261</b>		RunNo:	<b>4807</b>			
Prep Date:	<b>8/9/2012</b>		Analysis Date:	<b>8/10/2012</b>		SeqNo:	<b>135539</b>		Units: <b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		105	80	120			

Sample ID	<b>LCS-3261</b>		SampType:	<b>LCS</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>LCSS</b>		Batch ID:	<b>3261</b>		RunNo:	<b>4807</b>			
Prep Date:	<b>8/9/2012</b>		Analysis Date:	<b>8/10/2012</b>		SeqNo:	<b>135543</b>		Units: <b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.050	1.000	0	92.8	76.3	117			
Toluene	0.94	0.050	1.000	0	94.4	80	120			
Ethylbenzene	0.96	0.050	1.000	0	96.4	77	116			
Xylenes, Total	2.9	0.10	3.000	0	97.3	76.7	117			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

## Qualifiers:

\* / X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD 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  
RL Reporting Detection Limit



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87105  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

## Sample Log-In Check List

Client Name: Animas Environmental

Work Order Number: 1208369

Received by/date:

Logged By: Lindsay Mangin

08/08/12  
8/8/2012 9:55:00 AM

Completed By: Lindsay Mangin

8/8/2012 3:36:08 PM

Reviewed By: mg

08/09/12

### Chain of Custody

1. Were seals intact?
2. Is Chain of Custody complete?
3. How was the sample delivered?

Yes ☐ No ☐ Not Present ☒

Yes ☒ No ☐ Not Present ☐

Courier

### Log In

4. Coolers are present? (see 19. for cooler specific information)
5. Was an attempt made to cool the samples?
6. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$
7. Sample(s) in proper container(s)?
8. Sufficient sample volume for indicated test(s)?
9. Are samples (except VOA and ONG) properly preserved?
10. Was preservative added to bottles?

Yes ☒ No ☐ NA

Yes ☒ No ☐ NA

Yes ☒ No ☐ NA

Yes ☒ No ☐

Yes ☒ No ☐

Yes ☒ No ☐

Yes ☐ No ☒ NA

11. VOA vials have zero headspace?
12. Were any sample containers received broken?
13. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody)
14. Are matrices correctly identified on Chain of Custody?
15. Is it clear what analyses were requested?
16. Were all holding times able to be met?  
(If no, notify customer for authorization.)

Yes ☐ No ☐ No VOA Vials ☒

Yes ☐ No ☒

Yes ☒ No ☐

# of preserved  
bottles checked  
for pH:

Yes ☒ No ☐

(<2 or >12 unless noted)

Yes ☒ No ☐

Adjusted?

Yes ☒ No ☐

Checked by:

### Special Handling (if applicable)

17. 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:

18. Additional remarks:

### 19. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.0	Good	Yes			







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

August 13, 2012

Tami Ross  
Animas Environmental Services  
624 East Comanche  
Farmington, NM 87401  
TEL: (505) 793-2072  
FAX

RE: Enterprise Lateral 2B-24 Excavation #2

OrderNo.: 1208372

Dear Tami Ross:

Hall Environmental Analysis Laboratory received 14 sample(s) on 8/8/2012 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. 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. 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.

Sincerely,

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Analytical Report**

Lab Order 1208372

Date Reported: 8/13/2012

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Animas Environmental Services**Client Sample ID:** SC-1**Project:** Enterprise Lateral 2B-24 Excavation #2**Collection Date:** 8/6/2012 1:02:00 PM**Lab ID:** 1208372-001**Matrix:** SOIL**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/10/2012 1:01:41 PM
Surr: DNOP	103	77.6-140		%REC	1	8/10/2012 1:01:41 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/10/2012 2:11:12 PM
Surr: BFB	96.0	84-116		%REC	1	8/10/2012 2:11:12 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.049		mg/Kg	1	8/10/2012 2:11:12 PM
Toluene	ND	0.049		mg/Kg	1	8/10/2012 2:11:12 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/10/2012 2:11:12 PM
Xylenes, Total	ND	0.099		mg/Kg	1	8/10/2012 2:11:12 PM
Surr: 4-Bromofluorobenzene	101	80-120		%REC	1	8/10/2012 2:11:12 PM

**Qualifiers:**   \*/X   Value exceeds Maximum Contaminant Level.  
                  E    Value above quantitation range  
                  J    Analyte detected below quantitation limits  
                  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  
                  RL   Reporting Detection Limit  
                  U    Samples with CalcVal < MDL



# Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services

Client Sample ID: SC-2

Project: Enterprise Lateral 2B-24 Excavation #2

Collection Date: 8/6/2012 1:03:00 PM

Lab ID: 1208372-002

Matrix: SOIL

Received Date: 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	170	50		mg/Kg	5	8/13/2012 12:21:26 PM
Surr: DNOP	0	77.6-140	S	%REC	5	8/13/2012 12:21:26 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/10/2012 7:13:33 PM
Surr: BFB	105	84-116		%REC	1	8/10/2012 7:13:33 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.046		mg/Kg	1	8/10/2012 7:13:33 PM
Toluene	ND	0.046		mg/Kg	1	8/10/2012 7:13:33 PM
Ethylbenzene	ND	0.046		mg/Kg	1	8/10/2012 7:13:33 PM
Xylenes, Total	ND	0.092		mg/Kg	1	8/10/2012 7:13:33 PM
Surr: 4-Bromofluorobenzene	111	80-120		%REC	1	8/10/2012 7:13:33 PM

**Qualifiers:**

- \* / X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 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
- RL Reporting Detection Limit
- U Samples with CalcVal < MDL

**Analytical Report**

Lab Order 1208372

Date Reported: 8/13/2012

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Animas Environmental Services**Client Sample ID:** SC-3**Project:** Enterprise Lateral 2B-24 Excavation #2**Collection Date:** 8/6/2012 1:04:00 PM**Lab ID:** 1208372-003**Matrix:** SOIL**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/10/2012 1:26:03 PM
Surr: DNOP	103	77.6-140		%REC	1	8/10/2012 1:26:03 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/10/2012 3:42:02 PM
Surr: BFB	82.2	84-116	S	%REC	1	8/10/2012 3:42:02 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.049		mg/Kg	1	8/10/2012 3:42:02 PM
Toluene	ND	0.049		mg/Kg	1	8/10/2012 3:42:02 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/10/2012 3:42:02 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/10/2012 3:42:02 PM
Surr: 4-Bromofluorobenzene	84.4	80-120		%REC	1	8/10/2012 3:42:02 PM

**Qualifiers:** \* / X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit  
U Samples with CalcVal < MDL

**Analytical Report**

Lab Order 1208372

Date Reported: 8/13/2012

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Animas Environmental Services**Client Sample ID:** SC-4**Project:** Enterprise Lateral 2B-24 Excavation #2**Collection Date:** 8/6/2012 1:05:00 PM**Lab ID:** 1208372-004**Matrix:** SOIL**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/10/2012 1:48:25 PM
Surr: DNOP	103	77.6-140		%REC	1	8/10/2012 1:48:25 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/10/2012 4:12:09 PM
Surr: BFB	98.9	84-116		%REC	1	8/10/2012 4:12:09 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.049		mg/Kg	1	8/10/2012 4:12:09 PM
Toluene	ND	0.049		mg/Kg	1	8/10/2012 4:12:09 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/10/2012 4:12:09 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/10/2012 4:12:09 PM
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	8/10/2012 4:12:09 PM

**Qualifiers:**   \*/X   Value exceeds Maximum Contaminant Level.  
                  E    Value above quantitation range  
                  J    Analyte detected below quantitation limits  
                  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  
                  RL   Reporting Detection Limit  
                  U    Samples with CalcVal < MDL



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1208372

Date Reported: 8/13/2012

**CLIENT:** Animas Environmental Services

**Client Sample ID:** SC-5

**Project:** Enterprise Lateral 2B-24 Excavation #2

**Collection Date:** 8/6/2012 1:06:00 PM

**Lab ID:** 1208372-005

**Matrix:** SOIL

**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	12	10		mg/Kg	1	8/10/2012 2:10:52 PM
Surr: DNOP	109	77.6-140		%REC	1	8/10/2012 2:10:52 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/10/2012 4:42:23 PM
Surr: BFB	103	84-116		%REC	1	8/10/2012 4:42:23 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.046		mg/Kg	1	8/10/2012 4:42:23 PM
Toluene	ND	0.046		mg/Kg	1	8/10/2012 4:42:23 PM
Ethylbenzene	ND	0.046		mg/Kg	1	8/10/2012 4:42:23 PM
Xylenes, Total	ND	0.092		mg/Kg	1	8/10/2012 4:42:23 PM
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	8/10/2012 4:42:23 PM

**Qualifiers:** \*/X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit  
U Samples with CalcVal < MDL

**Analytical Report**

Lab Order 1208372

Date Reported: 8/13/2012

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Animas Environmental Services**Client Sample ID:** SC-6**Project:** Enterprise Lateral 2B-24 Excavation #2**Collection Date:** 8/6/2012 1:07:00 PM**Lab ID:** 1208372-006**Matrix:** SOIL**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	35	10		mg/Kg	1	8/13/2012 10:09:45 AM
Surr: DNOP	108	77.6-140		%REC	1	8/13/2012 10:09:45 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/10/2012 5:12:35 PM
Surr: BFB	92.0	84-116		%REC	1	8/10/2012 5:12:35 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.047		mg/Kg	1	8/10/2012 5:12:35 PM
Toluene	ND	0.047		mg/Kg	1	8/10/2012 5:12:35 PM
Ethylbenzene	ND	0.047		mg/Kg	1	8/10/2012 5:12:35 PM
Xylenes, Total	ND	0.094		mg/Kg	1	8/10/2012 5:12:35 PM
Surr: 4-Bromofluorobenzene	93.9	80-120		%REC	1	8/10/2012 5:12:35 PM

**Qualifiers:**   \*/X   Value exceeds Maximum Contaminant Level.  
                  E    Value above quantitation range  
                  J    Analyte detected below quantitation limits  
                  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  
                  RL   Reporting Detection Limit  
                  U    Samples with CalcVal < MDL

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1208372

Date Reported: 8/13/2012

**CLIENT:** Animas Environmental Services

**Client Sample ID:** SC-7

**Project:** Enterprise Lateral 2B-24 Excavation #2

**Collection Date:** 8/6/2012 1:08:00 PM

**Lab ID:** 1208372-007

**Matrix:** SOIL

**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/10/2012 2:33:10 PM
Surr: DNOP	102	77.6-140		%REC	1	8/10/2012 2:33:10 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/10/2012 5:42:44 PM
Surr: BFB	82.2	84-116	S	%REC	1	8/10/2012 5:42:44 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.050		mg/Kg	1	8/10/2012 5:42:44 PM
Toluene	ND	0.050		mg/Kg	1	8/10/2012 5:42:44 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/10/2012 5:42:44 PM
Xylenes, Total	ND	0.099		mg/Kg	1	8/10/2012 5:42:44 PM
Surr: 4-Bromofluorobenzene	86.2	80-120		%REC	1	8/10/2012 5:42:44 PM

**Qualifiers:**

- \* / X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 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
- RL Reporting Detection Limit
- U Samples with CalcVal < MDL



## Analytical Report

Lab Order 1208372

Date Reported: 8/13/2012

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services

Client Sample ID: SC-8

Project: Enterprise Lateral 2B-24 Excavation #2

Collection Date: 8/6/2012 1:09:00 PM

Lab ID: 1208372-008

Matrix: SOIL

Received Date: 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/10/2012 3:18:03 PM
Surr: DNOP	101	77.6-140		%REC	1	8/10/2012 3:18:03 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/10/2012 6:13:12 PM
Surr: BFB	82.2	84-116	S	%REC	1	8/10/2012 6:13:12 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.048		mg/Kg	1	8/10/2012 6:13:12 PM
Toluene	ND	0.048		mg/Kg	1	8/10/2012 6:13:12 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/10/2012 6:13:12 PM
Xylenes, Total	ND	0.096		mg/Kg	1	8/10/2012 6:13:12 PM
Surr: 4-Bromofluorobenzene	86.6	80-120		%REC	1	8/10/2012 6:13:12 PM

**Qualifiers:** \* / X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit  
U Samples with CalcVal < MDL

**Analytical Report**

Lab Order 1208372

Date Reported: 8/13/2012

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Animas Environmental Services**Client Sample ID:** SC-9**Project:** Enterprise Lateral 2B-24 Excavation #2**Collection Date:** 8/6/2012 1:10:00 PM**Lab ID:** 1208372-009**Matrix:** SOIL**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/13/2012 8:20:44 AM
Surr: DNOP	96.5	77.6-140		%REC	1	8/13/2012 8:20:44 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/10/2012 6:43:15 PM
Surr: BFB	99.4	84-116		%REC	1	8/10/2012 6:43:15 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.046		mg/Kg	1	8/10/2012 6:43:15 PM
Toluene	ND	0.046		mg/Kg	1	8/10/2012 6:43:15 PM
Ethylbenzene	ND	0.046		mg/Kg	1	8/10/2012 6:43:15 PM
Xylenes, Total	ND	0.092		mg/Kg	1	8/10/2012 6:43:15 PM
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	8/10/2012 6:43:15 PM

**Qualifiers:**   \*/X   Value exceeds Maximum Contaminant Level.  
                  E    Value above quantitation range  
                  J    Analyte detected below quantitation limits  
                  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  
                  RL   Reporting Detection Limit  
                  U    Samples with CalcVal < MDL

## Analytical Report

Lab Order 1208372

Date Reported: 8/13/2012

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services

Client Sample ID: SC-10

Project: Enterprise Lateral 2B-24 Excavation #2

Collection Date: 8/6/2012 1:11:00 PM

Lab ID: 1208372-010

Matrix: SOIL

Received Date: 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/13/2012 8:42:27 AM
Surr: DNOP	96.5	77.6-140		%REC	1	8/13/2012 8:42:27 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/10/2012 11:15:10 PM
Surr: BFB	99.5	84-116		%REC	1	8/10/2012 11:15:10 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.049		mg/Kg	1	8/10/2012 11:15:10 PM
Toluene	ND	0.049		mg/Kg	1	8/10/2012 11:15:10 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/10/2012 11:15:10 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/10/2012 11:15:10 PM
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	8/10/2012 11:15:10 PM

**Qualifiers:** \*/X Value exceeds Maximum Contaminant Level.  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 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  
 RL Reporting Detection Limit  
 U Samples with CalcVal < MDL



## Analytical Report

Lab Order 1208372

Date Reported: 8/13/2012

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services

Client Sample ID: SC-11

Project: Enterprise Lateral 2B-24 Excavation #2

Collection Date: 8/6/2012 1:12:00 PM

Lab ID: 1208372-011

Matrix: SOIL

Received Date: 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/10/2012 3:40:39 PM
Surr: DNOP	103	77.6-140		%REC	1	8/10/2012 3:40:39 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/10/2012 11:45:24 PM
Surr: BFB	95.0	84-116		%REC	1	8/10/2012 11:45:24 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.047		mg/Kg	1	8/10/2012 11:45:24 PM
Toluene	ND	0.047		mg/Kg	1	8/10/2012 11:45:24 PM
Ethylbenzene	ND	0.047		mg/Kg	1	8/10/2012 11:45:24 PM
Xylenes, Total	ND	0.093		mg/Kg	1	8/10/2012 11:45:24 PM
Surr: 4-Bromofluorobenzene	99.9	80-120		%REC	1	8/10/2012 11:45:24 PM

**Qualifiers:** \*/X Value exceeds Maximum Contaminant Level.  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 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  
 RL Reporting Detection Limit  
 U Samples with CalcVal < MDL

# Analytical Report

Lab Order 1208372

Date Reported: 8/13/2012

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental Services

**Client Sample ID:** SC-12

**Project:** Enterprise Lateral 2B-24 Excavation #2

**Collection Date:** 8/6/2012 1:13:00 PM

**Lab ID:** 1208372-012

**Matrix:** SOIL

**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/10/2012 4:03:10 PM
Surr: DNOP	100	77.6-140		%REC	1	8/10/2012 4:03:10 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/11/2012 12:15:27 AM
Surr: BFB	100	84-116		%REC	1	8/11/2012 12:15:27 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.046		mg/Kg	1	8/11/2012 12:15:27 AM
Toluene	ND	0.046		mg/Kg	1	8/11/2012 12:15:27 AM
Ethylbenzene	ND	0.046		mg/Kg	1	8/11/2012 12:15:27 AM
Xylenes, Total	ND	0.093		mg/Kg	1	8/11/2012 12:15:27 AM
Surr: 4-Bromofluorobenzene	106	80-120		%REC	1	8/11/2012 12:15:27 AM

**Qualifiers:**

- \* / X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 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
- RL Reporting Detection Limit
- U Samples with CalcVal < MDL

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208372

Date Reported: 8/13/2012

**CLIENT:** Animas Environmental Services

**Client Sample ID:** SC-13

**Project:** Enterprise Lateral 2B-24 Excavation #2

**Collection Date:** 8/6/2012 1:14:00 PM

**Lab ID:** 1208372-013

**Matrix:** SOIL

**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/10/2012 4:25:43 PM
Surr: DNOP	98.5	77.6-140		%REC	1	8/10/2012 4:25:43 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/11/2012 12:45:31 AM
Surr: BFB	92.9	84-116		%REC	1	8/11/2012 12:45:31 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.049		mg/Kg	1	8/11/2012 12:45:31 AM
Toluene	ND	0.049		mg/Kg	1	8/11/2012 12:45:31 AM
Ethylbenzene	ND	0.049		mg/Kg	1	8/11/2012 12:45:31 AM
Xylenes, Total	ND	0.097		mg/Kg	1	8/11/2012 12:45:31 AM
Surr: 4-Bromofluorobenzene	97.6	80-120		%REC	1	8/11/2012 12:45:31 AM

**Qualifiers:** \*/X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit  
U Samples with CalcVal < MDL



**Analytical Report**

Lab Order 1208372

Date Reported: 8/13/2012

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Animas Environmental Services**Client Sample ID:** SC-14**Project:** Enterprise Lateral 2B-24 Excavation #2**Collection Date:** 8/6/2012 1:15:00 PM**Lab ID:** 1208372-014**Matrix:** SOIL**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/10/2012 4:48:13 PM
Surr: DNOP	105	77.6-140		%REC	1	8/10/2012 4:48:13 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/11/2012 1:15:32 AM
Surr: BFB	111	84-116		%REC	1	8/11/2012 1:15:32 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.049		mg/Kg	1	8/11/2012 1:15:32 AM
Toluene	ND	0.049		mg/Kg	1	8/11/2012 1:15:32 AM
Ethylbenzene	ND	0.049		mg/Kg	1	8/11/2012 1:15:32 AM
Xylenes, Total	ND	0.097		mg/Kg	1	8/11/2012 1:15:32 AM
Surr: 4-Bromofluorobenzene	116	80-120		%REC	1	8/11/2012 1:15:32 AM

**Qualifiers:**   \*/X   Value exceeds Maximum Contaminant Level.  
                  E    Value above quantitation range  
                  J    Analyte detected below quantitation limits  
                  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  
                  RL   Reporting Detection Limit  
                  U    Samples with CalcVal < MDL

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1208372

13-Aug-12

Client: Animas Environmental Services

Project: Enterprise Lateral 2B-24 Excavation #2

Sample ID	MB-3264	SampType:	MBLK	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	PBS	Batch ID:	3264	RunNo:	4775					
Prep Date:	8/9/2012	Analysis Date:	8/10/2012	SeqNo:	134569	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	9.7		10.00		96.9	77.6	140			

Sample ID	LCS-3264	SampType:	LCS	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	3264	RunNo:	4775					
Prep Date:	8/9/2012	Analysis Date:	8/10/2012	SeqNo:	134693	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	38	10	50.00	0	76.0	52.6	130			
Surr: DNOP	5.3		5.000		106	77.6	140			

Sample ID	MB-3262	SampType:	MBLK	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	PBS	Batch ID:	3262	RunNo:	4775					
Prep Date:	8/9/2012	Analysis Date:	8/10/2012	SeqNo:	134715	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	10		10.00		100	77.6	140			

Sample ID	LCS-3262	SampType:	LCS	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	3262	RunNo:	4775					
Prep Date:	8/9/2012	Analysis Date:	8/10/2012	SeqNo:	134717	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	10	50.00	0	79.5	52.6	130			
Surr: DNOP	5.1		5.000		102	77.6	140			

Sample ID	MB-3288	SampType:	MBLK	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	PBS	Batch ID:	3288	RunNo:	4810					
Prep Date:	8/13/2012	Analysis Date:	8/13/2012	SeqNo:	135920	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.7		10.00		97.5	77.6	140			

Sample ID	LCS-3288	SampType:	LCS	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	3288	RunNo:	4810					
Prep Date:	8/13/2012	Analysis Date:	8/13/2012	SeqNo:	135921	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.2		5.000		83.6	77.6	140			

### Qualifiers:

\* / X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD 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  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1208372

13-Aug-12

Client: Animas Environmental Services

Project: Enterprise Lateral 2B-24 Excavation #2

Sample ID	MB-3263	SampType:	MBLK	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	PBS	Batch ID:	3263	RunNo:	4788					
Prep Date:	8/9/2012	Analysis Date:	8/10/2012	SeqNo:	135570	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	830		1000		82.6	84	116			S

Sample ID	LCS-3263	SampType:	LCS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	LCSS	Batch ID:	3263	RunNo:	4788					
Prep Date:	8/9/2012	Analysis Date:	8/10/2012	SeqNo:	135574	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	88.4	85	115			
Surr: BFB	1000		1000		101	84	116			

### Qualifiers:

\* / X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD 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  
RL Reporting Detection Limit



# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208372

13-Aug-12

Client: Animas Environmental Services

Project: Enterprise Lateral 2B-24 Excavation #2

Sample ID	MB-3263		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	3263		RunNo:	4788			
Prep Date:	8/9/2012		Analysis Date:	8/10/2012		SeqNo:	135596		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	0.89		1.000		88.5	80	120			

Sample ID	LCS-3263		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	3263		RunNo:	4788			
Prep Date:	8/9/2012		Analysis Date:	8/10/2012		SeqNo:	135600		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.050	1.000	0	91.7	76.3	117			
Toluene	0.94	0.050	1.000	0	94.2	80	120			
Ethylbenzene	0.96	0.050	1.000	0	96.2	77	116			
Xylenes, Total	2.9	0.10	3.000	0	97.8	76.7	117			
Surr: 4-Bromofluorobenzene	0.99		1.000		98.8	80	120			

## Qualifiers:

\* / X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD 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  
RL Reporting Detection Limit



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87105  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: Animas Environmental

Work Order Number: 1208372

Received by/date: AG 08/08/12

Logged By: Lindsay Mangin

8/8/2012 9:55:00 AM

Completed By: Lindsay Mangin

8/8/2012 3:52:05 PM

Reviewed By: [Signature]

08/09/12

### Chain of Custody

1. Were seals intact? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

### Log In

4. Coolers are present? (see 19. for cooler specific information) Yes ☒ No ☐ NA ☐
5. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
6. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☒ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
10. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
11. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
12. Were any sample containers received broken? Yes ☐ No ☒
13. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐ # of preserved bottles checked for pH: \_\_\_\_\_
14. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐ ( $<2$  or  $>12$  unless noted)
15. Is it clear what analyses were requested? Yes ☒ No ☐ Adjusted? ☐
16. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐ Checked by: \_\_\_\_\_

### Special Handling (if applicable)

17. 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: \_\_\_\_\_

18. Additional remarks:

### 19. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.0	Good	Yes			

# Chain-of-Custody Record

Client: Armas Env. Services

Mailing Address: 624 E. Comanche  
Farmington NM

Phone #: 505-564-2281

email or Fax#:

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

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

☐ EDD (Type) \_\_\_\_\_

Turn-Around Time:  
☒ Standard ☐ Rush \_\_\_\_\_

Project Name: Enterprise Lateral  
2B-24 Excavation #2

Project #:

Project Manager: Tami Ross

Sampler: Thomas Long

On Ice ☐ Yes ☐ No

Sample Temperature: 20°C



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

### Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)			Air Bubbles (Y or N)
6-12	1302	Soil	SC-1	4oz Jar	ICE	-001	X	X												
	1303		SC-2			-002	X	X												
	1304		SC-3			-003	X	X												
	1305		SC-4			-004	X	X												
	1306		SC-5			-005	X	X												
	1307		SC-6			-006	X	X												
	1308		SC-7			-007	X	X												
	1309		SC-8			-008	X	X												
	1310		SC-9			-009	X	X												
	1311		SC-10			-010	X	X												
	1312		SC-11			-011	X	X												
	1313		SC-12			-012	X	X												

Date: 8/7/12	Time: 1737	Relinquished by: <u>[Signature]</u>	Received by: <u>[Signature]</u>	Date: 8/7/12	Time: 1737	Remarks: <u>Bill to Enterprise</u>
Date: 8/7/12	Time: 1758	Relinquished by: <u>[Signature]</u>	Received by: <u>[Signature]</u>	Date: 8/8/12	Time: 0955	





Animas Environmental Services, LLC

www.animasenvironmental.com

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

Durango, Colorado  
970-403-3274

August 21, 2012

Aaron Dailey  
Enterprise Products Company  
614 Reilly Avenue  
Farmington, New Mexico 87401

**RE: Release Assessment Report  
Lateral 2A-4 May 2012 Pipeline Release  
San Juan County, New Mexico**

RCVD AUG 30 '12  
OIL CONS. DIV.  
DIST. 3

Dear Mr. Dailey:

On May 3, 2012, Animas Environmental Services, LLC (AES) completed an assessment associated with a small release of natural gas and condensate from the Enterprise Products Company (Enterprise) 3.5-inch diameter Lateral 2A-4 pipeline. The release, which is located approximately 12 miles southeast of Bloomfield, San Juan County, New Mexico, resulted from a pipeline leak caused by corrosion.

---

## 1.0 Site Information

### 1.1 Location

Location - SW¼ SW¼, Section 13, T27N, R10W, San Juan County, New Mexico

Latitude/Longitude - N36.57064 and W107.85246, respectively

Surface Owner – Federal (Bureau of Land Management)

Figure 1. Topographic Site Location Map

Figure 2. Aerial Site Map

### 1.2 NMOCD Ranking

In accordance with the New Mexico Oil Conservation Division (NMOCD) *Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993), the release location was assigned a ranking score to establish release action levels. The ranking score was obtained in part by reviewing available records of nearby oil/gas wells using the NMOCD online database. A Replacement for C-144 form dated September 2004 for the Angel Peak 13M #1 well, located less than 200 feet east of the release area, reported the depth to groundwater as greater than 100 feet below ground surface (bgs). Additionally, the New Mexico Office of the State Engineer (NMOSE) database was reviewed for nearby water wells, and no registered water wells were reported to be located within 1,000 feet of the location.

Google Earth and the New Mexico Tech Petroleum Recovery Research Center online mapping tool (<http://ford.nmt.edu/react/project.html>) were accessed to aid in the identification of downgradient surface water. A tributary of the Armenta Canyon wash is located approximately 300 feet west of the release location. Based on this information, the release location was assessed a ranking score of 10.

### *1.3 Assessment and Mitigation*

On May 3, 2012, Enterprise contractors completed an excavation along the Lateral 2A-4 pipeline using hand tools and hydrovac excavation equipment. Upon inspection, Enterprise determined that the release resulted from a pipeline leak caused by corrosion, and it was immediately repaired.

On the same day, AES guided the excavation by collecting 24 discrete samples for field screening for volatile organic compounds (VOCs). The final excavation dimensions measured approximately 33 feet by 12 feet by 10 feet deep and extended west an additional 150 square feet. The western extent of the excavation measured approximately 16 feet by 8 feet by 3 feet deep. AES collected confirmation soil samples from the side walls and base of the excavation and downgradient in the adjacent ephemeral stream for field screening and laboratory analysis. Soil sample locations and excavation extents are shown on Figure 3.

Approximately 120 cubic yards (excavated) and 10 barrels (hydrovac) of hydrocarbon contaminated soil were transported to the Envirotech Landfarm, near Bloomfield, New Mexico, for disposal. Following the collection of confirmation samples, the excavation was backfilled with clean imported material. A photograph log and disposal document are attached.

---

## *2.0 Soil Sampling*

Prior to backfilling the excavation, AES collected 12 5-point composite samples (SC-1 through SC-12) for field screening and laboratory analysis. SC-1 through SC-3 and SC-6 through SC-12 were collected from the excavation base and sidewalls, and SC-4 and SC-5 were collected within the ephemeral wash adjacent to the release location.

### *2.1 Field Screening*

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

The samples collected for laboratory analysis (SC-1 through SC-12) 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 laboratory, Hall Environmental Analysis Laboratory (Hall), in Albuquerque, New Mexico. Samples were laboratory analyzed for:

- Benzene, toluene, ethylbenzene, and xylene (BTEX) per U.S. Environmental Protection Agency (USEPA) Method 8021B;
- Total petroleum hydrocarbons (TPH) for gasoline range organics (GRO) and diesel range organics (DRO) per USEPA Method 8015B.

## 2.3 Field Screening and Laboratory Analytical Results

Soil field screening readings showed that VOC concentrations ranged from 47 ppm in SC-6 to 117 ppm in SC-11. All field screening readings were below the NMOCD action level of 100 ppm, except for SC-11 with 117 ppm.

Laboratory analytical results for benzene and total BTEX concentrations in each soil sample were below laboratory detection limits. TPH concentrations ranged from 5.0 mg/kg GRO in SC-5 up to 111 mg/kg in SC-12. All samples were below the NMOCD action level of 1,000 mg/kg for TPH. Field screening and laboratory analytical results are included in Table 1 and on Figure 3. Laboratory analytical reports are attached.

Table 1. Field Screening and Laboratory Analytical Results  
Lateral 2A-4 May 2012 Pipeline Release

<i>Sample ID</i>	<i>Sample Date</i>	<i>Depth (ft)</i>	<i>VOCs OVM (ppm)</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>100</b>	<b>10</b>	<b>50</b>	<b>1,000*</b>	
SC-1	5/3/12	3	87	<0.048	<0.241	<4.8	<9.9
SC-2	5/3/12	1 to 3	69	<0.047	<0.236	<4.7	<10
SC-3	5/3/12	1 to 3	64	<0.048	<0.24	<4.8	<9.7
SC-4	5/3/12	0.75	58	<0.049	<0.244	5.8	<10
SC-5	5/3/12	0.75	67	<0.048	<0.24	5.0	<10
SC-6	5/3/12	1 to 8	47	<0.048	<0.24	<4.8	<9.8
SC-7	5/3/12	1 to 8	51	<0.047	<0.236	<4.7	<10
SC-8	5/3/12	10	48	<0.048	<0.241	<4.8	<9.8
SC-9	5/3/12	1 to 8	81	<0.048	<0.241	<4.8	<9.9
SC-10	5/3/12	1 to 8	51	<0.049	<0.246	<4.9	<9.9



Sample ID	Sample Date	Depth (ft)	VOCs OVM (ppm)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)
NMOCD Action Level			100	10	50	1,000*	
SC-11	5/3/12	1 to 10	117	<0.19	<0.95	<19	81
SC-12	5/3/12	1 to 10	89	<0.18	<0.91	22	89

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

### 3.0 Conclusions and Recommendations

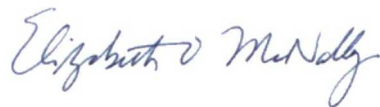
NMOCD action levels for releases are specified in NMOCD's *Guidelines for Leaks, Spills, and Releases* (August 1993), and the release was assigned a ranking score of 10. Based on field observations, field screening values, and laboratory analytical results for benzene, total BTEX, and TPH, petroleum hydrocarbon impacted soils have been removed to below NMOCD action levels. No further work is recommended.

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

Sincerely,



Tami C. Ross, CHMM  
Project Manager



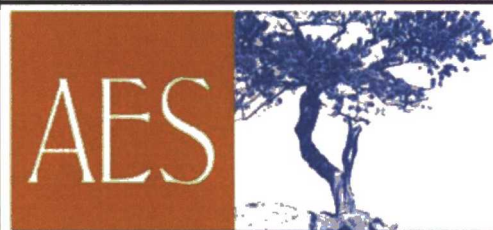
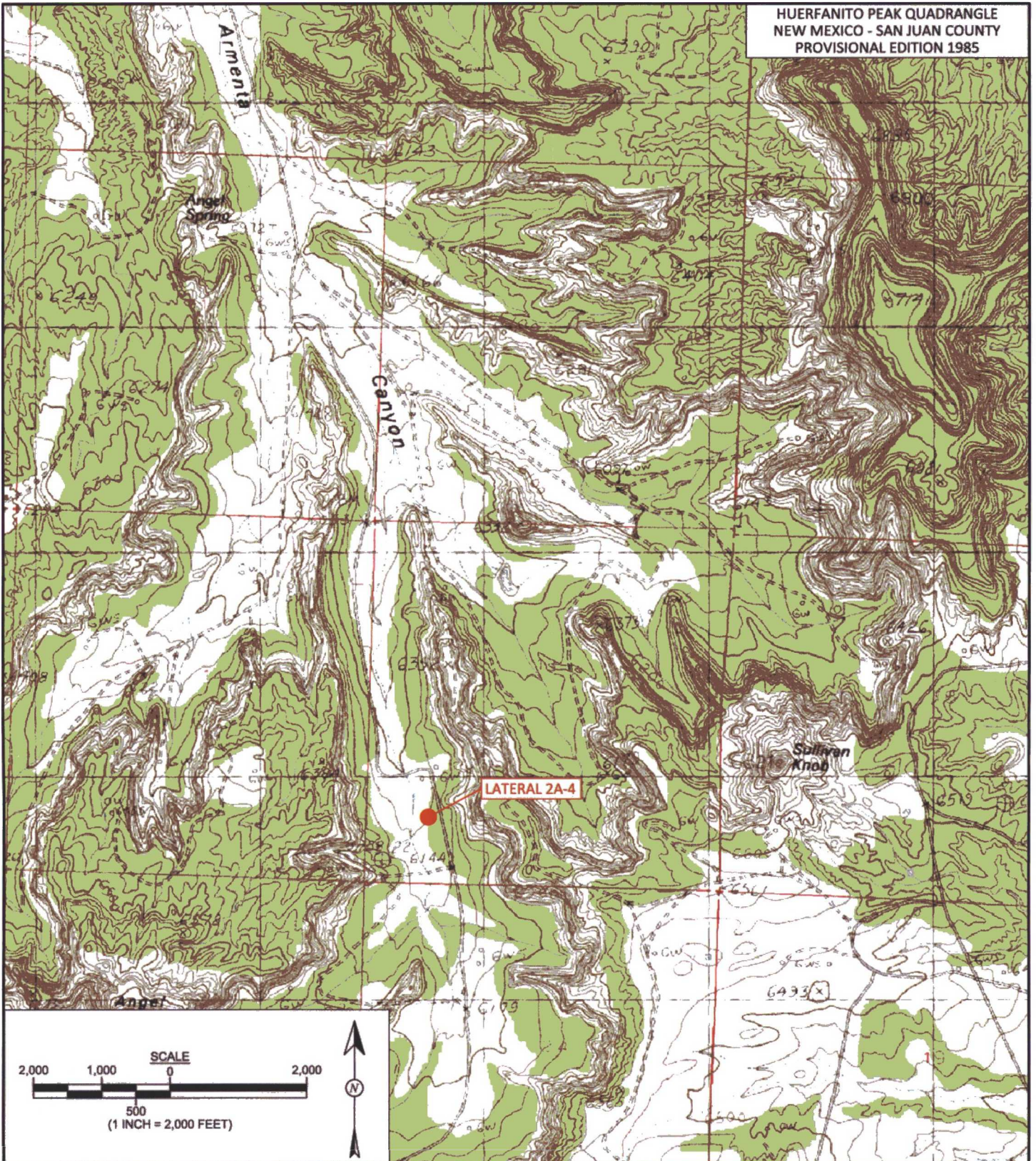
Elizabeth McNally, P.E.

#### Attachments:

- Figure 1. Topographic Site Location Map
- Figure 2. Aerial Site Map
- Figure 3. Soil Sample Locations and Results, May 2012
- Photograph Log
- Waste Disposal Document (Form C-138)
- Laboratory Analytical Reports (Hall 1205268)



HUERFANITO PEAK QUADRANGLE  
NEW MEXICO - SAN JUAN COUNTY  
PROVISIONAL EDITION 1985



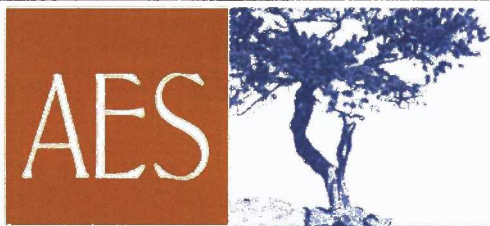
Animas Environmental Services, LLC

<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> May 14, 2012
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> May 14, 2012
<b>CHECKED BY:</b> T. Long	<b>DATE CHECKED:</b> August 7, 2012
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> August 7, 2012

## FIGURE 1

**TOPOGRAPHIC SITE LOCATION MAP**  
ENTERPRISE PRODUCTS COMPANY  
LATERAL 2A-4 MAY 2012 PIPELINE RELEASE  
SAN JUAN COUNTY, NEW MEXICO  
SW¼ SW¼, SECTION 13, T27N, R10W  
N36.57064, W107.85246





Animas Environmental Services, LLC

**DRAWN BY:**  
C. Lameman

**DATE DRAWN:**  
May 14, 2012

**REVISIONS BY:**  
C. Lameman

**DATE REVISED:**  
May 14, 2012

**CHECKED BY:**  
T. Ross

**DATE CHECKED:**  
August 7, 2012

**APPROVED BY:**  
E. McNally

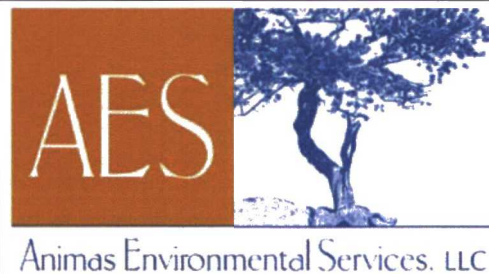
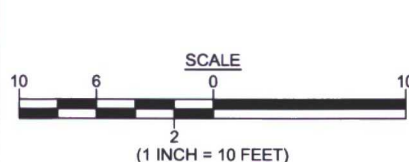
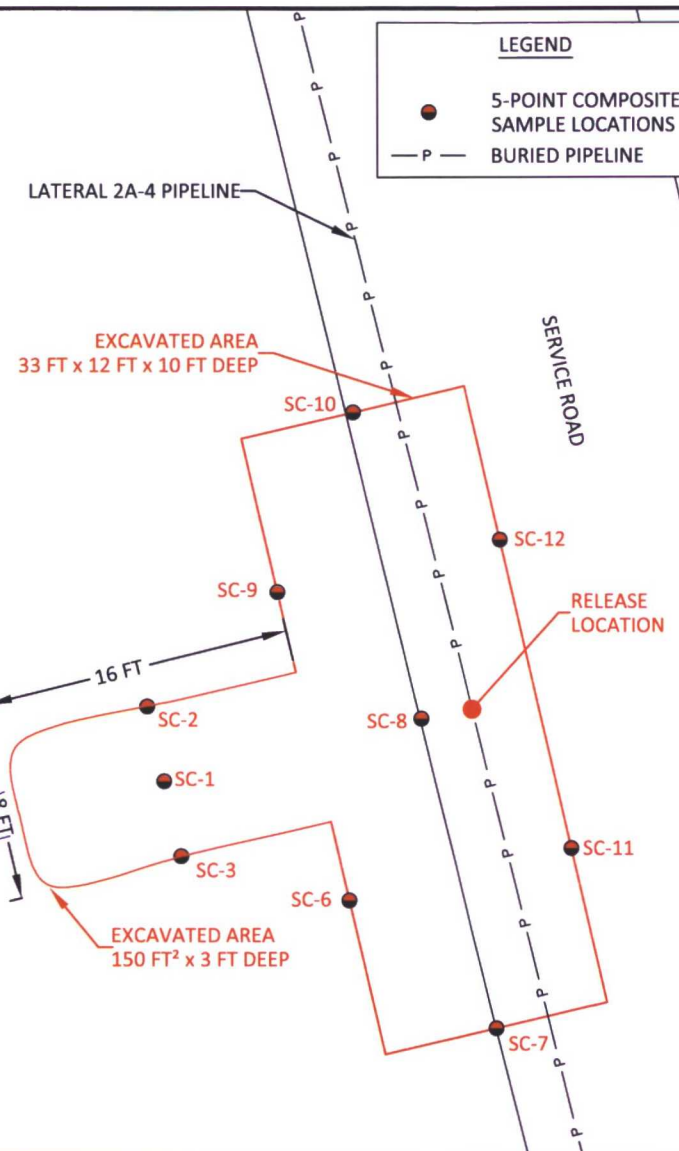
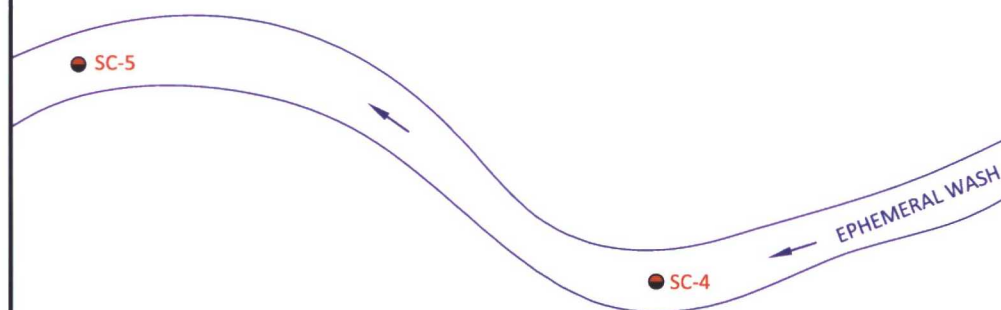
**DATE APPROVED:**  
August 7, 2012

## FIGURE 2

**AERIAL SITE MAP**  
 ENTERPRISE PRODUCTS COMPANY  
 LATERAL 2A-4 MAY 2012 PIPELINE RELEASE  
 SAN JUAN COUNTY, NEW MEXICO  
 SW $\frac{1}{4}$  SW $\frac{1}{4}$ , SECTION 13, T27N, R10W  
 N36.57064, W107.85246



Field Screening and Laboratory Analytical 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	1,000	
SC-1	5/3/12	3	87	<0.048	<0.241	<4.8	<9.9
SC-2	5/3/12	1 to 3	69	<0.047	<0.236	<4.7	<10
SC-3	5/3/12	1 to 3	64	<0.048	<0.24	<4.8	<9.7
SC-4	5/3/12	0.75	58	<0.049	<0.244	5.8	<10
SC-5	5/3/12	0.75	67	<0.048	<0.24	5.0	<10
SC-6	5/3/12	1 to 8	47	<0.048	<0.24	<4.8	<9.8
SC-7	5/3/12	1 to 10	51	<0.047	<0.236	<4.7	<10
SC-8	5/3/12	10	48	<0.048	<0.241	<4.8	<9.8
SC-9	5/3/12	1 to 8	81	<0.048	<0.241	<4.8	<9.9
SC-10	5/3/12	1 to 8	51	<0.049	<0.246	<4.9	<9.9
SC-11	5/3/12	1 to 10	117	<0.19	<0.95	<19	81
SC-12	5/3/12	1 to 10	89	<0.18	<0.91	22	89



**DRAWN BY:**  
C. Lameman

**DATE DRAWN:**  
May 15, 2012

**REVISIONS BY:**  
C. Lameman

**DATE REVISED:**  
May 15, 2012

**CHECKED BY:**  
T. Ross

**DATE CHECKED:**  
August 7, 2012

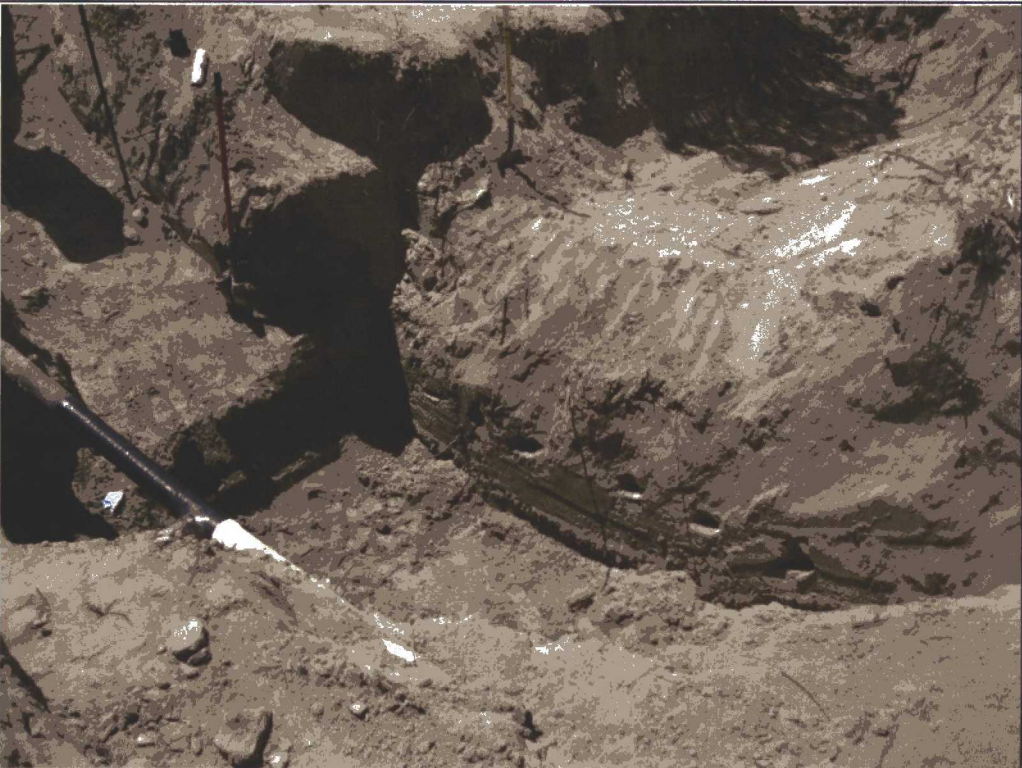
**APPROVED BY:**  
E. McNally

**DATE APPROVED:**  
August 7, 2012

## FIGURE 3

**SAMPLE LOCATIONS AND RESULTS  
MAY 2012**  
ENTERPRISE PRODUCTS COMPANY  
LATERAL 2A-4 MAY 2012 PIPELINE RELEASE  
SAN JUAN COUNTY, NEW MEXICO  
SW¼ SW¼, SECTION 13, T27N, R10W  
N36.57064, W107.85246

Photo #1	
Client: Enterprise Products Company	
Project: Lateral 2A-4 May 2012 Pipeline Release	
Taken by: Tom Long	
May 3, 2012	
AES Project No: 120504	Description: View of the release location and main excavation trench.

Photo #2	
Client: Enterprise Products Company.	
Project: Lateral 2A-4 May 2012 Pipeline Release	
Taken by: Tom Long	
May 3, 2012	
AES Project No: 120504	Description: View of western extent of excavation leading into the ephemeral wash.



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

97057-0505

Form C-138  
Revised March 12, 2007

\*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 Products Operating, LP.

paykey: 6611580

2. Originating Site:  
Lateral 2A-4 Gathering line

3. Location of Material (Street Address, City, State or ULSTR):  
Unit N Sec 13, T27N R10W (N 36.57032 W 107.85200), San Juan County NM

4. Source and Description of Waste:

Source: Pipeline Release

Description: Exempt stained soil from a pipeline release and associated remediation

Estimated Volume 30 yd<sup>3</sup> / bbls Known Volume (to be entered by the operator at the end of the haul) 120 yd<sup>3</sup> / bbls 10

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Aaron Dailey, representative or authorized agent for Enterprise Products Operating, LP.

SIGNATURE OF REPRESENTATIVE PRINT NAME

COMPANY NAME

do hereby 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, Aaron Dailey, representative for Enterprise Products Operating, LP, authorize Envirotech to complete the required testing/sign the Generator Waste Testing Certification.

I, Kendra Runung, representative for Envirotech Inc 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.

5. Transporter:

EMS—Energy Maintenance Services; MPA; Yucca

OCD Permitted Surface Waste Management Facility

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

Address of Facility: Hilltop, New Mexico

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 Runung

TITLE: Waste Coordinator

DATE: 5/2/12

SIGNATURE: Kendra Runung

TELEPHONE NO.: 632-0615

Surface Waste Management Facility Authorized Agent





*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 15, 2012

Ross Kennemer

Animas Environmental Services

624 East Comanche

Farmington, NM 87401

TEL: (505) 486-1776

FAX (505) 324-2022

RE: Enterprise Lateral 2A-4

OrderNo.: 1205268

Dear Ross Kennemer:

Hall Environmental Analysis Laboratory received 12 sample(s) on 5/4/2012 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. 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. All samples are reported as received unless otherwise indicated.

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

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1205268

Date Reported: 5/15/2012

**CLIENT:** Animas Environmental Services

**Client Sample ID:** SC-1

**Project:** Enterprise Lateral 2A-4

**Collection Date:** 5/3/2012

**Lab ID:** 1205268-001

**Matrix:** SOIL

**Received Date:** 5/4/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	5/8/2012 10:17:28 AM
Surr: DNOP	104	77.4-131		%REC	1	5/8/2012 10:17:28 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/8/2012 2:26:58 PM
Surr: BFB	104	69.7-121		%REC	1	5/8/2012 2:26:58 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.048		mg/Kg	1	5/8/2012 2:26:58 PM
Toluene	ND	0.048		mg/Kg	1	5/8/2012 2:26:58 PM
Ethylbenzene	ND	0.048		mg/Kg	1	5/8/2012 2:26:58 PM
Xylenes, Total	ND	0.097		mg/Kg	1	5/8/2012 2:26:58 PM
Surr: 4-Bromofluorobenzene	94.0	80-120		%REC	1	5/8/2012 2:26:58 PM

**Qualifiers:**

- \*X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 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
- RL Reporting Detection Limit

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1205268

Date Reported: 5/15/2012

CLIENT: Animas Environmental Services

Client Sample ID: SC-2

Project: Enterprise Lateral 2A-4

Collection Date: 5/3/2012

Lab ID: 1205268-002

Matrix: SOIL

Received Date: 5/4/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMB
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/8/2012 10:38:56 AM
Surr: DNOP	102	77.4-131		%REC	1	5/8/2012 10:38:56 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/8/2012 2:55:46 PM
Surr: BFB	105	69.7-121		%REC	1	5/8/2012 2:55:46 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	5/8/2012 2:55:46 PM
Toluene	ND	0.047		mg/Kg	1	5/8/2012 2:55:46 PM
Ethylbenzene	ND	0.047		mg/Kg	1	5/8/2012 2:55:46 PM
Xylenes, Total	ND	0.095		mg/Kg	1	5/8/2012 2:55:46 PM
Surr: 4-Bromofluorobenzene	94.0	80-120		%REC	1	5/8/2012 2:55:46 PM

**Qualifiers:**

- \* / X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 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
- RL Reporting Detection Limit



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1205268

Date Reported: 5/15/2012

**CLIENT:** Animas Environmental Services

**Client Sample ID:** SC-3

**Project:** Enterprise Lateral 2A-4

**Collection Date:** 5/3/2012

**Lab ID:** 1205268-003

**Matrix:** SOIL

**Received Date:** 5/4/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	5/8/2012 11:00:39 AM
Surr: DNOP	103	77.4-131		%REC	1	5/8/2012 11:00:39 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/8/2012 3:24:34 PM
Surr: BFB	105	69.7-121		%REC	1	5/8/2012 3:24:34 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.048		mg/Kg	1	5/8/2012 3:24:34 PM
Toluene	ND	0.048		mg/Kg	1	5/8/2012 3:24:34 PM
Ethylbenzene	ND	0.048		mg/Kg	1	5/8/2012 3:24:34 PM
Xylenes, Total	ND	0.096		mg/Kg	1	5/8/2012 3:24:34 PM
Surr: 4-Bromofluorobenzene	93.4	80-120		%REC	1	5/8/2012 3:24:34 PM

**Qualifiers:** \*/X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit

**Analytical Report**

Lab Order 1205268

Date Reported: 5/15/2012

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Animas Environmental Services**Client Sample ID:** SC-4**Project:** Enterprise Lateral 2A-4**Collection Date:** 5/3/2012**Lab ID:** 1205268-004**Matrix:** SOIL**Received Date:** 5/4/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/8/2012 11:46:01 AM
Surr: DNOP	105	77.4-131		%REC	1	5/8/2012 11:46:01 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	5.8	4.9		mg/Kg	1	5/8/2012 11:04:47 PM
Surr: BFB	111	69.7-121		%REC	1	5/8/2012 11:04:47 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.049		mg/Kg	1	5/8/2012 11:04:47 PM
Toluene	ND	0.049		mg/Kg	1	5/8/2012 11:04:47 PM
Ethylbenzene	ND	0.049		mg/Kg	1	5/8/2012 11:04:47 PM
Xylenes, Total	ND	0.097		mg/Kg	1	5/8/2012 11:04:47 PM
Surr: 4-Bromofluorobenzene	92.6	80-120		%REC	1	5/8/2012 11:04:47 PM

**Qualifiers:**   \*/X   Value exceeds Maximum Contaminant Level.  
                  E    Value above quantitation range  
                  J    Analyte detected below quantitation limits  
                  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  
RL   Reporting Detection Limit

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1205268

Date Reported: 5/15/2012

**CLIENT:** Animas Environmental Services

**Client Sample ID:** SC-5

**Project:** Enterprise Lateral 2A-4

**Collection Date:** 5/3/2012

**Lab ID:** 1205268-005

**Matrix:** SOIL

**Received Date:** 5/4/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/8/2012 12:07:31 PM
Surr: DNOP	109	77.4-131		%REC	1	5/8/2012 12:07:31 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	5.0	4.8		mg/Kg	1	5/8/2012 11:33:31 PM
Surr: BFB	112	69.7-121		%REC	1	5/8/2012 11:33:31 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	5/8/2012 11:33:31 PM
Toluene	ND	0.048		mg/Kg	1	5/8/2012 11:33:31 PM
Ethylbenzene	ND	0.048		mg/Kg	1	5/8/2012 11:33:31 PM
Xylenes, Total	ND	0.096		mg/Kg	1	5/8/2012 11:33:31 PM
Surr: 4-Bromofluorobenzene	94.8	80-120		%REC	1	5/8/2012 11:33:31 PM

**Qualifiers:**

- \*X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 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
- RL Reporting Detection Limit



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1205268

Date Reported: 5/15/2012

CLIENT: Animas Environmental Services

Client Sample ID: SC-6

Project: Enterprise Lateral 2A-4

Collection Date: 5/3/2012

Lab ID: 1205268-006

Matrix: SOIL

Received Date: 5/4/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	5/8/2012 12:29:09 PM
Surr: DNOP	103	77.4-131		%REC	1	5/8/2012 12:29:09 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/9/2012 12:02:13 AM
Surr: BFB	105	69.7-121		%REC	1	5/9/2012 12:02:13 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	5/9/2012 12:02:13 AM
Toluene	ND	0.048		mg/Kg	1	5/9/2012 12:02:13 AM
Ethylbenzene	ND	0.048		mg/Kg	1	5/9/2012 12:02:13 AM
Xylenes, Total	ND	0.096		mg/Kg	1	5/9/2012 12:02:13 AM
Surr: 4-Bromofluorobenzene	94.1	80-120		%REC	1	5/9/2012 12:02:13 AM

**Qualifiers:**   \*/X   Value exceeds Maximum Contaminant Level.  
                  E    Value above quantitation range  
                  J    Analyte detected below quantitation limits  
                  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  
RL   Reporting Detection Limit

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1205268

Date Reported: 5/15/2012

**CLIENT:** Animas Environmental Services

**Client Sample ID:** SC-7

**Project:** Enterprise Lateral 2A-4

**Collection Date:** 5/3/2012

**Lab ID:** 1205268-007

**Matrix:** SOIL

**Received Date:** 5/4/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/8/2012 12:50:52 PM
Surr: DNOP	105	77.4-131		%REC	1	5/8/2012 12:50:52 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	5/9/2012 12:30:57 AM
Surr: BFB	105	69.7-121		%REC	1	5/9/2012 12:30:57 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.047		mg/Kg	1	5/9/2012 12:30:57 AM
Toluene	ND	0.047		mg/Kg	1	5/9/2012 12:30:57 AM
Ethylbenzene	ND	0.047		mg/Kg	1	5/9/2012 12:30:57 AM
Xylenes, Total	ND	0.095		mg/Kg	1	5/9/2012 12:30:57 AM
Surr: 4-Bromofluorobenzene	93.4	80-120		%REC	1	5/9/2012 12:30:57 AM

**Qualifiers:** \*/X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit

# Analytical Report

Lab Order 1205268

Date Reported: 5/15/2012

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services

Client Sample ID: SC-8

Project: Enterprise Lateral 2A-4

Collection Date: 5/3/2012

Lab ID: 1205268-008

Matrix: SOIL

Received Date: 5/4/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	5/8/2012 1:12:32 PM
Surr: DNOP	104	77.4-131		%REC	1	5/8/2012 1:12:32 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/9/2012 12:59:37 AM
Surr: BFB	106	69.7-121		%REC	1	5/9/2012 12:59:37 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	5/9/2012 12:59:37 AM
Toluene	ND	0.048		mg/Kg	1	5/9/2012 12:59:37 AM
Ethylbenzene	ND	0.048		mg/Kg	1	5/9/2012 12:59:37 AM
Xylenes, Total	ND	0.097		mg/Kg	1	5/9/2012 12:59:37 AM
Surr: 4-Bromofluorobenzene	94.4	80-120		%REC	1	5/9/2012 12:59:37 AM

**Qualifiers:**

- \* / X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 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
- RL Reporting Detection Limit



**Analytical Report**

Lab Order 1205268

Date Reported: 5/15/2012

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Animas Environmental Services**Client Sample ID:** SC-9**Project:** Enterprise Lateral 2A-4**Collection Date:** 5/3/2012**Lab ID:** 1205268-009**Matrix:** SOIL**Received Date:** 5/4/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	5/8/2012 1:34:07 PM
Surr: DNOP	104	77.4-131		%REC	1	5/8/2012 1:34:07 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	5/9/2012 1:28:19 AM
Surr: BFB	105	69.7-121		%REC	1	5/9/2012 1:28:19 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.048		mg/Kg	1	5/9/2012 1:28:19 AM
Toluene	ND	0.048		mg/Kg	1	5/9/2012 1:28:19 AM
Ethylbenzene	ND	0.048		mg/Kg	1	5/9/2012 1:28:19 AM
Xylenes, Total	ND	0.097		mg/Kg	1	5/9/2012 1:28:19 AM
Surr: 4-Bromofluorobenzene	94.2	80-120		%REC	1	5/9/2012 1:28:19 AM

**Qualifiers:** \*/X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1205268

Date Reported: 5/15/2012

**CLIENT:** Animas Environmental Services

**Client Sample ID:** SC-10

**Project:** Enterprise Lateral 2A-4

**Collection Date:** 5/3/2012

**Lab ID:** 1205268-010

**Matrix:** SOIL

**Received Date:** 5/4/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	5/8/2012 1:55:54 PM
Surr: DNOP	103	77.4-131		%REC	1	5/8/2012 1:55:54 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	5/9/2012 1:57:05 AM
Surr: BFB	105	69.7-121		%REC	1	5/9/2012 1:57:05 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.049		mg/Kg	1	5/9/2012 1:57:05 AM
Toluene	ND	0.049		mg/Kg	1	5/9/2012 1:57:05 AM
Ethylbenzene	ND	0.049		mg/Kg	1	5/9/2012 1:57:05 AM
Xylenes, Total	ND	0.099		mg/Kg	1	5/9/2012 1:57:05 AM
Surr: 4-Bromofluorobenzene	95.1	80-120		%REC	1	5/9/2012 1:57:05 AM

**Qualifiers:** \*/X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit

## Analytical Report

Lab Order 1205268

Date Reported: 5/15/2012

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services

Client Sample ID: SC-11

Project: Enterprise Lateral 2A-4

Collection Date: 5/3/2012

Lab ID: 1205268-011

Matrix: SOIL

Received Date: 5/4/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	81	9.6		mg/Kg	1	5/8/2012 2:17:32 PM
Surr: DNOP	107	77.4-131		%REC	1	5/8/2012 2:17:32 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	ND	19		mg/Kg	4	5/9/2012 3:14:55 PM
Surr: BFB	122	69.7-121	S	%REC	4	5/9/2012 3:14:55 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	0.19		mg/Kg	4	5/9/2012 3:14:55 PM
Toluene	ND	0.19		mg/Kg	4	5/9/2012 3:14:55 PM
Ethylbenzene	ND	0.19		mg/Kg	4	5/9/2012 3:14:55 PM
Xylenes, Total	ND	0.38		mg/Kg	4	5/9/2012 3:14:55 PM
Surr: 4-Bromofluorobenzene	94.2	80-120		%REC	4	5/9/2012 3:14:55 PM

**Qualifiers:**

- \*X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 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
- RL Reporting Detection Limit



**Analytical Report**

Lab Order 1205268

Date Reported: 5/15/2012

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Animas Environmental Services**Client Sample ID:** SC-12**Project:** Enterprise Lateral 2A-4**Collection Date:** 5/3/2012**Lab ID:** 1205268-012**Matrix:** SOIL**Received Date:** 5/4/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	89	10		mg/Kg	1	5/8/2012 2:39:14 PM
Surr: DNOP	107	77.4-131		%REC	1	5/8/2012 2:39:14 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	22	18		mg/Kg	4	5/9/2012 3:43:42 PM
Surr: BFB	126	69.7-121	S	%REC	4	5/9/2012 3:43:42 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.18		mg/Kg	4	5/9/2012 3:43:42 PM
Toluene	ND	0.18		mg/Kg	4	5/9/2012 3:43:42 PM
Ethylbenzene	ND	0.18		mg/Kg	4	5/9/2012 3:43:42 PM
Xylenes, Total	ND	0.37		mg/Kg	4	5/9/2012 3:43:42 PM
Surr: 4-Bromofluorobenzene	93.3	80-120		%REC	4	5/9/2012 3:43:42 PM

**Qualifiers:** \*/X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1205268

15-May-12

Client: Animas Environmental Services

Project: Enterprise Lateral 2A-4

Sample ID	MB-1831	SampType:	MBLK		TestCode:	EPA Method 8015B: Diesel Range Organics				
Client ID:	PBS	Batch ID:	1831		RunNo:	2616				
Prep Date:	5/7/2012	Analysis Date:	5/8/2012		SeqNo:	73119		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	8.8		10.00		88.0	77.4	131			

Sample ID	LCS-1831	SampType: LCS			TestCode: EPA Method 8015B: Diesel Range Organics					
Client ID:	LCSS	Batch ID: 1831			RunNo: 2616					
Prep Date:	5/7/2012	Analysis Date: 5/8/2012			SeqNo: 73159		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	101	62.7	139			
Surr: DNOP	4.4		5.000		88.4	77.4	131			

## Qualifiers:

\* / X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD 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  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1205268

15-May-12

Client: Animas Environmental Services

Project: Enterprise Lateral 2A-4

Sample ID	MB-1829		SampType:	MBLK		TestCode:	EPA Method 8015B: Gasoline Range				
Client ID:	PBS		Batch ID:	1829		RunNo:	2654				
Prep Date:	5/7/2012		Analysis Date:	5/8/2012		SeqNo:	73700		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	1,000		1,000		104	69.7	121				

Sample ID	LCS-1829		SampType: LCS		TestCode: EPA Method 8015B: Gasoline Range					
Client ID:	LCSS		Batch ID: 1829		RunNo: 2654					
Prep Date:	5/7/2012		Analysis Date: 5/8/2012		SeqNo: 73701		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	25.00	0	115	98.5	133			
Surr: BFB	1,100		1,000		111	69.7	121			

Sample ID	1205257-001AMS		SampType: MS		TestCode: EPA Method 8015B: Gasoline Range					
Client ID:	BatchQC		Batch ID: 1829		RunNo: 2654					
Prep Date:	5/7/2012		Analysis Date: 5/8/2012		SeqNo: 73716		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	42	25	24.85	26.81	60.7	85.4	147			S
Surr: BFB	6,300		4,970		128	69.7	121			S

Sample ID	1205257-001AMSD		SampType: MSD		TestCode: EPA Method 8015B: Gasoline Range					
Client ID:	BatchQC		Batch ID: 1829		RunNo: 2654					
Prep Date:	5/7/2012		Analysis Date: 5/8/2012		SeqNo: 73717		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	48	25	24.53	26.81	84.9	85.4	147	12.8	19.2	S
Surr: BFB	6,200		4,907		126	69.7	121	0	0	S

### Qualifiers:

\*X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD 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  
RL Reporting Detection Limit



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1205268

15-May-12

Client: Animas Environmental Services

Project: Enterprise Lateral 2A-4

Sample ID	MB-1829	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles
Client ID:	PBS	Batch ID:	1829	RunNo:	2654
Prep Date:	5/7/2012	Analysis Date:	5/8/2012	SeqNo:	73754
				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	0.94		1.000		94.4	80	120			

Sample ID	LCS-1829	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles
Client ID:	LCSS	Batch ID:	1829	RunNo:	2654
Prep Date:	5/7/2012	Analysis Date:	5/8/2012	SeqNo:	73755
				Units:	mg/Kg

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.050	1.000	0	91.3	83.3	107			
Toluene	0.95	0.050	1.000	0	95.2	74.3	115			
Ethylbenzene	0.94	0.050	1.000	0	94.0	80.9	122			
Xylenes, Total	2.8	0.10	3.000	0	94.5	85.2	123			
Surr: 4-Bromofluorobenzene	0.99		1.000		98.6	80	120			

Sample ID	1205264-001AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles
Client ID:	BatchQC	Batch ID:	1829	RunNo:	2654
Prep Date:	5/7/2012	Analysis Date:	5/8/2012	SeqNo:	73758
				Units:	mg/Kg

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.048	0.9671	0	96.7	67.2	113			
Toluene	0.99	0.048	0.9671	0.008608	102	62.1	116			
Ethylbenzene	0.97	0.048	0.9671	0	101	67.9	127			
Xylenes, Total	2.9	0.097	2.901	0	101	60.6	134			
Surr: 4-Bromofluorobenzene	0.97		0.9671		100	80	120			

Sample ID	1205264-001AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles
Client ID:	BatchQC	Batch ID:	1829	RunNo:	2654
Prep Date:	5/7/2012	Analysis Date:	5/8/2012	SeqNo:	73759
				Units:	mg/Kg

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.89	0.048	0.9506	0	93.9	67.2	113	4.68	14.3	
Toluene	0.96	0.048	0.9506	0.008608	100	62.1	116	2.90	15.9	
Ethylbenzene	0.96	0.048	0.9506	0	101	67.9	127	1.09	14.4	
Xylenes, Total	3.0	0.095	2.852	0	103	60.6	134	1.07	12.6	
Surr: 4-Bromofluorobenzene	0.99		0.9506		104	80	120	0	0	

### Qualifiers:

\* / X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD 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  
RL Reporting Detection Limit



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87105  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: Animas Environmental

Work Order Number: 1205268

Received by/date: LM 05/04/12

Logged By: Michelle Garcia

5/4/2012 10:00:00 AM

Michelle Garcia

Completed By: Michelle Garcia

5/4/2012 3:39:38 PM

Michelle Garcia

Reviewed By:

05/04/12

### Chain of Custody

1. Were seals intact? Yes No Not Present ✓
2. Is Chain of Custody complete? Yes ✓ No Not Present
3. How was the sample delivered? Courier

### Log In

4. Coolers are present? (see 19. for cooler specific information) Yes ✓ No NA
5. Was an attempt made to cool the samples? Yes ✓ No NA
6. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ✓ No NA
7. Sample(s) in proper container(s)? Yes ✓ No
8. Sufficient sample volume for indicated test(s)? Yes ✓ No
9. Are samples (except VOA and ONG) properly preserved? Yes ✓ No
10. Was preservative added to bottles? Yes No ✓ NA
11. VOA vials have zero headspace? Yes No No VOA Vials ✓
12. Were any sample containers received broken? Yes No ✓
13. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ✓ No # of preserved bottles checked for pH:
14. Are matrices correctly identified on Chain of Custody? Yes ✓ No (<2 or >12 unless noted)
15. Is it clear what analyses were requested? Yes ✓ No Adjusted?
16. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ✓ No

Checked by:

### Special Handling (if applicable)

17. 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:

18. Additional remarks:

### 19. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.4	Good	Yes			



# Chain-of-Custody Record

Client: Animas Env. Services

Mailing Address: 624 E Comanche  
Farmington, NM

Phone #: 505-564-2281

email or Fax#:

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

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

☐ EDD (Type) \_\_\_\_\_

Turn-Around Time:  
☒ Standard ☐ Rush

Project Name: Enterprise  
Lateral 2A-4

Project #:

Project Manager: Ross Kenner

Sampler: Thomas Long

Office: ☒ Yes ☐ No

Sample Temperature: 3.4



## 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		BTEX + MTBE + TMB's (8024)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Ruthless (Y or N)
5-3-12		Soil	SC-1	4oz Jar	ICE	-001	X		X									
			SC-2			-002	X		X									
			SC-3			-003	X		X									
			SC-4			-004	X		X									
			SC-5			-005	X		X									
			SC-6			-006	X		X									
			SC-7			-007	X		X									
			SC-8			-008	X		X									
			SC-9			-009	X		X									
			SC-10			-010	X		X									
			SC-11			-011	X		X									
			SC-12			-012	X		X									

Date: 5-3-12 Time: 1624 Relinquished by: Thomas Long Received by: Christine Waeten Date: 5/3/12 Time: 1624

Date: 5/3/12 Time: 1651 Relinquished by: Christine Waeten Received by: Thomas Long Date: 5/3/12 Time: 1651

Remarks: Bill To Enterprise

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



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

State of New Mexico  
Energy Minerals and Natural Resources

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 Products	Contact Aaron Dailey	
Address 614 Reilly Avenue, Farmington NM 87401	Telephone No. (505)599-2286	
Facility Name Lateral 2B-24 Pipeline	Facility Type Natural gas gathering line	
Surface Owner BLM	Mineral Owner BLM	API No.

**LOCATION OF RELEASE**

Unit Letter E	Section 22	Township 28N	Range 10W	Feet from the	North/South Line	Feet from the	East/West Line	County San Juan
------------------	---------------	-----------------	--------------	---------------	------------------	---------------	----------------	--------------------

Latitude\_N 36\*64831 Longitude\_W 107\*88369 (decimal degrees)\_\_\_

RCVD NOV 29 '12  
OIL CONS. DIV.  
DIST. 3

**NATURE OF RELEASE**

Type of Release Natural gas	Volume of Release: 700 MCF (estimated over time)	Volume Recovered None
Source of Release corrosion leak on pipeline	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 7.24.2012 @ 11:00
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Brandon Powell (left message), Jonathan Kelly	
By Whom? Aaron Dailey	Date and Hour 7.24.2012 @ 16:00 hours	
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.\* ☐ Multiple corrosion leaks were discovered on the lateral 2B-24 pipeline. This pipeline has been locked out, tagged out and rendered out of service. Repairs were conducted the week of August 6, 2012. Environmental confirmation sampling was conducted in conjunction with the repairs. Please refer to the attached third party corrective action report for details.

Describe Area Affected and Cleanup Action Taken.\* Please refer to the attached third party corrective action report for details and confirmation sampling analytic results on these pipeline repair locations.

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.

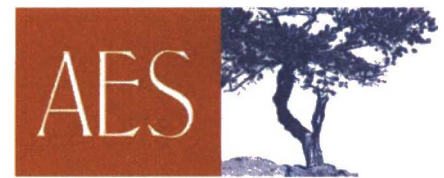
**OIL CONSERVATION DIVISION**

Signature:	Approved by Environmental Specialist: <i>Jonathan D. Kelly</i>	
Printed Name: Aaron Dailey	Approval Date: 3/26/2013 Expiration Date:	
Title: Field Environmental Scientist	Conditions of Approval:	
E-mail Address: amdailey@eprod.com	Attached <input type="checkbox"/>	
Date: 11.27.2012 Phone: (505)599-2286		

\* Attach Additional Sheets If Necessary

NSK 1308540236

58



Animas Environmental Services, LLC

www.animasenvironmental.com

November 15, 2012

Aaron Dailey  
Enterprise Products Company  
614 Reilly Avenue  
Farmington, New Mexico 87401

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

Durango, Colorado  
970-403-3274

**RE: Multiple Release Assessment Report  
Lateral 2B-24  
San Juan County, New Mexico**

RCVD MAR 18 '13  
OIL CONS. DIV.  
DIST. 3

Mr. Dailey:

On August 6, 2012, Animas Environmental Services, LLC (AES) completed an assessment associated with three separate releases of natural gas from the Enterprise Products Company (Enterprise) Lateral 2B-24 4-inch diameter pipeline. The releases, which are located approximately 6.25 to 7 miles south of Bloomfield, San Juan County, New Mexico, resulted from pipeline leaks caused by corrosion.

---

## 1.0 Site Information

### 1.1 Locations

All locations are illustrated on Figure 1- Topographic Site Location Map.

#### Release #1

Location – NE¼ NE¼, Section 21, T28N, R10W, San Juan County, New Mexico  
Latitude/Longitude - N36.65287 and W107.89455, respectively  
Surface Owner – Federal (Bureau of Land Management)  
Figure 2a. Aerial Site Map Release #1

#### Release #2

Location – SE¼ NW¼, Section 22, T28N, R10W, San Juan County, New Mexico  
Latitude/Longitude - N36.64828 and W107.88367, respectively  
Surface Owner – Federal (Bureau of Land Management)  
Figure 2b. Aerial Site Map Release #2



### **Release #3**

Location – SW¼ NW¼, Section 22, T28N, R10W, San Juan County, New Mexico

Latitude/Longitude - N36.65040 and W107.88930, respectively

Surface Owner – Federal (Bureau of Land Management)

Figure 2c. Aerial Site Map Release #3

### **1.2 NMOCD Ranking**

In accordance with the New Mexico Oil Conservation Division (NMOCD) *Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993) the release locations were each assigned a ranking score to establish release action levels. The ranking scores were obtained in part by reviewing available records of nearby oil/gas wells using the NMOCD online database. Additionally, the New Mexico Office of the State Engineer (NMOSE) database was reviewed for nearby water wells, and Google Earth and the New Mexico Tech Petroleum Recovery Research Center online mapping tool (<http://ford.nmt.edu/react/project.html>) were accessed to aid in the identification of downgradient surface water.

#### **Release #1**

No NMOCD documents were found to assist in determining the ranking score for Release #1. Based on site topography and elevation differentials between the release location and the nearest perennial water sources, depth to groundwater is estimated to be greater than 100 feet below ground surface (bgs). No registered water wells were reported to be located within 1,000 feet of the release area. A small unnamed ephemeral wash is located approximately 400 feet east of Release #1, and a larger unnamed ephemeral wash is located approximately 630 feet to the northwest. Based on this information, Release #1 was assessed a ranking score of 10.

#### **Release #2**

No NMOCD documents were found to assist in determining the ranking score for Release #2. Based on site topography and elevation differentials between the release location and the nearest perennial water sources, depth to groundwater is estimated to be greater than 100 feet bgs. No registered water wells were reported to be located within 1,000 feet of the release area. Unnamed ephemeral washes are located approximately 50 feet and 250 feet west and approximately 520 feet east of Release #2. Based on this information, Release #2 was assessed a ranking score of 20.

#### **Release #3**

A C-144 form dated August 2007 for the Davidson Gas Com H #1F well located approximately 200 feet northeast of Release #3 reported the depth to groundwater as greater than 100 feet bgs. No registered water wells were reported to be located within 1,000 feet of the release area. Unnamed ephemeral washes are also located



approximately 90 feet northwest and 550 feet southeast of Release #3. Based on this information, Release #3 was assessed a ranking score of 20.

### **1.3 Assessment and Mitigation**

On August 6, 2012, Enterprise contractors completed two excavations (Release #1 and Release #2) along the Lateral 2B-24 pipeline and determined that the releases were the result of pipeline leaks caused by corrosion. A third release area was identified (Release #3) and assessed with the installation of six soil borings. AES collected soil samples for field screening and laboratory analysis; a total of 10 soil samples were collected from the excavation at Release #1, a total of 14 samples from the excavation at Release #2, and 2 samples from the soil borings at Release #3.

The final excavation dimensions for Release #1 measured approximately 44 feet by 12 feet by 6.75 feet deep. Additionally, an area of surface staining approximately 1 foot wide by 75 feet long was observed adjacent to the north side of the excavation at Release #1. The final excavation dimensions for Release #2 measured 74 feet by 10 feet by 5 feet deep. The six soil borings installed in the vicinity of Release #3 were each terminated at sandstone. Soil boring total depths ranged from 0.5 feet bgs to 2.5 bgs.

Soil sample locations are included on Figures 3a, 3b, and 3c, and a photograph log is attached.

---

## **2.0 Soil Sampling**

### **Release #1**

AES personnel collected eight 5-point composite soil samples (SC-1 through SC-8) from the excavation base and sidewalls of Release #1 for field screening and laboratory analysis. Soil samples SC-1 through SC-6 were collected from the sidewalls of the excavation from 0 to 6.75 feet bgs. SC-7 and SC-8 were collected from the excavation base at depths of 6.75 feet. Additionally, AES collected two 5-point composite soil samples (SC-9 and SC-10) at depths of 0.25 feet bgs from the area of surface staining adjacent to the release area.

### **Release #2**

AES personnel collected 14 5-point composite soil samples (SC-1 through SC-14) from the excavation base and sidewalls of Release #2 for field screening and laboratory analysis. Soil samples SC-1 through SC-10 were collected from the sidewalls of the excavation from 0 to 5 feet bgs; and SC-11 through SC-14 were collected from the excavation base at depths of 5 feet bgs.

### **Release #3**

AES personnel collected a total of 11 soil samples for field screening from the six soil borings installed in the vicinity of Release #3. Additionally, two 5-point composite soil samples (SC-1 and SC-2) were collected for field screening and laboratory analysis. Soil sample SC-1 is a composite of SB-2 through SB-6 at 1 foot bgs, and SC-2 is a composite of SB-2 through SB-6 at total depth.

#### **2.1 Field Screening**

Field screening for volatile organic compounds (VOCs) 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**

A total of 26 soil samples (SC-1 through SC-10 for Release #1, SC-1 through SC-14 for Release #2, and SC-1 and SC-2 for Release #3) were collected for laboratory analysis and 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:

- Benzene, toluene, ethylbenzene, and xylene (BTEX) per U.S. Environmental Protection Agency (USEPA) Method 8021B;
- Total petroleum hydrocarbons (TPH) for gasoline range organics (GRO) and diesel range organics (DRO) per USEPA Method 8015B.

#### **2.3 Field Screening and Laboratory Analytical Results**

##### **Release #1**

Soil field screening results showed that VOC concentrations were 0.0 ppm in each soil sample collected from the Release #1 area. Soil analytical results from SC-1 through SC-10 showed that benzene and total BTEX concentrations were below laboratory detection limits. TPH concentrations were below laboratory detection limits in all samples, except for SC-9 with 120 mg/kg DRO.

##### **Release #2**

Field screening VOC concentrations in the samples collected from Release #2 ranged from 0.0 ppm up to 53.6 ppm in SC-1. Soil analytical results from SC-1 through SC-14 showed that benzene and total BTEX concentrations were below laboratory detection limits. TPH concentrations were below laboratory detection limits in all samples, except for SC-2 (170 mg/kg DRO), SC-5 (12 mg/kg DRO), and SC-6 (35 mg/kg DRO).



### Release #3

The VOC concentration was 0.0 ppm in each of the samples collected from the soil borings and 5-point composite samples for Release #3. Soil analytical results from SC-1 and SC-2 showed that benzene, total BTEX, and TPH concentrations were below laboratory detection limits.

Laboratory analytical results are included in Table 1 and on Figures 3a, 3b, and 3c. Laboratory analytical reports are attached.

Table 1. Soil Field Screening and Laboratory Analytical Results  
Lateral 2B-24 Multiple Release Assessment, August 2012

Release ID	Sample ID	Sample Date	Depth (ft)	VOCs OVM (ppm)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)
			<i>NMOC</i> D Action Level	100	10	50	1,000*	
Release #1	SC-1	8/6/12	0 to 6.75	0.0	<0.047	<0.236	<4.7	<10
	SC-2	8/6/12	0 to 6.75	0.0	<0.048	<0.24	<4.8	<9.8
	SC-3	8/6/12	0 to 6.75	0.0	<0.049	<0.246	<4.9	<10
	SC-4	8/6/12	0 to 6.75	0.0	<0.048	<0.24	<4.8	<10
	SC-5	8/6/12	0 to 6.75	0.0	<0.047	<0.235	<4.7	<10
	SC-6	8/6/12	0 to 6.75	0.0	<0.048	<0.241	<4.8	<10
	SC-7	8/6/12	6.75	0.0	<0.047	<0.235	<4.7	<9.7
	SC-8	8/6/12	6.75	0.0	<0.050	<0.25	<5.0	<9.8
	SC-9	8/6/12	0.25	0.0	<0.049	<0.245	<4.9	120
	SC-10	8/6/12	0.25	0.0	<0.048	<0.239	<4.8	<49
			<i>NMOC</i> D Action Level	100	10	50	100*	
Release #2	SC-1	8/6/12	0 to 5	53.6	<0.049	<0.246	<4.9	<9.7
	SC-2	8/6/12	0 to 5	7.0	<0.046	<0.23	<4.6	170
	SC-3	8/6/12	0 to 5	1.5	<0.049	<0.245	<4.9	<9.8
	SC-4	8/6/12	0 to 5	0.2	<0.049	<0.245	<4.9	<10
	SC-5	8/6/12	0 to 5	3.8	<0.046	<0.23	<4.6	12
	SC-6	8/6/12	0 to 5	2.4	<0.047	<0.235	<4.7	35
	SC-7	8/6/12	0 to 5	0.7	<0.050	<0.249	<5.0	<10
	SC-8	8/6/12	0 to 5	0.0	<0.048	<0.24	<4.8	<9.6
	SC-9	8/6/12	0 to 5	0.0	<0.046	<0.23	<4.6	<10
	SC-10	8/6/12	0 to 5	0.6	<0.049	<0.245	<4.9	<9.6



Release ID	Sample ID	Sample Date	Depth (ft)	VOCs OVM (ppm)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)
	SC-11	8/6/12	5	2.9	<0.047	<0.234	<4.7	<9.7
	SC-12	8/6/12	5	0.3	<0.046	<0.231	<4.6	<9.7
	SC-13	8/6/12	5	0.0	<0.049	<0.244	<4.9	<10
	SC-14	8/6/12	5	0.0	<0.049	<0.244	<4.9	<10
<b>NMOCD Action Level</b>				<b>100</b>	<b>10</b>	<b>50</b>	<b>100*</b>	
<b>Release #3</b>	SC-1	8/6/12	1	0.0	<0.047	<0.235	<4.7	<10
	SC-2	8/6/12	TD	0.0	<0.047	<0.235	<4.7	<10

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

### 3.0 Conclusions and Recommendations

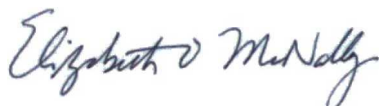
NMOCD action levels for releases are specified in NMOCD's *Guidelines for Leaks, Spills, and Releases* (August 1993). Release #1 was assigned a ranking score of 10, and Release #2 and Release #3 were each assigned a ranking score of 20. Based on field observations, field screening values, and laboratory analytical results for VOCs, benzene, BTEX, and TPH, soils have not been impacted above NMOCD action levels within the release areas, with the exception of SC-2 (170 mg/kg DRO) at Release #2. AES recommends application of a dilute Simple Green solution within the vicinity of SC-2 at Release #2 in order to enhance bioremediation of residual petroleum hydrocarbons in the soil.

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

Sincerely,



Landrea Cupps  
 Environmental Scientist



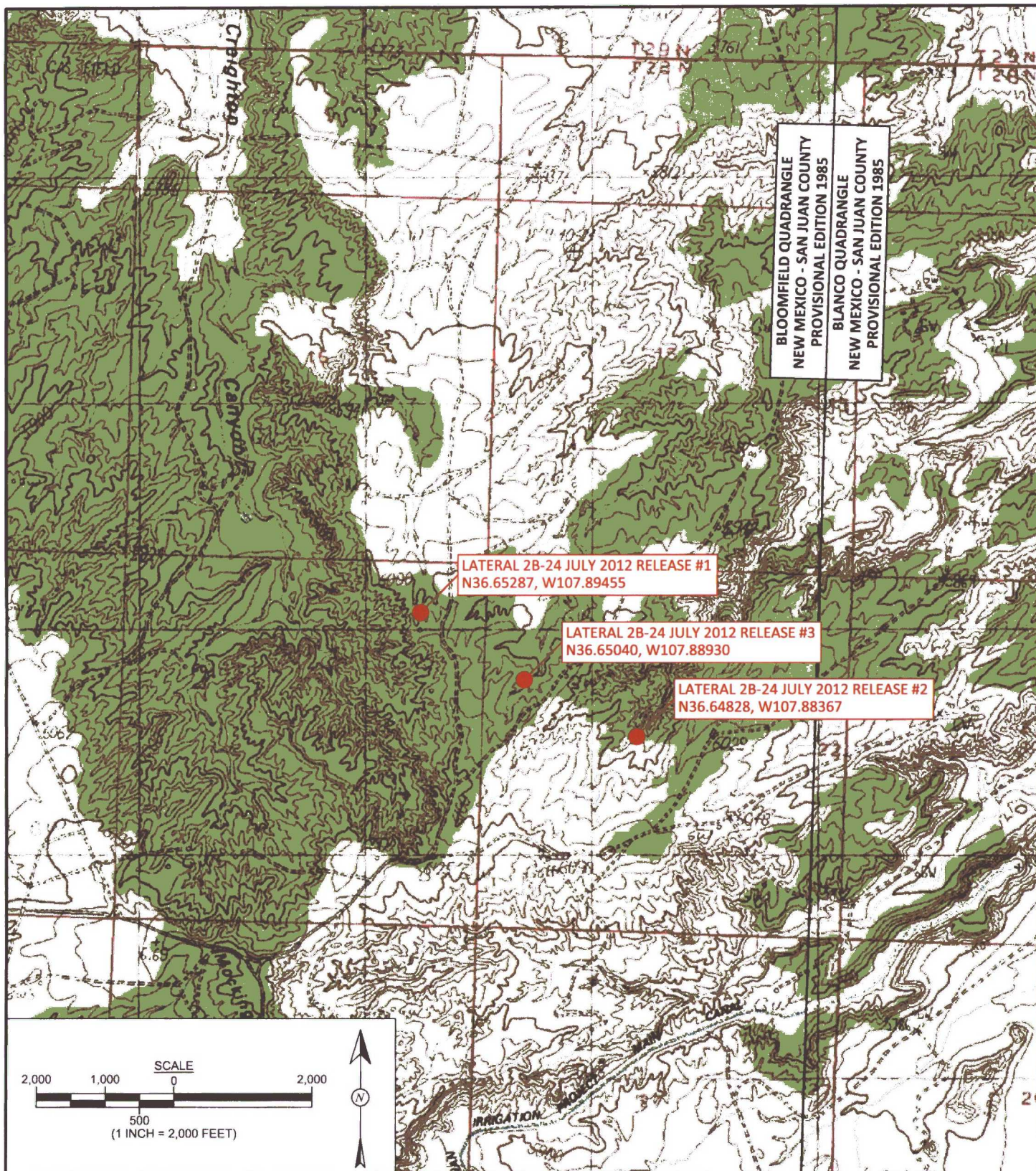
Elizabeth McNally, P.E.

Attachments:

Figure 1. Topographic Site Location Map  
Figure 2a. Aerial Site Map Release #1  
Figure 2b. Aerial Site Map Release #2  
Figure 2c. Aerial Site Map Release #3  
Figure 3a. Release #1 Sample Locations and Results, August 2012  
Figure 3b. Release #2 Sample Locations and Results, August 2012  
Figure 3c. Release #3 Sample Locations and Results, August 2012  
Photograph Log  
Laboratory Analytical Reports (Hall 1208369, 1208371, 1208372)

R:\Animas 2000\2012 Projects\Enterprise\Lateral 2B-24\July 2012\Enterprise Lateral 2B-24 Multiple Release Assessment 111512.docx





Animas Environmental Services, LLC

**DRAWN BY:**

N. Willis

**DATE DRAWN:**

August 8, 2012

**REVISIONS BY:**

C. Lameman

**DATE REVISED:**

November 14, 2012

**CHECKED BY:**

T. Ross

**DATE CHECKED:**

November 14, 2012

**APPROVED BY:**

E. McNally

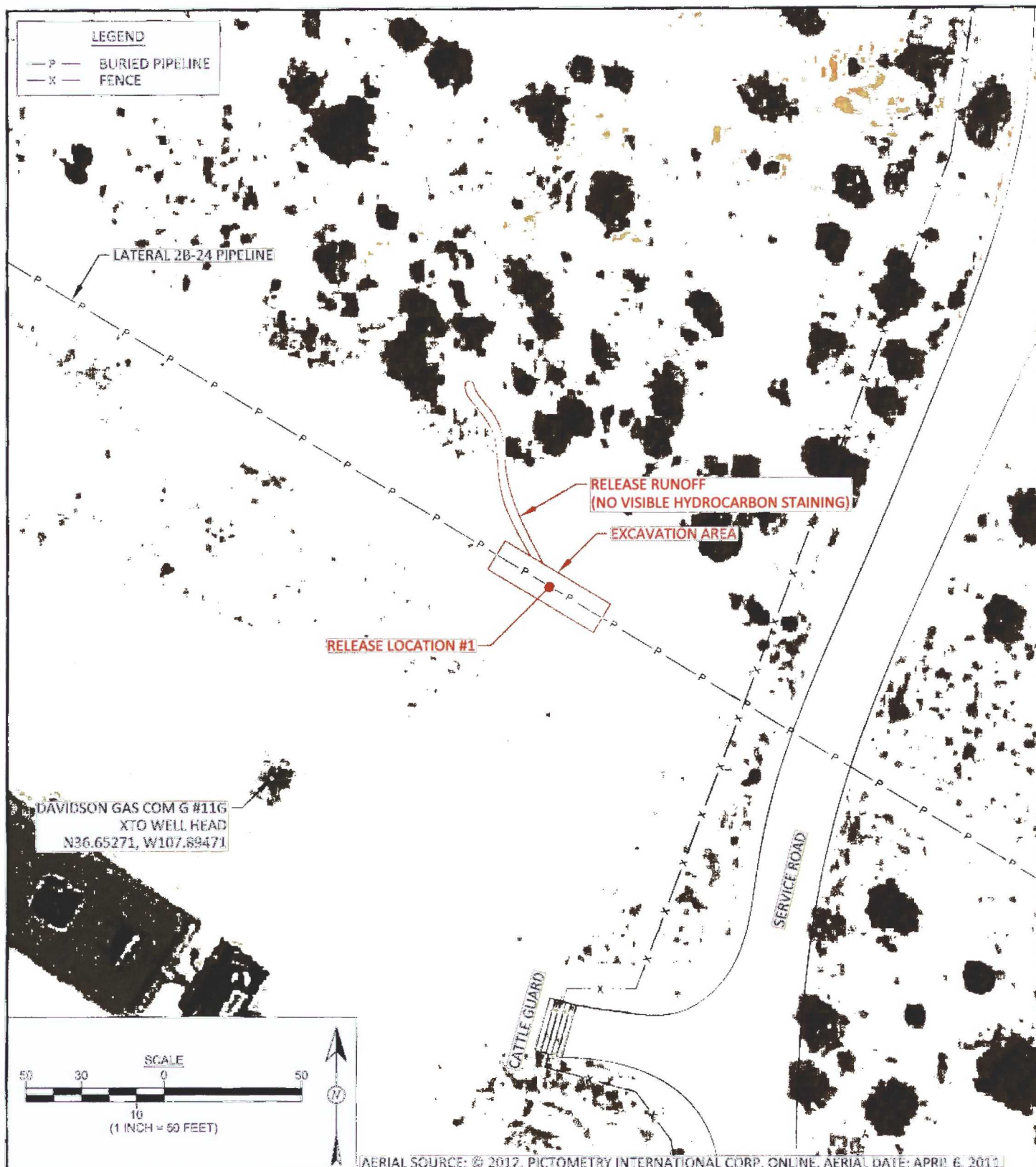
**DATE APPROVED:**

November 14, 2012

## FIGURE 1

**TOPOGRAPHIC SITE LOCATION MAP**  
 ENTERPRISE PRODUCTS COMPANY  
 LATERAL 2B-24 JULY 2012 RELEASES  
 SAN JUAN COUNTY, NEW MEXICO  
 SECTIONS 21 AND 22, T28N, R10W





Animas Environmental Services, LLC

<b>DRAWN BY:</b> N. Willis	<b>DATE DRAWN:</b> August 8, 2012
<b>REVISIONS BY:</b> C. Lammernan	<b>DATE REVISED:</b> November 14, 2012
<b>CHECKED BY:</b> T. Ross	<b>DATE CHECKED:</b> November 14, 2012
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> November 14, 2012

## FIGURE 2A

**AERIAL SITE MAP**  
ENTERPRISE PRODUCTS COMPANY  
LATERAL 2B-24 JULY 2012 RELEASE #1  
SAN JUAN COUNTY, NEW MEXICO  
NE $\frac{1}{4}$  NE $\frac{1}{4}$ , SECTION 21, T28N, R10W  
N36.65287, W107.89455



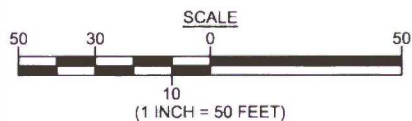
**LEGEND**

— P — BURIED PIPELINE

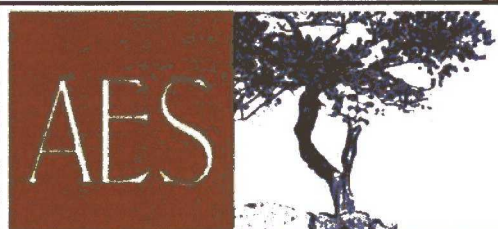
LATERAL 2B-24 PIPELINE

EXCAVATION AREA

RELEASE LOCATION #2



AERIAL SOURCE: © 2012. PICTOMETRY INTERNATIONAL CORP. ONLINE, AERIAL DATE: APRIL 6, 2011.



Animas Environmental Services, LLC

**DRAWN BY:**  
N. Willis

**DATE DRAWN:**  
August 8, 2012

**REVISIONS BY:**  
C. Lameman

**DATE REVISED:**  
November 14, 2012

**CHECKED BY:**  
T. Ross

**DATE CHECKED:**  
November 14, 2012

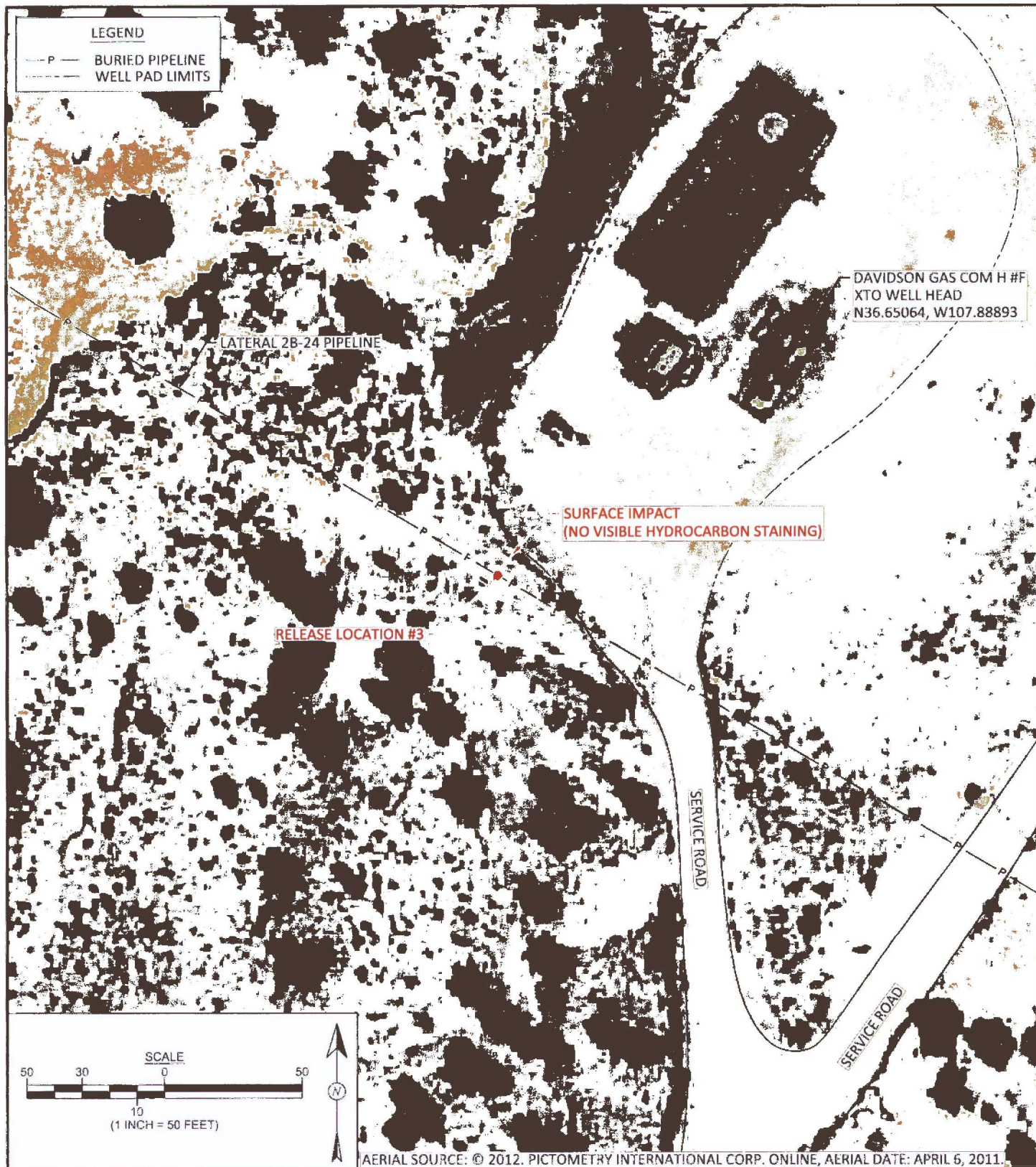
**APPROVED BY:**  
E. McNally

**DATE APPROVED:**  
November 14, 2012

## FIGURE 2B

**AERIAL SITE MAP**  
ENTERPRISE PRODUCTS COMPANY  
LATERAL 2B-24 JULY 2012 RELEASE #2  
SAN JUAN COUNTY, NEW MEXICO  
SE $\frac{1}{4}$  NW $\frac{1}{4}$ , SECTION 22, T28N, R10W  
N36.64828, W107.88367





**FIGURE 2C**

AES



Animas Environmental Services, LLC

**DRAWN BY:**  
N. Willis

**DATE DRAWN:**  
August 8, 2012

**REVISIONS BY:**  
C. Lameman

**DATE REVISED:**  
November 14, 2012

**CHECKED BY:**  
T. Ross

**DATE CHECKED:**  
November 14, 2012

**APPROVED BY:**  
E. McNally

**DATE APPROVED:**  
November 14, 2012

**AERIAL SITE MAP**  
ENTERPRISE PRODUCTS COMPANY  
LATERAL 2B-24 JULY 2012 RELEASE #3  
SAN JUAN COUNTY, NEW MEXICO  
SW¼ NW¼, SECTION 22, T28N, R10W  
N36.65040, W107.88930



Photo #1	
Client: Enterprise Products Company	
Project: Lateral 2B-24 Multiple Release	
Taken by: Tom Long	
August 7, 2012	
AES Project No: 120802	Description: View of Release #1 excavation.


Photo #2	
Client: Enterprise Products Company	
Project: Lateral 2B-24 Multiple Release	
Taken by: Tom Long	
August 7, 2012	
AES Project No: 120802	Description: View of surface staining adjacent to Release #1.



Photo #3	
Client: Enterprise Products Company	
Project: Lateral 2B-24 Multiple Release	
Taken by: Tom Long	
August 7, 2012	
AES Project No: 120802	Description: View of Release #2 excavation.

Photo #4	
Client: Enterprise Products Company	
Project: Lateral 2B-24 Multiple Release	
Taken by: Tom Long	
August 7, 2012	
AES Project No: 120802	Description: View of Release #3 location.





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

August 15, 2012

Tami Ross

Animas Environmental Services

624 East Comanche

Farmington, NM 87401

TEL: (505) 793-2072

FAX

RE: Enterprise Lateral 2B-24 Excavation #1

OrderNo.: 1208371

Dear Tami Ross:

Hall Environmental Analysis Laboratory received 10 sample(s) on 8/8/2012 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. 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. 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.

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services

Client Sample ID: SC-1

Project: Enterprise Lateral 2B-24 Excavation #1

Collection Date: 8/6/2012 10:50:00 AM

Lab ID: 1208371-001

Matrix: SOIL

Received Date: 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/10/2012 11:20:03 AM
Surr: DNOP	105	77.6-140		%REC	1	8/10/2012 11:20:03 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/10/2012 7:19:01 PM
Surr: BFB	99.7	84-116		%REC	1	8/10/2012 7:19:01 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.047		mg/Kg	1	8/10/2012 7:19:01 PM
Toluene	ND	0.047		mg/Kg	1	8/10/2012 7:19:01 PM
Ethylbenzene	ND	0.047		mg/Kg	1	8/10/2012 7:19:01 PM
Xylenes, Total	ND	0.095		mg/Kg	1	8/10/2012 7:19:01 PM
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1	8/10/2012 7:19:01 PM

**Qualifiers:**

- \* / X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 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
- RL Reporting Detection Limit
- U Samples with CalcVal < MDL

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 1208371

Date Reported: 8/15/2012

**CLIENT:** Animas Environmental Services**Client Sample ID:** SC-2**Project:** Enterprise Lateral 2B-24 Excavation #1**Collection Date:** 8/6/2012 10:51:00 AM**Lab ID:** 1208371-002**Matrix:** SOIL**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/10/2012 11:45:25 AM
Surr: DNOP	106	77.6-140		%REC	1	8/10/2012 11:45:25 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/10/2012 11:37:38 PM
Surr: BFB	99.1	84-116		%REC	1	8/10/2012 11:37:38 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.048		mg/Kg	1	8/10/2012 11:37:38 PM
Toluene	ND	0.048		mg/Kg	1	8/10/2012 11:37:38 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/10/2012 11:37:38 PM
Xylenes, Total	ND	0.096		mg/Kg	1	8/10/2012 11:37:38 PM
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	8/10/2012 11:37:38 PM

**Qualifiers:**   \*/X   Value exceeds Maximum Contaminant Level.  
                  E    Value above quantitation range  
                  J    Analyte detected below quantitation limits  
                  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  
                  RL   Reporting Detection Limit  
                  U    Samples with CalcVal < MDL

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1208371

Date Reported: 8/15/2012

**CLIENT:** Animas Environmental Services

**Client Sample ID:** SC-3

**Project:** Enterprise Lateral 2B-24 Excavation #1

**Collection Date:** 8/6/2012 10:52:00 AM

**Lab ID:** 1208371-003

**Matrix:** SOIL

**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/10/2012 12:37:07 PM
Surr: DNOP	103	77.6-140		%REC	1	8/10/2012 12:37:07 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/11/2012 12:06:24 AM
Surr: BFB	98.8	84-116		%REC	1	8/11/2012 12:06:24 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.049		mg/Kg	1	8/11/2012 12:06:24 AM
Toluene	ND	0.049		mg/Kg	1	8/11/2012 12:06:24 AM
Ethylbenzene	ND	0.049		mg/Kg	1	8/11/2012 12:06:24 AM
Xylenes, Total	ND	0.099		mg/Kg	1	8/11/2012 12:06:24 AM
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	8/11/2012 12:06:24 AM

**Qualifiers:**

- \*X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 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
- RL Reporting Detection Limit
- U Samples with CalcVal < MDL



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1208371

Date Reported: 8/15/2012

**CLIENT:** Animas Environmental Services

**Client Sample ID:** SC-4

**Project:** Enterprise Lateral 2B-24 Excavation #1

**Collection Date:** 8/6/2012 10:53:00 AM

**Lab ID:** 1208371-004

**Matrix:** SOIL

**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/10/2012 9:29:44 AM
Surr: DNOP	96.9	77.6-140		%REC	1	8/10/2012 9:29:44 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/11/2012 12:35:04 AM
Surr: BFB	97.6	84-116		%REC	1	8/11/2012 12:35:04 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.048		mg/Kg	1	8/11/2012 12:35:04 AM
Toluene	ND	0.048		mg/Kg	1	8/11/2012 12:35:04 AM
Ethylbenzene	ND	0.048		mg/Kg	1	8/11/2012 12:35:04 AM
Xylenes, Total	ND	0.096		mg/Kg	1	8/11/2012 12:35:04 AM
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	8/11/2012 12:35:04 AM

**Qualifiers:** \* / X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit  
U Samples with CalcVal < MDL

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1208371

Date Reported: 8/15/2012

**CLIENT:** Animas Environmental Services

**Client Sample ID:** SC-5

**Project:** Enterprise Lateral 2B-24 Excavation #1

**Collection Date:** 8/6/2012 10:54:00 AM

**Lab ID:** 1208371-005

**Matrix:** SOIL

**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/10/2012 10:41:22 AM
Surr: DNOP	99.3	77.6-140		%REC	1	8/10/2012 10:41:22 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/11/2012 1:03:44 AM
Surr: BFB	98.5	84-116		%REC	1	8/11/2012 1:03:44 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.047		mg/Kg	1	8/11/2012 1:03:44 AM
Toluene	ND	0.047		mg/Kg	1	8/11/2012 1:03:44 AM
Ethylbenzene	ND	0.047		mg/Kg	1	8/11/2012 1:03:44 AM
Xylenes, Total	ND	0.094		mg/Kg	1	8/11/2012 1:03:44 AM
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	8/11/2012 1:03:44 AM

**Qualifiers:**

- \* / X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 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
- RL Reporting Detection Limit
- U Samples with CalcVal < MDL

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1208371

Date Reported: 8/15/2012

**CLIENT:** Animas Environmental Services

**Client Sample ID:** SC-6

**Project:** Enterprise Lateral 2B-24 Excavation #1

**Collection Date:** 8/6/2012 10:55:00 AM

**Lab ID:** 1208371-006

**Matrix:** SOIL

**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JPM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/10/2012 11:54:47 AM
Surr: DNOP	99.2	77.6-140		%REC	1	8/10/2012 11:54:47 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/11/2012 1:32:22 AM
Surr: BFB	99.5	84-116		%REC	1	8/11/2012 1:32:22 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.048		mg/Kg	1	8/11/2012 1:32:22 AM
Toluene	ND	0.048		mg/Kg	1	8/11/2012 1:32:22 AM
Ethylbenzene	ND	0.048		mg/Kg	1	8/11/2012 1:32:22 AM
Xylenes, Total	ND	0.097		mg/Kg	1	8/11/2012 1:32:22 AM
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	8/11/2012 1:32:22 AM

**Qualifiers:** \*X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit  
U Samples with CalcVal < MDL



# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental Services **Client Sample ID:** SC-7  
**Project:** Enterprise Lateral 2B-24 Excavation #1 **Collection Date:** 8/6/2012 10:57:00 AM  
**Lab ID:** 1208371-007 **Matrix:** SOIL **Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JPM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/10/2012 12:17:02 PM
Surr: DNOP	101	77.6-140		%REC	1	8/10/2012 12:17:02 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/11/2012 2:01:06 AM
Surr: BFB	99.7	84-116		%REC	1	8/11/2012 2:01:06 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.047		mg/Kg	1	8/11/2012 2:01:06 AM
Toluene	ND	0.047		mg/Kg	1	8/11/2012 2:01:06 AM
Ethylbenzene	ND	0.047		mg/Kg	1	8/11/2012 2:01:06 AM
Xylenes, Total	ND	0.094		mg/Kg	1	8/11/2012 2:01:06 AM
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	8/11/2012 2:01:06 AM

<b>Qualifiers:</b>	*X	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
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits	U	Samples with CalcVal < MDL

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 1208371

Date Reported: 8/15/2012

**CLIENT:** Animas Environmental Services**Client Sample ID:** SC-8**Project:** Enterprise Lateral 2B-24 Excavation #1**Collection Date:** 8/6/2012 11:00:00 AM**Lab ID:** 1208371-008**Matrix:** SOIL**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/10/2012 12:39:12 PM
Surr: DNOP	103	77.6-140		%REC	1	8/10/2012 12:39:12 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/11/2012 2:29:52 AM
Surr: BFB	98.3	84-116		%REC	1	8/11/2012 2:29:52 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.050		mg/Kg	1	8/11/2012 2:29:52 AM
Toluene	ND	0.050		mg/Kg	1	8/11/2012 2:29:52 AM
Ethylbenzene	ND	0.050		mg/Kg	1	8/11/2012 2:29:52 AM
Xylenes, Total	ND	0.10		mg/Kg	1	8/11/2012 2:29:52 AM
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	8/11/2012 2:29:52 AM

**Qualifiers:** \* / X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit  
U Samples with CalcVal < MDL

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 1208371

Date Reported: 8/15/2012

**CLIENT:** Animas Environmental Services**Client Sample ID:** SC-9**Project:** Enterprise Lateral 2B-24 Excavation #1**Collection Date:** 8/6/2012 11:55:00 AM**Lab ID:** 1208371-009**Matrix:** SOIL**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	120	100		mg/Kg	10	8/12/2012 4:20:52 AM
Surr: DNOP	0	77.6-140	S	%REC	10	8/12/2012 4:20:52 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/14/2012 12:03:31 PM
Surr: BFB	96.1	84-116		%REC	1	8/14/2012 12:03:31 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.049		mg/Kg	1	8/14/2012 12:03:31 PM
Toluene	ND	0.049		mg/Kg	1	8/14/2012 12:03:31 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/14/2012 12:03:31 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/14/2012 12:03:31 PM
Surr: 4-Bromofluorobenzene	99.5	80-120		%REC	1	8/14/2012 12:03:31 PM

**Qualifiers:**   \*/X   Value exceeds Maximum Contaminant Level.  
                  E    Value above quantitation range  
                  J    Analyte detected below quantitation limits  
                  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  
RL   Reporting Detection Limit  
U   Samples with CalcVal < MDL



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1208371

Date Reported: 8/15/2012

CLIENT: Animas Environmental Services

Client Sample ID: SC-10

Project: Enterprise Lateral 2B-24 Excavation #1

Collection Date: 8/6/2012 11:56:00 AM

Lab ID: 1208371-010

Matrix: SOIL

Received Date: 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	49		mg/Kg	5	8/13/2012 11:15:27 AM
Surr: DNOP	0	77.6-140	S	%REC	5	8/13/2012 11:15:27 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/14/2012 12:32:18 PM
Surr: BFB	96.5	84-116		%REC	1	8/14/2012 12:32:18 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	8/14/2012 12:32:18 PM
Toluene	ND	0.048		mg/Kg	1	8/14/2012 12:32:18 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/14/2012 12:32:18 PM
Xylenes, Total	ND	0.095		mg/Kg	1	8/14/2012 12:32:18 PM
Surr: 4-Bromofluorobenzene	99.0	80-120		%REC	1	8/14/2012 12:32:18 PM

**Qualifiers:** \*X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit  
U Samples with CalcVal < MDL

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1208371  
15-Aug-12

**Client:** Animas Environmental Services  
**Project:** Enterprise Lateral 2B-24 Excavation #1

Sample ID <b>MB-3256</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015B: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>3256</b>	RunNo: <b>4749</b>								
Prep Date: <b>8/9/2012</b>	Analysis Date: <b>8/9/2012</b>	SeqNo: <b>133973</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	9.4		10.00		94.3	77.6	140			

Sample ID <b>LCS-3256</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015B: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>3256</b>	RunNo: <b>4749</b>								
Prep Date: <b>8/9/2012</b>	Analysis Date: <b>8/9/2012</b>	SeqNo: <b>133997</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	37	10	50.00	0	73.9	52.6	130			
Surr: DNOP	3.9		5.000		78.2	77.6	140			

Sample ID <b>MB-3262</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015B: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>3262</b>	RunNo: <b>4775</b>								
Prep Date: <b>8/9/2012</b>	Analysis Date: <b>8/10/2012</b>	SeqNo: <b>134715</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	10		10.00		100	77.6	140			

Sample ID <b>LCS-3262</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015B: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>3262</b>	RunNo: <b>4775</b>								
Prep Date: <b>8/9/2012</b>	Analysis Date: <b>8/10/2012</b>	SeqNo: <b>134717</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	10	50.00	0	79.5	52.6	130			
Surr: DNOP	5.1		5.000		102	77.6	140			

### Qualifiers:

\* /X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD 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  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1208371

15-Aug-12

Client: Animas Environmental Services

Project: Enterprise Lateral 2B-24 Excavation #1

Sample ID	MB-3261	SampType:	MBLK	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	PBS	Batch ID:	3261	RunNo:	4807					
Prep Date:	8/9/2012	Analysis Date:	8/10/2012	SeqNo:	135513	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	990		1000		98.8	84	116			

Sample ID	LCS-3261	SampType:	LCS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	LCSS	Batch ID:	3261	RunNo:	4807					
Prep Date:	8/9/2012	Analysis Date:	8/10/2012	SeqNo:	135517	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	88.1	85	115			
Surr: BFB	1000		1000		102	84	116			

### Qualifiers:

\*X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD 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  
RL Reporting Detection Limit



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1208371

15-Aug-12

Client: Animas Environmental Services

Project: Enterprise Lateral 2B-24 Excavation #1

Sample ID	<b>MB-3261</b>		SampType:	<b>MBLK</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>PBS</b>		Batch ID:	<b>3261</b>		RunNo:	<b>4807</b>			
Prep Date:	<b>8/9/2012</b>		Analysis Date:	<b>8/10/2012</b>		SeqNo:	<b>135539</b>		Units: <b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		105	80	120			

Sample ID	<b>LCS-3261</b>		SampType:	<b>LCS</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>LCSS</b>		Batch ID:	<b>3261</b>		RunNo:	<b>4807</b>			
Prep Date:	<b>8/9/2012</b>		Analysis Date:	<b>8/10/2012</b>		SeqNo:	<b>135543</b>		Units: <b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.050	1.000	0	92.8	76.3	117			
Toluene	0.94	0.050	1.000	0	94.4	80	120			
Ethylbenzene	0.96	0.050	1.000	0	96.4	77	116			
Xylenes, Total	2.9	0.10	3.000	0	97.3	76.7	117			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

### Qualifiers:

\* / X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD 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  
RL Reporting Detection Limit

## Sample Log-In Check List

Client Name: **Animas Environmental**

Work Order Number: **1208371**

Received by/date: *LS*

*08/08/12*

Logged By: **Lindsay Mangin**

**8/8/2012 9:55:00 AM**

*Andy Mayo*

Completed By: **Lindsay Mangin**

**8/8/2012 3:46:16 PM**

*Andy Mayo*

Reviewed By: *mg*

*08/09/12*

### Chain of Custody

1. Were seals intact? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

### Log In

4. Coolers are present? (see 19. for cooler specific information) Yes ☒ No ☐ NA ☐
5. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
6. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☒ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
10. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
11. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
12. Were any sample containers received broken? Yes ☐ No ☒
13. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐ # of preserved bottles checked for pH: ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐ ( $<2$  or  $>12$  unless noted)
15. Is it clear what analyses were requested? Yes ☒ No ☐ Adjusted? ☐
16. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐ Checked by: ☐

### Special Handling (if applicable)

17. 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:

18. Additional remarks:

### 19. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.0	Good	Yes			







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

August 13, 2012

Tami Ross

Animas Environmental Services  
624 East Comanche  
Farmington, NM 87401  
TEL: (505) 793-2072  
FAX

RE: Enterprise Lateral 2B-24 Release #3

OrderNo.: 1208369

Dear Tami Ross:

Hall Environmental Analysis Laboratory received 2 sample(s) on 8/8/2012 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. 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. 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.

Sincerely,

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1208369

Date Reported: 8/13/2012

CLIENT: Animas Environmental Services

Client Sample ID: SC-1

Project: Enterprise Lateral 2B-24 Release #3

Collection Date: 8/6/2012 3:16:00 PM

Lab ID: 1208369-001

Matrix: SOIL

Received Date: 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/10/2012 8:48:09 AM
Surr: DNOP	107	77.6-140		%REC	1	8/10/2012 8:48:09 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/10/2012 4:26:22 PM
Surr: BFB	103	84-116		%REC	1	8/10/2012 4:26:22 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.047		mg/Kg	1	8/10/2012 4:26:22 PM
Toluene	ND	0.047		mg/Kg	1	8/10/2012 4:26:22 PM
Ethylbenzene	ND	0.047		mg/Kg	1	8/10/2012 4:26:22 PM
Xylenes, Total	ND	0.094		mg/Kg	1	8/10/2012 4:26:22 PM
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	8/10/2012 4:26:22 PM

**Qualifiers:** \*/X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit  
U Samples with CalcVal < MDL

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1208369

Date Reported: 8/13/2012

**CLIENT:** Animas Environmental Services

**Client Sample ID:** SC-2

**Project:** Enterprise Lateral 2B-24 Release #3

**Collection Date:** 8/6/2012 3:18:00 PM

**Lab ID:** 1208369-002

**Matrix:** SOIL

**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/10/2012 9:13:28 AM
Surr: DNOP	109	77.6-140		%REC	1	8/10/2012 9:13:28 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/10/2012 4:55:05 PM
Surr: BFB	101	84-116		%REC	1	8/10/2012 4:55:05 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.047		mg/Kg	1	8/10/2012 4:55:05 PM
Toluene	ND	0.047		mg/Kg	1	8/10/2012 4:55:05 PM
Ethylbenzene	ND	0.047		mg/Kg	1	8/10/2012 4:55:05 PM
Xylenes, Total	ND	0.094		mg/Kg	1	8/10/2012 4:55:05 PM
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	8/10/2012 4:55:05 PM

**Qualifiers:**

- \*X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 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
- RL Reporting Detection Limit
- U Samples with CalcVal < MDL



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1208369

13-Aug-12

Client: Animas Environmental Services  
Project: Enterprise Lateral 2B-24 Release #3

Sample ID	MB-3256	SampType:	MBLK	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	PBS	Batch ID:	3256	RunNo:	4749					
Prep Date:	8/9/2012	Analysis Date:	8/9/2012	SeqNo:	133973	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		94.3	77.6	140			

Sample ID	LCS-3256	SampType:	LCS	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	3256	RunNo:	4749					
Prep Date:	8/9/2012	Analysis Date:	8/9/2012	SeqNo:	133997	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	37	10	50.00	0	73.9	52.6	130			
Surr: DNOP	3.9		5.000		78.2	77.6	140			

### Qualifiers:

\*/X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD 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  
RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208369

13-Aug-12

Client: Animas Environmental Services

Project: Enterprise Lateral 2B-24 Release #3

Sample ID	MB-3261	SampType:	MBLK	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	PBS	Batch ID:	3261	RunNo:	4807					
Prep Date:	8/9/2012	Analysis Date:	8/10/2012	SeqNo:	135513	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	990		1000		98.8	84	116			

Sample ID	LCS-3261	SampType:	LCS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	LCSS	Batch ID:	3261	RunNo:	4807					
Prep Date:	8/9/2012	Analysis Date:	8/10/2012	SeqNo:	135517	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	88.1	85	115			
Surr: BFB	1000		1000		102	84	116			

## Qualifiers:

\* / X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD 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  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1208369

13-Aug-12

**Client:** Animas Environmental Services  
**Project:** Enterprise Lateral 2B-24 Release #3

Sample ID	<b>MB-3261</b>		SampType:	<b>MBLK</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>PBS</b>		Batch ID:	<b>3261</b>		RunNo:	<b>4807</b>			
Prep Date:	<b>8/9/2012</b>		Analysis Date:	<b>8/10/2012</b>		SeqNo:	<b>135539</b>		Units: <b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		105	80	120			

Sample ID	<b>LCS-3261</b>		SampType:	<b>LCS</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>LCSS</b>		Batch ID:	<b>3261</b>		RunNo:	<b>4807</b>			
Prep Date:	<b>8/9/2012</b>		Analysis Date:	<b>8/10/2012</b>		SeqNo:	<b>135543</b>		Units: <b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.050	1.000	0	92.8	76.3	117			
Toluene	0.94	0.050	1.000	0	94.4	80	120			
Ethylbenzene	0.96	0.050	1.000	0	96.4	77	116			
Xylenes, Total	2.9	0.10	3.000	0	97.3	76.7	117			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

### Qualifiers:

\* / X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD 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  
RL Reporting Detection Limit



## Sample Log-In Check List

Client Name: **Animas Environmental**

Work Order Number: **1208369**

Received by/date: *AS*

*08/08/12*

Logged By: **Lindsay Mangin**

**8/8/2012 9:55:00 AM**

*Judy H. Mangin*

Completed By: **Lindsay Mangin**

**8/8/2012 3:36:08 PM**

*Judy H. Mangin*

Reviewed By: *mg*

*08/09/12*

### Chain of Custody

1. Were seals intact?
2. Is Chain of Custody complete?
3. How was the sample delivered?

Yes ☐ No ☐ Not Present ☒

Yes ☒ No ☐ Not Present ☐

Courier

### Log In

4. Coolers are present? (see 19. for cooler specific information)

Yes ☒ No ☐ NA ☐

5. Was an attempt made to cool the samples?

Yes ☒ No ☐ NA ☐

6. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$

Yes ☒ No ☐ NA ☐

7. Sample(s) in proper container(s)?

Yes ☒ No ☐

8. Sufficient sample volume for indicated test(s)?

Yes ☒ No ☐

9. Are samples (except VOA and ONG) properly preserved?

Yes ☒ No ☐

10. Was preservative added to bottles?

Yes ☐ No ☒ NA ☐

11. VOA vials have zero headspace?

Yes ☐ No ☐ No VOA Vials ☒

12. Were any sample containers received broken?

Yes ☐ No ☒

13. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody)

Yes ☒ No ☐

# of preserved  
bottles checked  
for pH:

14. Are matrices correctly identified on Chain of Custody?

Yes ☒ No ☐

(<2 or >12 unless noted)

15. Is it clear what analyses were requested?

Yes ☒ No ☐

Adjusted?

16. Were all holding times able to be met?

Yes ☒ No ☐

(If no, notify customer for authorization.)

Checked by:

### Special Handling (if applicable)

17. 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: \_\_\_\_\_

18. Additional remarks:

### 19. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.0	Good	Yes			

Client: Aringo Env. Services

Mailing Address: 624 E Comanche

Farmington, NM

Phone #: 505-564-2481

email or Fax#:

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

## Accreditation

☐ NELAP☐ Other☐ EDD (Type)

Turn-Around Time:

☒ Standard ☐ Rush

Project Name: Enterprise Lateral  
OB-24 Release #3

Project #:

**Project Manager:**

Tami Ross

Sampler: *Thomas Long*

**Choice**

### Sample restrictions

[illegible]

Date:	Time:	Relinquished by:
-------	-------	------------------

8	7	12	1737
---	---	----	------

Relinquished by:

*Harry F.*

Received by:

Christie Walter

Date	Time
------	------

8/7/12 17.37

Remarks:

## Bill 70 Enterprise

Date:	Time:
-------	-------

8/7/12 1258

Relinquished by:

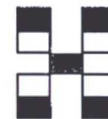
Robert Wall

Received by:



Date \_\_\_\_\_ Time \_\_\_\_\_

08/12/1955



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

[illegible]

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



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

August 13, 2012

Tami Ross

Animas Environmental Services  
624 East Comanche  
Farmington, NM 87401  
TEL: (505) 793-2072  
FAX

RE: Enterprise Lateral 2B-24 Excavation #2

OrderNo.: 1208372

Dear Tami Ross:

Hall Environmental Analysis Laboratory received 14 sample(s) on 8/8/2012 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. 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. 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.

Sincerely,

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental Services

**Client Sample ID:** SC-1

**Project:** Enterprise Lateral 2B-24 Excavation #2

**Collection Date:** 8/6/2012 1:02:00 PM

**Lab ID:** 1208372-001

**Matrix:** SOIL

**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/10/2012 1:01:41 PM
Surr: DNOP	103	77.6-140		%REC	1	8/10/2012 1:01:41 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/10/2012 2:11:12 PM
Surr: BFB	96.0	84-116		%REC	1	8/10/2012 2:11:12 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.049		mg/Kg	1	8/10/2012 2:11:12 PM
Toluene	ND	0.049		mg/Kg	1	8/10/2012 2:11:12 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/10/2012 2:11:12 PM
Xylenes, Total	ND	0.099		mg/Kg	1	8/10/2012 2:11:12 PM
Surr: 4-Bromofluorobenzene	101	80-120		%REC	1	8/10/2012 2:11:12 PM

**Qualifiers:**

- \* /X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 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
- RL Reporting Detection Limit
- U Samples with CalcVal < MDL

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1208372

Date Reported: 8/13/2012

CLIENT: Animas Environmental Services

Client Sample ID: SC-2

Project: Enterprise Lateral 2B-24 Excavation #2

Collection Date: 8/6/2012 1:03:00 PM

Lab ID: 1208372-002

Matrix: SOIL

Received Date: 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	170	50		mg/Kg	5	8/13/2012 12:21:26 PM
Surr: DNOP	0	77.6-140	S	%REC	5	8/13/2012 12:21:26 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/10/2012 7:13:33 PM
Surr: BFB	105	84-116		%REC	1	8/10/2012 7:13:33 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.046		mg/Kg	1	8/10/2012 7:13:33 PM
Toluene	ND	0.046		mg/Kg	1	8/10/2012 7:13:33 PM
Ethylbenzene	ND	0.046		mg/Kg	1	8/10/2012 7:13:33 PM
Xylenes, Total	ND	0.092		mg/Kg	1	8/10/2012 7:13:33 PM
Surr: 4-Bromofluorobenzene	111	80-120		%REC	1	8/10/2012 7:13:33 PM

**Qualifiers:** \*X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit  
U Samples with CalcVal < MDL

**Analytical Report**

Lab Order 1208372

Date Reported: 8/13/2012

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Animas Environmental Services**Client Sample ID:** SC-3**Project:** Enterprise Lateral 2B-24 Excavation #2**Collection Date:** 8/6/2012 1:04:00 PM**Lab ID:** 1208372-003**Matrix:** SOIL**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/10/2012 1:26:03 PM
Surr: DNOP	103	77.6-140		%REC	1	8/10/2012 1:26:03 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/10/2012 3:42:02 PM
Surr: BFB	82.2	84-116	S	%REC	1	8/10/2012 3:42:02 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.049		mg/Kg	1	8/10/2012 3:42:02 PM
Toluene	ND	0.049		mg/Kg	1	8/10/2012 3:42:02 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/10/2012 3:42:02 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/10/2012 3:42:02 PM
Surr: 4-Bromofluorobenzene	84.4	80-120		%REC	1	8/10/2012 3:42:02 PM

**Qualifiers:**   \*/X   Value exceeds Maximum Contaminant Level.  
                  E    Value above quantitation range  
                  J    Analyte detected below quantitation limits  
                  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  
RL  Reporting Detection Limit  
U   Samples with CalcVal < MDL



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1208372

Date Reported: 8/13/2012

CLIENT: Animas Environmental Services

Client Sample ID: SC-4

Project: Enterprise Lateral 2B-24 Excavation #2

Collection Date: 8/6/2012 1:05:00 PM

Lab ID: 1208372-004

Matrix: SOIL

Received Date: 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/10/2012 1:48:25 PM
Surr: DNOP	103	77.6-140		%REC	1	8/10/2012 1:48:25 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/10/2012 4:12:09 PM
Surr: BFB	98.9	84-116		%REC	1	8/10/2012 4:12:09 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.049		mg/Kg	1	8/10/2012 4:12:09 PM
Toluene	ND	0.049		mg/Kg	1	8/10/2012 4:12:09 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/10/2012 4:12:09 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/10/2012 4:12:09 PM
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	8/10/2012 4:12:09 PM

**Qualifiers:** \* / X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit  
U Samples with CalcVal < MDL

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1208372

Date Reported: 8/13/2012

**CLIENT:** Animas Environmental Services

**Client Sample ID:** SC-5

**Project:** Enterprise Lateral 2B-24 Excavation #2

**Collection Date:** 8/6/2012 1:06:00 PM

**Lab ID:** 1208372-005

**Matrix:** SOIL

**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	12	10		mg/Kg	1	8/10/2012 2:10:52 PM
Surr: DNOP	109	77.6-140		%REC	1	8/10/2012 2:10:52 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/10/2012 4:42:23 PM
Surr: BFB	103	84-116		%REC	1	8/10/2012 4:42:23 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.046		mg/Kg	1	8/10/2012 4:42:23 PM
Toluene	ND	0.046		mg/Kg	1	8/10/2012 4:42:23 PM
Ethylbenzene	ND	0.046		mg/Kg	1	8/10/2012 4:42:23 PM
Xylenes, Total	ND	0.092		mg/Kg	1	8/10/2012 4:42:23 PM
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	8/10/2012 4:42:23 PM

**Qualifiers:** \*/X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit  
U Samples with CalcVal < MDL

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1208372

Date Reported: 8/13/2012

CLIENT: Animas Environmental Services

Client Sample ID: SC-6

Project: Enterprise Lateral 2B-24 Excavation #2

Collection Date: 8/6/2012 1:07:00 PM

Lab ID: 1208372-006

Matrix: SOIL

Received Date: 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	35	10		mg/Kg	1	8/13/2012 10:09:45 AM
Surr: DNOP	108	77.6-140		%REC	1	8/13/2012 10:09:45 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/10/2012 5:12:35 PM
Surr: BFB	92.0	84-116		%REC	1	8/10/2012 5:12:35 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.047		mg/Kg	1	8/10/2012 5:12:35 PM
Toluene	ND	0.047		mg/Kg	1	8/10/2012 5:12:35 PM
Ethylbenzene	ND	0.047		mg/Kg	1	8/10/2012 5:12:35 PM
Xylenes, Total	ND	0.094		mg/Kg	1	8/10/2012 5:12:35 PM
Surr: 4-Bromofluorobenzene	93.9	80-120		%REC	1	8/10/2012 5:12:35 PM

**Qualifiers:** \*/X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit  
U Samples with CalcVal < MDL



# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental Services

**Client Sample ID:** SC-7

**Project:** Enterprise Lateral 2B-24 Excavation #2

**Collection Date:** 8/6/2012 1:08:00 PM

**Lab ID:** 1208372-007

**Matrix:** SOIL

**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/10/2012 2:33:10 PM
Surr: DNOP	102	77.6-140		%REC	1	8/10/2012 2:33:10 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/10/2012 5:42:44 PM
Surr: BFB	82.2	84-116	S	%REC	1	8/10/2012 5:42:44 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.050		mg/Kg	1	8/10/2012 5:42:44 PM
Toluene	ND	0.050		mg/Kg	1	8/10/2012 5:42:44 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/10/2012 5:42:44 PM
Xylenes, Total	ND	0.099		mg/Kg	1	8/10/2012 5:42:44 PM
Surr: 4-Bromofluorobenzene	86.2	80-120		%REC	1	8/10/2012 5:42:44 PM

**Qualifiers:**

- \* /X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 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
- RL Reporting Detection Limit
- U Samples with CalcVal < MDL

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Animas Environmental Services **Client Sample ID:** SC-8  
**Project:** Enterprise Lateral 2B-24 Excavation #2 **Collection Date:** 8/6/2012 1:09:00 PM  
**Lab ID:** 1208372-008 **Matrix:** SOIL **Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/10/2012 3:18:03 PM
Surr: DNOP	101	77.6-140		%REC	1	8/10/2012 3:18:03 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/10/2012 6:13:12 PM
Surr: BFB	82.2	84-116	S	%REC	1	8/10/2012 6:13:12 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.048		mg/Kg	1	8/10/2012 6:13:12 PM
Toluene	ND	0.048		mg/Kg	1	8/10/2012 6:13:12 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/10/2012 6:13:12 PM
Xylenes, Total	ND	0.096		mg/Kg	1	8/10/2012 6:13:12 PM
Surr: 4-Bromofluorobenzene	86.6	80-120		%REC	1	8/10/2012 6:13:12 PM

<b>Qualifiers:</b>	*X	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
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits	U	Samples with CalcVal < MDL

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental Services

**Client Sample ID:** SC-9

**Project:** Enterprise Lateral 2B-24 Excavation #2

**Collection Date:** 8/6/2012 1:10:00 PM

**Lab ID:** 1208372-009

**Matrix:** SOIL

**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/13/2012 8:20:44 AM
Surr: DNOP	96.5	77.6-140		%REC	1	8/13/2012 8:20:44 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/10/2012 6:43:15 PM
Surr: BFB	99.4	84-116		%REC	1	8/10/2012 6:43:15 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.046		mg/Kg	1	8/10/2012 6:43:15 PM
Toluene	ND	0.046		mg/Kg	1	8/10/2012 6:43:15 PM
Ethylbenzene	ND	0.046		mg/Kg	1	8/10/2012 6:43:15 PM
Xylenes, Total	ND	0.092		mg/Kg	1	8/10/2012 6:43:15 PM
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	8/10/2012 6:43:15 PM

**Qualifiers:**

- \* /X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- 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
- RL Reporting Detection Limit
- U Samples with CalcVal < MDL



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1208372

Date Reported: 8/13/2012

CLIENT: Animas Environmental Services

Client Sample ID: SC-10

Project: Enterprise Lateral 2B-24 Excavation #2

Collection Date: 8/6/2012 1:11:00 PM

Lab ID: 1208372-010

Matrix: SOIL

Received Date: 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/13/2012 8:42:27 AM
Surr: DNOP	96.5	77.6-140		%REC	1	8/13/2012 8:42:27 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/10/2012 11:15:10 PM
Surr: BFB	99.5	84-116		%REC	1	8/10/2012 11:15:10 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: RAA
Benzene	ND	0.049		mg/Kg	1	8/10/2012 11:15:10 PM
Toluene	ND	0.049		mg/Kg	1	8/10/2012 11:15:10 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/10/2012 11:15:10 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/10/2012 11:15:10 PM
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	8/10/2012 11:15:10 PM

**Qualifiers:** \*X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit  
U Samples with CalcVal < MDL

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental Services **Client Sample ID:** SC-11  
**Project:** Enterprise Lateral 2B-24 Excavation #2 **Collection Date:** 8/6/2012 1:12:00 PM  
**Lab ID:** 1208372-011 **Matrix:** SOIL **Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/10/2012 3:40:39 PM
Surr: DNOP	103	77.6-140		%REC	1	8/10/2012 3:40:39 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/10/2012 11:45:24 PM
Surr: BFB	95.0	84-116		%REC	1	8/10/2012 11:45:24 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.047		mg/Kg	1	8/10/2012 11:45:24 PM
Toluene	ND	0.047		mg/Kg	1	8/10/2012 11:45:24 PM
Ethylbenzene	ND	0.047		mg/Kg	1	8/10/2012 11:45:24 PM
Xylenes, Total	ND	0.093		mg/Kg	1	8/10/2012 11:45:24 PM
Surr: 4-Bromofluorobenzene	99.9	80-120		%REC	1	8/10/2012 11:45:24 PM

<b>Qualifiers:</b>	* / X	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
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits	U	Samples with CalcVal < MDL

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 1208372

Date Reported: 8/13/2012

**CLIENT:** Animas Environmental Services**Client Sample ID:** SC-12**Project:** Enterprise Lateral 2B-24 Excavation #2**Collection Date:** 8/6/2012 1:13:00 PM**Lab ID:** 1208372-012**Matrix:** SOIL**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/10/2012 4:03:10 PM
Surr: DNOP	100	77.6-140		%REC	1	8/10/2012 4:03:10 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/11/2012 12:15:27 AM
Surr: BFB	100	84-116		%REC	1	8/11/2012 12:15:27 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.046		mg/Kg	1	8/11/2012 12:15:27 AM
Toluene	ND	0.046		mg/Kg	1	8/11/2012 12:15:27 AM
Ethylbenzene	ND	0.046		mg/Kg	1	8/11/2012 12:15:27 AM
Xylenes, Total	ND	0.093		mg/Kg	1	8/11/2012 12:15:27 AM
Surr: 4-Bromofluorobenzene	106	80-120		%REC	1	8/11/2012 12:15:27 AM

**Qualifiers:**   \*/X   Value exceeds Maximum Contaminant Level.  
                  E    Value above quantitation range  
                  J    Analyte detected below quantitation limits  
                  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  
                  RL   Reporting Detection Limit  
                  U    Samples with CalcVal < MDL



**Analytical Report**

Lab Order 1208372

Date Reported: 8/13/2012

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Animas Environmental Services**Client Sample ID:** SC-13**Project:** Enterprise Lateral 2B-24 Excavation #2**Collection Date:** 8/6/2012 1:14:00 PM**Lab ID:** 1208372-013**Matrix:** SOIL**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/10/2012 4:25:43 PM
Surr: DNOP	98.5	77.6-140		%REC	1	8/10/2012 4:25:43 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/11/2012 12:45:31 AM
Surr: BFB	92.9	84-116		%REC	1	8/11/2012 12:45:31 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.049		mg/Kg	1	8/11/2012 12:45:31 AM
Toluene	ND	0.049		mg/Kg	1	8/11/2012 12:45:31 AM
Ethylbenzene	ND	0.049		mg/Kg	1	8/11/2012 12:45:31 AM
Xylenes, Total	ND	0.097		mg/Kg	1	8/11/2012 12:45:31 AM
Surr: 4-Bromofluorobenzene	97.6	80-120		%REC	1	8/11/2012 12:45:31 AM

**Qualifiers:** \* / X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit  
U Samples with CalcVal < MDL

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 1208372

Date Reported: 8/13/2012

**CLIENT:** Animas Environmental Services**Client Sample ID:** SC-14**Project:** Enterprise Lateral 2B-24 Excavation #2**Collection Date:** 8/6/2012 1:15:00 PM**Lab ID:** 1208372-014**Matrix:** SOIL**Received Date:** 8/8/2012 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/10/2012 4:48:13 PM
Surr: DNOP	105	77.6-140		%REC	1	8/10/2012 4:48:13 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>RAA</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/11/2012 1:15:32 AM
Surr: BFB	111	84-116		%REC	1	8/11/2012 1:15:32 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>RAA</b>
Benzene	ND	0.049		mg/Kg	1	8/11/2012 1:15:32 AM
Toluene	ND	0.049		mg/Kg	1	8/11/2012 1:15:32 AM
Ethylbenzene	ND	0.049		mg/Kg	1	8/11/2012 1:15:32 AM
Xylenes, Total	ND	0.097		mg/Kg	1	8/11/2012 1:15:32 AM
Surr: 4-Bromofluorobenzene	116	80-120		%REC	1	8/11/2012 1:15:32 AM

**Qualifiers:**   \*/X   Value exceeds Maximum Contaminant Level.  
                  E    Value above quantitation range  
                  J    Analyte detected below quantitation limits  
                  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  
                  RL   Reporting Detection Limit  
                  U    Samples with CalcVal < MDL

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1208372

13-Aug-12

Client: Animas Environmental Services

Project: Enterprise Lateral 2B-24 Excavation #2

Sample ID	MB-3264	SampType:	MBLK	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	PBS	Batch ID:	3264	RunNo:	4775					
Prep Date:	8/9/2012	Analysis Date:	8/10/2012	SeqNo:	134569	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
I Range Organics (DRO)	ND	10								
Surr: DNOP	9.7		10.00		96.9	77.6	140			

Sample ID	LCS-3264	SampType:	LCS	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	3264	RunNo:	4775					
Prep Date:	8/9/2012	Analysis Date:	8/10/2012	SeqNo:	134693	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
I Range Organics (DRO)	38	10	50.00	0	76.0	52.6	130			
Surr: DNOP	5.3		5.000		106	77.6	140			

Sample ID	MB-3262	SampType:	MBLK	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	PBS	Batch ID:	3262	RunNo:	4775					
Prep Date:	8/9/2012	Analysis Date:	8/10/2012	SeqNo:	134715	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
I Range Organics (DRO)	ND	10								
Surr: DNOP	10		10.00		100	77.6	140			

Sample ID	LCS-3262	SampType:	LCS	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	3262	RunNo:	4775					
Prep Date:	8/9/2012	Analysis Date:	8/10/2012	SeqNo:	134717	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
I Range Organics (DRO)	40	10	50.00	0	79.5	52.6	130			
Surr: DNOP	5.1		5.000		102	77.6	140			

Sample ID	MB-3288	SampType:	MBLK	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	PBS	Batch ID:	3288	RunNo:	4810					
Prep Date:	8/13/2012	Analysis Date:	8/13/2012	SeqNo:	135920	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.7		10.00		97.5	77.6	140			

Sample ID	LCS-3288	SampType:	LCS	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	3288	RunNo:	4810					
Prep Date:	8/13/2012	Analysis Date:	8/13/2012	SeqNo:	135921	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.2		5.000		83.6	77.6	140			

### Qualifiers:

\* /X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD 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  
RL Reporting Detection Limit



# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208372

13-Aug-12

Client: Animas Environmental Services

Project: Enterprise Lateral 2B-24 Excavation #2

Sample ID	MB-3263	SampType:	MBLK	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	PBS	Batch ID:	3263	RunNo:	4788					
Prep Date:	8/9/2012	Analysis Date:	8/10/2012	SeqNo:	135570	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	830		1000		82.6	84	116			S

Sample ID	LCS-3263	SampType:	LCS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	LCSS	Batch ID:	3263	RunNo:	4788					
Prep Date:	8/9/2012	Analysis Date:	8/10/2012	SeqNo:	135574	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	88.4	85	115			
Surr: BFB	1000		1000		101	84	116			

## Qualifiers:

\*X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD 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  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1208372  
13-Aug-12

**Client:** Animas Environmental Services  
**Project:** Enterprise Lateral 2B-24 Excavation #2

Sample ID	<b>MB-3263</b>		SampType:	<b>MBLK</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>PBS</b>		Batch ID:	<b>3263</b>		RunNo:	<b>4788</b>			
Prep Date:	<b>8/9/2012</b>		Analysis Date:	<b>8/10/2012</b>		SeqNo:	<b>135596</b>		Units: <b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.89		1.000		88.5	80	120			

Sample ID	<b>LCS-3263</b>		SampType:	<b>LCS</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>LCSS</b>		Batch ID:	<b>3263</b>		RunNo:	<b>4788</b>			
Prep Date:	<b>8/9/2012</b>		Analysis Date:	<b>8/10/2012</b>		SeqNo:	<b>135600</b>		Units: <b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.050	1.000	0	91.7	76.3	117			
Toluene	0.94	0.050	1.000	0	94.2	80	120			
Ethylbenzene	0.96	0.050	1.000	0	96.2	77	116			
Xylenes, Total	2.9	0.10	3.000	0	97.8	76.7	117			
Surr: 4-Bromofluorobenzene	0.99		1.000		98.8	80	120			

### Qualifiers:

\* / X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD 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  
RL Reporting Detection Limit



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87105  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: Animas Environmental

Work Order Number: 1208372

Received by/date:

AG

08/08/12

Logged By: Lindsay Mangin

8/8/2012 9:55:00 AM

*Lindsay Mangin*

Completed By: Lindsay Mangin

8/8/2012 3:52:05 PM

*Lindsay Mangin*

Reviewed By:

*mg*

08/09/12

### Chain of Custody

1. Were seals intact? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

### Log In

4. Coolers are present? (see 19. for cooler specific information) Yes ☒ No ☐ NA ☐
5. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
6. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☒ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
10. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
11. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
12. Were any sample containers received broken? Yes ☐ No ☒
13. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐ # of preserved bottles checked for pH: \_\_\_\_\_
14. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐ (<2 or >12 unless noted)
15. Is it clear what analyses were requested? Yes ☒ No ☐ Adjusted? \_\_\_\_\_
16. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐ Checked by: \_\_\_\_\_

### Special Handling (if applicable)

17. 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: \_\_\_\_\_

18. Additional remarks:

### 19. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.0	Good	Yes			



# Chain-of-Custody Record

Client: Armas Env. Services

Mailing Address: 624 E. Comanche  
Farmington NM

Phone #: 505-564-2281

email or Fax#:

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

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

☐ EDD (Type) \_\_\_\_\_

Turn-Around Time:

☒ Standard ☐ Rush

Project Name: Enterprise Lateral

2B-24 Excavation #2

Project #:

Project Manager:

Tami Ross

Sampler: Thomas Long

On Ice: ☒ YES ☐ NO

Sample Temperature: 21



**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	REMARKS	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
-6-12	1302	Soil	SC-1	4oz Jar	ICE	-001	X	X										
	1303		SC-2			-002	X	X										
	1304		SC-3			-003	X	X										
	1305		SC-4			-004	X	X										
	1306		SC-5			-005	X	X										
	1307		SC-6			-006	X	X										
	1308		SC-7			-007	X	X										
	1309		SC-8			-008	X	X										
	1310		SC-9			-009	X	X										
	1311		SC-10			-010	X	X										
	1312		SC-11			-011	X	X										
	1313		SC-12			-012	X	X										

Date: 8/7/12 Time: 1737 Relinquished by: [Signature]

Date: 8/7/12 Time: 1758 Relinquished by: [Signature]

Received by: [Signature] Date: 8/7/12 Time: 1737

Received by: [Signature] Date: 08/08/12 Time: 0955

Remarks: Bill to Enterprise



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 Products	Contact Aaron Dailey	
Address 614 Reilly Avenue, Farmington NM 87401	Telephone No. (505)599-2286	
Facility Name Lateral K-7 Pipeline	Facility Type Natural Gas Gathering line	
Surface Owner Private	Mineral Owner	API No.

**LOCATION OF RELEASE**

Unit Letter O	Section 15	Township 26N	Range 7W	Feet from the	North/South Line	Feet from the	East/West Line	County San Juan
------------------	---------------	-----------------	-------------	---------------	------------------	---------------	----------------	--------------------

Latitude \_N36.4825\_ Longitude \_W107.5633(Decimal Degrees)\_

**NATURE OF RELEASE**

Type of Release Natural gas	Volume of Release Unknown	Volume Recovered None
Source of Release 8 inch natural gas gathering line	Date and Hour of Occurrence Unknown	Date and Hour of Discovery** 8.1.2012 @ 09:00 hours
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Brandon Powell, NM OCD Aztec Office	<b>RCVD NOV 7 '12 OIL CONS. DIV. DIST. 3</b>
By Whom? Aaron Dailey	Date and Hour 8.1.2012 @ 15:00 hours	
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.\*


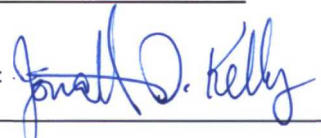
Describe Cause of Problem and Remedial Action Taken.\*

Dead vegetation on pipeline right of way was reported to Enterprise Environmental Department by a third party contractor. Upon investigation and verification, the site was claimed by Enterprise. After making notifications to Enterprise supervision and NM OCD, the site was barricaded using orange field fence within 24 hours of discovery. Additionally, signage was placed on the field fence stating "flammable, keep out."

Describe Area Affected and Cleanup Action Taken.\*

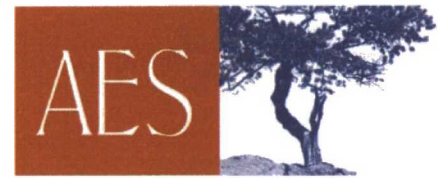
There are approximately 5 dead vegetation spots on this right of way. Enterprise supervisor and operators identified and repaired corrosion leaks on this pipeline. An environmental assessment was conducted by a third party environmental contractor. Soil samples taken demonstrate dry gas released in this area as the laboratory analytical results show soil impacts below regulatory standards. A third party environmental corrective action report is attached to this "final" c-141 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: Aaron Dailey	Approved by Environmental Specialist: 	
Title: Field Environmental Scientist	Approval Date: 3/26/2013	Expiration Date:
E-mail Address: amdailey@eprod.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 11.5.2012 Phone: (505)599-2286		

\* Attach Additional Sheets If Necessary

NJK 1308543225



Animas Environmental Services, LLC

www.animasenvironmental.com

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

Durango, Colorado  
970-403-3274

October 3, 2012

Aaron Dailey  
Enterprise Products Company  
614 Reilly Avenue  
Farmington, New Mexico 87401

**RE: Release Assessment Report  
Lateral K-7 August 2012 Pipeline Release  
Rio Arriba County, New Mexico**

RCVD MAR 18 '13  
OIL CONS. DIV.  
DIST. 3

Dear Mr. Dailey:

On August 9, 2012, Animas Environmental Services, LLC (AES) completed an assessment associated with current and historic releases of natural gas condensate from the Enterprise Products Company (Enterprise) Lateral K-7 pipeline. The release area, which is located approximately 28 miles southeast of Bloomfield, San Juan County, New Mexico, was investigated because of distressed vegetation and discolored soils encountered by Enterprise personnel during pipeline investigation and repair activities.

---

## 1.0 Site Information

### 1.1 Location

Location - NW¼ SE¼, Section 15, T26N, R7W, San Juan County, New Mexico

Latitude/Longitude - N36.48489 and W107.56028, respectively

Surface Owner – Private

Figure 1. Topographic Site Location Map

Figure 2. Aerial Site Map

### 1.2 NMOCD Ranking

In accordance with the New Mexico Oil Conservation Division (NMOCD) *Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993), the release location was assigned a ranking score to establish release action levels. The ranking score was obtained in part by reviewing available records of nearby oil/gas wells using the NMOCD online database. A C-144 form dated April 2012 for the Candado 1 E well located approximately 230 feet southeast of the release area reported the depth to groundwater as less than 50 feet below ground surface (bgs). Additionally, the C-144 form for the Candado 1 E identified a domestic water well and an industrial water well within the 1,000 foot buffer zone. The New Mexico Office of the State Engineer



(NMOSE) database was reviewed for nearby water wells, and a registered water well was reported to be located within 1,000 feet of the location. However, it was determined that the release area was not located within a wellhead protection area because no private domestic water sources were located within a 200 foot radius of the release location.

Google Earth and the New Mexico Tech Petroleum Recovery Research Center online mapping tool (<http://ford.nmt.edu/react/project.html>) were accessed to aid in the identification of downgradient surface water. Little Palluche Canyon wash, a tributary of Cañon Largo wash, is located approximately 200 feet northwest of the release location. Based on this information, the release location was assessed a ranking score of 40.

### **1.3 Assessment and Mitigation**

On August 9, 2012, AES conducted a release assessment along the Lateral K-7 pipeline. AES installed 16 soil borings and collected soil samples for field screening of volatile organic compounds (VOCs) and total petroleum hydrocarbons (TPH). Samples were also collected for laboratory analysis. Soil sample locations are included on Figure 3, and a photograph log is attached.

---

## **2.0 Soil Sampling**

AES installed 16 soil borings (SB-1 through SB-16) and collected soil samples for field screening of VOCs from each soil boring in order to guide the assessment. A total of 107 discrete soil samples were field screened for VOCs. Soil borings ranged from 5 feet to 7 feet below ground surface (bgs) and were terminated at auger refusal due to tight clay. Based on VOC field screening results and location, 16 of the samples were field screened for TPH. Four were also submitted for laboratory analysis in order to provide Quality Assurance/Quality Control (QA/QC) of the field screening results.

### **2.1 Field Screening**

#### **2.1.1 Volatile Organic Compounds**

A portion of each sample was utilized for field screening of VOC vapors 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**

Sixteen samples were analyzed in the field for TPH per 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

Soil samples were selected from SB-1, SB-3, SB-12, and SB-16 for confirmation laboratory analysis and 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:

- Benzene, toluene, ethylbenzene, and xylene (BTEX) per U.S. Environmental Protection Agency (USEPA) Method 8021B;
- TPH for gasoline range organics (GRO) and diesel range organics (DRO) per USEPA Method 8015B.

## 2.3 Field Screening and Laboratory Analytical Results

Soil field screening results showed that VOC concentrations ranged from 25.3 ppm in SB-11 up to 1,175 ppm in SB-1. Field TPH concentrations ranged from 48.3 mg/kg in SB-7 up to 114 mg/kg in SB-1.

Laboratory analytical results showed that benzene concentrations were below laboratory detection limits in each sample. Total BTEX concentrations ranged from below laboratory detection limits up to 2.1 mg/kg in SB-3 at 6 feet bgs. TPH concentrations in SB-1 at 5 feet bgs were 6.7 mg/kg GRO and 28 mg/kg DRO, and the TPH concentration in SB-3 at 6 feet bgs was 18 mg/kg GRO. TPH concentrations were below laboratory detection limits in SB-12 at 5 feet bgs and SB-16 at 2 feet bgs. Field screening and laboratory analytical results are included in Table 1 and on Figure 3. AES Field Screening Report and the laboratory analytical report are attached.

---

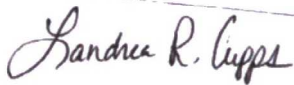
## 3.0 Conclusions and Recommendations

NMOCD action levels for releases are specified in NMOCD's *Guidelines for Leaks, Spills, and Releases* (August 1993), and the release was assigned a ranking score of 40. During the August 2012 assessment, AES personnel observed distressed vegetation and subsurface soil staining with an odor indicative of decomposed petroleum hydrocarbons. Field screening action levels for VOCs were exceeded in SB-1, SB-3, and SB-16, and TPH field screening action levels were exceeded in SB-1. However, laboratory analytical results for benzene, total BTEX, and TPH, soil concentrations in SB-

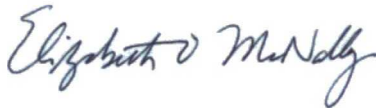
1 and SB-3 are below NMOCD action levels within the release area. Based on interpolation of field screening values and corresponding laboratory QA/QC results, AES believes the elevated VOC field screening reading of 327 ppm in SB-14 would correspond with laboratory analytical results that are also below applicable NMOCD action levels. No further work is recommended.

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

Sincerely,



Landrea Cupps  
Environmental Scientist



Elizabeth McNally, P.E.

Attachments:

- Figure 1. Topographic Site Location Map
- Figure 2. Aerial Site Map
- Figure 3. Sample Locations and Results, August 2012
- Photograph Log
- Table 1. Summary of Soil Field Screening and Analytical Results
- AES Field Screening Report 081012
- Laboratory Analytical Reports (Hall 1208520)



GOULD PASS QUADRANGLE  
NEW MEXICO  
PROVISIONAL EDITION 1985

SMOUSE MESA QUADRANGLE  
NEW MEXICO  
PROVISIONAL EDITION 1985

10 Canyon

Little Palluche

15

Lateral K-7 Release

Largo Camp

14 Largo

Canyon

Palluche

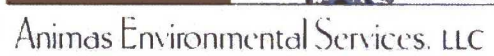
SCALE

2,000 1,000 0 2,000

500

(1 INCH = 2,000 FEET)

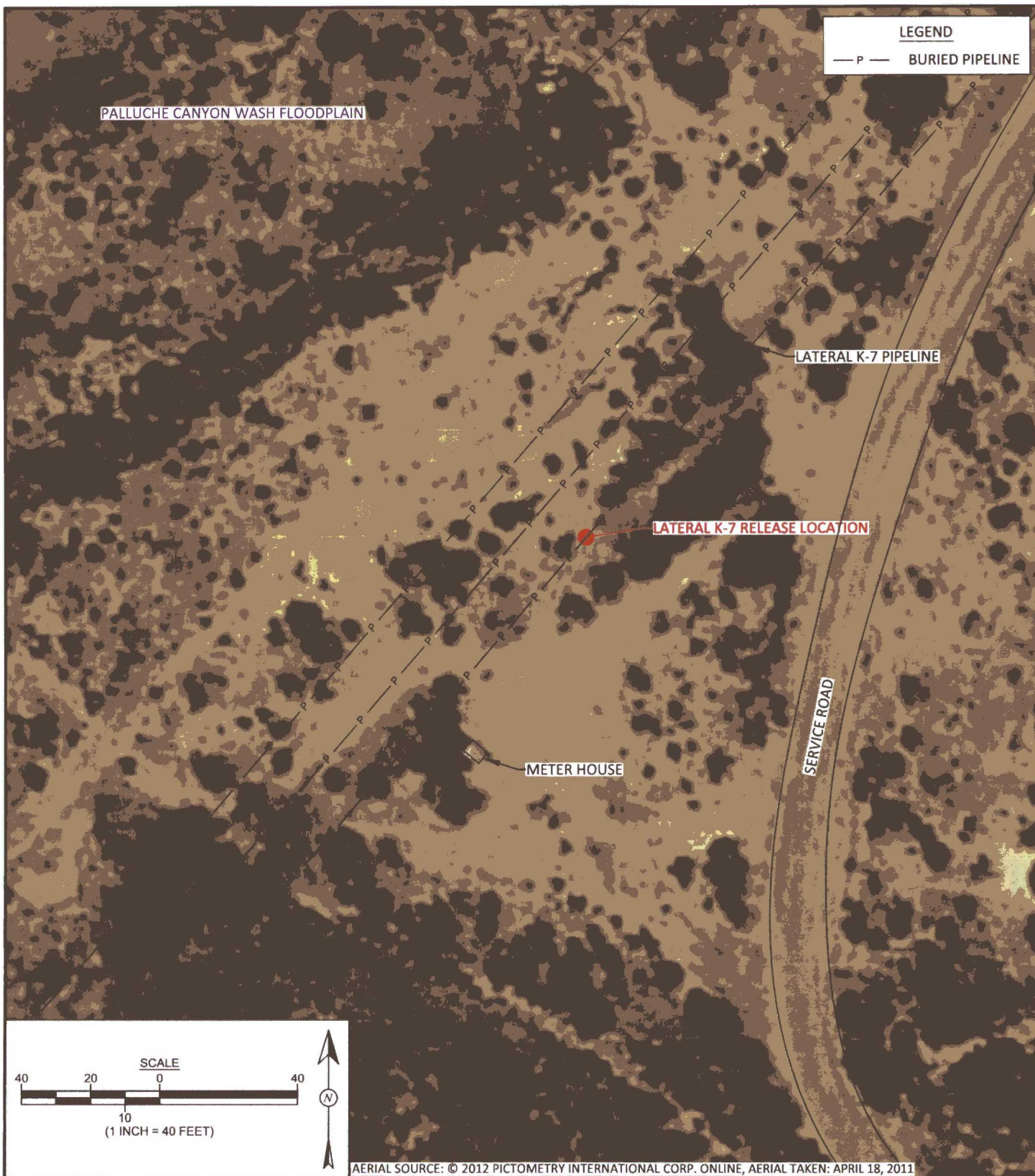
N



**DATE APPROVED:**  
September 12, 2012

**TOPOGRAPHIC SITE LOCATION MAP**  
**ENTERPRISE PRODUCTS COMPANY**  
**LATERAL K-7 AUGUST 2012**  
**PIPELINE RELEASE ASSESSMENT**  
**RIO ARRIBA COUNTY, NEW MEXICO**  
**NW¼ SE¼, SECTION 15, T26N, R7W**  
**N36.48489, W107.56028**





Animas Environmental Services, LLC

<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> August 10, 2012
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> September 12, 2012
<b>CHECKED BY:</b> T. Ross	<b>DATE CHECKED:</b> September 12, 2012
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> September 12, 2012

## FIGURE 2

**AERIAL SITE MAP**  
 ENTERPRISE PRODUCTS COMPANY  
 LATERAL K-7 AUGUST 2012  
 PIPELINE RELEASE ASSESSMENT  
 RIO ARRIBA COUNTY, NEW MEXICO  
 NW¼ SE¼, SECTION 15, T26N, R7W  
 N36.48489, W107.56028




Photo #1	
Client: Enterprise Products Company	
Project: Lateral K-7 August 2012 Pipeline Release Assessment	
Taken by: Tom Long	
August 9, 2012	
AES Project No: 120806	Description: View of dead vegetation and stained soils along pipeline corridor.

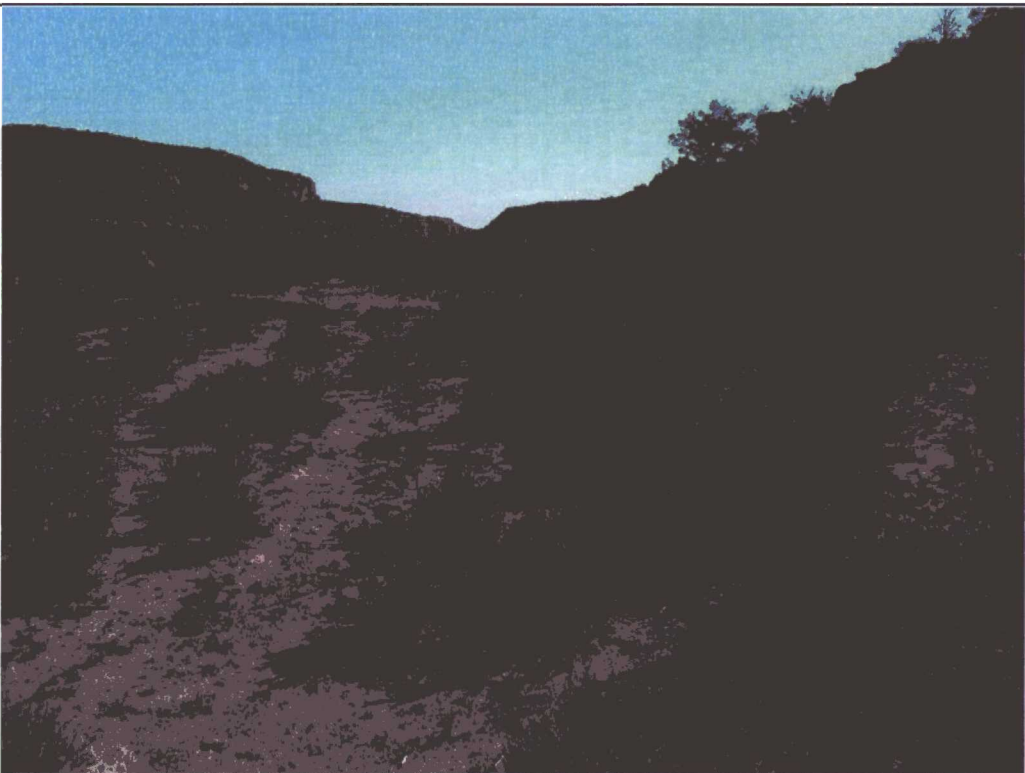
Photo #2	
Client: Enterprise Products Company	
Project: Lateral K-7 August 2012 Pipeline Release Assessment	
Taken by: Tom Long	
August 9, 2012	
AES Project No: 120806	Description: View of stressed and dead vegetation along pipeline corridor.




Photo #3	
Client: Enterprise Products Company	
Project: Lateral K-7 August 2012 Pipeline Release Assessment	
Taken by: Tom Long	
August 9, 2012	
AES Project No: 120806	Description: View of stressed and dead vegetation along pipeline corridor.


Photo #4	
Client: Enterprise Products Company	
Project: Lateral K-7 August 2012 Pipeline Release Assessment	
Taken by: Tom Long	
August 9, 2012	
AES Project No: 120806	Description: View soil boring and dead vegetation along pipeline corridor.

TABLE 1  
SUMMARY OF SOIL FIELD SCREENING AND ANALYTICAL RESULTS  
Enterprise Products Company Lateral K-7 August 2012 Pipeline Release Assessment  
Rio Arriba County, New Mexico

Sample ID	Date Sampled	Depth (ft)	VOCs OVM (ppm)	Field TPH (mg/kg)	Benzene (mg/kg)	Total BTEX (mg/kg)	GRO (C6-C10) (mg/kg)	DRO (C10-C22) (mg/kg)
<b>NMOCD Action Level</b>			<b>100</b>	<b>100</b>	<b>10</b>	<b>50</b>	<b>100</b>	
SB-1	9-Aug-12	3	303	84.9	NA	NA	NA	NA
		5	1,175	114	<0.049	0.41	6.7	28
SB-2	9-Aug-12	4	90	60.1	NA	NA	NA	NA
		6	38.6	56.2	NA	NA	NA	NA
SB-3	9-Aug-12	3	82.2	49.6	NA	NA	NA	NA
		6	633.0	75.7	<0.049	2.1	18	<10
SB-4	9-Aug-12	2	31.1	NA	NA	NA	NA	NA
		5	62.3	53.6	NA	NA	NA	NA
SB-5	9-Aug-12	2	65.8	NA	NA	NA	NA	NA
		7	64.7	NA	NA	NA	NA	NA
SB-6	9-Aug-12	2	52.1	70.5	NA	NA	NA	NA
		5	48.8	NA	NA	NA	NA	NA
SB-7	9-Aug-12	2	96.6	66.6	NA	NA	NA	NA
		4	47.2	48.3	NA	NA	NA	NA
SB-8	9-Aug-12	2	46.4	NA	NA	NA	NA	NA
		6	34.3	NA	NA	NA	NA	NA
SB-9	9-Aug-12	2	39.2	74.4	NA	NA	NA	NA
		5	53.3	NA	NA	NA	NA	NA
SB-10	9-Aug-12	2	56.8	NA	NA	NA	NA	NA
		5	78.6	NA	NA	NA	NA	NA
SB-11	9-Aug-12	2	70.3	NA	NA	NA	NA	NA
		5	25.3	NA	NA	NA	NA	NA
SB-12	9-Aug-12	1	44.7	53.6	NA	NA	NA	NA
		5	56.4	57.5	<0.048	<0.241	<4.8	<9.8
SB-13	9-Aug-12	3	94	50.9	NA	NA	NA	NA
		5	71.4	62.7	NA	NA	NA	NA
SB-14	9-Aug-12	2	54	NA	NA	NA	NA	NA
		7	327	NA	NA	NA	NA	NA
SB-15	9-Aug-12	2	35.8	NA	NA	NA	NA	NA
		5	64.2	NA	NA	NA	NA	NA
SB-16	9-Aug-12	2	101	94.0	<0.049	<0.245	<4.9	<9.8
		5	64.2	NA	NA	NA	NA	NA

**NOTES** NE = Not Established  
NA = Not Analyzed



# AES Field Screening Report



Animas Environmental Services, LLC

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

Client: Enterprise Products Company

Project Location: Lateral K-7

Date: 8/10/2012

Matrix: Soil

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

Durango, Colorado  
970-403-3274

Sample ID	Collection Date	Time of Sample Collection	Sample Location	OVM (ppm)	Field Chloride (mg/kg)	Field TPH Analysis Time	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SB-1@3'	8/9/2012	9:26		303	NA	12:28	84.88	20.0	1	TCR
SB-1@5'	8/9/2012	9:30		1,175	NA	12:31	113.59	20.0	1	TCR
SB-2@4'	8/9/2012	9:41		89.6	NA	12:33	60.08	20.0	1	TCR
SB-2@6'	8/9/2012	9:43		38.6	NA	12:35	56.16	20.0	1	TCR
SB-3@3'	8/9/2012	10:07		82.2	NA	12:38	49.64	20.0	1	TCR
SB-3@6'	8/9/2012	10:20		633	NA	12:42	75.74	20.0	1	TCR
SB-4@2'	8/9/2012	10:26		31	NA	NA	NA	NA	NA	NA
SB-4@5'	8/9/2012	10:31		62.3	NA	12:44	53.55	20.0	1	TCR
SB-6@2'	8/9/2012	10:57		52.1	NA	9:35	70.52	20.0	1	TCR
SB-6@5'	8/9/2012	11:00		48.8	NA	NA	NA	NA	NA	NA
SB-7@2'	8/9/2012	11:24		96.6	NA	9:41	66.60	20.0	1	TCR
SB-7@4'	8/9/2012	11:26		47.2	NA	12:47	48.33	20.0	1	TCR
SB-8@2'	8/9/2012	11:30		46.4	NA	NA	NA	NA	NA	NA
SB-8@6'	8/9/2012	11:34		34.3	NA	NA	NA	NA	NA	NA



SB-9@2'	8/9/2012	12:15		39.2	NA	9:49	74.43	20.0	1	TCR
SB-9@5'	8/9/2012	12:18		53.3	NA	NA	NA	NA	NA	NA
SB-10@2'	8/9/2012	12:22		56.8	NA	NA	NA	NA	NA	NA
SB-10@5'	8/9/2012	12:25		78.6	NA	NA	NA	NA	NA	NA
SB-11@2'	8/9/2012	12:56		70.3	NA	NA	NA	NA	NA	NA
SB-11@5'	8/9/2012	12:59		25.3	NA	NA	NA	NA	NA	NA
SB-12@1'	8/9/2012	13:01		44.7	NA	12:50	53.55	20.0	1	TCR
SB-12@5'	8/9/2012	13:05		56.4	NA	12:52	57.47	20.0	1	TCR
SB-13@3'	8/9/2012	13:23		94.0	NA	12:54	50.94	20.0	1	TCR
SB-13@5'	8/9/2012	13:25		71.4	NA	12:56	62.69	20.0	1	TCR
SB-14@2'	8/9/2012	13:28		54	NA	NA	NA	NA	NA	NA
SB-14@7'	8/9/2012	14:15		<b>327</b>	NA	NA	NA	NA	NA	NA
SB-15@2'	8/9/2012	14:27		35.8	NA	NA	NA	NA	NA	NA
SB-15@5'	8/9/2012	14:30		64.2	NA	NA	NA	NA	NA	NA
SB-16@2'	8/9/2012	14:33		101	NA	9:55	94.01	20.0	1	TCR
SB-16@5'	8/9/2012	14:33		101	NA	NA	NA	NA	NA	NA

PQL Practical Quantitation Limit  
 ND Not Detected at the Reporting Limit  
 DF Dilution Factor  
 NA Not Analyzed

Field Chloride - Quantab Chloride Titrators or Drop Count Titration with Silver Nitrate  
 Total Petroleum Hydrocarbons - USEPA 418.1

Analyst: 



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

August 16, 2012

Tami Ross

Animas Environmental Services

624 East Comanche

Farmington, NM 87401

TEL: (505) 793-2072

FAX

RE: Enterprise Lateral K-7

OrderNo.: 1208520

Dear Tami Ross:

Hall Environmental Analysis Laboratory received 4 sample(s) on 8/11/2012 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. 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. 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.

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

**Analytical Report**

Lab Order 1208520

Date Reported: 8/16/2012

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Animas Environmental Services**Client Sample ID:** SB-1@5'**Project:** Enterprise Lateral K-7**Collection Date:** 8/9/2012 9:30:00 AM**Lab ID:** 1208520-001**Matrix:** SOIL**Received Date:** 8/11/2012 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	28	9.9		mg/Kg	1	8/14/2012 9:17:51 AM
Surr: DNOP	103	77.6-140		%REC	1	8/14/2012 9:17:51 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	6.7	4.9		mg/Kg	1	8/14/2012 1:58:46 PM
Surr: BFB	126	84-116	S	%REC	1	8/14/2012 1:58:46 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.049		mg/Kg	1	8/14/2012 1:58:46 PM
Toluene	0.056	0.049		mg/Kg	1	8/14/2012 1:58:46 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/14/2012 1:58:46 PM
Xylenes, Total	0.35	0.097		mg/Kg	1	8/14/2012 1:58:46 PM
Surr: 4-Bromofluorobenzene	99.6	80-120		%REC	1	8/14/2012 1:58:46 PM

**Qualifiers:** \*/X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit  
U Samples with CalcVal < MDL



**Analytical Report**

Lab Order 1208520

Date Reported: 8/16/2012

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Animas Environmental Services**Client Sample ID:** SB-3@6'**Project:** Enterprise Lateral K-7**Collection Date:** 8/9/2012 10:20:00 AM**Lab ID:** 1208520-002**Matrix:** SOIL**Received Date:** 8/11/2012 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/14/2012 10:23:38 AM
Surr: DNOP	105	77.6-140		%REC	1	8/14/2012 10:23:38 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	18	4.9		mg/Kg	1	8/14/2012 4:22:39 PM
Surr: BFB	142	84-116	S	%REC	1	8/14/2012 4:22:39 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.049		mg/Kg	1	8/14/2012 4:22:39 PM
Toluene	0.41	0.049		mg/Kg	1	8/14/2012 4:22:39 PM
Ethylbenzene	0.15	0.049		mg/Kg	1	8/14/2012 4:22:39 PM
Xylenes, Total	1.5	0.097		mg/Kg	1	8/14/2012 4:22:39 PM
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	8/14/2012 4:22:39 PM

**Qualifiers:**   \*/X   Value exceeds Maximum Contaminant Level.  
                  E    Value above quantitation range  
                  J    Analyte detected below quantitation limits  
                  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  
                  RL   Reporting Detection Limit  
                  U    Samples with CalcVal < MDL

## Analytical Report

Lab Order 1208520

Date Reported: 8/16/2012

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services

Client Sample ID: SB-12@5'

Project: Enterprise Lateral K-7

Collection Date: 8/9/2012 1:05:00 PM

Lab ID: 1208520-003

Matrix: SOIL

Received Date: 8/11/2012 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JMP
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/14/2012 10:45:33 AM
Surr: DNOP	110	77.6-140		%REC	1	8/14/2012 10:45:33 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/14/2012 4:51:24 PM
Surr: BFB	103	84-116		%REC	1	8/14/2012 4:51:24 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	8/14/2012 4:51:24 PM
Toluene	ND	0.048		mg/Kg	1	8/14/2012 4:51:24 PM
Ethylbenzene	ND	0.048		mg/Kg	1	8/14/2012 4:51:24 PM
Xylenes, Total	ND	0.097		mg/Kg	1	8/14/2012 4:51:24 PM
Surr: 4-Bromofluorobenzene	101	80-120		%REC	1	8/14/2012 4:51:24 PM

Qualifiers: \*/X Value exceeds Maximum Contaminant Level.  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 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  
 RL Reporting Detection Limit  
 U Samples with CalcVal < MDL

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1208520

Date Reported: 8/16/2012

**CLIENT:** Animas Environmental Services

**Client Sample ID:** SB-16@2'

**Project:** Enterprise Lateral K-7

**Collection Date:** 8/9/2012 2:33:00 PM

**Lab ID:** 1208520-004

**Matrix:** SOIL

**Received Date:** 8/11/2012 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/14/2012 11:29:47 AM
Surr: DNOP	112	77.6-140		%REC	1	8/14/2012 11:29:47 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/14/2012 5:20:13 PM
Surr: BFB	99.9	84-116		%REC	1	8/14/2012 5:20:13 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.049		mg/Kg	1	8/14/2012 5:20:13 PM
Toluene	ND	0.049		mg/Kg	1	8/14/2012 5:20:13 PM
Ethylbenzene	ND	0.049		mg/Kg	1	8/14/2012 5:20:13 PM
Xylenes, Total	ND	0.098		mg/Kg	1	8/14/2012 5:20:13 PM
Surr: 4-Bromofluorobenzene	101	80-120		%REC	1	8/14/2012 5:20:13 PM

**Qualifiers:** \* / X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
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  
RL Reporting Detection Limit  
U Samples with CalcVal < MDL



# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208520

16-Aug-12

Client: Animas Environmental Services

Project: Enterprise Lateral K-7

Sample ID	MB-3288	SampType:	MBLK	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	PBS	Batch ID:	3288	RunNo:	4810					
Prep Date:	8/13/2012	Analysis Date:	8/13/2012	SeqNo:	135920	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	9.7		10.00		97.5	77.6	140			

Sample ID	LCS-3288	SampType:	LCS	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	3288	RunNo:	4810					
Prep Date:	8/13/2012	Analysis Date:	8/13/2012	SeqNo:	135921	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	35	10	50.00	0	70.0	52.6	130			
Surr: DNOP	4.2		5.000		83.6	77.6	140			

Sample ID	1208520-001AMS	SampType:	MS	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	SB-1@5'	Batch ID:	3288	RunNo:	4836					
Prep Date:	8/13/2012	Analysis Date:	8/14/2012	SeqNo:	136797	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	58	10	51.23	28.23	57.5	57.2	146			
Surr: DNOP	4.5		5.123		88.4	77.6	140			

Sample ID	1208520-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	SB-1@5'	Batch ID:	3288	RunNo:	4836					
Prep Date:	8/13/2012	Analysis Date:	8/14/2012	SeqNo:	136798	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	64	10	51.02	28.23	69.3	57.2	146	9.70	24.5	
Surr: DNOP	4.7		5.102		92.3	77.6	140	0	0	

## Qualifiers:

\*X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD 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  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1208520

16-Aug-12

Client: Animas Environmental Services

Project: Enterprise Lateral K-7

Sample ID	MB-3299		SampType: MBLK		TestCode: EPA Method 8015B: Gasoline Range					
Client ID:	PBS		Batch ID: 3299		RunNo: 4873					
Prep Date:	8/13/2012		Analysis Date: 8/14/2012		SeqNo: 137753		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	970		1000		96.6	84	116			

Sample ID	LCS-3299		SampType: LCS		TestCode: EPA Method 8015B: Gasoline Range					
Client ID:	LCSS		Batch ID: 3299		RunNo: 4873					
Prep Date:	8/13/2012		Analysis Date: 8/14/2012		SeqNo: 137754		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	90.9	85	115			
Surr: BFB	990		1000		98.6	84	116			

Sample ID	1208520-001AMS		SampType: MS		TestCode: EPA Method 8015B: Gasoline Range					
Client ID:	SB-1@5'		Batch ID: 3299		RunNo: 4873					
Prep Date:	8/13/2012		Analysis Date: 8/14/2012		SeqNo: 137758		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	49	4.9	24.46	6.660	174	70	130			S
Surr: BFB	1400		978.5		138	84	116			S

Sample ID	1208520-001AMSD		SampType: MSD		TestCode: EPA Method 8015B: Gasoline Range					
Client ID:	SB-1@5'		Batch ID: 3299		RunNo: 4873					
Prep Date:	8/13/2012		Analysis Date: 8/14/2012		SeqNo: 137759		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	57	4.9	24.63	6.660	203	70	130	14.4	22.1	S
Surr: BFB	1400		985.2		142	84	116	0	0	S

### Qualifiers:

\* / X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD 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  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1208520

16-Aug-12

Client: Animas Environmental Services

Project: Enterprise Lateral K-7

Sample ID	<b>MB-3299</b>		SampType:	<b>MBLK</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>PBS</b>		Batch ID:	<b>3299</b>		RunNo:	<b>4873</b>			
Prep Date:	<b>8/13/2012</b>		Analysis Date:	<b>8/14/2012</b>		SeqNo:	<b>137765</b>		Units: <b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		99.9	80	120			

Sample ID	<b>LCS-3299</b>		SampType:	<b>LCS</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>LCSS</b>		Batch ID:	<b>3299</b>		RunNo:	<b>4873</b>			
Prep Date:	<b>8/13/2012</b>		Analysis Date:	<b>8/14/2012</b>		SeqNo:	<b>137766</b>		Units: <b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.050	1.000	0	98.9	76.3	117			
Toluene	1.0	0.050	1.000	0	101	80	120			
Ethylbenzene	1.0	0.050	1.000	0	104	77	116			
Xylenes, Total	3.1	0.10	3.000	0	105	76.7	117			
Surr: 4-Bromofluorobenzene	1.0		1.000		105	80	120			

Sample ID	<b>1208520-004AMS</b>		SampType:	<b>MS</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>SB-16@2'</b>		Batch ID:	<b>3299</b>		RunNo:	<b>4873</b>			
Prep Date:	<b>8/13/2012</b>		Analysis Date:	<b>8/14/2012</b>		SeqNo:	<b>137774</b>		Units: <b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.048	0.9681	0	102	67.2	113			
Toluene	1.0	0.048	0.9681	0	106	62.1	116			
Ethylbenzene	1.1	0.048	0.9681	0	111	67.9	127			
Xylenes, Total	3.2	0.097	2.904	0.01761	111	60.6	134			
Surr: 4-Bromofluorobenzene	1.0		0.9681		106	80	120			

Sample ID	<b>1208520-004AMSD</b>		SampType:	<b>MSD</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>SB-16@2'</b>		Batch ID:	<b>3299</b>		RunNo:	<b>4873</b>			
Prep Date:	<b>8/13/2012</b>		Analysis Date:	<b>8/14/2012</b>		SeqNo:	<b>137775</b>		Units: <b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.048	0.9653	0	97.4	67.2	113	4.76	14.3	
Toluene	0.97	0.048	0.9653	0	101	62.1	116	5.01	15.9	
Ethylbenzene	1.0	0.048	0.9653	0	104	67.9	127	6.22	14.4	
Xylenes, Total	3.1	0.097	2.896	0.01761	106	60.6	134	5.02	12.6	
Surr: 4-Bromofluorobenzene	1.0		0.9653		106	80	120	0	0	

### Qualifiers:

\* / X Value exceeds Maximum Contaminant Level.  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 R RPD 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  
 RL Reporting Detection Limit





Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87105  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: Animas Environmental

Work Order Number: 1208520

Received by/date:

af

08/11/12

Logged By: Ashley Gallegos

8/11/2012 12:00:00 PM

af

Completed By: Ashley Gallegos

8/13/2012 9:31:59 AM

af

Reviewed By:

AT 08/13/12

### Chain of Custody

1. Were seals intact? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Client

### Log In

4. Coolers are present? (see 19. for cooler specific information) Yes ☒ No ☐ NA ☐
5. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
6. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☒ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
10. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
11. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
12. Were any sample containers received broken? Yes ☐ No ☒
13. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐ # of preserved bottles checked for pH: ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐ (<2 or >12 unless noted)
15. Is it clear what analyses were requested? Yes ☒ No ☐ Adjusted? ☐
16. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐ Checked by: ☐

### Special Handling (if applicable)

17. 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:

18. Additional remarks:

### 19. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.4	Good	Not Present			

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-141  
Revised October 10, 2003

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

**Release Notification and Corrective Action**

**OPERATOR**

Initial Report ☐ Final Report ☒

Name of Company Enterprise Products	Contact Aaron Dailey
Address 614 Reilly Avenue, Farmington 87401	Telephone No. (505) 599-2286
Facility Name Lateral H-37 Pipeline	Facility Type Natural gas gathering line

Surface Owner Private	Mineral Owner Private	Lease No. N/A
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**LOCATION OF RELEASE**

Unit Letter	Section 3	Township 31N	Range 9W	Feet from the	North/South Line	Feet from the	East/West Line	County San Juan
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Latitude\_N36 56.051\_\_ Longitude\_W 108 10.986

RCVD JAN 12 '12  
OIL CONS. DIV.  
DIST. 3

**NATURE OF RELEASE**

Type of Release: Natural Gas	Volume of Release: 84 MCF	Volume Recovered: Soil remediation (dig and haul) to OCD standard
Source of Release 6" Gas Gathering Line	Date and Hour of Occurrence 11.18.2011 @ 08:00 hours	Date and Hour of Discovery 11.18.2011 @ 08:00 hours
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.\* Enterprise employees were dispatched to a reported line leak located on lateral H-37, which is located on private land.

Describe Area Affected and Cleanup Action Taken.\* Pipeline was repaired on 11.29.2011. Contaminated soil was removed and hauled to an OCD permitted landfarm facility. No groundwater was encountered and we were able to achieve the <100ppm TPH and BTEX standard for all sidewalls and the bottom of the excavation. A third party environmental contractor was used to oversee the environmental cleanup. A third party environmental assessment and report will be submitted to the Aztec office once this is complete.

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: Aaron Dailey		Approved by District Supervisor: 	
Title: Field Environmental Scientist		Approval Date: 1/12/2012	Expiration Date:
E-mail Address: amdailey@eprod.com		Conditions of Approval:	Attached <input type="checkbox"/>
Date: 12.2.2011 Phone: (505) 599-2286			

\* Attach Additional Sheets If Necessary

nJK1201256123