

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 August 8, 2011

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

## Release Notification and Corrective Action

### OPERATOR

☐ Initial Report ☒ Final Report

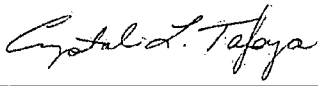
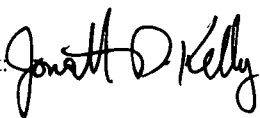
Name of Company <b>Burlington Resources Oil &amp; Gas Company</b>	Contact <b>Crystal Tafoya</b>	
Address <b>3401 East 30<sup>th</sup> St, Farmington, NM</b>	Telephone No. <b>(505) 326-9837</b>	
Facility Name: <b>Sheets 4</b>	Facility Type: <b>Gas Well</b>	
Surface Owner <b>Federal</b>	Mineral Owner <b>Federal (SF-080376-A)</b>	API No. <b>30-045-24297</b>

### LOCATION OF RELEASE

Unit Letter <b>O</b>	Section <b>28</b>	Township <b>31N</b>	Range <b>9W</b>	Feet from the <b>1100</b>	North/South Line <b>South</b>	Feet from the <b>1530</b>	East/West Line <b>East</b>	County <b>San Juan</b>
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Latitude **36.86487** Longitude **107.78156**

### NATURE OF RELEASE

Type of Release <b>Produced Fluids</b>	Volume of Release <b>Unknown</b>	Volume Recovered <b>176 cu.yds</b>
Source of Release <b>Below Grade Tank</b>	Date and Hour of Occurrence <b>Unknown</b>	Date and Hour of Discovery <b>August 6, 2012</b>
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.* <b>N/A</b>		
Describe Cause of Problem and Remedial Action Taken.* <b>Below Grade Tank Closure Activities</b>		<b>RCVD MAY 7 '13 OIL CONS. DIV. DIST. 3</b>
Describe Area Affected and Cleanup Action Taken.* <b>The below grade tank sample results were above regulatory standards by USEPA method 418.1 for TPH confirming a release. Excavation and confirmation sampling occurred. The excavation was 22' x 18' x 12' where sandstone was encountered. 176 cubic yards of soil was transported to a third party landfarm. Analytical results for BTEX and Chlorides were below the regulatory standards set forth in the NMOCD Guidelines for Remediation of Leaks, Spills and Release. However, TPH concentrations as GRO/DRO exceeded the NMOCD action levels of 100 mg/kg with 3,150 mg/kg. COP received approval from BLM &amp; OCD to apply potassium permanganate to the base of the excavation on 3/4/13. N further action will be performed on this location. The final report is attached for review.</b>		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		
Signature: 		<b>OIL CONSERVATION DIVISION</b>
Printed Name: <b>Crystal Tafoya</b>		Approved by Environmental Specialist: 
Title: <b>Field Environmental Specialist</b>	Approval Date: <b>1/8/2014</b>	Expiration Date:
E-mail Address: <b>crystal.tafoya@conocophillips.com</b>	Conditions of Approval: <b>C-144 Closure Permit required for BBT Closure</b>	Attached <input type="checkbox"/>
Date: <b>5/6/2013</b>	Phone: <b>(505) 326-9837</b>	

\* Attach Additional Sheets If Necessary

nJK1400833265

30



Animas Environmental Services, LLC

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

April 29, 2013

Crystal Tafoya  
ConocoPhillips  
San Juan Business Unit  
Office 214-4  
5525 Hwy 64  
Farmington, New Mexico 87401

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

Durango, Colorado  
970-403-3084

**RE: Below Grade Tank Closure, Release Assessment, and Final Excavation Report  
Sheets #4  
San Juan County, New Mexico**

Dear Ms. Tafoya:

On June 26 and August 6, 2012, and February 23, 2013, Animas Environmental Services, LLC (AES) completed below grade tank (BGT) closure sampling, an initial release assessment, and environmental clearance of the final excavation limits at the ConocoPhillips (CoP) Sheets #4, located in San Juan County, New Mexico. The historical release was discovered during BGT closure sampling at the location. An initial release assessment was completed on August 6, 2012. The final excavation was completed by contractors while AES was on location on February 23, 2013.

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## 1.0 Site Information

### 1.1 Location

Site Name – Sheets #4

Legal Description - SW¼ SE¼, Section 28, T31N, R9W, San Juan County, New Mexico

Well Latitude/Longitude – N36.86493 and W107.78220, respectively

BGT/Release Latitude/Longitude - N36.86481 and W107.78225, respectively

Land Jurisdiction - Bureau of Land Management (BLM)

Figure 1 - Topographic Site Location Map

Figure 2 - Aerial Site Map, June 2012

### 1.2 NMOCD Ranking

Prior to site work, the New Mexico Oil Conservation Division (NMOCD) database was reviewed, and cathodic reports for the Sheets #4 location dated August 1988 and May 1991 reported the depth to groundwater as 90 feet below ground surface (bgs). Additionally, a Replacement C-144 form for the site dated September 2004 had a

ranking of 10 for depth to groundwater. The New Mexico Office of the State Engineer (NMOSE) database was reviewed, and no registered water wells were located within 1,000 feet of the location. Additionally, 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.

Once on site, AES personnel further assessed the ranking using topographical interpretation, Global Positioning System (GPS) elevation readings, and visual reconnaissance. AES personnel concluded that depth to groundwater at the site was between 50 and 99 feet bgs. The wash in Little Pump Canyon is approximately 650 feet northwest of the location. Based on this information, the location was assessed a ranking score of 20 per the NMOCD *Guidelines for Leaks, Spills, and Releases* (1993).

### 1.3 Assessments

AES was initially contacted by Jess Henson, CoP representative, on June 25, 2012, for BGT closure sampling at the location. On June 26, 2012, Deborah Watson and Zachary Trujillo of AES traveled to the location and collected six soil samples from below the BGT liner. Four samples were collected from the perimeter of the BGT footprint, one sample was collected from the center of the BGT footprint, and one sample was composited from the four perimeter samples and one center sample. Sample locations are included on Figure 2.

On August 6, 2012, AES personnel returned to the location to complete the release assessment field work. The assessment included collection and field screening of 20 soil samples from nine soil borings (SB-1 through SB-9). Based on field screening results, AES recommended excavation of the release area. Sample locations are shown on Figure 3.

On February 27, 2013, AES personnel returned to the location to collect confirmation soil samples of the excavation. The field screening activities included collection of five confirmation soil samples (SC-1 through SC-5) of the walls and base of the excavation. The final excavation measured 34 feet by 26 feet by 12 feet in depth. The depth of the excavation was limited based on a confining sandstone layer encountered at 12 feet bgs. Sample locations and final excavation extents are presented on Figure 4.

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## 2.0 Soil Sampling

On June 26, 2012, during BGT closure sampling, AES personnel conducted field screening and collected five soil samples (S-1 through S-5) and one 5-point composite (SC-1) from below the BGT. Soil samples were collected from approximately 0.5 feet

below the former BGT for field screening of volatile organic compounds (VOCs), total petroleum hydrocarbon (TPH), and chlorides. A five point composite sample (SC-1) was collected for confirmation laboratory analysis.

A total of 20 soil samples (SB-1 through SB-9) and 5 composite samples (SC-1 through SC-5) were collected during the release and excavation assessments. All soil samples were field screened for VOCs, and selected samples were analyzed for TPH. One composite sample (SC-1) collected during the excavation was submitted for confirmation laboratory analysis.

## **2.1 Soil 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**

Soil samples were also 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*.

### **2.1.3 Chlorides**

Soil samples were field screened for chlorides using Chloride Drop Count Titration with silver nitrate. Sampling and analysis methods followed procedures provided by Hach Company.

## **2.2 Laboratory Analyses**

The composite soil samples collected for laboratory analysis were placed into new, clean, laboratory-supplied containers, which were then labeled, placed on ice, and logged onto sample chain of custody records. The 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 USEPA Method 8260B/8021B;
- TPH for gasoline range organics (GRO) and diesel range organics (DRO) per USEPA Method 8015B.

The soil sample (SC-1) collected on June 26, 2012, was also analyzed for:

- Chlorides per USEPA Method 300.0.

### 2.3 Soil Field and Laboratory Analytical Results

On June 26, 2012, BGT closure field screening readings for VOCs via OVM ranged from 2.4 ppm in S-3 up to 76.2 ppm in S-1. Field TPH concentrations ranged from 77.4 mg/kg in S-3 to greater than 2,500 mg/kg in S-4. Field chloride concentrations were reported at 40 mg/kg in each sample (S-1 through S-5).

On August 6, 2012, initial assessment field screening readings for VOCs via OVM ranged from 2.7 ppm in SB-3 and SB-6 up to 3,797 ppm in SB-4. Field TPH concentrations ranged from 90.5 mg/kg in SB-9 to greater than 6,530 mg/kg in SB-1.

On February 27, 2013, final excavation field screening results for VOCs via OVM ranged from 2.3 ppm in SC-4 up to 1,926 ppm in SC-1. Field TPH concentrations ranged from 24.8 mg/kg in SC-5 to greater than 5,000 mg/kg in SC-1. Field screening VOC and TPH results are summarized in Table 1 and on Figures 2 through 4. The AES field screening reports are attached.

Table 1. Soil Field Screening VOCs, TPH, and Chloride Results  
 Sheets #4 BGT Closure, Release Assessment and Final Excavation Report  
 June and August 2012 and February 2013

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Sample Depth (ft)</i>	<i>VOCs OVM Reading (ppm)</i>	<i>Field TPH (mg/kg)</i>	<i>Chloride (mg/kg)</i>
<b>NMOC Action Level*</b>			<b>100</b>	<b>100</b>	<b>250</b>
S-1	06/26/12	4	76.2	1,580	40
S-2	06/26/12	4	18.8	1,810	40
S-3	06/26/12	4	2.4	77.4	40
S-4	06/26/12	4	51.7	>2,500	40
S-5	06/26/12	4	3.8	211	40
SB-1	08/06/12	6	7.6	NA	NA
		8	149	NA	NA
		9.5	2,365	6,530	NA
SB-2	08/06/12	4	4.6	NA	NA
		6	3.5	143	NA
SB-3	08/06/12	6	5.3	NA	NA

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Sample Depth (ft)</i>	<i>VOCs OVM Reading (ppm)</i>	<i>Field TPH (mg/kg)</i>	<i>Chloride (mg/kg)</i>
<b>NMOCD Action Level*</b>			<b>100</b>	<b>100</b>	<b>250</b>
		8	2.7	<b>117</b>	NA
SB-4	08/06/12	6	20.9	NA	NA
		8	<b>2,344</b>	NA	NA
		10	<b>3,797</b>	NA	NA
		12	<b>2,204</b>	NA	NA
SB-5	08/06/12	4	10.1	NA	NA
		6	51.2	<b>2,250</b>	NA
SB-6	08/06/12	6	2.7	NA	NA
		8	9.9	NA	NA
		10.5	12.5	<b>117</b>	NA
SB-7	08/06/12	6	9.1	NA	NA
		7	8.8	95.1	NA
SB-8	08/06/12	6	7.7	<b>105</b>	NA
SB-9	08/06/12	6	9.9	90.5	NA
SC-1	02/27/13	12	<b>1,926</b>	<b>&gt;5,000</b>	NA
SC-2	02/27/13	1 to 12	9.6	94.4	NA
SC-3	02/27/13	1 to 12	2.5	44.3	NA
SC-4	02/27/13	1 to 12	2.3	88.3	NA
SC-5	02/27/13	1 to 12	4.5	24.8	NA

NA – not analyzed

\*Action levels determined by the NMOCD ranking score per NMAC 19.15.17.13E and NMOCD Guidelines for Leaks, Spills, and Releases (August 1993)

Laboratory analytical results for SC-1 collected on June 26, 2012, from below the former BGT, showed that benzene and total BTEX concentrations were reported below laboratory detection limits of 0.050 mg/kg and 0.25 mg/kg, respectively. The TPH as GRO/DRO concentration was reported at 2,780 mg/kg. The chloride concentration was below the laboratory detection limit of 30 mg/kg.

Laboratory analytical results for SC-1 collected on February 27, 2013, from the base of the final excavation, had a benzene concentration reported below the laboratory detection limit of 0.25 mg/kg. The total BTEX concentration was 25 mg/kg. The TPH concentration as GRO/DRO was 3,150 mg/kg. Laboratory analytical results are

summarized in Table 2 and included on Figures 2 and 4. Laboratory analytical reports are attached.

Table 2. Laboratory Analytical Results – Benzene, Total BTEX, TPH, and Chlorides  
 Sheets #4 BGT Closure and Final Excavation  
 June 2012 and February 2013

<i>Sample ID</i>	<i>Date</i>	<i>Depth (ft)</i>	<i>Benzene (mg/kg)</i>	<i>Total BTEX (mg/kg)</i>	<i>TPH- GRO (mg/kg)</i>	<i>TPH- DRO (mg/kg)</i>	<i>Chlorides (mg/kg)</i>
<b>NMOCD Action Level</b>			<b>0.2/10</b>	<b>50</b>	<b>100</b>		<b>250</b>
SC-1	06/26/12	4	<0.050	<0.25	80	2,700	<30
SC-1	02/27/13	12	<0.25	25	850	2,300	NA

\*Action levels determined by the NMOCD ranking score per NMAC 19.15.17.13E and *NMOCD Guidelines for Leaks, Spills, and Releases* (August 1993)

### 3.0 Conclusions and Recommendations

NMOCD action levels for BGT closures are specified in New Mexico Administrative Code (NMAC) 19.15.17.13E. Field TPH concentrations exceeded the NMOCD action level of 100 mg/kg in four samples. Laboratory analytical results for TPH (as GRO/DRO) in SC-1 were reported above the NMOCD action level of 100 mg/kg with 2,780 mg/kg. Benzene and total BTEX concentrations in SC-1 were below the NMOCD action levels of 0.2 mg/kg and 50 mg/kg, respectively. Chloride concentrations were reported below the NMOCD action level of 250 mg/kg. Based on field and laboratory analytical results, a release was confirmed at the location.

On August 6, 2012, AES conducted an initial assessment associated with a historical release discovered during BGT closure confirmation sampling. Action levels for releases are determined by the NMOCD ranking score per *NMOCD Guidelines for Leaks, Spills, and Releases* (August 1993), and the site was assigned a ranking of 20. Field screening results for VOCs via OVM were above the NMOCD action level of 100 ppm in SB-1 and SB-4, with the highest concentration of 3,797 ppm reported in SB-4. Field TPH concentrations above the NMOCD action level of 100 mg/kg were reported in each boring except SB-7 and SB-9. Note that SB-4 was not field screened for TPH, because it was inferred to be above action levels.

On February 27, 2013, final assessment of the excavation area was completed. Field screening results of the excavation showed that concentrations of VOCs and TPH were below NMOCD action levels for each of the final four walls of the excavation. However, the base of the excavation (SC-1) exceeded NMOCD action levels for VOCs with 1,926 ppm and TPH with greater than 5,000 mg/kg. Laboratory analytical results for SC-1

(base) showed benzene and total BTEX concentrations below applicable NMOCD action levels. However, TPH concentrations as GRO/DRO exceeded the NMOCD action level of 100 mg/kg with 3,150 mg/kg. Further excavation of the base was not possible due to a competent layer of sandstone encountered at 12 feet bgs.

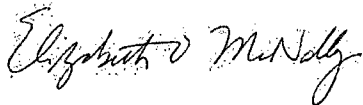
CoP consulted with Mark Kelly of BLM and Brandon Powell of NMOCD, and on March 4, 2013, was granted approval to backfill the excavation following application of potassium permanganate to the base of the excavation, which was applied on March 4, 2013, by Envirotech Inc. No further work is recommended for the Sheets #4.

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

Sincerely,



Landrea Cupps  
Environmental Scientist



Elizabeth McNally, P.E.

Attachments:

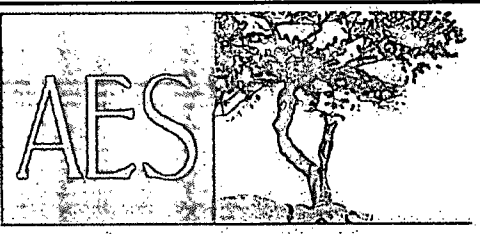
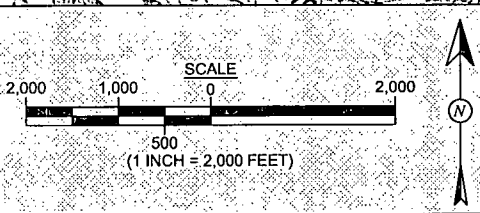
- Figure 1. Topographic Site Location Map
- Figure 2. Aerial Site Map, June 2012
- Figure 3. Initial Assessment Sample Locations and Results, August 2012
- Figure 4. Final Excavation Sample Locations and Results, February 2013
- AES Field Screening Reports (062612, 080612, and 022713)
- Hall Analytical Reports (1206B26 and 1302915)





MOUNT NEBO QUADRANGLE  
NEW MEXICO - COLORADO  
PROVISIONAL EDITION 1985

TURLEY QUADRANGLE  
NEW MEXICO - SAN JUAN COUNTY  
PROVISIONAL EDITION 1985



Animas Environmental Services, LLC

<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> June 26, 2012
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> June 26, 2012
<b>CHECKED BY:</b> D. Watson	<b>DATE CHECKED:</b> June 26, 2012
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> June 26, 2012

**FIGURE 1**

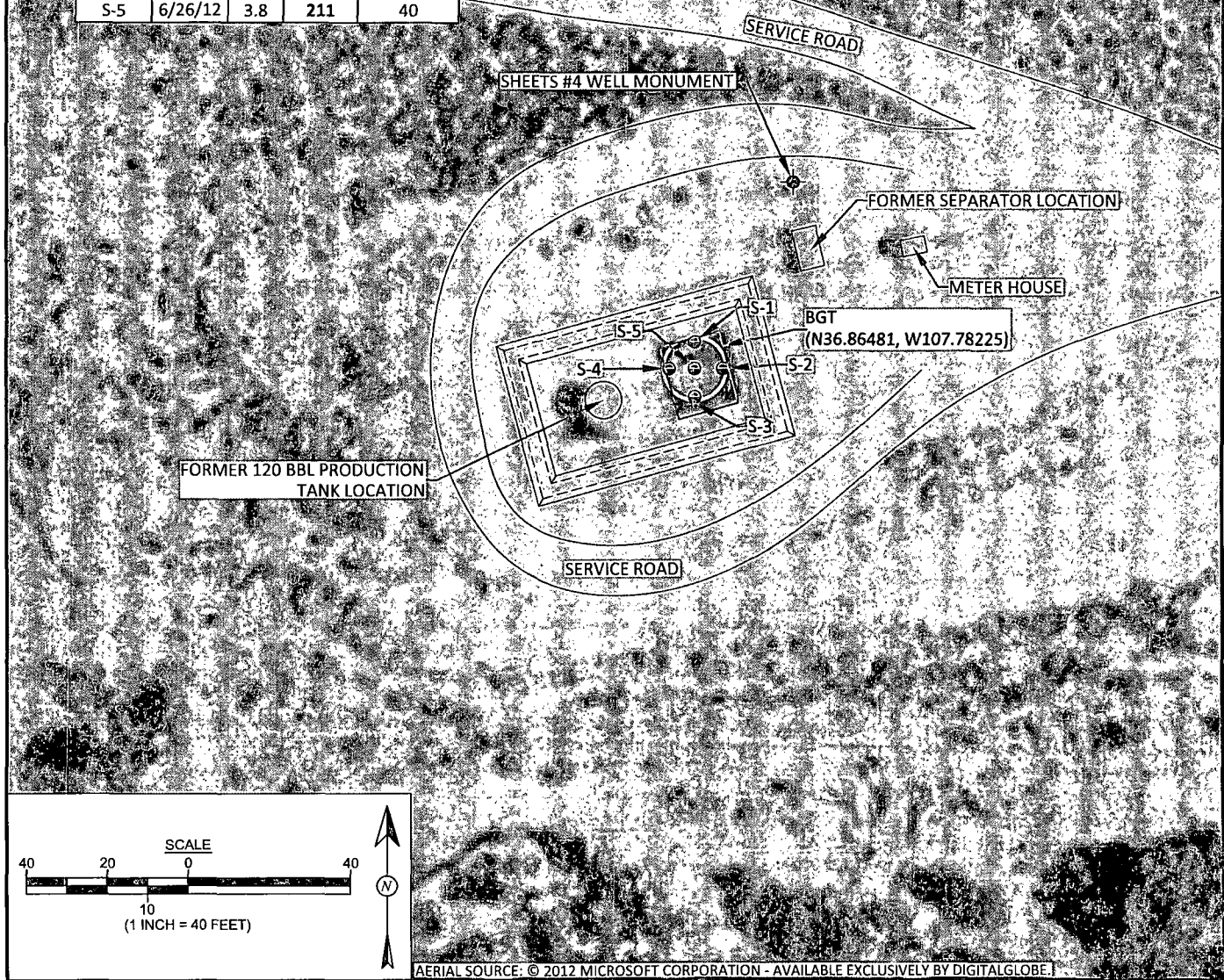
**TOPOGRAPHIC SITE LOCATION MAP**  
ConocoPhillips  
SHEETS #4  
SAN JUAN COUNTY, NEW MEXICO  
SW¼, SE¼, SECTION 28, T31N, R9W  
N36.86493, W107.78220

LEGEND	
	SECONDARY CONTAINMENT

Field Screening Results				
Sample ID	Date	OVM-PID (ppm)	TPH (mg/kg)	Chlorides (mg/kg)
NMOCD ACTION LEVEL		NE	100	250
S-1	6/26/12	76.2	1,580	40
S-2	6/26/12	18.8	1,810	40
S-3	6/26/12	2.4	77.4	40
S-4	6/26/12	51.7	>2,500	40
S-5	6/26/12	3.8	211	40

Laboratory Analytical Results						
Sample ID	Date	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH - GRO (mg/kg)	TPH - DRO (mg/kg)	Chlorides (mg/kg)
NMOCD ACTION LEVEL		0.2	50	100		250
SC-1	6/26/12	<0.050	<0.25	80	2,700	<30

NOTE: ALL SAMPLES WERE ANALYZED PER EPA METHOD 8021B, 8015B AND 300.0. SC-1 IS A 5 POINT COMPOSITE SAMPLE OF S-1 THROUGH S-5.

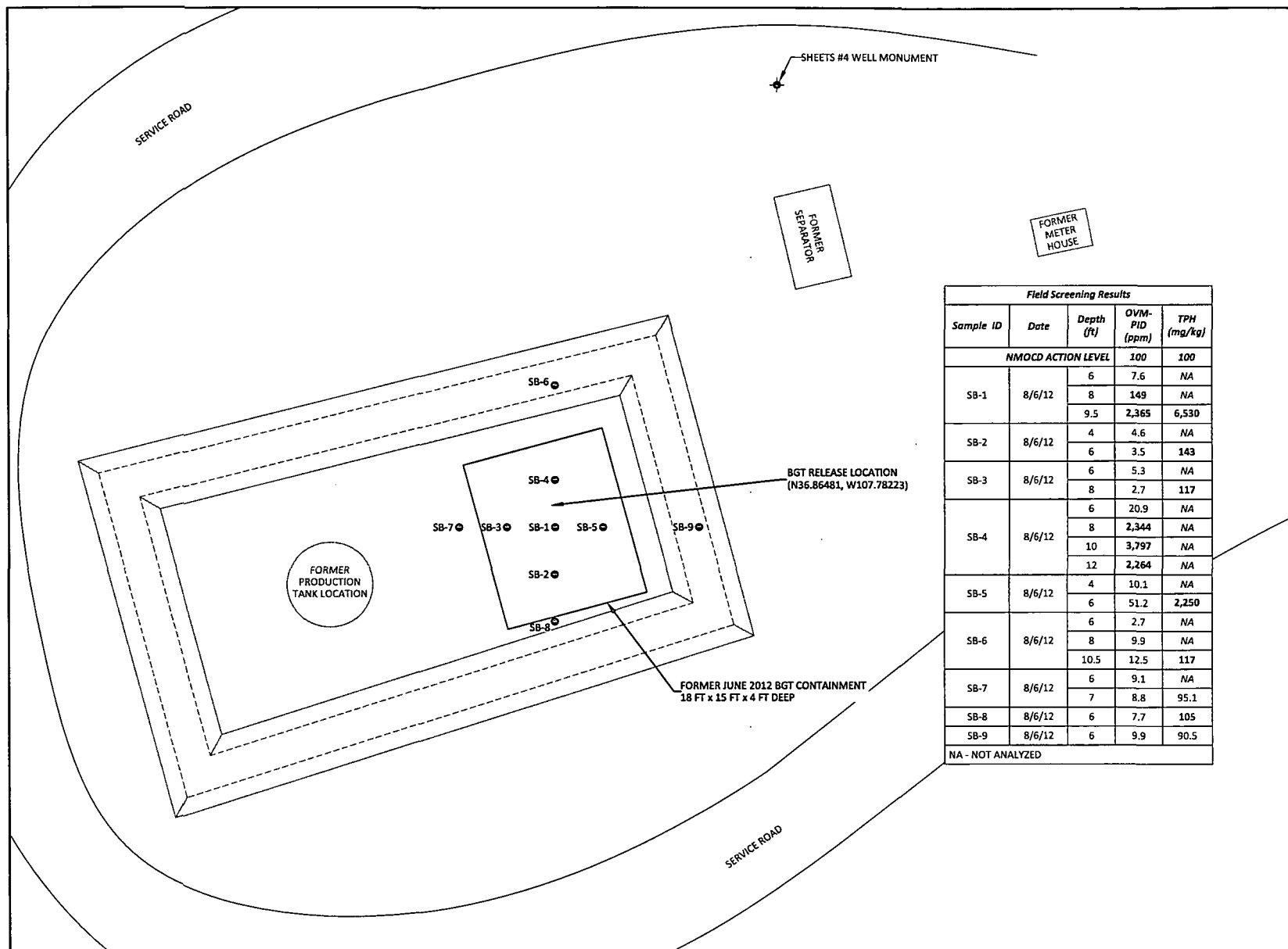





Animas Environmental Services, LLC

<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> June 26, 2012
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> June 26, 2012
<b>CHECKED BY:</b> D. Watson	<b>DATE CHECKED:</b> June 26, 2012
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> June 26, 2012

**FIGURE 2**  
  
**AERIAL SITE MAP**  
**JUNE 2012**  
 ConocoPhillips  
 SHEETS #4  
 SAN JUAN COUNTY, NEW MEXICO  
 SW¼, SE¼, SECTION 28, T31N, R9W  
 N36.86493, W107.78220



Field Screening Results				
Sample ID	Date	Depth (ft)	OVM-PID (ppm)	TPH (mg/kg)
		<b>NMOCD ACTION LEVEL</b>		<b>100</b>
SB-1	8/6/12	6	7.6	NA
		8	149	NA
		9.5	2,365	6,530
SB-2	8/6/12	4	4.6	NA
		6	3.5	143
SB-3	8/6/12	6	5.3	NA
		8	2.7	117
		10	20.9	NA
SB-4	8/6/12	8	2,344	NA
		10	3,797	NA
		12	2,264	NA
SB-5	8/6/12	4	10.1	NA
		6	51.2	2,250
SB-6	8/6/12	6	2.7	NA
		8	9.9	NA
		10.5	12.5	117
SB-7	8/6/12	6	9.1	NA
		7	8.8	95.1
SB-8	8/6/12	6	7.7	105
SB-9	8/6/12	6	9.9	90.5
NA - NOT ANALYZED				

**FIGURE 3**

**INITIAL ASSESSMENT SAMPLE LOCATIONS AND RESULTS**  
**AUGUST 2012**  
 ConocoPhillips  
 SHEETS #4  
 SAN JUAN COUNTY, NEW MEXICO  
 SW¼ SE¼, SECTION 28, T31N, R9W  
 N36.86493, W107.78220

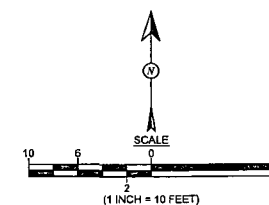


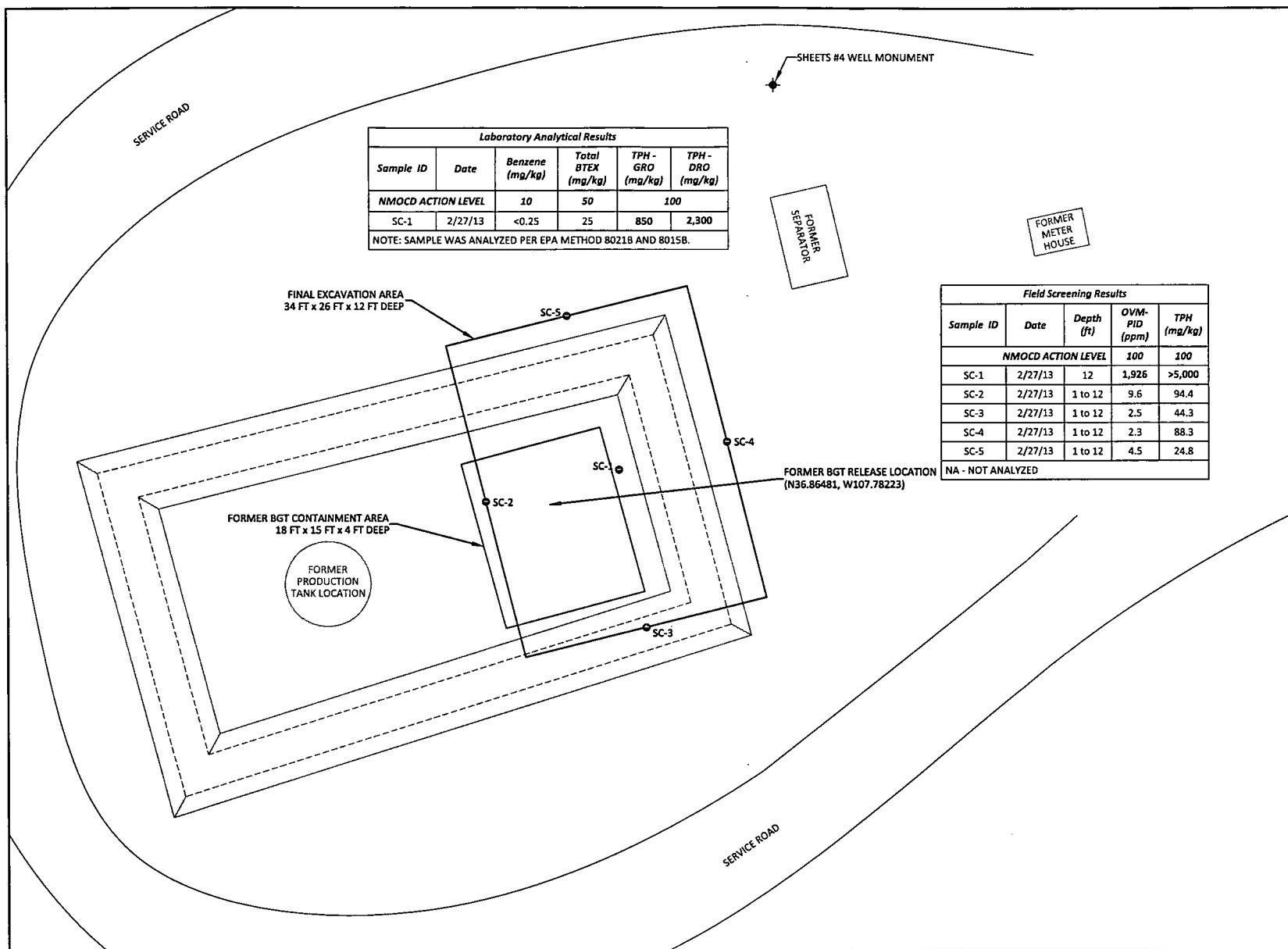
Animas Environmental Services, LLC

<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> August 10, 2012
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> February 27, 2013
<b>CHECKED BY:</b> D. Watson	<b>DATE CHECKED:</b> February 27, 2013
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> February 27, 2013

**LEGEND**

● SAMPLE LOCATIONS





**FIGURE 4**

**FINAL EXCAVATION SAMPLE LOCATIONS AND RESULTS  
FEBRUARY 2013**

ConocoPhillips  
SHEETS #4

SAN JUAN COUNTY, NEW MEXICO  
SW¼ SEC. SECTION 28, T31N, R9W  
N36.86493, W107.78220



Animas Environmental Services, LLC

**DRAWN BY:**  
C. Lameman

**DATE DRAWN:**  
August 10, 2012

**REVISIONS BY:**  
C. Lameman

**DATE REVISED:**  
February 27, 2013

**CHECKED BY:**  
D. Watson

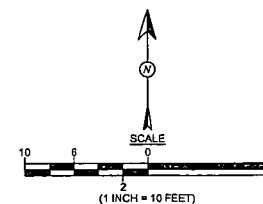
**DATE CHECKED:**  
February 27, 2013

**APPROVED BY:**  
E. McNally

**DATE APPROVED:**  
February 27, 2013

**LEGEND**

● SAMPLE LOCATIONS



# AES Field Screening Report



Animas Environmental Services, LLC

www.animasenvironmental.com

Client: ConocoPhillips

Project Location: Sheets #4

Date: 6/26/2012

Matrix: Soil

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

Durango, Colorado  
970-403-3084

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
S-1	6/26/2012	10:05	North	76.2	40	10:41	1,580	20.0	1	DAW
S-2	6/26/2012	10:07	East	18.8	40	10:46	1,810	20.0	1	DAW
S-3	6/26/2012	10:09	South	2.4	40	10:48	77.4	20.0	1	DAW
S-4	6/26/2012	10:11	West	51.7	40	10:52	>2,500	20.0	1	DAW
S-5	6/26/2012	10:15	Center	3.8	40	10:56	211	20.0	1	DAW

PQL Practical Quantitation Limit

ND Not Detected at the Reporting Limit

DF Dilution Factor

\*Field TPH concentrations recorded may be below PQL.

Field Chloride - Quantab Chloride Titrators or Drop Count Titration with Silver Nitrate

Total Petroleum Hydrocarbons - USEPA 418.1

Analyst:

*Deborah Water*

# AES Field Screening Report



Animas Environmental Services, LLC

www.animasenvironmental.com

Client: ConocoPhillips

Project Location: Sheets #4

Date: 8/6/2012

Matrix: Soil

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

Durango, Colorado  
970-403-3084

Sample ID	Collection Date	Time of Sample Collection	OVM (ppm)	Field TPH Analysis Time	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SB-1 @ 6'	8/6/2012	10:37	7.6	Not analyzed for field TPH				
SB-1 @ 8'	8/6/2012	10:47	149	Not analyzed for field TPH				
SB-1 @ 9.5'	8/6/2012	11:00	2,365	11:26	6,533	200	10	HMW
SB-2 @ 4'	8/6/2012	11:13	4.6	Not analyzed for field TPH				
SB-2 @ 6'	8/6/2012	11:30	3.5	11:53	143	20.0	1	HMW
SB-3 @ 6'	8/6/2012	11:47	5.3	Not analyzed for field TPH				
SB-3 @ 8'	8/6/2012	11:57	2.7	12:23	117	20.0	1	HMW
SB-4 @ 6'	8/6/2012	12:18	20.9	Not analyzed for field TPH				
SB-4 @ 8'	8/6/2012	12:41	2,344	Not analyzed for field TPH				
SB-4 @ 10'	8/6/2012	12:56	3,797	Not analyzed for field TPH				
SB-4 @ 12'	8/6/2012	13:07	2,204	Not analyzed for field TPH				
SB-5 @ 4'	8/6/2012	13:15	10.1	Not analyzed for field TPH				
SB-5 @ 6'	8/6/2012	13:26	51.2	13:53	2,246	20.0	1	HMW
SB-6 @ 6'	8/6/2012	13:36	2.7	Not analyzed for field TPH				
SB-6 @ 8'	8/6/2012	13:58	9.9	Not analyzed for field TPH				
SB-6 @ 10.5'	8/6/2012	14:11	12.5	14:38	117	20.0	1	HMW
SB-7 @ 6'	8/6/2012	14:19	9.1	Not analyzed for field TPH				
SB-7 @ 7'	8/6/2012	14:24	8.8	14:54	95.1	20.0	1	HMW
SB-8 @ 6'	8/6/2012	14:33	7.7	15:06	105	20.0	1	HMW
SB-9 @ 6'	8/6/2012	14:40	9.9	15:11	90.5	20.0	1	HMW

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

Total Petroleum Hydrocarbons - USEPA 418.1  
 \*Field TPH concentrations recorded may be below PQL.

Analyst:

*Heather M. Woods*

# AES Field Screening Report



Animas Environmental Services, LLC

www.animasenvironmental.com

Client: ConocoPhillips

Project Location: Sheets #4

Date: 2/27/2013

Matrix: Soil

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

Durango, Colorado  
970-403-3084

Sample ID	Collection Date	Time of Sample Collection	Sample Location	OMV (ppm)	Field TPH Analysis Time	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SC-1	2/27/2013	8:15	Base	1,926	9:08	>5,000	40.0	1	HMW
SC-2	2/27/2013	8:18	West Wall	9.6	9:10	94.4	20.0	1	HMW
SC-3	2/27/2013	9:43	South Wall	2.5	10:00	44.3	20.0	1	HMW
SC-4	2/27/2013	9:40	East Wall	2.3	9:57	88.3	20.0	1	HMW
SC-5	2/27/2013	8:28	North Wall	4.5	9:17	24.8	20.0	1	HMW

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

Total Petroleum Hydrocarbons - USEPA 418.1

*\*Field TPH concentrations recorded may be below PQL.*

Analyst:

*Heather M. Woods*



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

June 29, 2012

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

RE: CoP Sheets #4

OrderNo.: 1206B26

Dear Ross Kennemer:

Hall Environmental Analysis Laboratory received 1 sample(s) on 6/27/2012 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,

A handwritten signature in black ink, appearing to read "Andy Freeman", with a stylized flourish at the end.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1206B26

Date Reported: 6/29/2012

CLIENT: Animas Environmental Services

Client Sample ID: SC-1

Project: CoP Sheets #4

Collection Date: 6/26/2012 10:17:00 AM

Lab ID: 1206B26-001

Matrix: MEOH (SOIL)

Received Date: 6/27/2012 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)	2700	97		mg/Kg	10	6/27/2012 1:18:25 PM
Surr: DNOP	0	77.6-140	S	%REC	10	6/27/2012 1:18:25 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: BRM
Chloride	ND	30		mg/Kg	20	6/27/2012 11:39:56 AM
<b>EPA METHOD 8260B: VOLATILES SHORT LIST</b>						Analyst: RAA
Benzene	ND	0.050		mg/Kg	1	6/27/2012 1:51:06 PM
Toluene	ND	0.050		mg/Kg	1	6/27/2012 1:51:06 PM
Ethylbenzene	ND	0.050		mg/Kg	1	6/27/2012 1:51:06 PM
Xylenes, Total	ND	0.10		mg/Kg	1	6/27/2012 1:51:06 PM
Surr: 1,2-Dichloroethane-d4	81.8	70-130		%REC	1	6/27/2012 1:51:06 PM
Surr: 4-Bromofluorobenzene	105	70-130		%REC	1	6/27/2012 1:51:06 PM
Surr: Dibromofluoromethane	84.1	71.7-132		%REC	1	6/27/2012 1:51:06 PM
Surr: Toluene-d8	88.7	70-130		%REC	1	6/27/2012 1:51:06 PM
<b>EPA METHOD 8015B MOD: GASOLINE RANGE</b>						Analyst: RAA
Gasoline Range Organics (GRO)	80	5.0		mg/Kg	1	6/27/2012 1:51:06 PM
Surr: BFB	105	70-130		%REC	1	6/27/2012 1:51:06 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#: 1206B26

29-Jun-12

Client: Animas Environmental Services

Project: CoP Sheets #4

Sample ID: 1206A27-003BMS	SampType: MS	TestCode: EPA Method 300.0: Anions								
Client ID: BatchQC	Batch ID: 2593	RunNo: 3740								
Prep Date: 6/27/2012	Analysis Date: 6/27/2012	SeqNo: 105731 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	48	7.5	15.00	33.58	97.9	64.4	117			

Sample ID: 1206A27-003BMSD		SampType: MSD		TestCode: EPA Method 300.0: Anions						
Client ID: BatchQC		Batch ID: 2593		RunNo: 3740						
Prep Date: 6/27/2012		Analysis Date: 6/27/2012		SeqNo: 105732		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	48	7.5	15.00	33.58	97.1	64.4	117	0.254	20	

## 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#: 1206B26

29-Jun-12

Client: Animas Environmental Services

Project: CoP Sheets #4

Sample ID: MB-2601	SampType: MBLK	TestCode: EPA Method 8015B: Diesel Range Organics								
Client ID: PBS	Batch ID: 2601	RunNo: 3705								
Prep Date: 6/27/2012	Analysis Date: 6/27/2012	SeqNo: 105014 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	11		10.00		106	77.6	140			

Sample ID: LCS-2601	SampType: LCS	TestCode: EPA Method 8015B: Diesel Range Organics								
Client ID: LCSS	Batch ID: 2601	RunNo: 3705								
Prep Date: 6/27/2012	Analysis Date: 6/27/2012	SeqNo: 105019 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	89.3	52.6	130			
Surr: DNOP	4.2		5.000		85.0	77.6	140			

Sample ID: 1206A97-001AMS	SampType: MS	TestCode: EPA Method 8015B: Diesel Range Organics								
Client ID: BatchQC	Batch ID: 2601	RunNo: 3730								
Prep Date: 6/27/2012	Analysis Date: 6/28/2012	SeqNo: 105493 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	9.9	49.50	0	84.6	57.2	146			
Surr: DNOP	4.4		4.950		88.7	77.6	140			

Sample ID: 1206A97-001AMSD	SampType: MSD	TestCode: EPA Method 8015B: Diesel Range Organics								
Client ID: BatchQC	Batch ID: 2601	RunNo: 3730								
Prep Date: 6/27/2012	Analysis Date: 6/28/2012	SeqNo: 105523 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	10	50.40	0	82.9	57.2	146	0.286	24.5	
Surr: DNOP	4.3		5.040		84.9	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#: 1206B26

29-Jun-12

Client: Animas Environmental Services

Project: CoP Sheets #4

Sample ID: 5ml rb	SampType: MBLK	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: PBS	Batch ID: R3719	RunNo: 3719								
Prep Date:	Analysis Date: 6/27/2012	SeqNo: 105656	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: 1,2-Dichloroethane-d4	0.43		0.5000		86.4	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.0	70	130			
Surr: Dibromofluoromethane	0.43		0.5000		85.5	71.7	132			
Surr: Toluene-d8	0.45		0.5000		89.9	70	130			

Sample ID: 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: LCSS	Batch ID: R3719	RunNo: 3719								
Prep Date:	Analysis Date: 6/27/2012	SeqNo: 105657	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	92.9	70.7	123			
Toluene	0.91	0.050	1.000	0	91.5	80	120			
Surr: 1,2-Dichloroethane-d4	0.41		0.5000		82.0	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.0	70	130			
Surr: Dibromofluoromethane	0.40		0.5000		79.4	71.7	132			
Surr: Toluene-d8	0.43		0.5000		85.4	70	130			

### 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#: 1206B26

29-Jun-12

Client: Animas Environmental Services

Project: CoP Sheets #4

Sample ID: 2.5ug gro lcs	SampType: LCS	TestCode: EPA Method 8015B Mod: Gasoline Range								
Client ID: LCSS	Batch ID: R3719	RunNo: 3719								
Prep Date:	Analysis Date: 6/27/2012	SeqNo: 105644	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	98.0	85	115			
Surr: BFB	470		500.0		94.2	70	130			

Sample ID: 1206b23-002a ms g	SampType: MS	TestCode: EPA Method 8015B Mod: Gasoline Range								
Client ID: BatchQC	Batch ID: R3719	RunNo: 3719								
Prep Date:	Analysis Date: 6/27/2012	SeqNo: 105646	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	5.0	20.13	0	100	70	130			
Surr: BFB	350		402.7		86.8	70	130			

Sample ID: 1206b23-002a msd g	SampType: MSD	TestCode: EPA Method 8015B Mod: Gasoline Range								
Client ID: BatchQC	Batch ID: R3719	RunNo: 3719								
Prep Date:	Analysis Date: 6/27/2012	SeqNo: 105647	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	5.0	20.13	0	97.7	70	130	2.67	20	
Surr: BFB	360		402.7		88.7	70	130	0	0	

Sample ID: 5ml rb	SampType: MBLK	TestCode: EPA Method 8015B Mod: Gasoline Range								
Client ID: PBS	Batch ID: R3719	RunNo: 3719								
Prep Date:	Analysis Date: 6/27/2012	SeqNo: 105678	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	480		500.0		96.0	70	130			

### 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: 1206B26  
Received by/date: 6/27/12  
Logged By: Lindsay Mangin 6/27/2012 10:00:00 AM  
Completed By: Lindsay Mangin 6/27/2012 10:30:34 AM  
Reviewed By: 06/27/12

## 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° 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?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
15. Is it clear what analyses were requested? Yes ☒ No ☐
16. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐

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

## Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

18. Additional remarks:

## 19. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.0	Good	Yes			

Client: Animas Environmental  
Services LLC

Mailing Address: 624 E Comanche  
Farmington NM 87401

Phone #: 505 564 2281

email or Fax#:

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other \_\_\_\_\_

☐ EDD (Type) \_\_\_\_\_

☐ Standard ☒ Rush Same day

CoP Sheets # 4

**Project Manager:**

R. Kennemer

Sampler: D Watson

On Ice ☒ Yes ☐ No

Sample Temperature: 4°C

[illegible]

Container Type and #	Preservative Type
-------------------------	----------------------

Type and #	Type
------------	------

1	Медик	мед
---	-------	-----

1-4oz glas	
------------	--

9

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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Received by:

Accepted by \_\_\_\_\_

Received by Matthew Walby

Received by \_\_\_\_\_

Franklin Park

~~1200-1211 11 1111~~

## 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

	X	BTEX + <del>MTBE</del> s (8021)
		BTEX + MTBE + TPH (Gas only)
	X	TPH Method 8015B ( <sup>gas/diesel</sup> )
		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)
	X	300.0 Chlondes
		Air Rubbles (Y or N)

Date:	Time:	Relinquished by:
6/7/17	1725	Deborah Water

Date:	Time:	Relinquished by:
11/24/12	1751	Christine, L. Lee

Received by:	Date	Time
Christine Walker	6/26/17	1725

Received by: [Signature] Date 06/27/2006 Time 10:00

Remarks:	Bull to ConocoPhillips
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wo: 10330121  
krea: 5  
act code: C200

Supervisor: Harry Dee  
Approver ID: KATHW  
ordered by: Jess Henson



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

March 01, 2013

Debbie Watson

Animas Environmental Services

624 East Comanche

Farmington, NM 87401

TEL: (505) 486-4071

FAX

RE: CoP Sheets #4

OrderNo.: 1302915

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 2/28/2013 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. 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 1302915

Date Reported: 3/1/2013

CLIENT: Animas Environmental Services

Client Sample ID: SC-1

Project: CoP Sheets #4

Collection Date: 2/27/2013 8:15:00 AM

Lab ID: 1302915-001

Matrix: SOIL

Received Date: 2/28/2013 9:59:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: MMD
Diesel Range Organics (DRO)	2300	100		mg/Kg	10	2/28/2013 1:00:13 PM
Surr: DNOP	0	72.4-120	S	%REC	10	2/28/2013 1:00:13 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	850	50		mg/Kg	10	2/28/2013 11:42:53 AM
Surr: BFB	723	84-116	S	%REC	10	2/28/2013 11:42:53 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	0.25		mg/Kg	10	2/28/2013 11:42:53 AM
Toluene	ND	0.50		mg/Kg	10	2/28/2013 11:42:53 AM
Ethylbenzene	2.8	0.50		mg/Kg	10	2/28/2013 11:42:53 AM
Xylenes, Total	22	1.0		mg/Kg	10	2/28/2013 11:42:53 AM
Surr: 4-Bromofluorobenzene	138	80-120	S	%REC	10	2/28/2013 11:42:53 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1302915

01-Mar-13

Client: Animas Environmental Services

Project: CoP Sheets #4

Sample ID	MB-6278	SampType:	MBLK	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	PBS	Batch ID:	6278	RunNo:	8891					
Prep Date:	2/28/2013	Analysis Date:	2/28/2013	SeqNo:	254152	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	11		10.00		106	72.4	120			

Sample ID	LCS-6278	SampType:	LCS	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	6278	RunNo:	8891					
Prep Date:	2/28/2013	Analysis Date:	2/28/2013	SeqNo:	254153	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	102	47.4	122			
Surr: DNOP	5.6		5.000		112	72.4	120			

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1302915

01-Mar-13

Client: Animas Environmental Services

Project: CoP Sheets #4

Sample ID	MB-6270	SampType:	MBLK	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	PBS	Batch ID:	R8894	RunNo:	8894					
Prep Date:	2/27/2013	Analysis Date:	2/28/2013	SeqNo:	254504	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	1100		1000		106	84	116			

Sample ID	LCS-6270	SampType:	LCS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	LCSS	Batch ID:	R8894	RunNo:	8894					
Prep Date:	2/27/2013	Analysis Date:	2/28/2013	SeqNo:	254505	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	32	5.0	25.00	0	129	62.6	136			
Surr: BFB	1400		1000		138	84	116			S

Sample ID	MB-6270	SampType:	MBLK	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	PBS	Batch ID:	6270	RunNo:	8894					
Prep Date:	2/27/2013	Analysis Date:	2/28/2013	SeqNo:	254526	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		106	84	116			

Sample ID	LCS-6270	SampType:	LCS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	LCSS	Batch ID:	6270	RunNo:	8894					
Prep Date:	2/27/2013	Analysis Date:	2/28/2013	SeqNo:	254527	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1400		1000		138	84	116			S

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1302915

01-Mar-13

Client: Animas Environmental Services

Project: CoP Sheets #4

Sample ID	MB-6270	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	6270	RunNo:	8894					
Prep Date:	2/27/2013	Analysis Date:	2/28/2013	SeqNo:	254558	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		105	80	120			

Sample ID	LCS-6270	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	6270	RunNo:	8894					
Prep Date:	2/27/2013	Analysis Date:	2/28/2013	SeqNo:	254559	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.2		1.000		115	80	120			

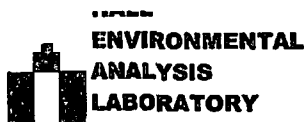
Sample ID	1302914-001AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	BatchQC	Batch ID:	R8894	RunNo:	8894					
Prep Date:		Analysis Date:	2/28/2013	SeqNo:	254599	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.51	0.050	0.5368	0	94.1	67.2	113			
Toluene	0.50	0.050	0.5368	0	93.5	62.1	116			
Ethylbenzene	0.51	0.050	0.5368	0	94.3	67.9	127			
Xylenes, Total	1.5	0.10	1.610	0	95.5	60.6	134			
Surr: 4-Bromofluorobenzene	0.61		0.5368		113	80	120			

Sample ID	1302914-001AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	BatchQC	Batch ID:	R8894	RunNo:	8894					
Prep Date:		Analysis Date:	2/28/2013	SeqNo:	254600	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.50	0.050	0.5368	0	92.5	67.2	113	1.74	14.3	
Toluene	0.49	0.050	0.5368	0	91.6	62.1	116	1.98	15.9	
Ethylbenzene	0.50	0.050	0.5368	0	92.5	67.9	127	1.89	14.4	
Xylenes, Total	1.5	0.10	1.610	0	92.8	60.6	134	2.83	12.6	
Surr: 4-Bromofluorobenzene	0.46		0.5368		86.1	80	120	0	0	

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits



4901 Hawks 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:	1302915
Received by/date:	AG 02/28/13		
Logged By:	Anne Thorne	2/28/2013 9:59:00 AM	<i>Anne Thorne</i>
Completed By:	Anne Thorne	2/28/2013	<i>Anne Thorne</i>
Reviewed By:	IO	02/28/2013	

### 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 ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
15. Is it clear what analyses were requested? Yes ☒ No ☐
16. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐

# of preserved  
bottles checked  
for pH:

(<2 or >12 unless noted)

Adjusted? \_\_\_\_\_

Checked by: \_\_\_\_\_

### Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

18. Additional remarks:

### 19. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.9	Good	Yes			

Chain-of-Custody Record		Turn-Around Time:
Client: <u>Animas Environmental Services, LLC</u>	<input type="checkbox"/> Standard	<input checked="" type="checkbox"/> Rush <u>Same Day</u>
Mailing Address: <u>624 E. Comanche</u>	Project Name: <u>CoP Sheets #4</u>	
<u>Farmington, NM 87401</u>	Project #:	
Phone #: <u>505-564-2281</u>	Project Manager:	
email or Fax#:	<u>D. Watson</u>	
QA/QC Package:	Sampler: <u>H. Woods</u>	
<input checked="" type="checkbox"/> Standard	<input type="checkbox"/> Level 4 (Full Validation)	<input type="checkbox"/> On Ice <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Accreditation	Sample Temperature: <u>2</u>	
<input type="checkbox"/> NELAP <input type="checkbox"/> Other _____		
<input type="checkbox"/> EDD (Type) _____		

☐ Standard ☒ Rush Same Day

Col Sheets #4

**Project Manager:**

D. Watson

Sampler: H. Woods

Once ☐ No ☒ Yes ☐ No

Sample Temperature

Container Type and #	Material	Quantity	Weight	Volume	Notes
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[illegible]

# HEALING

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## Analysis Request

[illegible]

Date:	Time:	Relinquished by:
4/27/13	1708	Heather M. Woods

Received by:	Date	Time
Christine Wheeler	2/27/13	1708

Remarks: Bill to Conuco Phillips

Date:	Time:	Relinquished by:
2/27/13	1720	Christina Wale

Received by: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

*[Signature]* 02/28/13 09:59

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.