

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, a Wholly Owned Subsidiary of ConocoPhillips Company</b>	Contact <b>Lisa Hunter</b>
Address <b>3401 East 30<sup>th</sup> St, Farmington, NM</b>	Telephone No. <b>(505) 326-9786</b>
Facility Name: <b>San Juan 29-7 Unit 52</b>	Facility Type: <b>Gas Well</b>

Surface Owner <b>Private</b>	Mineral Owner <b>Federal</b>	API No. <b>3003907664</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>H</b>	<b>07</b>	<b>29N</b>	<b>07W</b>	<b>1710'</b>	<b>North</b>	<b>855'</b>	<b>East</b>	<b>Rio Arriba</b>

Latitude 36.7429 Longitude -107.60585

**NATURE OF RELEASE**

Type of Release <b>Historic Hydrocarbon</b>	Volume of Release <b>Unknown</b>	Volume Recovered <b>786 c/yds</b>
Source of Release <b>Below Grade Tank Leak</b>	Date and Hour of Occurrence <b>Unknown</b>	Date and Hour of Discovery <b>02/27/14</b>
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? <b>n/a</b>	
By Whom? <b>n/a</b>	Date and Hour <b>n/a</b>	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. <b>n/a</b>	

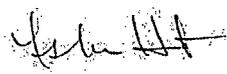
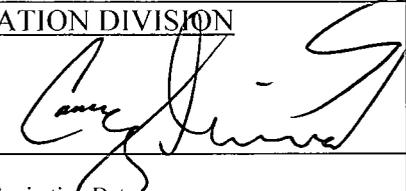
If a Watercourse was Impacted, Describe Fully.\*  
**n/a**

**RCUD AUG 19 14**  
**OIL CONS. DIV.**  
**DIST. 3**

Describe Cause of Problem and Remedial Action Taken.\*  
**Historical hydrocarbon impacted soil was found during an environmental assessment and removal of a leaking tank (1.8 BBL condensate spill).**

Describe Area Affected and Cleanup Action Taken.\*  
**Historical hydrocarbon impacted soil was found during an environmental assessment/remediation of a non-reportable 1.8 BBL condensate spill. The excavation was 45' x 45' x 10' in depth and 786 c/yds of soil was transported to IEI land farm and 786 c/yds of clean soil was transported from Aztec Machine Company and placed in the excavation site. The soil sampling report is attached for review. Backfilled excavation per authorization of Brandon Powell, NMOCD, May 5, 2014.**

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>Lisa Hunter</b>	Approved by Environmental Specialist: 	
Title: <b>Field Environmental Specialist</b>	Approval Date: <b>11/5/14</b>	Expiration Date:
E-mail Address: <b>Lisa.Hunter@cop.com</b>	Conditions of Approval:	Attached <input type="checkbox"/>
Date: <b>August 18, 2014</b> Phone: <b>(505) 326-9786</b>		

\* Attach Additional Sheets If Necessary

#NCS/430954580

48

## Hunter, Lisa

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**From:** Hunter, Lisa  
**Sent:** Monday, May 05, 2014 2:58 PM  
**To:** Brandon Powell (Brandon.Powell@state.nm.us)  
**Cc:** Jonathan Kelly (Jonathan.Kelly@state.nm.us); cory.smith@state.nm.us; Hunter, Lisa  
**Subject:** San Juan 29-7 #52 Excavation Backfill

Brandon –

As per our phone conversation of Monday, May 05, 2014, and with your verbal consent, COPC Environmental has approved the backfill of the San Juan 29-7 Unit 52 excavation. This excavation was a result of historic contamination discovered during a release assessment.

As discussed, our excavation terminated at sandstone at about 12 feet (confirmed the depth with third-party environmental). With the original lab samples of April 29<sup>th</sup>, the walls cleared the NMOCD thresholds, however the sample levels at base (terminating at sandstone) were 890 ppm for TPH (750 DRO & 140 GRO). We sprayed the base with Quantum Growth on Thursday, May 1<sup>st</sup> and resampled the next day (May 2<sup>nd</sup>), and left the excavation open over the weekend. The lab results came in this morning dropping the TPH to 738 ppm (640 DRO & 98 MRO). This site is ranked a 20 (100 ppm), and is located on private property.

Please let me know if you have any questions.

Thanks,

*Lisa Hunter*

Field Environmental Specialist  
ConocoPhillips Company  
5525 Hwy 64 - 500 Bldg., 214-04  
P O Box 4289  
[Lisa.Hunter@ConocoPhillips.com](mailto:Lisa.Hunter@ConocoPhillips.com)  
Office: 505.326.9786  
Cell: 505.258.1607



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

August 11, 2014

Lisa Hunter  
ConocoPhillips  
San Juan Business Unit  
Office 214-04  
5525 Hwy 64  
Farmington, New Mexico 87401

*Via electronic mail to:*

[SJBUE-Team@ConocoPhillips.com](mailto:SJBUE-Team@ConocoPhillips.com)

**RE: Below Grade Tank Closure, Release Assessment, and Final Excavation Report  
San Juan 29-7 #52  
Rio Arriba County, New Mexico**

Dear Ms. Hunter:

On February 28, March 5, April 29, and May 2, 2014, Animas Environmental Services, LLC (AES) completed below grade tank (BGT) closure sampling, a release assessment, and environmental clearance of the final excavation limits at the ConocoPhillips (CoP) San Juan 29-7 #52 located in Rio Arriba County, New Mexico. The release at the BGT consisted of approximately 1.8 barrels (bbl) of hydrocarbons and paraffin, of which 1 bbl was recovered. An initial release assessment was completed on February 28, 2014, and the final excavation was completed by CoP contractors while AES was on location on April 29, 2014.

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## 1.0 Site Information

### 1.1 Location

Site Name – San Juan 29-7 #52

Location – SE¼ NE¼, Section 7, T29N, R7W, Rio Arriba County, New Mexico

Well Head Latitude/Longitude – N36.74292 and W107.60656, respectively

BGT/Release Location Latitude/Longitude – N36.74303 and W107.60645, respectively

Land Jurisdiction – Private

Figure 1. Topographic Site Location Map

Figure 2. Aerial Site Map, February 2014

## 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 20 based on the following factors:

- **Depth to Groundwater:** A cathodic protection report form dated May 1991 reported depth to water at 110 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:** Approximately 165 feet to the south-southeast is an unnamed ephemeral stream that drains into a livestock pond located approximately 195 feet east of the location. (20 points)

## 1.3 Assessment

AES was initially contacted by Lisa Hunter, CoP representative, on February 24, 2014, and on February 28, 2014, Emilee Skyles and Anna Riling of AES traveled to the location. Soil sampling consisted of collection of five soil samples from below the BGT. 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.

On March 5, 2014, AES personnel returned to the location to complete the release assessment field work. The assessment included collection and field screening of 33 soil samples from 11 soil borings (SB-1 through SB-11). Based on field screening results, AES recommended excavation of the release area. Sample locations are shown on Figure 3.

On April 29, 2014, 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 approximately 61 feet by 40 by 12 feet in depth. The depth of the excavation was limited due to a confining shale unit around 12 feet bgs. A final confirmation soil sample (SC-6) from the base was collected on May 2, 2014, following application of Quantum Growth™. Sample locations and final excavation extents are presented on Figure 4.

## 2.0 Soil Sampling

A total of 38 soil samples (S-1 through S-5 and SB-1 through SB-11) and 7 composite samples (BGT SC-1 and SC-1 through SC-6) were collected during the assessments. All soil samples were field screened for volatile organic compounds (VOCs), and selected samples were analyzed for total petroleum hydrocarbon (TPH). All composite samples (BGT SC-1 and SC-1 through SC-6) collected were submitted for confirmation laboratory analysis.

### 2.1 Field Sampling

#### 2.1.1 Volatile Organic Compounds

Field screening for VOC vapors was conducted with a photo-ionization detector (PID) 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 U.S. Environmental Protection Agency (USEPA) Method 418.1 using a Buck Scientific Model HC-404 Total Hydrocarbon Analyzer Infrared Spectrometer (Buck). A 3-point calibration was completed prior to conducting soil analyses. Field analytical protocol followed AES's *Standard Operating Procedure: Field Analysis Total Petroleum Hydrocarbons per EPA Method 418.1*.

#### 2.1.3 Chlorides

Soil sample SC-1 was 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 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. Samples were maintained on ice until delivery to the analytical laboratory, Hall Environmental Analysis Laboratory (Hall) in Albuquerque, New Mexico. Soil samples SC-1 through SC-6 were laboratory analyzed for:

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

In addition, SC-4, SC-5, and SC-6 were also analyzed for:

- Benzene, toluene, ethylbenzene, and xylene (BTEX) per USEPA Method 8021B.

Composite soil sample BGT SC-1 was laboratory analyzed for:

- Chlorides per USEPA Method 300.0.

### 2.3 Field and Laboratory Analytical Results

On February 28, 2014, BGT closure field screening results for VOCs via OVM ranged from 1,458 ppm in S-5 up to 3,218 ppm in S-1. Field TPH concentrations in all samples were greater than 2,300 mg/kg.

On March 5, 2014, initial assessment field screening readings for VOCs via OVM ranged from 0.1 ppm in SB-10 and SB-11 up to 3,340 ppm in SB-1. Field TPH concentrations ranged from less than 20.0 mg/kg in SB-10 and SB-11 to greater than 25,000 mg/kg in SB-3 and SB-4.

Final excavation field screening results for VOCs via OVM ranged from 15.9 ppm in SC-2 up to 3,827 ppm in SC-5. Field TPH concentrations ranged from 46.5 mg/kg in SC-2 up to 1,770 mg/kg in SC-5. Field screening VOC and TPH results are summarized in Table 1 and on Figures 2 through 4. The AES field sampling reports are attached.

Table 1. Soil Field Sampling VOCs, TPH, and Chloride Results  
 San Juan 29-7 #52 BGT Closure, Release Assessment and Final Excavation  
 February through May 2014

Sample ID	Date Sampled	Sample Depth (ft bgs)	VOCs via OVM (ppm)	TPH 418.1 (mg/kg)	Field Chlorides (mg/kg)
<b>NMOCDC Action Level* (NMAC 19.15.17.13E)</b>			<b>NE/100</b>	<b>100</b>	<b>250/NE</b>
S-1	2/28/14	0.5	3,218	>2,300	NA
S-2	2/28/14	0.5	2,661	>2,300	NA
S-3	2/28/14	0.5	2,535	>2,300	NA
S-4	2/28/14	0.5	2,392	>2,300	NA
S-5	2/28/14	0.5	1,458	>2,300	NA
BGT SC-1	2/28/14	0.5	2,375	NA	80
SB-1	3/5/14	6.25	2,771	NA	NA
		8.5	3,340	NA	NA
SB-2	3/5/14	0.5	179	512	NA
		3	75.9	NA	NA

<b>Sample ID</b>	<b>Date Sampled</b>	<b>Sample Depth (ft bgs)</b>	<b>VOCs via OVM (ppm)</b>	<b>TPH 418.1 (mg/kg)</b>	<b>Field Chlorides (mg/kg)</b>
<b>NMOCD Action Level* (NMAC 19.15.17.13E)</b>			<b>NE/100</b>	<b>100</b>	<b>250/NE</b>
SB-3	3/5/14	0.5	24.2	NA	NA
		3	6.4	NA	NA
		6	<b>1,945</b>	<b>&gt;25,000</b>	NA
SB-4	3/5/14	0.5	35.2	NA	NA
		3	56.7	NA	NA
		5	<b>1,816</b>	<b>&gt;25,000</b>	NA
SB-5	3/5/14	0.5	23.8	NA	NA
		3	65.3	NA	NA
		6	<b>1,823</b>	NA	NA
		7.75	<b>2,156</b>	<b>792</b>	NA
SB-6	3/5/14	0.5	5.8	NA	NA
		3	1.8	NA	NA
		6	1.3	NA	NA
		8	<b>1,453</b>	<b>681</b>	NA
SB-7	3/5/14	0.5	2.5	NA	NA
		2.5	1.0	NA	NA
SB-8	3/5/14	0.5	0.7	NA	NA
		2.5	0.8	NA	NA
SB-9	3/5/14	0.5	1.8	NA	NA
		3	0.8	NA	NA
		6	0.8	NA	NA
		8	1.3	26.8	NA
SB-10	3/5/14	0.5	0.2	NA	NA
		3	0.1	NA	NA
		8	0.1	<20.0	NA
SB-11	3/5/14	0.5	0.2	NA	NA
		3	0.1	NA	NA
		6	0.2	NA	NA

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Sample Depth (ft bgs)</i>	<i>VOCs via OVM (ppm)</i>	<i>TPH 418.1 (mg/kg)</i>	<i>Field Chlorides (mg/kg)</i>
<b>NMOCD Action Level* (NMAC 19.15.17.13E)</b>			<b>NE/100</b>	<b>100</b>	<b>250/NE</b>
		9	0.1	<20.0	NA
SC-1	4/29/14	1 to 12	19.3	<b>289</b>	NA
SC-2	4/29/14	1 to 12	15.9	46.5	NA
SC-3	4/29/14	1 to 12	26.2	<b>270</b>	NA
SC-4	4/29/14	1 to 12	<b>122</b>	<b>192</b>	NA
SC-5	4/29/14	12	<b>3,827</b>	<b>1,770</b>	NA
SC-6	5/2/14	12	<b>575</b>	<b>854</b>	NA

NA – not analyzed

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

Laboratory analysis of sample BGT SC-1 was used to confirm the chloride concentration for BGT closure sampling results. Laboratory analytical results reported the chloride concentration as less than 30 mg/kg.

Laboratory analyses for SC-1 through SC-6 were used to confirm field sampling results from the final excavation extents. Benzene concentrations were reported below laboratory detection limits in all samples (SC-4, SC-5, and SC-6). Total BTEX concentrations ranged from 0.070 mg/kg in SC-4 up to 5.58 mg/kg in SC-6. Total TPH concentrations ranged from below laboratory detection limits in SC-2 up to 890 mg/kg in SC-5. Results are summarized in Table 2 and included on Figures 2 through 4. Laboratory analytical reports are attached.

Table 2. Soil Laboratory Analytical Results – Benzene, Total BTEX, TPH, and Chlorides  
 San Juan 29-7 #52 BGT Closure, Release Assessment, and Final Excavation  
 February, April, and May 2014

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Sample Depth (ft bgs)</i>	<i>Benzene (mg/kg)</i>	<i>Total BTEX (mg/kg)</i>	<i>TPH-GRO (mg/kg)</i>	<i>TPH-DRO (mg/kg)</i>	<i>Chlorides (mg/kg)</i>
<b>NMOCD Action Level* (NMAC 19.15.17.13E)</b>			<b>0.2/10</b>	<b>50</b>		<b>100</b>	<b>250/NE</b>
BGT SC-1	2/28/14	0.5	NA	NA	NA	NA	<30
SC-1	4/29/14	1 to 12	NA	NA	<3.4	96	NA
SC-2	4/29/14	1 to 12	NA	NA	<5.0	<10	NA

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Sample Depth (ft bgs)</i>	<i>Benzene (mg/kg)</i>	<i>Total BTEX (mg/kg)</i>	<i>TPH-GRO (mg/kg)</i>	<i>TPH-DRO (mg/kg)</i>	<i>Chlorides (mg/kg)</i>
<b>NMOCD Action Level* (NMAC 19.15.17.13E)</b>			<b>0.2/10</b>	<b>50</b>		<b>100</b>	<b>250/NE</b>
SC-3	4/29/14	1 to 12	NA	NA	<3.5	46	NA
SC-4	4/29/14	1 to 12	<0.031	0.070	3.5	65	NA
SC-5	4/29/14	12	<0.083	5.2	<b>140</b>	<b>750</b>	NA
SC-6	5/2/14	12	<0.081	5.58	<b>98</b>	<b>640</b>	NA

NA – not analyzed

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

### 3.0 Conclusions and Recommendations

On February 28 and March 5, 2014, AES conducted a BGT closure and assessment of petroleum contaminated soils associated with a 1.8 bbl release of hydrocarbons and paraffin at the San Juan 29-7 #52. NMOCD action levels for BGT closures are specified in New Mexico Administrative Code (NMAC) 19.15.17.13E. 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 20.

Field BGT closure sampling results in February 2014 were above the NMOCD action level of 100 mg/kg, with all samples reporting concentrations greater than 2,300 mg/kg. Laboratory results for chloride concentrations in BGT SC-1 were reported below the NMOCD action level of 250 mg/kg. Based on field concentrations, a release was confirmed.

In March 2014, release assessment field sampling results above the NMOCD action level of 100 ppm VOCs and 100 mg/kg TPH were reported in SB-1 through SB-6. The highest VOC concentration was reported in SB-1 with 3,340 ppm, and the highest TPH concentration was reported in SB-3 and SB-4 with concentrations greater than 25,000 mg/kg. Excavation of the release area was recommended.

On April 29, 2014, final excavation of the impacted area was completed. Field sampling results of the excavation extents showed that VOC concentrations were below applicable NMOCD action levels for three of the final walls of the excavation. However, samples SC-4 (west wall) and SC-5 (base) reported VOC concentrations above the NMOCD action level with 122 ppm and 3,827 ppm, respectively. Field TPH concentrations were above the applicable NMOCD action level of 100 mg/kg for the

final walls and base of the excavation, with the exception of SC-2 (south wall) which had a TPH concentration of 46.1 mg/kg. Laboratory analytical results reported benzene and total BTEX concentrations in SC-4 and SC-5 as below NMOCD action levels. TPH concentrations as GRO/DRO were also reported below the applicable NMOCD action level in all samples except SC-5, which had a TPH concentration of 890 mg/kg. Quantum Growth™ was applied to the base of the excavation, and an additional confirmation sample (SC-6) was collected on May 2, 2014. Field sampling results for SC-6 reported VOC and TPH concentrations above applicable NMOCD action levels. However, laboratory analytical results for SC-6 reported benzene and total BTEX concentrations below applicable NMOCD action levels, but TPH concentrations remained above NMOCD action levels.

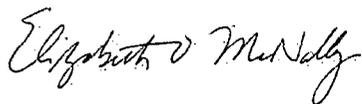
Based on the final field sampling and laboratory analytical results of the excavation of petroleum contaminated soils at the San Juan 29-7 #52, VOCs, benzene, total BTEX, and TPH concentrations were below the applicable NMOCD action levels for the final sidewalls of the excavation. However, the base of the excavation exceeded applicable NMOCD action levels for TPH. On May 5, 2014, CoP received approval to backfill the excavation from Brandon Powell of the NMOCD. No further work is recommended.

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

Sincerely,



Emilee Skyles  
Staff Geologist



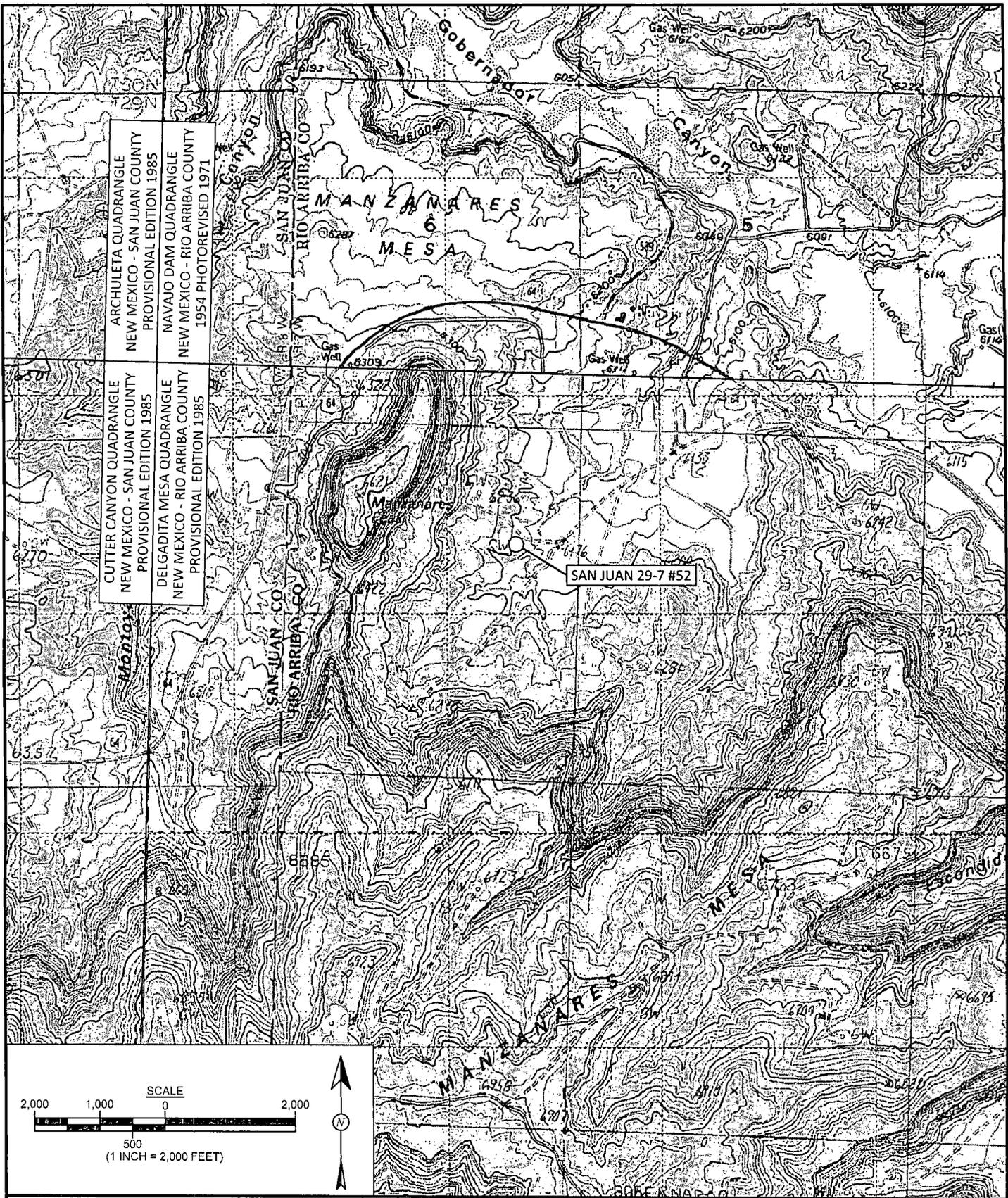
Elizabeth McNally, PE

Attachments:

- Figure 1. Topographic Site Location Map
- Figure 2. Aerial Site Map, February 2014
- Figure 3. Release Assessment Sample Locations and Results, March 2014
- Figure 4. Final Excavation Sample Locations and Results, April and May 2014
- AES Field Sampling Report 022814

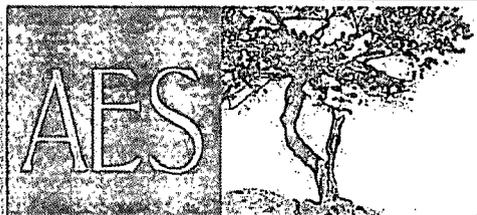
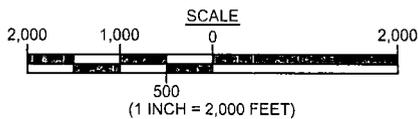
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AES Field Sampling Report 042914  
AES Field Sampling Report 050214  
Hall Laboratory Analytical Report 1403065  
Hall Laboratory Analytical Report 1404B95  
Hall Laboratory Analytical Report 1404C13  
Hall Laboratory Analytical Report 1405102

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Projects\ConocoPhillips\SJ 29-7 #52\San Juan 29-7 #52 BGT Closure Assessment and Excavation Report  
081114.docx



ARCHULETA QUADRANGLE  
 NEW MEXICO - SAN JUAN COUNTY  
 PROVISIONAL EDITION 1985  
 NAVAJO DAM QUADRANGLE  
 NEW MEXICO - RIO ARRIBA COUNTY  
 1954 PHOTO REVISED 1971

CUTTER CANYON QUADRANGLE  
 NEW MEXICO - SAN JUAN COUNTY  
 PROVISIONAL EDITION 1985  
 DELGADITA MESA QUADRANGLE  
 NEW MEXICO - RIO ARRIBA COUNTY  
 PROVISIONAL EDITION 1985



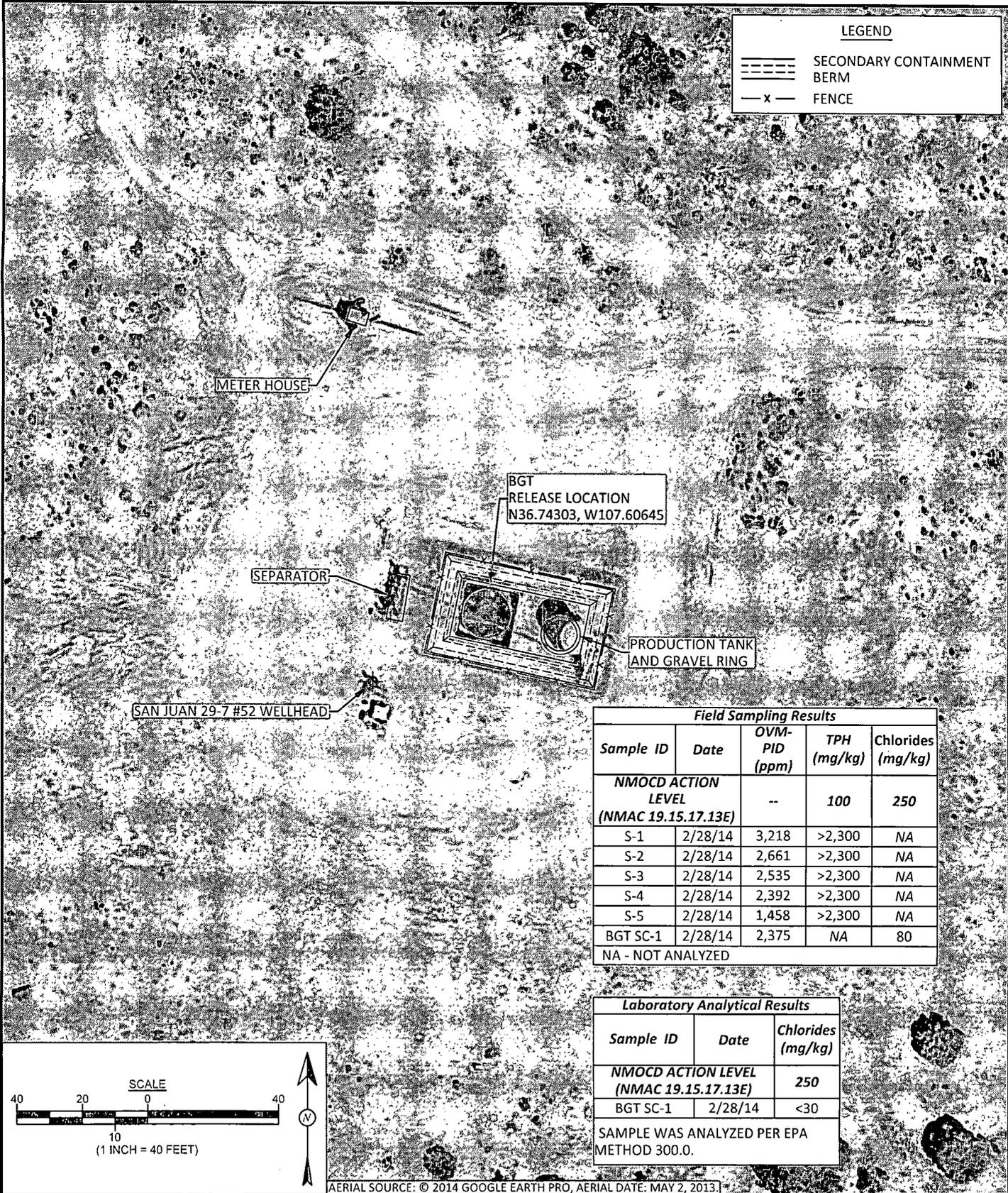
Animas Environmental Services, LLC

<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> May 29, 2014
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> May 29, 2014
<b>CHECKED BY:</b> D. Watson	<b>DATE CHECKED:</b> May 29, 2014
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> May 29, 2014

### FIGURE 1

**TOPOGRAPHIC SITE LOCATION MAP**  
 ConocoPhillips  
 SAN JUAN 29-7 #52  
 SE¼, NE¼, SECTION 7, T29N, R7W  
 RIO ARRIBA COUNTY, NEW MEXICO  
 N36.74292, W107.60656

LEGEND	
	SECONDARY CONTAINMENT BERM
	FENCE



SAN JUAN 29-7 #52 WELLHEAD

METER HOUSE

SEPARATOR

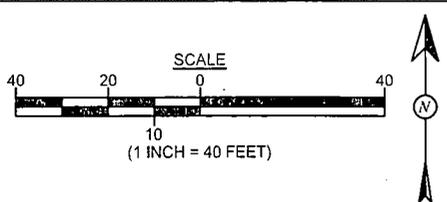
BGT  
RELEASE LOCATION  
N36.74303, W107.60645

PRODUCTION TANK  
AND GRAVEL RING

Field Sampling Results				
Sample ID	Date	OVM-PID (ppm)	TPH (mg/kg)	Chlorides (mg/kg)
<b>NMOCD ACTION LEVEL (NMAC 19.15.17.13E)</b>		--	100	250
S-1	2/28/14	3,218	>2,300	NA
S-2	2/28/14	2,661	>2,300	NA
S-3	2/28/14	2,535	>2,300	NA
S-4	2/28/14	2,392	>2,300	NA
S-5	2/28/14	1,458	>2,300	NA
BGT SC-1	2/28/14	2,375	NA	80
NA - NOT ANALYZED				

Laboratory Analytical Results		
Sample ID	Date	Chlorides (mg/kg)
<b>NMOCD ACTION LEVEL (NMAC 19.15.17.13E)</b>		250
BGT SC-1	2/28/14	<30

SAMPLE WAS ANALYZED PER EPA METHOD 300.0.



AERIAL SOURCE: © 2014 GOOGLE EARTH PRO, AERIAL DATE: MAY 2, 2013



<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> May 29, 2014
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> May 29, 2014
<b>CHECKED BY:</b> D. Watson	<b>DATE CHECKED:</b> May 29, 2014
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> May 29, 2014

**FIGURE 2**  
**AERIAL SITE MAP**  
**FEBRUARY 2014**  
ConocoPhillips  
SAN JUAN 29-7 #52  
SE¼ NE¼, SECTION 7, T29N, R7W  
RIO ARRIBA COUNTY, NEW MEXICO  
N36.74292, W107.60656

**FIGURE 3-**

**RELEASE ASSESSMENT SAMPLE LOCATIONS AND RESULTS MARCH 2014**  
 ConocoPhillips  
 SAN JUAN 29-7 #52  
 SE¼ NE¼, SECTION 7, T29N, R7W  
 RIO ARRIBA COUNTY, NEW MEXICO  
 N36.74292, W107.60656



Animas Environmental Services, LLC

**DRAWN BY:** C. Lameman  
**DATE DRAWN:** March 6, 2014

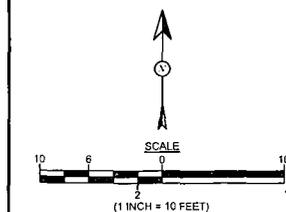
**REVISIONS BY:** S. Glasses  
**DATE REVISED:** July 15, 2014

**CHECKED BY:** D. Watson  
**DATE CHECKED:** July 15, 2014

**APPROVED BY:** E. McNally  
**DATE APPROVED:** July 15, 2014

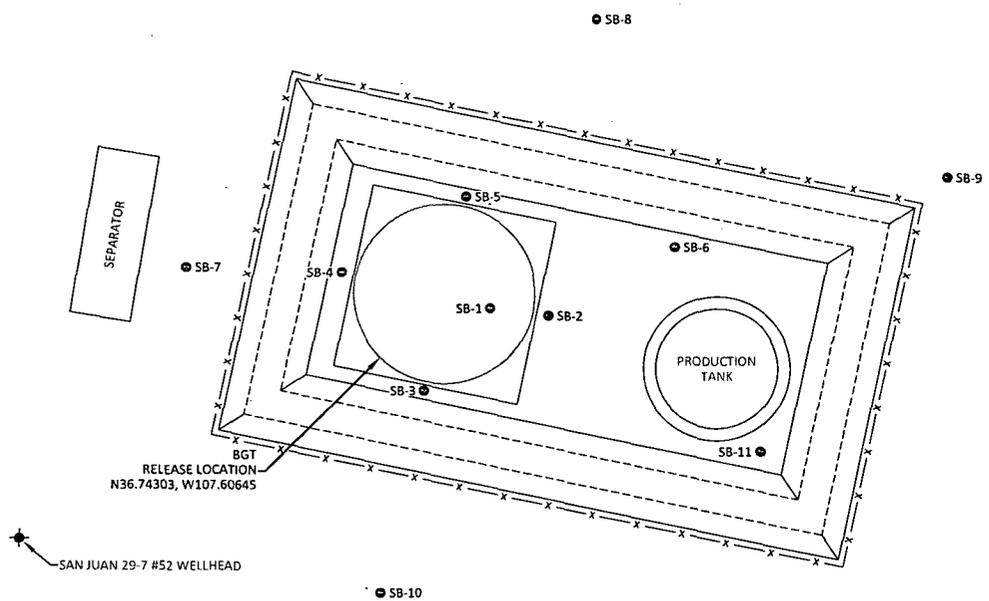
**LEGEND**

- SAMPLE LOCATIONS
- SECONDARY CONTAINMENT BERM
- x- FENCE



Field Sampling Results				
Sample ID	Date	Depth (ft)	OVM-PID (ppm)	TPH (mg/kg)
		<b>NMOC ACTION LEVEL</b>		<b>100</b>
SB-1	3/5/14	6.25	2,771	NA
		8.5	3,340	NA
SB-2	3/5/14	0.5	179	512
		3	75.9	NA
SB-3	3/5/14	0.5	24.2	NA
		3	6.4	NA
		6	1,945	>25,000
SB-4	3/5/14	0.5	35.2	NA
		3	56.7	NA
		5	1,816	>25,000
SB-5	3/5/14	0.5	23.8	NA
		3	65.3	NA
		6	1,823	NA
		7.75	2,156	792
SB-6	3/5/14	0.5	5.8	NA
		3	1.8	NA
		6	1.3	NA
SB-7	3/5/14	8	1,453	681
		0.5	2.5	NA
		2.5	1.0	NA
SB-8	3/5/14	0.5	0.7	NA
		2.5	0.8	NA
		0.5	1.8	NA
SB-9	3/5/14	3	0.8	NA
		6	0.8	NA
		8	1.3	26.8
SB-10	3/15/14	0.5	0.2	NA
		3	0.1	NA
		8	0.1	<20.0
SB-11	3/5/14	0.5	0.2	NA
		3	0.1	NA
		6	0.2	NA
		9	0.1	<20.0

NA - NOT ANALYZED



BGT  
 RELEASE LOCATION  
 N36.74303, W107.60645

SAN JUAN 29-7 #52 WELLHEAD

**FIGURE 4**

**FINAL EXCAVATION SAMPLE LOCATIONS AND RESULTS  
APRIL AND MAY 2014**  
 ConocoPhillips  
 SAN JUAN 29-7 #52  
 SE¼ NE¼, SECTION 7, T29N, R7W  
 RIO ARRIBA COUNTY, NEW MEXICO  
 N36.74292, W107.60656



Animas Environmental Services, LLC

**DRAWN BY:**  
C. Lameman

**DATE DRAWN:**  
May 29, 2014

**REVISIONS BY:**  
C. Lameman

**DATE REVISED:**  
May 29, 2014

**CHECKED BY:**  
D. Watson

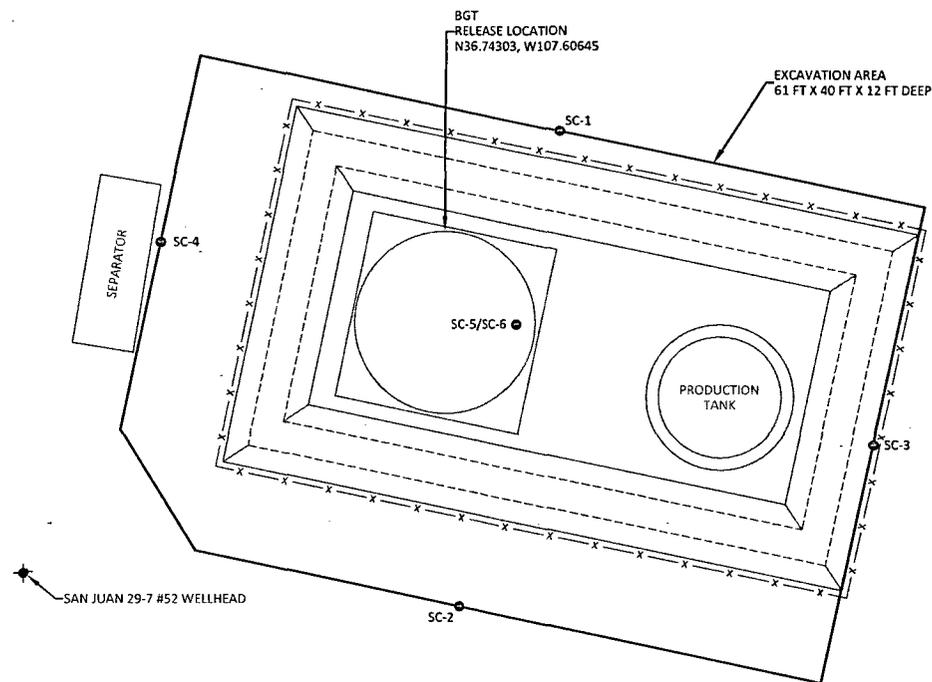
**DATE CHECKED:**  
May 29, 2014

**APPROVED BY:**  
E. McNally

**DATE APPROVED:**  
May 29, 2014

**LEGEND**

- SAMPLE LOCATIONS
- ==== SECONDARY CONTAINMENT BERM
- x- FENCE

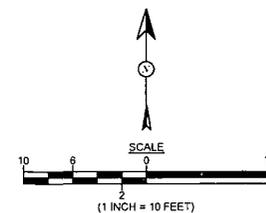


Field Sampling Results				
Sample ID	Date	Depth (ft)	OVM-PID (ppm)	TPH (mg/kg)
NMOCD ACTION LEVEL			100	100
SC-1	4/29/14	1 to 12	19.3	289
SC-2	4/29/14	1 to 12	15.9	46.5
SC-3	4/29/14	1 to 12	26.2	270
SC-4	4/29/14	1 to 12	122	192
SC-5	4/29/14	12	3,827	1,770
SC-6	5/2/14	12	575	854

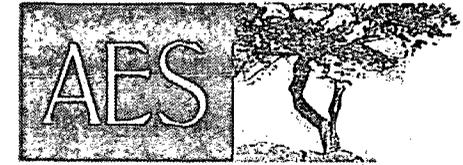
ALL SAMPLES WERE COMPOSITE SAMPLES.

Laboratory Analytical Results						
Sample ID	Date	Depth (ft)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH - GRO (mg/kg)	TPH - DRO (mg/kg)
NMOCD ACTION LEVEL			10	50	100	
SC-1	4/29/14	1 to 12	NA	NA	<3.4	96
SC-2	4/29/14	1 to 12	NA	NA	<5.0	<10
SC-3	4/29/14	1 to 12	NA	NA	<3.5	46
SC-4	4/29/14	1 to 12	<0.031	0.070	3.5	65
SC-5	4/29/14	12	<0.083	5.2	140	750
SC-6	5/2/14	12	<0.081	5.58	98	640

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



# AES Field Sampling 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 29-7 #52

Date: 2/28/2014

Matrix: Soil

Sample ID	Collection Date	Time of Sample Collection	Sample Location	OVM (ppm)	Field Chloride (mg/kg)	TPH Analysis Time	TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
S-1	2/28/2014	10:15	North	3,218	NA	11:34	>2,300	20.0	1	AR
S-2	2/28/2014	10:16	South	2,661	NA	11:40	>2,300	20.0	1	AR
S-3	2/28/2014	10:17	East	2,535	NA	11:45	>2,300	20.0	1	AR
S-4	2/28/2014	10:18	West	2,392	NA	11:50	>2,300	20.0	1	AR
S-5	2/28/2014	12:57	Center	1,458	NA	13:11	>2,300	20.0	1	AR
SC-1	2/28/2014	10:25	Composite	2,375	80	Not Analyzed for TPH				

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

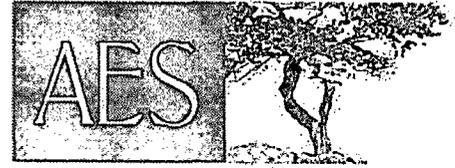
DF Dilution Factor  
 NA Not Analyzed  
 ND Not Detected at the Reporting Limit  
 PQL Practical Quantitation Limit

Total Petroleum Hydrocarbons - USEPA 418.1

\*TPH concentrations recorded may be below PQL.

Analyst:

# AES Field Sampling Report



Animas Environmental Services, LLC

www.animasenvironmental.com

Client: ConocoPhillips

Project Location: San Juan 29-7 #52

Date: 3/5/2014

Matrix: Soil

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

Durango, Colorado  
970-403-3084

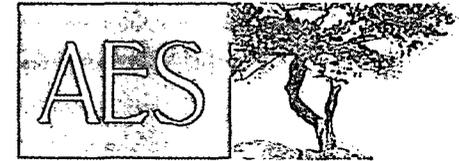
Sample ID	Collection Date	Collection Time	OVM (ppm)	TPH* (mg/kg)	TPH Analysis Time	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SB-1 @ 6.25'	3/5/2014	11:05	2,771	Not Analyzed for TPH				
SB-1 @ 8.5'	3/5/2014	11:15	3,340	Not Analyzed for TPH				
SB-2 @ 0.5'	3/5/2014	11:20	179	512	14:45	20.0	1	EMS
SB-2 @ 3'	3/5/2014	11:24	75.9	Not Analyzed for TPH				
SB-3 @ 0.5'	3/5/2014	11:35	24.2	Not Analyzed for TPH				
SB-3 @ 3'	3/5/2014	11:42	6.4	Not Analyzed for TPH				
SB-3 @ 6'	3/5/2014	11:50	1,945	>25,000	12:19	200	10	EMS
SB-4 @ 0.5'	3/5/2014	12:10	35.2	Not Analyzed for TPH				
SB-4 @ 3'	3/5/2014	12:18	56.7	Not Analyzed for TPH				
SB-4 @ 5'	3/5/2014	12:20	1,816	>25,000	16:02	200	10	EMS
SB-5 @ 0.5'	3/5/2014	12:30	23.8	Not Analyzed for TPH				
SB-5 @ 3'	3/5/2014	12:35	65.3	Not Analyzed for TPH				
SB-5 @ 6'	3/5/2014	13:09	1,823	Not Analyzed for TPH				
SB-5 @ 7.75'	3/5/2014	13:13	2,156	792	16:08	20.0	1	EMS
SB-6 @ 0.5'	3/5/2014	13:17	5.8	Not Analyzed for TPH				
SB-6 @ 3'	3/5/2014	13:20	1.8	Not Analyzed for TPH				
SB-6 @ 6'	3/5/2014	13:00	1.3	Not Analyzed for TPH				
SB-6 @ 8'	3/5/2014	13:24	1,453	681	15:20	20.0	1	EMS
SB-7 @ 0.5'	3/5/2014	14:25	2.5	Not Analyzed for TPH				
SB-7 @ 2.5'	3/5/2014	14:30	1.0	Not Analyzed for TPH				
SB-8 @ 0.5'	3/5/2014	14:35	0.7	Not Analyzed for TPH				
SB-8 @ 2.5'	3/5/2014	14:40	0.8	Not Analyzed for TPH				
SB-9 @ 0.5'	3/5/2014	14:36	1.8	Not Analyzed for TPH				

Sample ID	Collection Date	Collection Time	OVM (ppm)	TPH* (mg/kg)	TPH Analysis Time	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SB-9 @ 6'	3/5/2014	14:44	0.8	<i>Not Analyzed for TPH</i>				
SB-9 @ 8'	3/5/2014	14:50	1.3	26.8	15:24	20.0	1	EMS
SB-10 @ 0.5'	3/5/2014	15:10	0.2	<i>Not Analyzed for TPH</i>				
SB-10 @ 3'	3/5/2014	15:20	0.1	<i>Not Analyzed for TPH</i>				
SB-10 @ 8'	3/5/2014	16:20	0.1	8.6	16:55	20.0	1	EMS
SB-11 @ 0.5'	3/5/2014	16:00	0.2	<i>Not Analyzed for TPH</i>				
SB-11 @ 3'	3/5/2014	16:12	0.1	<i>Not Analyzed for TPH</i>				
SB-11 @ 6'	3/5/2014	16:30	0.2	<i>Not Analyzed for TPH</i>				
SB-11 @ 9'	3/5/2014	16:40	0.1	19.0	16:59	20.0	1	EMS

DF Dilution Factor  
NA Not Analyzed  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitation Limit  
\*TPH concentrations recorded may be below PQL.  
Total Petroleum Hydrocarbons - USEPA 418.1

Analyst: *Smith Skyl*

# AES Field Sampling 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 29-7 #52

Date: 4/29/2014

Matrix: Soil

Sample ID	Collection Date	Time of Sample Collection	Sample Location	OVM (ppm)	TPH Analysis Time	TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SC-1	4/29/2014	14:35	North Wall	19.3	14:51	289	20.0	1	EMS
SC-2	4/29/2014	11:30	South Wall	15.9	12:16	46.5	20.0	1	EMS
SC-3	4/29/2014	11:35	East Wall	26.2	12:19	270	20.0	1	EMS
SC-4	4/29/2014	14:16	West Wall	122	14:31	192	20.0	1	EMS
SC-5	4/29/2014	11:42	Base	3,827	12:22	1,770	20.0	1	EMS

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

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

Analyst: *Eric Skelton*

# AES Field Sampling 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 29-7 #52

Date: 5/2/2014

Matrix: Soil

Sample ID	Collection Date	Time of Sample Collection	Sample Location	OVM (ppm)	TPH Analysis Time	TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SC-6	5/2/2014	11:20	Base	575	11:37	854	20.0	1	HMW

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

Total Petroleum Hydrocarbons - USEPA 418.1  
 \*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)

March 10, 2014

Debbie Watson

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

RE: SJ 29-7 # 52

OrderNo.: 1403065

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/4/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

Analytical Report

Lab Order 1403065

Date Reported: 3/10/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental

Client Sample ID: SC-1 BGT SC-1 DAW

Project: SJ 29-7 # 52

Collection Date: 2/28/2014 10:25:00 AM

Lab ID: 1403065-001

Matrix: SOIL

Received Date: 3/4/2014 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	ND	30		mg/Kg	20	3/6/2014 7:37:40 PM	12064

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	Page 1 of 2
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1403065

10-Mar-14

Client: Animas Environmental

Project: SJ 29-7 # 52

Sample ID	MB-12064	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	12064	RunNo:	17165					
Prep Date:	3/6/2014	Analysis Date:	3/6/2014	SeqNo:	493843	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-12064	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	12064	RunNo:	17165					
Prep Date:	3/6/2014	Analysis Date:	3/6/2014	SeqNo:	493844	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.2	90	110			

## Qualifiers:

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

**Sample Log-In Check List**

Client Name: Animas Environmental Work Order Number: 1403065 RcptNo: 1

Received by/date: [Signature] 03/04/14

Logged By: Lindsay Mangin 3/4/2014 10:00:00 AM [Signature]

Completed By: Lindsay Mangin 3/4/2014 11:07:00 AM [Signature]

Reviewed By: mg 03/05/14

**Chain of Custody**

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

**Log In**

- 4. Was an attempt made to cool the samples? Yes  No  NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA
- 6. Sample(s) in proper container(s)? Yes  No
- 7. Sufficient sample volume for indicated test(s)? Yes  No
- 8. Are samples (except VOA and ONG) properly preserved? Yes  No
- 9. Was preservative added to bottles? Yes  No  NA
- 10. VOA vials have zero headspace? Yes  No  No VOA Vials
- 11. Were any sample containers received broken? Yes  No
- 12. Does paperwork match bottle labels? Yes  No   
(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	2.5	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)

May 02, 2014

Debbie Watson

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

RE: COP SJ 29-7 #52

OrderNo.: 1404B95

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 4/30/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

Analytical Report

Lab Order 1404B95

Date Reported: 5/2/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental

Client Sample ID: SC-1

Project: COP SJ 29-7 #52

Collection Date: 4/29/2014 2:35:00 PM

Lab ID: 1404B95-001

Matrix: MEOH (SOIL)

Received Date: 4/30/2014 10:05:00 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)	96	10		mg/Kg	1	4/30/2014 12:21:16 PM	12938
Surr: DNOP	105	57.9-140		%REC	1	4/30/2014 12:21:16 PM	12938
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	4/30/2014 12:02:25 PM	R18302
Surr: BFB	89.7	74.5-129		%REC	1	4/30/2014 12:02:25 PM	R18302

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

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

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Animas Environmental

**Client Sample ID:** SC-3

**Project:** COP SJ 29-7 #52

**Collection Date:** 4/29/2014 11:35:00 AM

**Lab ID:** 1404B95-002

**Matrix:** MEOH (SOIL)

**Received Date:** 4/30/2014 10:05:00 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)	46	10		mg/Kg	1	4/30/2014 12:52:35 PM	12938
Surr: DNOP	94.4	57.9-140		%REC	1	4/30/2014 12:52:35 PM	12938
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	4/30/2014 12:30:59 PM	R18302
Surr: BFB	85.2	74.5-129		%REC	1	4/30/2014 12:30:59 PM	R18302

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

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

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Animas Environmental

Client Sample ID: SC-4

Project: COP SJ 29-7 #52

Collection Date: 4/29/2014 2:16:00 PM

Lab ID: 1404B95-003

Matrix: MEOH (SOIL)

Received Date: 4/30/2014 10:05:00 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)	65	9.9		mg/Kg	1	4/30/2014 1:23:37 PM	12938
Surr: DNOP	106	57.9-140		%REC	1	4/30/2014 1:23:37 PM	12938
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	3.5	3.1		mg/Kg	1	4/30/2014 12:59:35 PM	R18302
Surr: BFB	111	74.5-129		%REC	1	4/30/2014 12:59:35 PM	R18302
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.031		mg/Kg	1	4/30/2014 12:59:35 PM	R18302
Toluene	ND	0.031		mg/Kg	1	4/30/2014 12:59:35 PM	R18302
Ethylbenzene	ND	0.031		mg/Kg	1	4/30/2014 12:59:35 PM	R18302
Xylenes, Total	0.070	0.063		mg/Kg	1	4/30/2014 12:59:35 PM	R18302
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	4/30/2014 12:59:35 PM	R18302

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

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

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Animas Environmental  
**Project:** COP SJ 29-7 #52  
**Lab ID:** 1404B95-004

**Client Sample ID:** SC-5  
**Collection Date:** 4/29/2014 11:42:00 AM  
**Received Date:** 4/30/2014 10:05:00 AM

**Matrix:** MEOH (SOIL)

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)	750	9.9		mg/Kg	1	4/30/2014 1:54:44 PM	12938
Surr: DNOP	112	57.9-140		%REC	1	4/30/2014 1:54:44 PM	12938
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	140	17		mg/Kg	5	4/30/2014 11:33:47 AM	R18302
Surr: BFB	258	74.5-129	S	%REC	5	4/30/2014 11:33:47 AM	R18302
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.083		mg/Kg	5	4/30/2014 11:33:47 AM	R18302
Toluene	ND	0.17		mg/Kg	5	4/30/2014 11:33:47 AM	R18302
Ethylbenzene	0.40	0.17		mg/Kg	5	4/30/2014 11:33:47 AM	R18302
Xylenes, Total	4.8	0.33		mg/Kg	5	4/30/2014 11:33:47 AM	R18302
Surr: 4-Bromofluorobenzene	117	80-120		%REC	5	4/30/2014 11:33:47 AM	R18302

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

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1404B95

02-May-14

Client: Animas Environmental

Project: COP SJ 29-7 #52

Sample ID	MB-12938	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	12938	RunNo:	18255					
Prep Date:	4/29/2014	Analysis Date:	4/30/2014	SeqNo:	528682	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	8.6		10.00		86.3	57.9	140			

Sample ID	LCS-12938	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	12938	RunNo:	18255					
Prep Date:	4/29/2014	Analysis Date:	4/30/2014	SeqNo:	528683	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	10	50.00	0	80.9	60.8	145			
Surr: DNOP	3.9		5.000		78.1	57.9	140			

Sample ID	MB-12956	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	12956	RunNo:	18327					
Prep Date:	5/1/2014	Analysis Date:	5/1/2014	SeqNo:	529725	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.7		10.00		87.3	57.9	140			

Sample ID	LCS-12956	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	12956	RunNo:	18327					
Prep Date:	5/1/2014	Analysis Date:	5/1/2014	SeqNo:	529726	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.7		5.000		94.0	57.9	140			

**Qualifiers:**

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1404B95

02-May-14

Client: Animas Environmental

Project: COP SJ 29-7 #52

Sample ID	MB-12911 MK	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	R18302	RunNo:	18302					
Prep Date:		Analysis Date:	4/30/2014	SeqNo:	529079	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	850		1000		84.8	74.5	129			

Sample ID	LCS-12911 MK	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	R18302	RunNo:	18302					
Prep Date:		Analysis Date:	4/30/2014	SeqNo:	529080	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.1	71.7	134			
Surr: BFB	940		1000		93.8	74.5	129			

## Qualifiers:

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1404B95

02-May-14

Client: Animas Environmental

Project: COP SJ 29-7 #52

Sample ID	MB-12911 MK	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	R18302	RunNo:	18302					
Prep Date:		Analysis Date:	4/30/2014	SeqNo:	529270	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

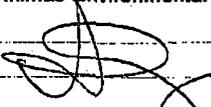
Sample ID	LCS-12911 MK	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	R18302	RunNo:	18302					
Prep Date:		Analysis Date:	4/30/2014	SeqNo:	529271	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	108	80	120			
Toluene	1.0	0.050	1.000	0	99.8	80	120			
Ethylbenzene	1.0	0.050	1.000	0	101	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.0	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

## Qualifiers:

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

# Sample Log-In Check List

Client Name: Animas Environmental Work Order Number: 1404B95 RcptNo: 1

Received by/date:  04/30/14

Logged By: Ashley Gallegos 4/30/2014 10:05:00 AM 

Completed By: Ashley Gallegos 4/30/2014 10:12:57 AM 

Reviewed By:  04/30/14

**Chain of Custody**

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

**Log In**

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

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

**Special Handling (if applicable)**

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

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

17. Additional remarks:

**18. Cooler Information**

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

# Chain-of-Custody Record

Client: Armas Environmental Services

Mailing Address: 624 E. Comanche  
Farmington, NM 87401

Phone #: 505-564-2281

email or Fax#:

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

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

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

Project Name: CoP SJ 29-7 #52

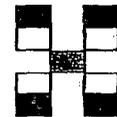
Project #:

Project Manager: D. Watson

Sampler: E. Skyles

On Ice:  Yes  No

Sample Temperature: 10°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 + <del>MTBE</del> + THAs (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)	Air Bubbles (Y or N)	
4/27/14						1404895													
	14:35	Soil	SC-1	Mech Kit 1-4oz	Mech Non	-001			X										
	11:35	Soil	SC-3	Mech Kit 1-4oz	Mech Non	-002			X										
	14:16	Soil	SC-4	Mech Kit 1-4oz	Mech Non	-003	X	X											
	11:42	Soil	SC-5	Mech Kit 1-4oz	Mech Non	-004	X	X											

Date: <u>4/29/14</u>	Time: <u>1716</u>	Relinquished by: <u>SIL Skyles</u>	Received by: <u>M. Wall</u>	Date: <u>4/29/14</u>	Time: <u>1716</u>	Remarks: <u>Bill to Cornea Phillips</u>
Date: <u>4/29/14</u>	Time: <u>1740</u>	Relinquished by: <u>M. Wall</u>	Received by: <u>Shirley Galloway</u>	Date: <u>04/30/14</u>	Time: <u>10:05</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 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)

May 05, 2014

Debbie Watson

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

RE: COP SJ 29-7#52

OrderNo.: 1404C13

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 4/30/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Animas Environmental  
 Project: COP SJ 29-7#52  
 Lab ID: 1404C13-001

Matrix: SOIL

Client Sample ID: SC-2  
 Collection Date: 4/29/2014 11:30:00 AM  
 Received Date: 4/30/2014 10:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>BCN</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/2/2014 3:26:00 PM	12956
Surr: DNOP	92.8	57.9-140		%REC	1	5/2/2014 3:26:00 PM	12956
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/1/2014 3:34:23 PM	12950
Surr: BFB	85.1	74.5-129		%REC	1	5/1/2014 3:34:23 PM	12950

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

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1404C13

06-May-14

Client: Animas Environmental

Project: COP SJ 29-7#52

Sample ID	<b>MB-12956</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>12956</b>	RunNo:	<b>18327</b>					
Prep Date:	<b>5/1/2014</b>	Analysis Date:	<b>5/1/2014</b>	SeqNo:	<b>529725</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.7		10.00		87.3	57.9	140			

Sample ID	<b>LCS-12956</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>12956</b>	RunNo:	<b>18327</b>					
Prep Date:	<b>5/1/2014</b>	Analysis Date:	<b>5/1/2014</b>	SeqNo:	<b>529726</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	91.8	60.8	145			
Surr: DNOP	4.7		5.000		94.0	57.9	140			

Sample ID	<b>MB-12982</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>12982</b>	RunNo:	<b>18356</b>					
Prep Date:	<b>5/2/2014</b>	Analysis Date:	<b>5/2/2014</b>	SeqNo:	<b>530268</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.4		10.00		84.4	57.9	140			

Sample ID	<b>LCS-12982</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>12982</b>	RunNo:	<b>18356</b>					
Prep Date:	<b>5/2/2014</b>	Analysis Date:	<b>5/2/2014</b>	SeqNo:	<b>530310</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.4		5.000		88.8	57.9	140			

## Qualifiers:

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1404C13

06-May-14

Client: Animas Environmental

Project: COP SJ 29-7#52

Sample ID	<b>MB-12950</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>12950</b>	RunNo:	<b>18348</b>					
Prep Date:	<b>4/30/2014</b>	Analysis Date:	<b>5/1/2014</b>	SeqNo:	<b>530007</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	840		1000		84.5	74.5	129			

Sample ID	<b>LCS-12950</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>12950</b>	RunNo:	<b>18348</b>					
Prep Date:	<b>4/30/2014</b>	Analysis Date:	<b>5/1/2014</b>	SeqNo:	<b>530008</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	99.0	71.7	134			
Surr: BFB	920		1000		91.9	74.5	129			

Sample ID	<b>1404C12-001AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>BatchQC</b>	Batch ID:	<b>12950</b>	RunNo:	<b>18348</b>					
Prep Date:	<b>4/30/2014</b>	Analysis Date:	<b>5/1/2014</b>	SeqNo:	<b>530010</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.7	23.63	0	104	69.5	145			
Surr: BFB	890		945.2		93.9	74.5	129			

Sample ID	<b>1404C12-001AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>BatchQC</b>	Batch ID:	<b>12950</b>	RunNo:	<b>18348</b>					
Prep Date:	<b>4/30/2014</b>	Analysis Date:	<b>5/1/2014</b>	SeqNo:	<b>530011</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	4.7	23.67	0	86.4	69.5	145	17.9	20	
Surr: BFB	890		947.0		93.8	74.5	129	0	0	

**Qualifiers:**

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

# Sample Log-In Check List

Client Name: **Animas Environmental**

Work Order Number: **1404C13**

RcptNo: **1**

Received by/date: *[Signature]* **04/30/14**

Logged By: **Ashley Gallegos** **4/30/2014 10:05:00 AM** *[Signature]*

Completed By: **Ashley Gallegos** **4/30/2014 1:11:09 PM** *[Signature]*

Reviewed By: **IO** **04/30/14**

**Chain of Custody**

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

**Log In**

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

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

**Special Handling (if applicable)**

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

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

17. Additional remarks:

**18. Cooler Information**

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

May 06, 2014

Debbie Watson

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

RE: CoP SJ 29-7 #52

OrderNo.: 1405102

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 5/3/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Animas Environmental  
**Project:** CoP SJ 29-7 #52  
**Lab ID:** 1405102-001

**Client Sample ID:** SC-6  
**Collection Date:** 5/2/2014 11:20:00 AM  
**Received Date:** 5/3/2014 10:20:00 AM

**Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	640	10		mg/Kg	1	5/5/2014 11:16:48 AM	12995
Surr: DNOP	101	57.9-140		%REC	1	5/5/2014 11:16:48 AM	12995
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	98	16		mg/Kg	5	5/5/2014 9:52:28 AM	R18376
Surr: BFB	204	74.5-129	S	%REC	5	5/5/2014 9:52:28 AM	R18376
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.081		mg/Kg	5	5/5/2014 9:52:28 AM	R18376
Toluene	ND	0.16		mg/Kg	5	5/5/2014 9:52:28 AM	R18376
Ethylbenzene	0.38	0.16		mg/Kg	5	5/5/2014 9:52:28 AM	R18376
Xylenes, Total	5.2	0.32		mg/Kg	5	5/5/2014 9:52:28 AM	R18376
Surr: 4-Bromofluorobenzene	112	80-120		%REC	5	5/5/2014 9:52:28 AM	R18376

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

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1405102

06-May-14

Client: Animas Environmental

Project: CoP SJ 29-7 #52

Sample ID	<b>MB-12995</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>12995</b>	RunNo:	<b>18374</b>					
Prep Date:	<b>5/5/2014</b>	Analysis Date:	<b>5/5/2014</b>	SeqNo:	<b>530743</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	8.2		10.00		81.9	57.9	140			

Sample ID	<b>LCS-12995</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>12995</b>	RunNo:	<b>18374</b>					
Prep Date:	<b>5/5/2014</b>	Analysis Date:	<b>5/5/2014</b>	SeqNo:	<b>530744</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.00	0	88.0	60.8	145			
Surr: DNOP	3.9		5.000		78.0	57.9	140			

## Qualifiers:

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1405102

06-May-14

Client: Animas Environmental

Project: CoP SJ 29-7 #52

Sample ID	MB-12990 MK	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	R18376	RunNo:	18376					
Prep Date:		Analysis Date:	5/5/2014	SeqNo:	531630	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	840		1000		84.2	74.5	129			

Sample ID	LCS-12990 MK	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	R18376	RunNo:	18376					
Prep Date:		Analysis Date:	5/5/2014	SeqNo:	531635	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.3	71.7	134			
Surr: BFB	930		1000		92.6	74.5	129			

### Qualifiers:

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1405102

06-May-14

Client: Animas Environmental

Project: CoP SJ 29-7 #52

Sample ID	<b>MB-12990 MK</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R18376</b>	RunNo:	<b>18376</b>					
Prep Date:		Analysis Date:	<b>5/5/2014</b>	SeqNo:	<b>531665</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	0.99		1.000		99.1	80	120			

Sample ID	<b>100NG BTEX LCS</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R18376</b>	RunNo:	<b>18376</b>					
Prep Date:		Analysis Date:	<b>5/5/2014</b>	SeqNo:	<b>531666</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.050	1.000	0	119	80	120			
Toluene	1.1	0.050	1.000	0	109	80	120			
Ethylbenzene	1.1	0.050	1.000	0	108	80	120			
Xylenes, Total	3.2	0.10	3.000	0	107	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

## Qualifiers:

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

**Sample Log-In Check List**

Client Name: **Animas Environmental**      Work Order Number: **1405102**      RcptNo: **1**

Received by/date: AT 05/03/14

Logged By: **Anne Thorne**      5/3/2014 10:20:00 AM      *Anne Thorne*

Completed By: **Anne Thorne**      5/5/2014      *Anne Thorne*

Reviewed By: AT 05/05/14

**Chain of Custody**

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

**Log In**

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

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

**Special Handling (if applicable)**

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

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

17. Additional remarks:

**18. Cooler Information**

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

