

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

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 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>Lindsay Dumas</b>
Address <b>3401 East 30<sup>th</sup> St, Farmington, NM</b>	Telephone No. <b>(505) 599-4089</b>
Facility Name: <b>San Juan 28-6 169M</b>	Facility Type: <b>Gas</b>

Surface Owner: <b>Fee (E-290-42)</b>	Mineral Owner: <b>Fee</b>	API No. <b>30-039-25703</b>
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**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
<b>I</b>	<b>2</b>	<b>27N</b>	<b>06W</b>	<b>1680'</b>	<b>South</b>	<b>800'</b>	<b>East</b>	<b>Rio Arriba</b>

Latitude **36.60038** Longitude **-107.42945**

**NATURE OF RELEASE**

Type of Release <b>Historic Contamination</b>	Volume of Release <b>N/A</b>	Volume Recovered <b>N/A</b>
Source of Release <b>Production Tank</b>	Date and Hour of Occurrence <b>N/A</b>	Date and Hour of Discovery <b>9/6/13</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.	

**RCVD MAR 18 '14**

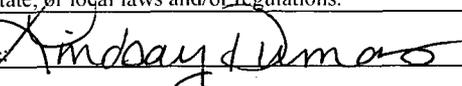
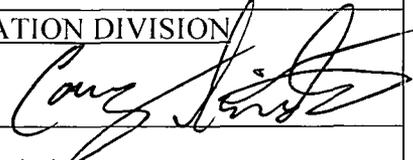
**OIL CONS. DIV.  
DIST. 3**

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*  
**Petroleum contaminated soils were discovered during facility reset activities at the location.**

Describe Area Affected and Cleanup Action Taken.\*  
**Excavation was 35' X 45' X 3.5' Deep. 276 c/yds of soil was transported to IEI Land Farm and 300 c/yds of clean soil was transported from Aztec Machine Co. and placed in the excavation site. Analytical results were below the regulatory standards – no further action required. The soil sampling report is attached for review.**

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: <b>Lindsay Dumas</b>	Approved by Environmental Specialist: 	
Title: <b>Field Environmental Specialist</b>	Approval Date:	Expiration Date:
E-mail Address: <b>Lindsay.Dumas@conocophillips.com</b>	Conditions of Approval:	Attached <input type="checkbox"/>
Date: <b>3/17/14</b>	Phone: <b>(505) 599-4089</b>	

\* Attach Additional Sheets If Necessary

Incident# **NCS 141065 4311**



Animas Environmental Services, LLC

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

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

Durango, Colorado  
970-403-3084

February 7, 2014

Lindsay Dumas  
ConocoPhillips  
San Juan Business Unit  
Office 214-07  
5525 Hwy 64  
Farmington, New Mexico 87401

*Via electronic mail to:*  
[SJBUE-Team@ConocoPhillips.com](mailto:SJBUE-Team@ConocoPhillips.com)

**RE: Initial Release Assessment and Final Excavation Report  
San Juan 28-6 #169M  
Rio Arriba County, New Mexico**

Dear Ms. Dumas:

On September 6 and October 3, 7, and 14, 2013, Animas Environmental Services, LLC (AES) completed an initial release assessment and environmental clearance of the final excavation limits at the ConocoPhillips (CoP) San Juan 28-6 #169M, located in Rio Arriba County, New Mexico. A release was discovered beneath the onsite production tank during facility reset activities at the location. The initial release assessment was completed by AES on September 6, 2013, and the final excavation was completed by CoP contractors while AES was on location on October 14, 2013.

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## 1.0 Site Information

### 1.1 Location

Location – NE¼ SE¼, Section 2, T27N, R6W, Rio Arriba County, New Mexico  
Well Head Latitude/Longitude – N36.60050 and W107.42999, respectively  
Release Location Latitude/Longitude – N36.60057 and W107.42973, respectively  
Land Jurisdiction – State of New Mexico  
Figure 1. Topographic Site Location Map  
Figure 2. Aerial Site Map, September 2013

### 1.2 NMOCD Ranking

In accordance with New Mexico Oil Conservation Division (NMOCD) release protocols, action levels were established per NMOCD *Guidelines for Remediation of Leaks, Spills,*

and Releases (August 1993) prior to site work. The release was given a ranking score of 10 based on the following factors:

- **Depth to Groundwater:** A cathodic protection report form dated March 1999 reported the depth to groundwater at 240 to 250 feet below ground surface (bgs). (0 points)
- **Wellhead Protection Area:** The release location is not within a wellhead protection area. (0 points)
- **Distance to Surface Water Body:** An unnamed wash which discharges north to the wash in Muñoz Canyon is located approximately 230 feet to the west. (10 points)

### *1.3 Assessment*

AES was initially contacted by Dan Rudder of CoP on September 5, 2013, and on September 6, 2013, Deborah Watson and David Reese of AES completed the release assessment field work. The assessment included collection and field screening of 27 soil samples from 15 assessment trenches (TH-1 through TH-15) in and around the release area. One sample (SCA-1) was composited from surface samples collected from TH-1 through TH-5. Based on the field screening results, AES recommended further excavation of the release area. Sample locations are shown on Figure 3.

On October 3, 2013, AES returned to the location to collect confirmation soil samples of the excavation. The field screening activities included collection of four confirmation soil samples from the walls and base of the excavation. The area of the final excavation was approximately 54 feet by 36 feet by 1.5 to 3.5 feet in depth. The depth of the excavation was limited due to a confining sandstone unit at 1.5 to 3.5 feet bgs. Samples SC-5 and SC-6 were collected on October 7, 2013, following an initial application of potassium permanganate. Final confirmation soil samples (SC-7 and SC-8) from the base of the excavation were collected on October 14, 2013, following the second application of potassium permanganate. Sample locations and final excavation extents are presented on Figure 4.

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## **2.0 Soil Sampling**

A total of 27 soil samples from 15 assessment trenches (TH-1 through TH-15) and 9 composite samples (SCA-1 and SC-1 through SC-8) were collected during the assessments. Selected soil samples were field screened for volatile organic compounds (VOCs), and selected samples were also analyzed for total petroleum hydrocarbons (TPH). Two samples (TH-1 and SCA-1) collected during the initial assessment and eight

composite samples (SC-1 through SC-8) collected during the excavation clearance were submitted for confirmation laboratory analysis.

## *2.1 Field Screening*

### **2.1.1 Volatile Organic Compounds**

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

### **2.1.2 Total Petroleum Hydrocarbons**

Field TPH samples were analyzed 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*

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 TH-1 and SC-1 through SC-8 were laboratory analyzed for:

- Benzene, toluene, ethylbenzene, and xylene (BTEX) per U.S. Environmental Protection Agency (USEPA) Method 8021B.

Soil samples SC-1, SC-2, SC-5, SC-6, and SC-7 were also laboratory analyzed for:

- TPH for gasoline range organics (GRO) and diesel range organics (DRO) per USEPA Method 8015D.

Soil sample SCA-1 was laboratory analyzed for:

- Chlorides per USEPA Method 300.0.

## *2.3 Field Screening and Laboratory Analytical Results*

On September 6, 2013, initial assessment field screening results for VOCs via OVM showed concentrations ranging from 0.0 ppm in TH-2 through TH-4, TH-9, TH-14, and TH-15, up to 3,429 ppm in TH-11. Field TPH concentrations ranged from 23.0 mg/kg in TH-1 at 4.5 feet deep to 6,500 mg/kg in TH-1 at 4 feet.

On October 3, October 7, and October 14, 2013, final excavation field screening results for VOCs via OVM ranged from 399 ppm in SC-8 up to 3,564 ppm in SC-5. Field TPH concentrations ranged from 193 mg/kg in SC-4 to 3,290 mg/kg in SC-1. Results are included below in Table 1 and on Figures 3 and 4. The AES Field Screening Reports are attached.

Table 1. Field Screening VOCs and TPH Results  
 San Juan 28-6 #169M Initial Release Assessment and Final Excavation  
 September and October 2013

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Sample Depth (ft bgs)</i>	<i>VOCs via OVM (ppm)</i>	<i>Field TPH (mg/kg)</i>
<i>NMOCD Action Level*</i>			<i>100</i>	<i>1,000</i>
TH-1	9/6/13	Surface	<b>1,890</b>	NA
		2	<b>2,966</b>	<b>&gt;2,500</b>
		3	<b>692</b>	NA
		4	<b>3,079</b>	<b>6,500</b>
		4.5	22.0	23.0
TH-2	9/6/13	Surface	0.0	NA
		1.5	0.0	NA
TH-3	9/6/13	Surface	0.0	NA
		2	0.0	NA
TH-4	9/6/13	Surface	0.0	NA
		2.5	<b>397</b>	167
TH-5	9/6/13	Surface	<b>2,995</b>	NA
		4	<b>3,000</b>	NA
TH-6	9/6/13	3	17.5	NA
		4.5	<b>144</b>	NA
TH-7	9/6/13	4.0	11.4	NA
TH-8	9/6/13	Surface	<b>3,113</b>	NA
		3	10.3	NA
TH-9	9/6/13	2	0.0	NA
		3.5	0.0	NA
TH-10	9/6/13	1.5	<b>273</b>	247

<b>Sample ID</b>	<b>Date Sampled</b>	<b>Sample Depth (ft bgs)</b>	<b>VOCs via OVM (ppm)</b>	<b>Field TPH (mg/kg)</b>
<i>NMOCD Action Level*</i>			100	1,000
TH-11	9/6/13	1.5	<b>3,429</b>	<b>2,130</b>
TH-12	9/6/13	2	22.2	NA
TH-13	9/6/13	1.5	0.2	NA
TH-14	9/6/13	2	0.0	NA
		3.5	0.0	NA
TH-15	9/6/13	2	0.0	NA
SC-1	10/3/13	3.5	<b>3,463</b>	<b>3,290</b>
SC-2	10/3/13	2 to 3.5	<b>2,920</b>	<b>2,420</b>
SC-3	10/3/13	0 to 1.5	<b>714</b>	282
SC-4	10/3/13	0 to 2	<b>902</b>	193
SC-5	10/7/13	3.5	<b>3,564</b>	<b>1,920</b>
SC-6	10/7/13	1.5	<b>2,804</b>	<b>2,560</b>
SC-7	10/14/13	3.5	<b>770</b>	<b>1,430</b>
SC-8	10/14/13	1.5	<b>399</b>	726

NA – not analyzed

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

Laboratory analyses for TH-1 at 4 feet deep and SCA-1 were used to confirm field screening results of the initial release assessment. Benzene and total BTEX concentrations in TH-1 were reported at less than 0.24 mg/kg and 15.3 mg/kg, respectively. The chloride concentration in SC-1 was reported at 12 mg/kg.

Laboratory analyses for SC-1 through SC-8 were used to confirm field screening results from the final excavation. Benzene concentrations ranged from below laboratory detection limits in SC-2 through SC-5 and SC-8, up to 0.83 mg/kg in SC-6. Total BTEX concentrations ranged from 0.70 mg/kg in SC-3 up to 170 mg/kg in SC-6. TPH concentrations as GRO/DRO ranged from 1,270 mg/kg in SC-2 up to 2,930 mg/kg in SC-6. Results are presented in Table 2 and on Figure 4. The laboratory analytical reports are attached.

Table 2. Laboratory Analytical Results – Benzene, Total BTEX, TPH, and Chlorides  
 San Juan 28-6 #169M Initial Release Assessment and Final Excavation  
 September and October 2013

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Sample Depth (ft bgs)</i>	<i>Benzene (mg/kg)</i>	<i>Total BTEX (mg/kg)</i>	<i>GRO (mg/kg)</i>	<i>DRO (mg/kg)</i>	<i>Chlorides (mg/kg)</i>
<i>NMOCD Action Level*</i>			<i>10</i>	<i>50</i>	<i>1,000</i>		<i>NE</i>
TH-1	9/6/14	4	<0.24	15.3	NA	NA	NA
SCA-1	9/6/14	surface	NA	NA	NA	NA	12
SC-1	10/3/13	1.5	0.57	<b>87.3</b>	<b>1,300</b>	<b>950</b>	NA
SC-2	10/3/13	2 to 3.5	<0.50	46.1	<b>610</b>	<b>660</b>	NA
SC-3	10/3/13	1 to 2	<0.12	0.70	NA	NA	NA
SC-4	10/3/13	0.5 to 1	<0.12	3.9	NA	NA	NA
SC-5	10/7/13	1.5	<0.12	<b>76.8</b>	<b>1,300</b>	<b>1,000</b>	NA
SC-6	10/7/13	2 to 3.5	0.83	<b>170</b>	<b>2,000</b>	<b>930</b>	NA
SC-7	10/14/13	1.5	0.087	27.7	<b>580</b>	<b>780</b>	NA
SC-8	10/14/13	2 to 3.5	<0.10	2.0	NA	NA	NA

NA – not analyzed, NE – not established

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

### 3.0 Conclusions and Recommendations

On September 6, 2013, AES conducted an initial assessment of petroleum contaminated soils associated with release discovered during facility reset activities at the San Juan 28-6 #169M. Action levels for releases are determined by the NMOCD ranking score per *NMOCD Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993), and the site was assigned a rank of 10.

Initial assessment field screening results above the NMOCD action level of 100 ppm VOCs and 1,000 mg/kg TPH were reported in TH-1, TH-4 through TH-6, TH-8, TH-10, and TH-11. The highest VOC concentration was reported in TH-11 with 3,429 ppm, and the highest TPH concentration was reported in TH-1 with 6,500 mg/kg. Laboratory analyses for TH-1 and SCA-1 were used to confirm field screening results. Benzene and total BTEX concentrations were reported below the NMOCD action levels of 10 mg/kg and 50 mg/kg, respectively, in TH-1. The chloride concentration in SCA-1 was reported at 12 mg/kg.

Field screening results from the excavation extents on October 3, 2013, showed that VOC concentrations were above applicable NMOCD action levels for the final walls and base of the excavation. Field TPH concentrations were below the applicable NMOCD action level of 1,000 mg/kg for the sidewalls of the excavation but exceeded the action level in the base of the excavation. Laboratory analytical results reported benzene and total BTEX concentrations below NMOCD action levels in the sidewall samples. However, sample SC-1 (excavation base) exceeded the NMOCD action level of 50 mg/kg total BTEX with 87.3 mg/kg, and base samples SC-1 and SC-2 exceeded the NMOCD action levels for TPH as GRO/DRO with 2,250 mg/kg and 1,270 mg/kg, respectively.

Two separate applications of potassium permanganate were applied to the base of the excavation followed by field and laboratory sampling events on October 7 and 14, 2013. Field screening and laboratory analytical results for SC-5 and SC-6 (excavation base) collected on October 7, 2013, exceeded the NMOCD action levels for VOCs, total BTEX, and TPH (GRO/DRO). Subsequent field screening results for SC-7 and SC-8 (collected on October 14, 2013) reported VOC concentrations above the NMOCD action level of 100 ppm with 770 ppm and 390 ppm, respectively. Field TPH concentrations were reported below the NMOCD action level of 1,000 mg/kg in SC-8 with 726 mg/kg, while SC-7 exceeded the NMOCD action level with 1,460 mg/kg. Laboratory analytical results from October 14, 2013, reported both samples below applicable NMOCD action levels for benzene and total BTEX. Sample SC-7 had a reported TPH (as GRO/DRO) concentration just above the NMOCD action level with 1,360 mg/kg.

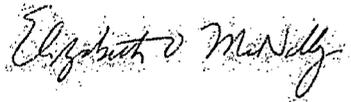
Based on the final field screening and laboratory analytical results of the excavation of petroleum contaminated soils at the San Juan 28-6 #169M, benzene, total BTEX, and TPH concentrations were below the applicable NMOCD action levels for the final sidewalls and the base of the excavation, with the exception of the SC-7, after two applications of potassium permanganate. On October 15, 2013, CoP received approval to backfill the excavation from Brandon Powell of the NMOCD. No further work is recommended at the San Juan 28-6 #169M.

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

Sincerely,



David J. Reese  
Environmental Scientist



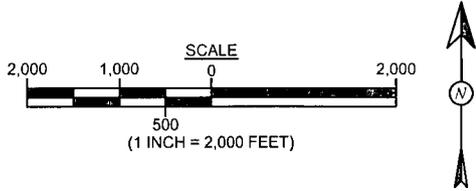
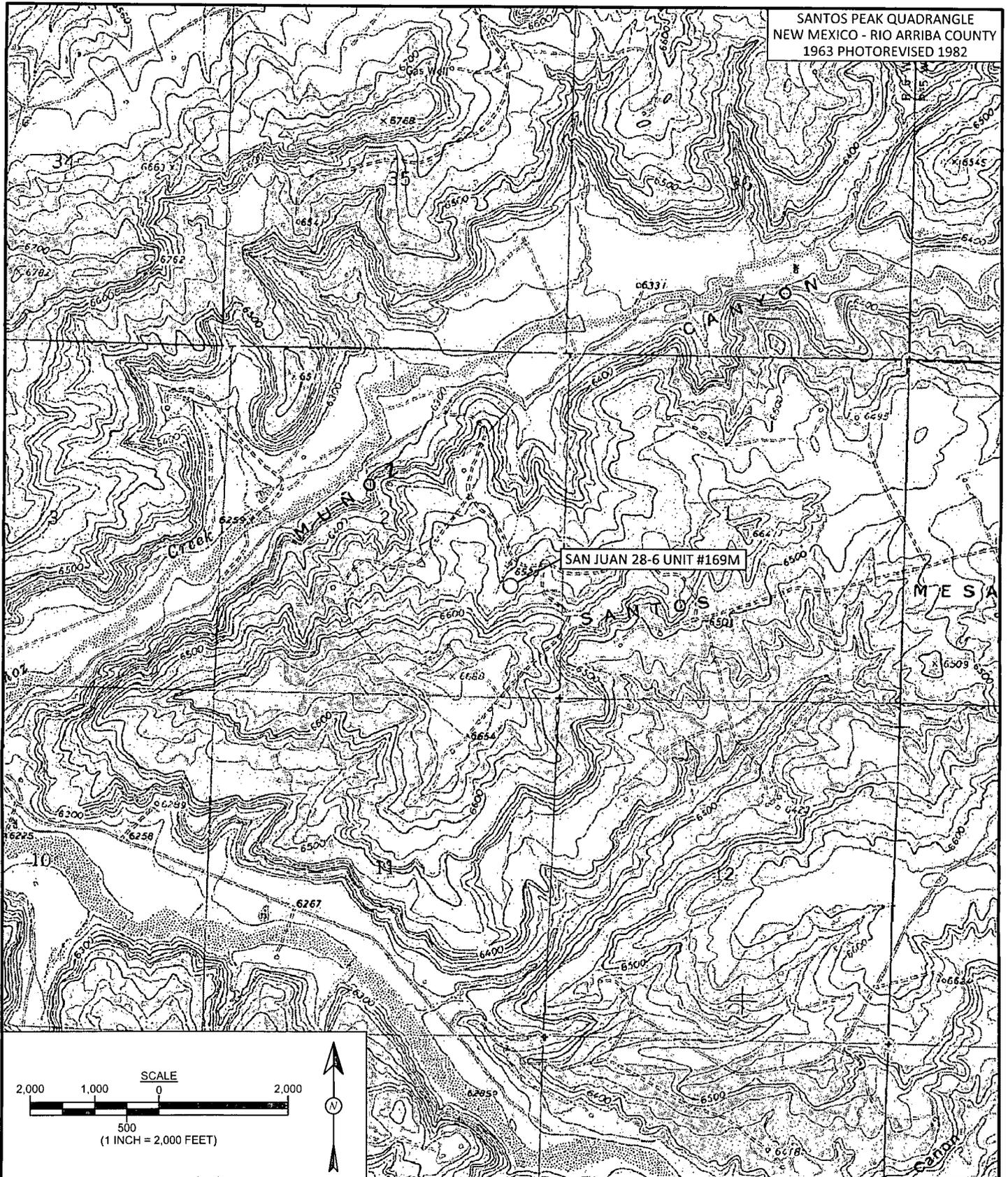
Elizabeth McNally, PE

Attachments:

- Figure 1. Topographic Site Location Map
- Figure 2. Aerial Site Map, September 2013
- Figure 3. Initial Assessment Sample Locations and Results, September 2013
- Figure 4. Final Excavation Sample Locations and Results, October 2013
- AES Field Screening Report 090613
- AES Field Screening Report 100313 100713 101413
- Hall Laboratory Analytical Report 1309325
- Hall Laboratory Analytical Report 1310239
- Hall Laboratory Analytical Report 1310359
- Hall Laboratory Analytical Report 1310684

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#169M\San Juan 28-6 #169M Release and Final Excavation Report 020714.docx

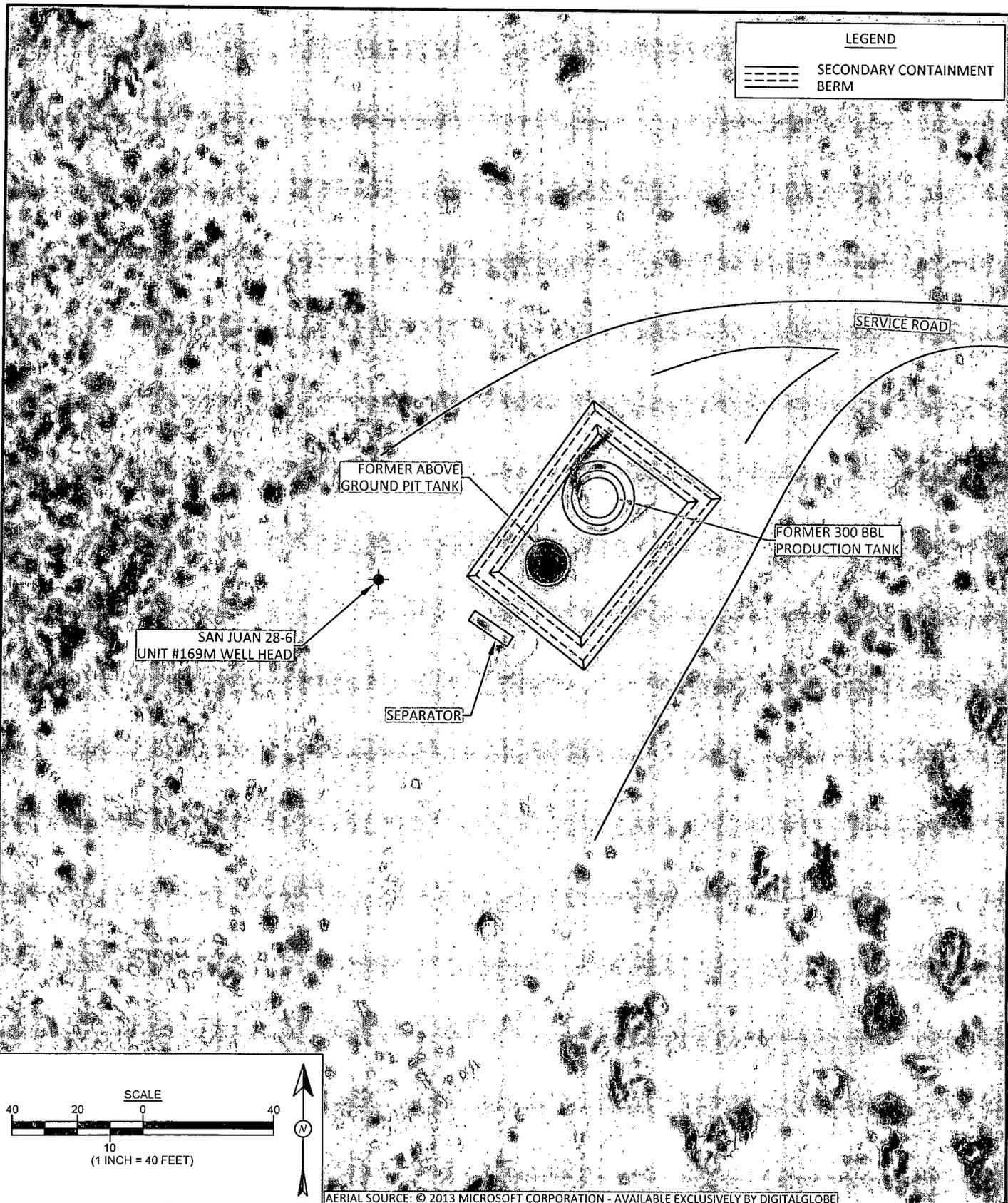
SANTOS PEAK QUADRANGLE  
 NEW MEXICO - RIO ARriba COUNTY  
 1963 PHOTOREVISED 1982



<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> January 16, 2014
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> January 16, 2014
<b>CHECKED BY:</b> D. Watson	<b>DATE CHECKED:</b> January 16, 2014
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> January 16, 2014

**FIGURE 1**

**TOPOGRAPHIC SITE LOCATION MAP**  
 ConocoPhillips  
 SAN JUAN 28-6 UNIT #169M  
 NE¼, SE¼, SECTION 2, T27N, R6W  
 RIO ARriba COUNTY, NEW MEXICO  
 N36.60050, W107.42999



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<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> January 16, 2014
<b>CHECKED BY:</b> D. Watson	<b>DATE CHECKED:</b> January 16, 2014
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> January 16, 2014

**FIGURE 2**

**AERIAL SITE MAP  
SEPTEMBER 2013**

ConocoPhillips  
SAN JUAN 28-6 UNIT #169M  
NE¼ SE¼, SECTION 2, T27N, R6W  
RIO ARriba COUNTY, NEW MEXICO  
N36.60050, W107.42999

**FIGURE 3**

**INITIAL ASSESSMENT SAMPLE LOCATIONS AND RESULTS SEPTEMBER 2013**  
 ConocoPhillips  
 SAN JUAN 28-6 UNIT #169M  
 NE¼ SE¼, SECTION 2, T27N, R6W  
 RIO ARRIBA COUNTY, NEW MEXICO  
 N36.60050, W107.42999



Animas Environmental Services, LLC

**DRAWN BY:** C. Lameman **DATE DRAWN:** September 9, 2013

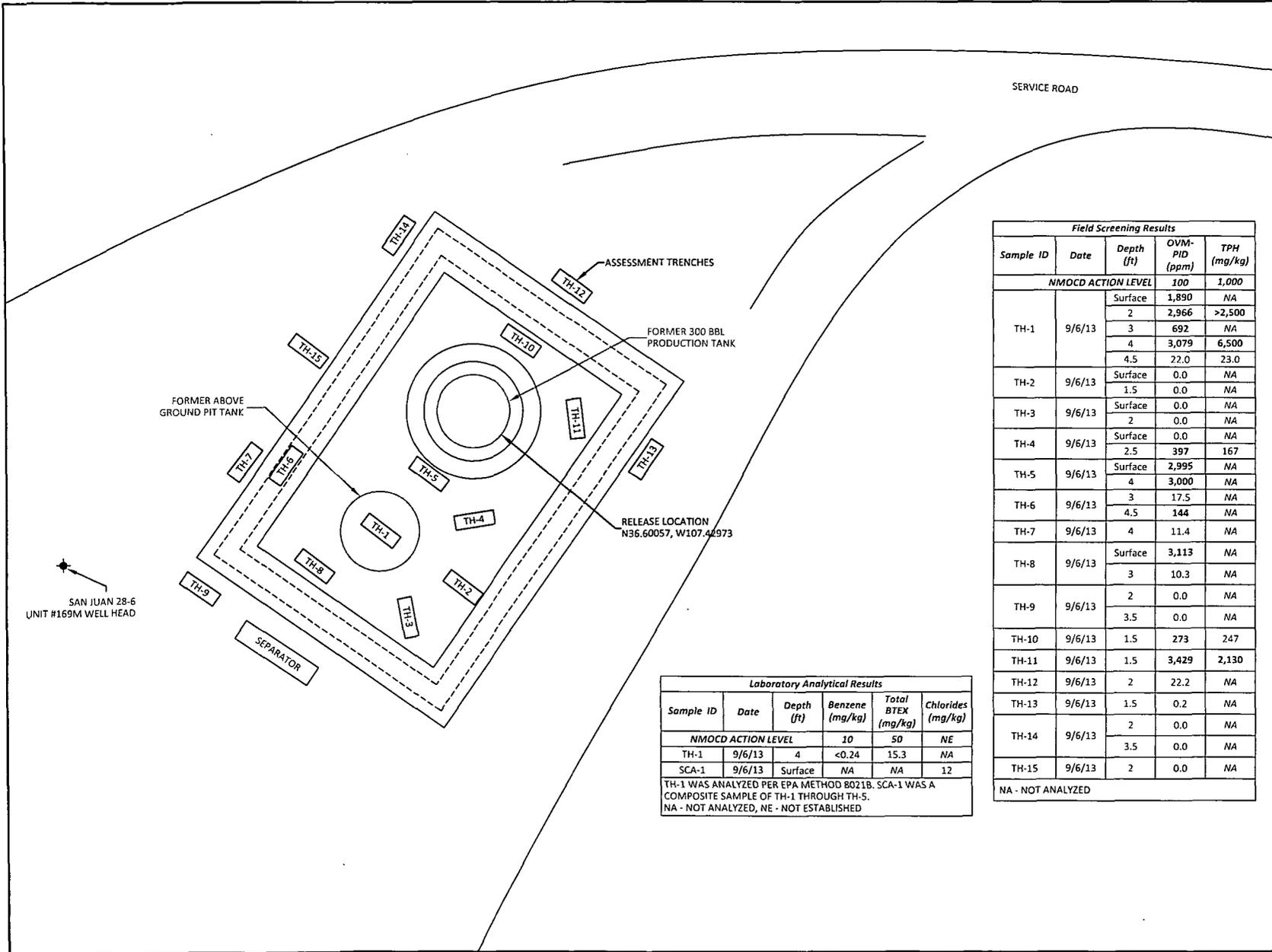
**REVISIONS BY:** C. Lameman **DATE REVISED:** January 16, 2014

**CHECKED BY:** D. Watson **DATE CHECKED:** January 16, 2014

**APPROVED BY:** E. McNally **DATE APPROVED:** January 16, 2014

**LEGEND**

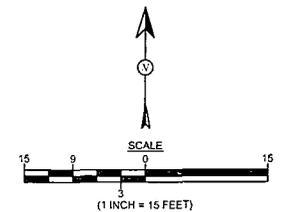
==== SECONDARY CONTAINMENT BERM



Field Screening Results				
Sample ID	Date	Depth (ft)	OVM-PID (ppm)	TPH (mg/kg)
<b>NMOC ACTION LEVEL</b>				
		Surface	1,890	NA
		2	2,966	>2,500
		3	692	NA
		4	3,079	6,500
		4.5	22.0	23.0
TH-1	9/6/13	Surface	0.0	NA
		1.5	0.0	NA
TH-2	9/6/13	Surface	0.0	NA
		2	0.0	NA
TH-3	9/6/13	Surface	0.0	NA
		2.5	397	167
TH-4	9/6/13	Surface	2,995	NA
		4	3,000	NA
TH-5	9/6/13	3	17.5	NA
		4.5	144	NA
TH-6	9/6/13	4	11.4	NA
TH-7	9/6/13	Surface	3,113	NA
		3	10.3	NA
TH-8	9/6/13	2	0.0	NA
		3.5	0.0	NA
TH-9	9/6/13	1.5	273	247
TH-10	9/6/13	1.5	3,429	2,130
TH-11	9/6/13	2	22.2	NA
TH-12	9/6/13	1.5	0.2	NA
		2	0.0	NA
TH-13	9/6/13	3.5	0.0	NA
TH-14	9/6/13	2	0.0	NA
TH-15	9/6/13	2	0.0	NA

Laboratory Analytical Results					
Sample ID	Date	Depth (ft)	Benzene (mg/kg)	Total BTEX (mg/kg)	Chlorides (mg/kg)
<b>NMOC ACTION LEVEL</b>					
			10	50	NE
TH-1	9/6/13	4	<0.24	15.3	NA
SCA-1	9/6/13	Surface	NA	NA	12

TH-1 WAS ANALYZED PER EPA METHOD 8021B. SCA-1 WAS A COMPOSITE SAMPLE OF TH-1 THROUGH TH-5.  
 NA - NOT ANALYZED, NE - NOT ESTABLISHED



**FIGURE 4**

**FINAL EXCAVATION SAMPLE LOCATIONS AND RESULTS OCTOBER 2013**  
 ConocoPhillips  
 SAN JUAN 28-6 UNIT #169M  
 NE¼, SE¼, SECTION 2, T27N, R6W  
 RIO ARRIBA COUNTY, NEW MEXICO  
 N36.60050, W107.42999

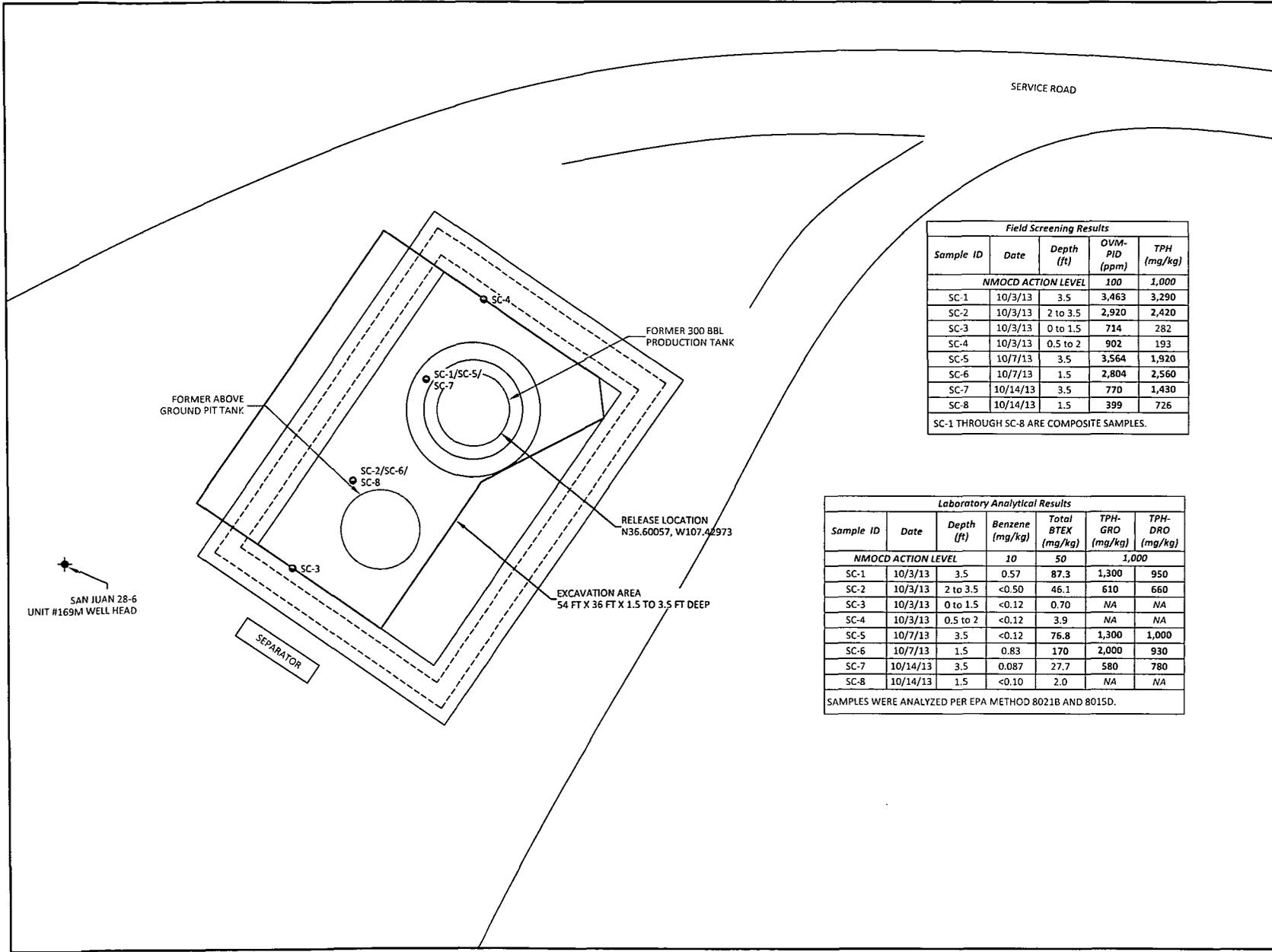
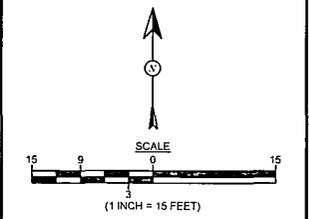


Animas Environmental Services, LLC

<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> January 16, 2014
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> January 16, 2014
<b>CHECKED BY:</b> D. Watson	<b>DATE CHECKED:</b> January 16, 2014
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> January 16, 2014

**LEGEND**

●	SAMPLE LOCATIONS
====	SECONDARY CONTAINMENT BERM



**Field Screening Results**

Sample ID	Date	Depth (ft)	OVM-PID (ppm)	TPH (mg/kg)
<b>NMOC ACTION LEVEL</b>				<b>100</b>
SC-1	10/3/13	3.5	3,463	3,290
SC-2	10/3/13	2 to 3.5	2,920	2,420
SC-3	10/3/13	0 to 1.5	714	282
SC-4	10/3/13	0.5 to 2	902	193
SC-5	10/7/13	3.5	3,564	1,920
SC-6	10/7/13	1.5	2,804	2,560
SC-7	10/14/13	3.5	770	1,430
SC-8	10/14/13	1.5	399	726

SC-1 THROUGH SC-8 ARE COMPOSITE SAMPLES.

**Laboratory Analytical Results**

Sample ID	Date	Depth (ft)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)
<b>NMOC ACTION LEVEL</b>			<b>10</b>	<b>50</b>	<b>1,000</b>	
SC-1	10/3/13	3.5	0.57	87.3	1,300	950
SC-2	10/3/13	2 to 3.5	<0.50	46.1	610	660
SC-3	10/3/13	0 to 1.5	<0.12	0.70	NA	NA
SC-4	10/3/13	0.5 to 2	<0.12	3.9	NA	NA
SC-5	10/7/13	3.5	<0.12	76.8	1,300	1,000
SC-6	10/7/13	1.5	0.83	170	2,000	930
SC-7	10/14/13	3.5	0.087	27.7	580	780
SC-8	10/14/13	1.5	<0.10	2.0	NA	NA

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

# AES Field Screening Report



Animas Environmental Services, LLC

www.animasenvironmental.com

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

Durango, Colorado  
970-403-3084

Client: ConocoPhillips

Project Location: San Juan 28-6 #169M

Date: 9/6/2013

Matrix: Soil

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
TH-1 @ surface	9/6/2013	9:55	1,890	Not analyzed for TPH				
TH-1 @ 2'	9/6/2013	9:58	2,966	11:31	>2,500	20.0	1	DAW
TH-1 @ 3'	9/6/2013	10:00	692	Not analyzed for TPH				
TH-1 @ 4'	9/6/2013	10:03	3,079	11:38	6,500	200	10	DAW
TH-1 @ 4.5'	9/6/2013	10:05	22.0	11:23	23.0	20.0	1	DAW
TH-2 @ surface	9/6/2013	10:10	0.0	Not analyzed for TPH				
TH-2 @ 1.5'	9/6/2013	10:12	0.0	Not analyzed for TPH				
TH-3 @ surface	9/6/2013	10:23	0.0	Not analyzed for TPH				
TH-3 @ 2'	9/6/2013	10:25	0.0	Not analyzed for TPH				
TH-4 @ surface	9/6/2013	10:28	0.0	Not analyzed for TPH				
TH-4 @ 2.5'	9/6/2013	10:30	397	11:28	167	20.0	1	DAW
TH-5 @ surface	9/6/2013	12:03	2,995	Not analyzed for TPH				
TH-5 @ 4'	9/6/2013	12:10	3,000	Not analyzed for TPH				
TH-6 @ 3'	9/6/2013	12:12	17.5	Not analyzed for TPH				
TH-6 @ 4.5'	9/6/2013	12:15	144	Not analyzed for TPH				
TH-7 @ 4'	9/6/2013	12:20	11.4	Not analyzed for TPH				

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
TH-8 @ surface	9/6/2013	12:23	3,113	Not analyzed for TPH				
TH-8 @ 3'	9/6/2013	12:25	10.3	Not analyzed for TPH				
TH-9 @ 2'	9/6/2013	12:28	0.0	Not analyzed for TPH				
TH-9 @ 3.5'	9/6/2013	12:30	0.0	Not analyzed for TPH				
TH-10 @ 1.5'	9/6/2013	13:44	273	14:40	247	20.0	1	DAW
TH-11 @ 1.5'	9/6/2013	13:46	3,429	14:45	2,130	20.0	1	DAW
TH-12 @ 2'	9/6/2013	13:49	22.2	Not analyzed for TPH				
TH-13 @ 1.5'	9/6/2013	13:51	0.2	Not analyzed for TPH				
TH-14 @ 2'	9/6/2013	13:55	0.0	Not analyzed for TPH				
TH-14 @ 3.5'	9/6/2013	14:05	0.0	Not analyzed for TPH				
TH-15 @ 2'	9/6/2013	14:07	0.0	Not analyzed for TPH				

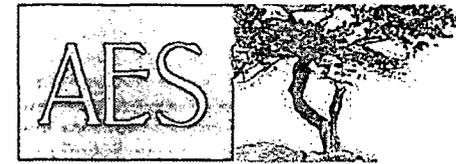
DF Dilution Factor  
NA Not Analyzed  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitation Limit  
\*Field TPH concentrations recorded may be below PQL.

Total Petroleum Hydrocarbons - USEPA 418.1

Analyst:



# AES Field Screening Report



Animas Environmental Services, LLC

www.animasenvironmental.com

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

Durango, Colorado  
970-403-3084

Client: ConocoPhillips

Project Location: San Juan 28-6 #169M

Date: 10/14/2013

Matrix: Soil

Sample ID	Collection Date	Time of Sample Collection	Sample Location	OVM (ppm)	Field TPH Analysis Time	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SC-1	10/3/2013	9:30	East Base	3,463	10:18	3,290	200	10	HMW
SC-2	10/3/2013	9:35	West Base	2,920	10:24	2,420	20.0	1	HMW
SC-3	10/3/2013	9:38	West Wall	714	10:26	282	20.0	1	HMW
SC-4	10/3/2013	9:41	East Wall	902	10:28	193	20.0	1	HMW
SC-5	10/7/2013	11:43	East Base	3,564	12:14	1,920	20.0	1	HMW
SC-6	10/7/2013	11:51	West Base	2,804	12:16	2,560	20.0	1	HMW
SC-7	10/14/2013	12:20	East Base	770	15:18	1,430	20.0	1	HMW
SC-8	10/14/2013	12:35	West Base	399	15:20	726	20.0	1	HMW

DF Dilution Factor

NA Not Analyzed

ND Not Detected at the Reporting Limit

PQL Practical Quantitation Limit

\*Field TPH concentrations recorded may be below PQL.

Total Petroleum Hydrocarbons - USEPA 418.1

Analyst:

*Heather M. Woods*



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)

September 13, 2013

Debbie Watson

Animas Environmental

624 East Comanche

Farmington, NM 87401

TEL: (505) 486-4071

FAX

RE: COP San Juan 28-6 Unit 169-M

OrderNo.: 1309325

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 9/10/2013 for the analyses presented in the following report.

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

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

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

Sincerely,

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 1309325

Date Reported: 9/13/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental

Client Sample ID: TH-1@4'

Project: COP San Juan 28-6 Unit 169-M

Collection Date: 9/6/2013 10:03:00 AM

Lab ID: 1309325-001

Matrix: SOIL

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

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.24		mg/Kg	5	9/11/2013 1:35:51 PM	9242
Toluene	0.31	0.24		mg/Kg	5	9/11/2013 1:35:51 PM	9242
Ethylbenzene	ND	0.24		mg/Kg	5	9/11/2013 1:35:51 PM	9242
Xylenes, Total	15	0.49		mg/Kg	5	9/11/2013 1:35:51 PM	9242
Surr: 4-Bromofluorobenzene	151	80-120	S	%REC	5	9/11/2013 1:35:51 PM	9242

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

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

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Animas Environmental **Client Sample ID:** SG-1 SCA-1 DAW  
**Project:** COP San Juan 28-6 Unit 169-M **Collection Date:** 9/6/2013 10:30:00 AM  
**Lab ID:** 1309325-002 **Matrix:** SOIL **Received Date:** 9/10/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JRR
Chloride	12	1.5		mg/Kg	1	9/12/2013 12:52:57 PM	9279

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1309325

13-Sep-13

Client: Animas Environmental  
Project: COP San Juan 28-6 Unit 169-M

Sample ID	<b>MB-9279</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>9279</b>	RunNo:	<b>13343</b>					
Prep Date:	<b>9/11/2013</b>	Analysis Date:	<b>9/12/2013</b>	SeqNo:	<b>379599</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	<b>LCS-9279</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>9279</b>	RunNo:	<b>13343</b>					
Prep Date:	<b>9/11/2013</b>	Analysis Date:	<b>9/12/2013</b>	SeqNo:	<b>379600</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.5	90	110			

Sample ID	<b>1309325-002AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>SC-1</b>	Batch ID:	<b>9279</b>	RunNo:	<b>13343</b>					
Prep Date:	<b>9/11/2013</b>	Analysis Date:	<b>9/12/2013</b>	SeqNo:	<b>379604</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	28	1.5	15.00	12.45	106	58.8	109			

Sample ID	<b>1309325-002AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>SC-1</b>	Batch ID:	<b>9279</b>	RunNo:	<b>13343</b>					
Prep Date:	<b>9/11/2013</b>	Analysis Date:	<b>9/12/2013</b>	SeqNo:	<b>379605</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	28	1.5	15.00	12.45	103	58.8	109	1.44	20	

### Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1309325

13-Sep-13

**Client:** Animas Environmental  
**Project:** COP San Juan 28-6 Unit 169-M

Sample ID	<b>MB-9242</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>9242</b>	RunNo:	<b>13292</b>					
Prep Date:	<b>9/10/2013</b>	Analysis Date:	<b>9/11/2013</b>	SeqNo:	<b>378545</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		103	80	120			

Sample ID	<b>LCS-9242</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>9242</b>	RunNo:	<b>13292</b>					
Prep Date:	<b>9/10/2013</b>	Analysis Date:	<b>9/11/2013</b>	SeqNo:	<b>378546</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.98	0.050	1.000	0	97.7	80	120			
Toluene	0.99	0.050	1.000	0	98.7	80	120			
Ethylbenzene	0.99	0.050	1.000	0	99.1	80	120			
Xylenes, Total	3.0	0.10	3.000	0	98.7	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		110	80	120			

Sample ID	<b>MB-9268 MK</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R13320</b>	RunNo:	<b>13320</b>					
Prep Date:		Analysis Date:	<b>9/12/2013</b>	SeqNo:	<b>379491</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			
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Sample ID	<b>LCS-9268 MK</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R13320</b>	RunNo:	<b>13320</b>					
Prep Date:		Analysis Date:	<b>9/12/2013</b>	SeqNo:	<b>379492</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Surr: 4-Bromofluorobenzene	1.1		1.000		114	80	120			
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### Qualifiers:

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



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

# Sample Log-In Check List

Client Name: **Animas Environmental**

Work Order Number: **1309325**

RcptNo: **1**

Received by/date:

*[Signature]*

**09/10/13**

Logged By: **Lindsay Mangin**

**9/10/2013 10:00:00 AM**

*[Signature]*

Completed By: **Lindsay Mangin**

**9/10/2013 10:45:23 AM**

*[Signature]*

Reviewed By:

*[Signature]*

**09/10/13**

**Chain of Custody**

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

**Log In**

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

**Special Handling (if applicable)**

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

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

17. Additional remarks:

**18. Cooler Information**

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

October 07, 2013

Debbie Watson

Animas Environmental  
624 East Comanche  
Farmington, NM 87401  
TEL: (505) 486-4071  
FAX

RE: CoP San Juan 28-6 # 169M

OrderNo.: 1310239

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 10/4/2013 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Animas Environmental **Client Sample ID:** SC-1  
**Project:** CoP San Juan 28-6 # 169M **Collection Date:** 10/3/2013 9:30:00 AM  
**Lab ID:** 1310239-001 **Matrix:** MEOH (SOIL) **Received Date:** 10/4/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	950	10		mg/Kg	1	10/4/2013 3:57:06 PM	9653
Surr: DNOP	100	63-147		%REC	1	10/4/2013 3:57:06 PM	9653
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	1300	100		mg/Kg	20	10/4/2013 11:57:11 AM	R13843
Surr: BFB	322	80-120	S	%REC	20	10/4/2013 11:57:11 AM	R13843
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	0.57	0.50		mg/Kg	20	10/4/2013 11:57:11 AM	R13843
Toluene	15	1.0		mg/Kg	20	10/4/2013 11:57:11 AM	R13843
Ethylbenzene	5.7	1.0		mg/Kg	20	10/4/2013 11:57:11 AM	R13843
Xylenes, Total	66	2.0		mg/Kg	20	10/4/2013 11:57:11 AM	R13843
Surr: 4-Bromofluorobenzene	112	80-120		%REC	20	10/4/2013 11:57:11 AM	R13843

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

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

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Animas Environmental

Client Sample ID: SC-2

Project: CoP San Juan 28-6 # 169M

Collection Date: 10/3/2013 9:35:00 AM

Lab ID: 1310239-002

Matrix: MEOH (SOIL)

Received Date: 10/4/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	660	9.9		mg/Kg	1	10/4/2013 4:19:10 PM	9653
Surr: DNOP	98.0	63-147		%REC	1	10/4/2013 4:19:10 PM	9653
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	610	100		mg/Kg	20	10/4/2013 12:25:44 PM	R13843
Surr: BFB	205	80-120	S	%REC	20	10/4/2013 12:25:44 PM	R13843
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.50		mg/Kg	20	10/4/2013 12:25:44 PM	R13843
Toluene	8.2	1.0		mg/Kg	20	10/4/2013 12:25:44 PM	R13843
Ethylbenzene	2.9	1.0		mg/Kg	20	10/4/2013 12:25:44 PM	R13843
Xylenes, Total	35	2.0		mg/Kg	20	10/4/2013 12:25:44 PM	R13843
Surr: 4-Bromofluorobenzene	112	80-120		%REC	20	10/4/2013 12:25:44 PM	R13843

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

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

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Animas Environmental

Client Sample ID: SC-3

Project: CoP San Juan 28-6 # 169M

Collection Date: 10/3/2013 9:38:00 AM

Lab ID: 1310239-003

Matrix: MEOH (SOIL)

Received Date: 10/4/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.12		mg/Kg	5	10/4/2013 1:22:51 PM	R13843
Toluene	ND	0.25		mg/Kg	5	10/4/2013 1:22:51 PM	R13843
Ethylbenzene	ND	0.25		mg/Kg	5	10/4/2013 1:22:51 PM	R13843
Xylenes, Total	0.70	0.50		mg/Kg	5	10/4/2013 1:22:51 PM	R13843
Surr: 4-Bromofluorobenzene	104	80-120		%REC	5	10/4/2013 1:22:51 PM	R13843

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

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

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Animas Environmental

Client Sample ID: SC-4

Project: CoP San Juan 28-6 # 169M

Collection Date: 10/3/2013 9:41:00 AM

Lab ID: 1310239-004

Matrix: MEOH (SOIL)

Received Date: 10/4/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.12		mg/Kg	5	10/4/2013 1:51:32 PM	R13843
Toluene	0.30	0.25		mg/Kg	5	10/4/2013 1:51:32 PM	R13843
Ethylbenzene	0.26	0.25		mg/Kg	5	10/4/2013 1:51:32 PM	R13843
Xylenes, Total	3.3	0.50		mg/Kg	5	10/4/2013 1:51:32 PM	R13843
Surr: 4-Bromofluorobenzene	104	80-120		%REC	5	10/4/2013 1:51:32 PM	R13843

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1310239

07-Oct-13

Client: Animas Environmental  
Project: CoP San Juan 28-6 # 169M

Sample ID	<b>MB-9653</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>9653</b>	RunNo:	<b>13829</b>					
Prep Date:	<b>10/4/2013</b>	Analysis Date:	<b>10/4/2013</b>	SeqNo:	<b>395809</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		93.6	63	147			

Sample ID	<b>LCS-9653</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>9653</b>	RunNo:	<b>13829</b>					
Prep Date:	<b>10/4/2013</b>	Analysis Date:	<b>10/4/2013</b>	SeqNo:	<b>395810</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	10	50.00	0	103	77.1	128			
Surr: DNOP	5.1		5.000		102	63	147			

Sample ID	<b>1309E34-001AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>BatchQC</b>	Batch ID:	<b>9604</b>	RunNo:	<b>13830</b>					
Prep Date:	<b>10/2/2013</b>	Analysis Date:	<b>10/4/2013</b>	SeqNo:	<b>395999</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.4		4.970		109	63	147	0	0	

Sample ID	<b>1309E34-001AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>BatchQC</b>	Batch ID:	<b>9604</b>	RunNo:	<b>13830</b>					
Prep Date:	<b>10/2/2013</b>	Analysis Date:	<b>10/4/2013</b>	SeqNo:	<b>396001</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.6		4.960		113	63	147			

### Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1310239

07-Oct-13

Client: Animas Environmental  
Project: CoP San Juan 28-6 # 169M

Sample ID	<b>MB-9641 MK</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R13843</b>	RunNo:	<b>13843</b>					
Prep Date:		Analysis Date:	<b>10/4/2013</b>	SeqNo:	<b>396045</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	850		1000		84.8	80	120			

Sample ID	<b>LCS-9641 MK</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R13843</b>	RunNo:	<b>13843</b>					
Prep Date:		Analysis Date:	<b>10/4/2013</b>	SeqNo:	<b>396046</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.9	74.5	126			
Surr: BFB	890		1000		88.9	80	120			

### Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1310239

07-Oct-13

Client: Animas Environmental  
Project: CoP San Juan 28-6 # 169M

Sample ID	<b>MB-9641 MK</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R13843</b>	RunNo:	<b>13843</b>					
Prep Date:		Analysis Date:	<b>10/4/2013</b>	SeqNo:	<b>396215</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	0.96		1.000		95.8	80	120			

Sample ID	<b>LCS-9641 MK</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R13843</b>	RunNo:	<b>13843</b>					
Prep Date:		Analysis Date:	<b>10/4/2013</b>	SeqNo:	<b>396216</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	99.1	80	120			
Toluene	1.0	0.050	1.000	0	102	80	120			
Ethylbenzene	1.1	0.050	1.000	0	106	80	120			
Xylenes, Total	3.1	0.10	3.000	0	105	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

### Qualifiers:

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

**Sample Log-In Check List**

Client Name: Animas Environmental      Work Order Number: 1310239      RcptNo: 1

Received by/date:	<i>[Signature]</i>	10/04/13
Logged By:	Lindsay Mangin	10/4/2013 10:00:00 AM
Completed By:	Lindsay Mangin	10/4/2013 10:17:00 AM
Reviewed By:	<i>IO</i>	10/04/13

**Chain of Custody**

- Custody seals intact on sample bottles?      Yes       No       Not Present
- Is Chain of Custody complete?      Yes       No       Not Present
- How was the sample delivered?      Courier

**Log In**

- Was an attempt made to cool the samples?      Yes       No       NA
- Were all samples received at a temperature of >0° C to 6.0°C      Yes       No       NA
- Sample(s) In proper container(s)?      Yes       No
- Sufficient sample volume for indicated test(s)?      Yes       No
- Are samples (except VOA and ONG) properly preserved?      Yes       No
- Was preservative added to bottles?      Yes       No       NA
- VOA vials have zero headspace?      Yes       No       No VOA Vials
- Were any sample containers received broken?      Yes       No
- Does paperwork match bottle labels?  
(Note discrepancies on chain of custody)      Yes       No
- Are matrices correctly identified on Chain of Custody?      Yes       No
- Is it clear what analyses were requested?      Yes       No
- 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)**

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

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

17. Additional remarks:

**18. Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.6	Good	Yes			

# Chain-of-Custody Record

Client: Animas Environmental Services

Mailing Address: 1624 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) \_\_\_\_\_

Turn-Around Time:

Standard       Rush Same Day

Project Name:

CoP San Juan 28-6 #169M

Project #:

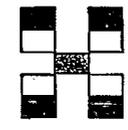
Project Manager:

D. Watson

Sampler: H. Woods

Office:  Yes       No

Sample Temperature: 16.9



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

### Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TPH (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / <del>MBB</del> )	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)	
10/3/13	930	Soil	SC-1	MeOH kit / 1-4oz	MeOH / -	-001	X		X										
10/3/13	935	Soil	SC-2	MeOH kit / 1-4oz	MeOH / -	-002	X		X										
10/3/13	930	Soil	SC-3	MeOH kit / 1-4oz	MeOH / -	-003	X												
10/3/13	941	Soil	SC-4	MeOH kit / 1-4oz	MeOH / -	-004	X												

Date: 10/3/13 Time: 1736 Relinquished by: Heather M. Woods

Received by: Christina Walle Date: 10/3/13 Time: 1736

Remarks: Bill to ConocoPhillips  
 wo: 9763915  
 Super: Mike Smith

Date: 10/3/13 Time: 1754 Relinquished by: Christina Walle

Received by: [Signature] Date: 10/04/13 Time: 1000

User: KLARCIA  
 Ordered by: Eric Smith

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



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

October 09, 2013

Debbie Watson  
Animas Environmental  
624 East Comanche  
Farmington, NM 87401  
TEL: (505) 486-4071  
FAX

RE: CoP San Juan 28-6 #169M

OrderNo.: 1310359

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 10/8/2013 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Animas Environmental  
**Project:** CoP San Juan 28-6 #169M  
**Lab ID:** 1310359-001

**Matrix:** SOIL

**Client Sample ID:** SC-5  
**Collection Date:** 10/7/2013 11:43:00 AM  
**Received Date:** 10/8/2013 10:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	1000	100		mg/Kg	10	10/8/2013 3:25:02 PM	9699
Surr: DNOP	0	63-147	S	%REC	10	10/8/2013 3:25:02 PM	9699
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	1300	250		mg/Kg	50	10/8/2013 2:12:45 PM	R13916
Surr: BFB	250	80-120	S	%REC	50	10/8/2013 2:12:45 PM	R13916
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.12		mg/Kg	5	10/8/2013 12:42:03 PM	R13916
Toluene	7.6	0.25		mg/Kg	5	10/8/2013 12:42:03 PM	R13916
Ethylbenzene	8.2	0.25		mg/Kg	5	10/8/2013 12:42:03 PM	R13916
Xylenes, Total	61	5.0		mg/Kg	50	10/8/2013 2:12:45 PM	R13916
Surr: 4-Bromofluorobenzene	119	80-120		%REC	50	10/8/2013 2:12:45 PM	R13916

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

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

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1310359

Date Reported: 10/9/2013

**CLIENT:** Animas Environmental

**Client Sample ID:** SC-6

**Project:** CoP San Juan 28-6 #169M

**Collection Date:** 10/7/2013 11:51:00 AM

**Lab ID:** 1310359-002

**Matrix:** SOIL

**Received Date:** 10/8/2013 10:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	930	10		mg/Kg	1	10/8/2013 1:49:27 PM	9699
Surr: DNOP	84.0	63-147		%REC	1	10/8/2013 1:49:27 PM	9699
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	2000	500		mg/Kg	100	10/8/2013 2:43:04 PM	R13916
Surr: BFB	173	80-120	S	%REC	100	10/8/2013 2:43:04 PM	R13916
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	0.83	0.50		mg/Kg	10	10/8/2013 1:12:07 PM	R13916
Toluene	27	5.0		mg/Kg	100	10/8/2013 2:43:04 PM	R13916
Ethylbenzene	12	5.0		mg/Kg	100	10/8/2013 2:43:04 PM	R13916
Xylenes, Total	130	10		mg/Kg	100	10/8/2013 2:43:04 PM	R13916
Surr: 4-Bromofluorobenzene	117	80-120		%REC	100	10/8/2013 2:43:04 PM	R13916

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

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1310359

09-Oct-13

Client: Animas Environmental  
Project: CoP San Juan 28-6 #169M

Sample ID	MB-9699	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	9699	RunNo:	13895					
Prep Date:	10/8/2013	Analysis Date:	10/8/2013	SeqNo:	397618	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	7.8		10.00		77.7	63	147			

Sample ID	LCS-9699	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	9699	RunNo:	13895					
Prep Date:	10/8/2013	Analysis Date:	10/8/2013	SeqNo:	397619	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	96.3	77.1	128			
Surr: DNOP	3.9		5.000		77.4	63	147			

### Qualifiers:

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1310359

09-Oct-13

**Client:** Animas Environmental  
**Project:** CoP San Juan 28-6 #169M

Sample ID	<b>MB-9666</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>9666</b>	RunNo:	<b>13916</b>					
Prep Date:	<b>10/7/2013</b>	Analysis Date:	<b>10/8/2013</b>	SeqNo:	<b>397758</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		101	80	120			

Sample ID	<b>LCS-9666</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>9666</b>	RunNo:	<b>13916</b>					
Prep Date:	<b>10/7/2013</b>	Analysis Date:	<b>10/8/2013</b>	SeqNo:	<b>397759</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		112	80	120			

Sample ID	<b>MB-9666 MK</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R13916</b>	RunNo:	<b>13916</b>					
Prep Date:		Analysis Date:	<b>10/8/2013</b>	SeqNo:	<b>397773</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		101	80	120			

Sample ID	<b>LCS-9666 MK</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R13916</b>	RunNo:	<b>13916</b>					
Prep Date:		Analysis Date:	<b>10/8/2013</b>	SeqNo:	<b>397774</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	89.7	74.5	126			
Surr: BFB	1100		1000		112	80	120			

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1310359  
09-Oct-13

Client: Animas Environmental  
Project: CoP San Juan 28-6 #169M

Sample ID	<b>MB-9666</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>9666</b>	RunNo:	<b>13916</b>					
Prep Date:	<b>10/7/2013</b>	Analysis Date:	<b>10/8/2013</b>	SeqNo:	<b>397899</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		112	80	120			

Sample ID	<b>LCS-9666</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>9666</b>	RunNo:	<b>13916</b>					
Prep Date:	<b>10/7/2013</b>	Analysis Date:	<b>10/8/2013</b>	SeqNo:	<b>397900</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.2		1.000		115	80	120			

Sample ID	<b>MB-9666 MK</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R13916</b>	RunNo:	<b>13916</b>					
Prep Date:		Analysis Date:	<b>10/8/2013</b>	SeqNo:	<b>397911</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		112	80	120			

Sample ID	<b>LCS-9666 MK</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R13916</b>	RunNo:	<b>13916</b>					
Prep Date:		Analysis Date:	<b>10/8/2013</b>	SeqNo:	<b>397912</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.050	1.000	0	89.6	80	120			
Toluene	0.91	0.050	1.000	0	91.1	80	120			
Ethylbenzene	0.94	0.050	1.000	0	94.5	80	120			
Xylenes, Total	3.0	0.10	3.000	0	101	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		115	80	120			

### Qualifiers:

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

**Sample Log-In Check List**

Client Name: Anlmas Environmental

Work Order Number: 1310359

RcptNo: 1

Received by/date: LM 10/08/13

Logged By: **Anne Thorne** 10/8/2013 10:30:00 AM *Anne Thorne*

Completed By: **Anne Thorne** 10/8/2013 *Anne Thorne*

Reviewed By: *AT* / ~~AT~~ 10/08/13

**Chain of Custody**

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

**Log In**

- 4. Was an attempt made to cool the samples? Yes  No  NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA
- 6. Sample(s) In proper container(s)? Yes  No
- 7. Sufficient sample volume for indicated test(s)? Yes  No
- 8. Are samples (except VOA and ONG) properly preserved? Yes  No
- 9. Was preservative added to bottles? Yes  No  NA
- 10. VOA vials have zero headspace? Yes  No  No VOA Vials
- 11. Were any sample containers received broken? Yes  No
- 12. Does paperwork match bottle labels? Yes  No   
(Note discrepancies on chain of custody)
- 13. Are matrices correctly identified on Chain of Custody? Yes  No
- 14. Is it clear what analyses were requested? Yes  No
- 15. Were all holding times able to be met? Yes  No   
(If no, notify customer for authorization.)

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

**Special Handling (if applicable)**

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

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

17. Additional remarks:

**18. Cooler Information**

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

# Chain-of-Custody Record

Turn-Around Time:  
 Standard  Rush Same Day  
 Project Name: CoP San Juan 2B-6 #169M  
 Project #:

Project Manager: D. Watson  
 Sampler: H. Woods  
 On Ice:  Yes  No  
 Sample Temperature: 13.0339

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No
7/13	1143	Soil	SC-5	MeOH kit / 1-4oz	MeOH / -	001
7/13	1151	Soil	SC-6	MeOH kit / 1-4oz	MeOH / -	002

Date: 7/13 Time: 1543 Relinquished by: Heather M. Woods  
 Received by: Chris Waite Date: 10/7/13 Time: 1543  
 Date: 7/13 Time: 1745 Relinquished by: Christine Wooten  
 Received by: [Signature] Date: 10/08/13 Time: 1030

Analysis Request												Air Bubbles (Y or N)
BTEX + <del>MTBE</del> + <del>TPH</del> (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / <del>TPH</del> )	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)		
X	X	X										
X	X	X										

Remarks:  
 Bill to ConocoPhillips  
 WO: 9763915  
 Supervisor: Mike Smith  
 Activity: DISO  
 User: KGARCIA  
 Ordered by: Eric Smith



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Client: Anmos Environmental Services  
 Mailing Address: 624 E. Comanche  
Farmington, NM 87401  
 Phone #: 505-564-2281  
 Email or Fax#: \_\_\_\_\_  
 A/QC Package: (Standard  Level 4 (Full Validation)   
 Accreditation:  NELAP  Other \_\_\_\_\_  
 EDD (Type): \_\_\_\_\_

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)

October 16, 2013

Debbie Watson

Animas Environmental  
624 East Comanche  
Farmington, NM 87401  
TEL: (505) 486-4071  
FAX

RE: COP San Juan 28-6 #169M

OrderNo.: 1310684

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 10/15/2013 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Animas Environmental

Client Sample ID: SC-7

Project: COP San Juan 28-6 #169M

Collection Date: 10/14/2013 12:20:00 PM

Lab ID: 1310684-001

Matrix: MEOH (SOIL)

Received Date: 10/15/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	780	10		mg/Kg	1	10/15/2013 12:06:13 PM	9822
Surr: DNOP	102	63-147		%REC	1	10/15/2013 12:06:13 PM	9822
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	580	100		mg/Kg	20	10/15/2013 1:48:04 PM	R14079
Surr: BFB	232	74.5-129	S	%REC	20	10/15/2013 1:48:04 PM	R14079
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	0.087	0.050		mg/Kg	2	10/15/2013 11:53:49 AM	R14079
Toluene	2.4	0.10		mg/Kg	2	10/15/2013 11:53:49 AM	R14079
Ethylbenzene	2.2	0.10		mg/Kg	2	10/15/2013 11:53:49 AM	R14079
Xylenes, Total	23	2.0		mg/Kg	20	10/15/2013 1:48:04 PM	R14079
Surr: 4-Bromofluorobenzene	112	80-120		%REC	20	10/15/2013 1:48:04 PM	R14079

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

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

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Animas Environmental

**Client Sample ID:** SC-8

**Project:** COP San Juan 28-6 #169M

**Collection Date:** 10/14/2013 12:35:00 PM

**Lab ID:** 1310684-002

**Matrix:** MEOH (SOIL)

**Received Date:** 10/15/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.10		mg/Kg	4	10/15/2013 12:50:56 PM	R14079
Toluene	ND	0.20		mg/Kg	4	10/15/2013 12:50:56 PM	R14079
Ethylbenzene	ND	0.20		mg/Kg	4	10/15/2013 12:50:56 PM	R14079
Xylenes, Total	2.0	0.40		mg/Kg	4	10/15/2013 12:50:56 PM	R14079
Surr: 4-Bromofluorobenzene	111	80-120		%REC	4	10/15/2013 12:50:56 PM	R14079

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1310684

16-Oct-13

Client: Animas Environmental  
Project: COP San Juan 28-6 #169M

Sample ID	<b>MB-9822</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>9822</b>	RunNo:	<b>14066</b>					
Prep Date:	<b>10/15/2013</b>	Analysis Date:	<b>10/15/2013</b>	SeqNo:	<b>402767</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	9.6		10.00		96.4	63	147			

Sample ID	<b>LCS-9822</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>9822</b>	RunNo:	<b>14066</b>					
Prep Date:	<b>10/15/2013</b>	Analysis Date:	<b>10/15/2013</b>	SeqNo:	<b>402894</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	105	77.1	128			
Surr: DNOP	5.0		5.000		100	63	147			

Sample ID	<b>MB-9801</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>9801</b>	RunNo:	<b>14066</b>					
Prep Date:	<b>10/14/2013</b>	Analysis Date:	<b>10/15/2013</b>	SeqNo:	<b>403236</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		101	63	147			

### Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1310684

16-Oct-13

**Client:** Animas Environmental  
**Project:** COP San Juan 28-6 #169M

Sample ID	<b>MB-9811 MK</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R14079</b>	RunNo:	<b>14079</b>					
Prep Date:		Analysis Date:	<b>10/15/2013</b>	SeqNo:	<b>403460</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	870		1000		87.5	74.5	129			

Sample ID	<b>LCS-9811 MK</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R14079</b>	RunNo:	<b>14079</b>					
Prep Date:		Analysis Date:	<b>10/15/2013</b>	SeqNo:	<b>403461</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	106	74.5	126			
Surr: BFB	980		1000		98.4	74.5	129			

Sample ID	<b>MB-9811</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>9811</b>	RunNo:	<b>14079</b>					
Prep Date:	<b>10/14/2013</b>	Analysis Date:	<b>10/15/2013</b>	SeqNo:	<b>403465</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	870		1000		87.5	74.5	129			

Sample ID	<b>LCS-9811</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>9811</b>	RunNo:	<b>14079</b>					
Prep Date:	<b>10/14/2013</b>	Analysis Date:	<b>10/15/2013</b>	SeqNo:	<b>403466</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	980		1000		98.4	74.5	129			

### Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1310684

16-Oct-13

Client: Animas Environmental  
Project: COP San Juan 28-6 #169M

Sample ID	<b>MB-9811 MK</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R14079</b>	RunNo:	<b>14079</b>					
Prep Date:		Analysis Date:	<b>10/15/2013</b>	SeqNo:	<b>403502</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID	<b>LCS-9811 MK</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R14079</b>	RunNo:	<b>14079</b>					
Prep Date:		Analysis Date:	<b>10/15/2013</b>	SeqNo:	<b>403503</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	102	80	120			
Toluene	1.0	0.050	1.000	0	104	80	120			
Ethylbenzene	1.1	0.050	1.000	0	106	80	120			
Xylenes, Total	3.2	0.10	3.000	0	107	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

Sample ID	<b>MB-9811</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>9811</b>	RunNo:	<b>14079</b>					
Prep Date:	<b>10/14/2013</b>	Analysis Date:	<b>10/15/2013</b>	SeqNo:	<b>403508</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID	<b>LCS-9811</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>9811</b>	RunNo:	<b>14079</b>					
Prep Date:	<b>10/14/2013</b>	Analysis Date:	<b>10/15/2013</b>	SeqNo:	<b>403509</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

### Qualifiers:

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



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

# Sample Log-In Check List

Client Name: Animas Environmental

Work Order Number: 1310684

RcptNo: 1

Received by/date:

*[Signature]*

10/15/13

Logged By: Ashley Gallegos

10/15/2013 10:00:00 AM

*[Signature]*

Completed By: Ashley Gallegos

10/15/2013 10:20:57 AM

*[Signature]*

Reviewed By:

*[Signature]*

10/15/13

**Chain of Custody**

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

**Log In**

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

**Special Handling (if applicable)**

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

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

17. Additional remarks:

**18. Cooler Information**

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

# Chain-of-Custody Record

Client: Animas Environmental Services

Mailing Address: 624 E. Comanche  
Farmington, NM 87401  
 Phone #: 505-564-2281

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

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

Turn-Around Time:  
 Standard  Rush Same Day

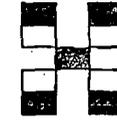
Project Name: Col San Juan 2B-6 #169M

Project #: \_\_\_\_\_

Project Manager: D. Watson

Sampler: H. Woods  
On site  Yes  No

Sample Temperature: 16°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 + TPH (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / <del>WSS</del> )	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Inhalation (V or N)	
10/14/13	1220	Soil	SC-7	MeOH Kit / 1-4oz	MeOH / -	-001	X	X											
10/14/13	1235	Soil	SC-8	MeOH Kit / 1-4oz	MeOH / -	-002	X												

Date: <u>10/14/13</u>	Time: <u>1708</u>	Relinquished by: <u>Heather M. Woods</u>	Received by: <u>Christine White</u>	Date: <u>10/14/13</u>	Time: <u>1708</u>	Remarks: Bill to Conoco Phillips WO: 9763915 Activity: DISO Supervisor: Mike Smith User ID: KGARCIA Ordered by: Eric Smith
Date: <u>10/14/13</u>	Time: <u>1749</u>	Relinquished by: <u>Chris White</u>	Received by: <u>[Signature]</u>	Date: <u>10/15/13</u>	Time: <u>1000</u>	

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