

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>Crystal Tafoya</b>
Address <b>3401 East 30<sup>th</sup> St, Farmington, NM</b>	Telephone No. <b>(505) 326-9837</b>
Facility Name: <b>San Juan 30-6 Unit 473S</b>	Facility Type: <b>Gas Well</b>
Surface Owner <b>BLM</b>	Mineral Owner <b>BLM (SF-080713-A)</b>
API No. <b>30-039-29436</b>	

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
<b>E</b>	<b>22</b>	<b>30N</b>	<b>6W</b>	<b>1715</b>	<b>North</b>	<b>435</b>	<b>West</b>	<b>Rio Arriba</b>

Latitude 36.80065 Longitude 107.45717

**NATURE OF RELEASE**

Type of Release <b>Produced Fluids</b>	Volume of Release <b>None</b>	Volume Recovered <b>None</b>
Source of Release <b>Below Grade Tank</b>	Date and Hour of Occurrence <b>Unknown</b>	Date and Hour of Discovery <b>November 28, 2012</b>
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

RCVD JAN 31 '13  
OIL CONSV. DIV.

Describe Cause of Problem and Remedial Action Taken.\*

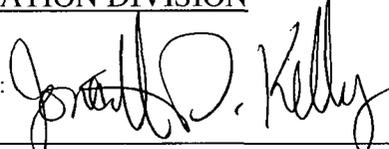
**Below Grade Tank Closure Activities**

DIST. 3

Describe Area Affected and Cleanup Action Taken.\*

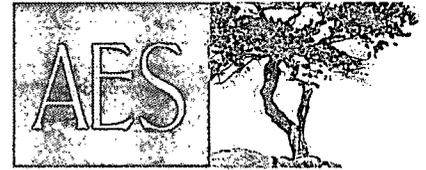
**The regulatory standard for closure at this site was determined to be 100 ppm. Soil samples were taken and then transported to the lab and analytical results for TPH, BTEX and Chlorides were below the regulatory standards set forth in the NMOCD Guidelines for Remediation of Leaks, Spills and Release; therefore no further action is required. The final report is attached.**

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

Signature: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: <b>Crystal Tafoya</b>	Approved by Environmental Specialist: 	
Title: <b>Field Environmental Specialist</b>	Approval Date: <b>1/31/2013</b>	Expiration Date:
E-mail Address: <b>crystal.tafoya@conocophillips.com</b>	Conditions of Approval:	Attached <input type="checkbox"/>
Date: <b>1/31/2013</b>	Phone: <b>(505) 326-9837</b>	

\* Attach Additional Sheets If Necessary

nJK 130315690



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

January 18, 2013

Crystal Tafoya  
ConocoPhillips  
San Juan Business Unit  
Office 214-05  
5525 Hwy 64  
Farmington, New Mexico 87401

**RE: Below Grade Tank Closure Report  
San Juan 30-6 #473S  
Rio Arriba County, New Mexico**

Dear Ms. Tafoya:

Animas Environmental Services, LLC (AES) is pleased to provide the final report associated with the below grade tank (BGT) closure at ConocoPhillips (CoP) San Juan 30-6 #473S, located in Rio Arriba County, New Mexico. Tank removal had been completed by CoP contractors prior to AES' arrival at the location.

---

## 1.0 Site Information

### 1.1 Location

Site Name – San Juan 30-6 #473S

Legal Description – SW $\frac{1}{4}$  NW $\frac{1}{4}$ , Section 22, T30N, R6W, Rio Arriba County, New Mexico

Well Latitude/Longitude – N36.80065 and W107.45714, respectively

BGT Latitude/Longitude – N36.80048 and W107.45766, respectively

Land Jurisdiction – Bureau of Land Management (BLM)

Figure 1. Topographic Site Location Map

Figure 2. Aerial Site Map, November 2012

### 1.2 NMOCD Ranking

Prior to site work, the New Mexico Oil Conservation Division (NMOCD) database was reviewed, and a C-144 form dated March 2006 for the San Juan 30-6 Unit #473S reported the depth to groundwater as greater than 100 feet below ground surface (bgs). The New Mexico Office of the State Engineer (NMOSE) database was reviewed for nearby water wells, and no registered water wells were reported to be located within 1,000 feet of the location. Additionally, Google Earth and the New Mexico Tech Petroleum Recovery Research Center online mapping tool

(<http://ford.nmt.edu/react/project.html>) were accessed to aid in the identification of downgradient surface water.

Once on site, AES personnel further assessed the ranking using topographical interpretation, Global Positioning System (GPS) elevation readings, and visual reconnaissance. AES personnel concluded that depth to groundwater at the site was greater than 100 feet bgs. An unnamed wash is located approximately 120 feet north of the location. Based on this information, the location was assessed a ranking score of 20.

### *1.3 BGT Closure Assessment*

AES was initially contacted by Bruce Yazzie, CoP representative, on November 28, 2012, and on November 29, 2012, Deborah Watson and Kelsey Christiansen of AES met with a CoP representative at the location. AES personnel collected six soil samples from below the BGT liner. Four samples were collected from the perimeter of the BGT footprint, one sample was collected from the center of the BGT footprint, and one sample was composited from the four perimeter samples and one center sample.

---

## **2.0 Soil Sampling**

On November 29, 2012, AES personnel conducted field screening and collected five soil samples (S-1 through S-5) and one 5-point composite (SC-1) from below the BGT. Soil samples were collected from approximately 0.5 feet below the former BGT for field screening of volatile organic compounds (VOCs) and total petroleum hydrocarbon (TPH). Soil sample SC-1 was field screened for chloride and was submitted for confirmation laboratory analysis. Soil sample locations are included on Figure 2.

### *2.1 Field Screening*

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

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

#### **2.1.2 Total Petroleum Hydrocarbons**

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

### 2.1.3 Chlorides

Soil 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 composite soil sample SC-1 collected for laboratory analysis was placed into a new, clean, laboratory-supplied container, which was then labeled, placed on ice, and logged onto a sample chain of custody record. The sample was maintained on ice until delivery to the analytical laboratory, Hall Environmental Analysis Laboratory (Hall), in Albuquerque, New Mexico. Soil sample SC-1 was laboratory analyzed for:

- Benzene, toluene, ethylbenzene, and xylene (BTEX) per U.S. Environmental Protection Agency (USEPA) Method 8021B;
- Total petroleum hydrocarbons as gasoline range organics (GRO) and diesel range organics (DRO) per USEPA Method 8015B;
- Chloride per USEPA Method 300.0.

## 2.3 Field and Laboratory Analytical Results

Field screening readings for VOCs via OVM ranged from 1.4 ppm in S-1 up to 4.2 ppm in S-2. Field TPH concentrations ranged from less than 20.0 mg/kg in S-2 and S-5 up to 180 mg/kg in S-3. The field chloride concentration in SC-1 was 60 mg/kg. Field screening results are summarized in Table 1 and presented on Figure 2. The AES Field Screening Report is attached.

Table 1. Soil Field Screening VOCs, TPH, and Chloride Results  
 San Juan 30-6 #473S BGT Closure, November 2012

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Depth below BGT (ft)</i>	<i>VOCs OVM Reading (ppm)</i>	<i>Field TPH (mg/kg)</i>	<i>Field Chlorides (mg/kg)</i>
<b>NMOCD Action Level (NMAC 19.15.17.13E)</b>			--	<b>100</b>	<b>250</b>
S-1	11/29/12	0.5	1.4	20.8	NA
S-2	11/29/12	0.5	4.2	<20.0	NA
S-3	11/29/12	0.5	2.6	<b>180</b>	NA
S-4	11/29/12	0.5	2.5	34.1	NA
S-5	11/29/12	0.5	3.1	<20.0	NA
SC-1	11/29/12	0.5	NA	NA	60

NA - not analyzed

Laboratory analytical results reported benzene and total BTEX concentrations in SC-1 as less than 0.050 mg/kg and 0.25 mg/kg, respectively. TPH concentrations as GRO and DRO were reported at less than 5.0 mg/kg and 9.8 mg/kg, respectively. The laboratory chloride concentration was less than 30 mg/kg. Laboratory analytical results are summarized in Table 2 and included on Figure 2. Laboratory analytical reports are attached.

Table 2. Soil Laboratory Analytical Results  
San Juan 30-6 #473S BGT Closure, November 2012

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Depth (ft)</i>	<i>Benzene (mg/kg)</i>	<i>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</b>	<b>50</b>	<b>100</b>		<b>250</b>
SC-1	11/29/12	0.5	<0.050	<0.25	<5.0	<9.8	<30

### 3.0 Conclusions and Recommendations

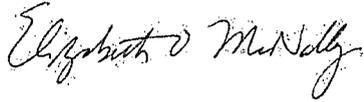
NMOCD action levels for BGT closures are specified in New Mexico Administrative Code (NMAC) 19.15.17.13E. Benzene and total BTEX concentrations in SC-1 were below the NMOCD action levels of 0.2 mg/kg and 50 mg/kg, respectively. Field TPH concentrations were below the NMOCD action level of 100 mg/kg in each sample except S-3 with 180 mg/kg. However, TPH concentrations as GRO/DRO were reported below the NMOCD threshold of 100 mg/kg with less than 15 mg/kg. Chloride concentrations in SC-1 were below the NMOCD action level of 250 mg/kg. Based on field screening and laboratory analytical results for benzene, total BTEX, TPH, and chlorides, no further work is recommended.

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

Sincerely,



Landrea Cupps  
Environmental Scientist



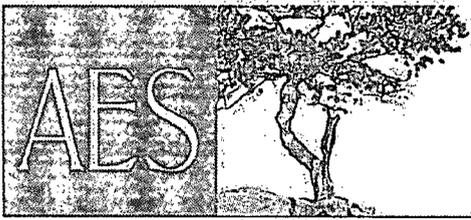
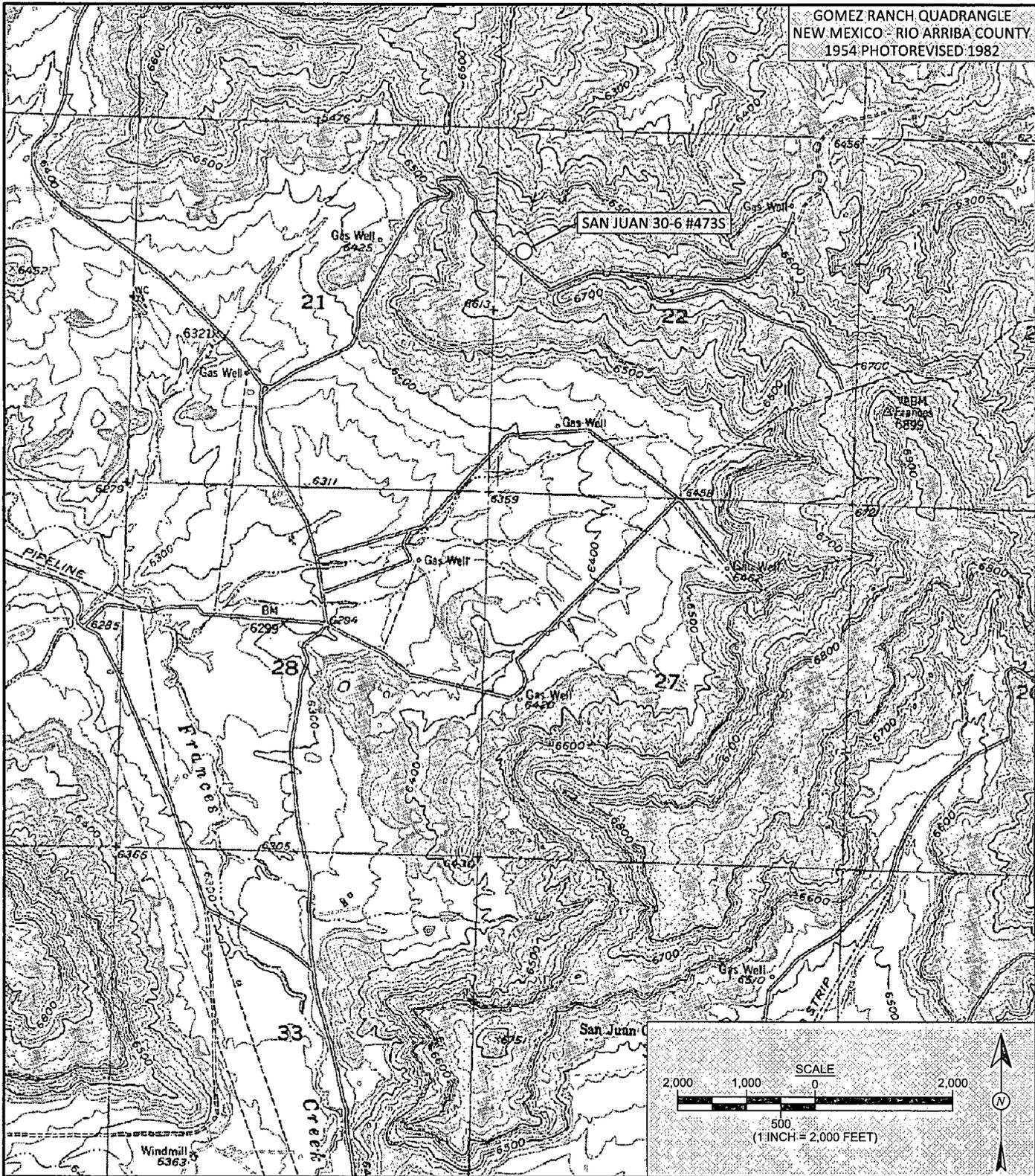
Elizabeth McNally, P.E.

Attachments:

- Figure 1. Topographic Site Location Map
- Figure 2. Aerial Site Map, November 2012
- AES Field Screening Report 112912
- Hall Analytical Report 1211A82

C:\Users\LanyLap\Dropbox\2013 Projects\ConocoPhillips\SJ 30-6 #473S\San Juan 30-6 #473S BGT Closure Report 011813.docx

GOMEZ RANCH QUADRANGLE  
 NEW MEXICO - RIO ARriba COUNTY  
 1954: PHOTOREVISED 1982



Animas Environmental Services, LLC

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

**FIGURE 1**  
**TOPOGRAPHIC SITE LOCATION MAP**  
 ConocoPhillips  
 SAN JUAN 30-6 #473S  
 RIO ARriba COUNTY, NEW MEXICO  
 SW¼ NW¼, SECTION 22, T30N, R6W  
 N36.80065, W107.45714

**LEGEND**  
 **SAMPLE LOCATIONS**

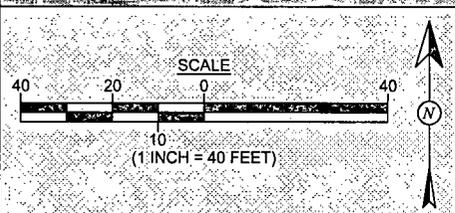
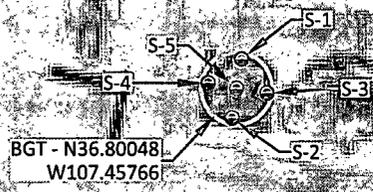
Field Screening Results				
Sample ID	Date	OVM-PID (ppm)	TPH (mg/kg)	Chlorides (mg/kg)
<b>NMOC ACTION LEVEL</b>		--	100	250
S-1	11/29/12	1.4	20.8	NA
S-2	11/29/12	4.2	<20.0	NA
S-3	11/29/12	2.6	180	NA
S-4	11/29/12	2.5	34.1	NA
S-5	11/29/12	3.1	<20.0	NA
SC-1	11/29/12	NA	NA	60

SC-1 IS A 5-POINT COMPOSITE SAMPLE OF S-1 THROUGH S-5. NA - NOT ANALYZED

Laboratory Analytical Results						
Sample ID	Date	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH - GRO (mg/kg)	TPH - DRO (mg/kg)	Chlorides (mg/kg)
<b>NMOC ACTION LEVEL</b>		0.2	50	100		250
SC-1	11/29/12	<0.050	<0.25	<5.0	<9.8	<30

SAMPLE WAS ANALYZED PER EPA METHOD 8021B, 8015B AND 300.0.

SAN JUAN 30-6 #473S MONUMENT



AERIAL SOURCE: © 2012 MICROSOFT CORPORATION - AVAILABLE EXCLUSIVELY BY DIGITALGLOBE



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

**FIGURE 2**  
**AERIAL SITE MAP**  
**BELOW GRADE TANK CLOSURE**  
**NOVEMBER 2012**  
 ConocoPhillips  
 SAN JUAN 30-6 #473S  
 RIO ARriba COUNTY, NEW MEXICO  
 SW¼ NW¼, SECTION 22, T30N, R6W  
 N36.80065, W107.45714

# AES Field Screening Report



Animas Environmental Services, LLC

www.animasenvironmental.com

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

Durango, Colorado  
970-403-3274

Client: ConocoPhillips

Project Location: San Juan 30-6 #4735

Date: 11/29/2012

Matrix: Soil

Sample ID	Collection Date	Time of Sample Collection	Sample Location	OVM (ppm)	Field Chloride (mg/kg)	Field TPH Analysis Time	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
S-1	11/29/2012	14:50	North	1.4	NA	20:01	20.8	20.0	1	DAW
S-2	11/29/2012	14:53	South	4.2	NA	20:04	<20.0	20.0	1	DAW
S-3	11/29/2012	14:55	East	2.6	NA	20:06	180	20.0	1	DAW
S-4	11/29/2012	14:56	West	2.5	NA	20:08	34.1	20.0	1	DAW
S-5	11/29/2012	14:58	Center	3.1	NA	20:11	<20.0	20.0	1	DAW
SC-1	11/29/2012	15:00	Composite	NA	60	Not Analyzed for TPH.				

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

\*Field TPH concentrations recorded may be below PQL.

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

Total Petroleum Hydrocarbons - USEPA 418.1

Analyst:



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)

December 05, 2012

Debbie Watson

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

RE: CoP San Juan 30-6 #473S

OrderNo.: 1211A82

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 11/30/2012 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

Sincerely,

A handwritten signature in black ink, appearing to read 'John Caldwell', is enclosed within a rectangular box.

John Caldwell  
Supervisor  
4901 Hawkins NE  
Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1211A82

Date Reported: 12/5/2012

**CLIENT:** Animas Environmental Services

**Client Sample ID:** SC-1

**Project:** CoP San Juan 30-6 #473S

**Collection Date:** 11/29/2012 3:00:00 PM

**Lab ID:** 1211A82-001

**Matrix:** MEOH (SOIL)

**Received Date:** 11/30/2012 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>MMD</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	11/30/2012 12:01:03 PM
Surr: DNOP	102	77.6-140		%REC	1	11/30/2012 12:01:03 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/30/2012 1:23:06 PM
Surr: BFB	97.2	84-116		%REC	1	11/30/2012 1:23:06 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.050		mg/Kg	1	11/30/2012 1:23:06 PM
Toluene	ND	0.050		mg/Kg	1	11/30/2012 1:23:06 PM
Ethylbenzene	ND	0.050		mg/Kg	1	11/30/2012 1:23:06 PM
Xylenes, Total	ND	0.10		mg/Kg	1	11/30/2012 1:23:06 PM
Surr: 4-Bromofluorobenzene	107	80-120		%REC	1	11/30/2012 1:23:06 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>JRR</b>
Chloride	ND	30		mg/Kg	20	11/30/2012 12:26:09 PM

**Qualifiers:**

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

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

**QC SUMMARY REPORT**  
**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1211A82  
 05-Dec-12

**Client:** Animas Environmental Services  
**Project:** CoP San Juan 30-6 #473S

Sample ID	<b>MB-5048</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>5048</b>	RunNo:	<b>7229</b>					
Prep Date:	<b>11/30/2012</b>	Analysis Date:	<b>11/30/2012</b>	SeqNo:	<b>209559</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-5048</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>5048</b>	RunNo:	<b>7229</b>					
Prep Date:	<b>11/30/2012</b>	Analysis Date:	<b>11/30/2012</b>	SeqNo:	<b>209560</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	95.9	90	110			

Sample ID	<b>1211A82-001BMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>SC-1</b>	Batch ID:	<b>5048</b>	RunNo:	<b>7229</b>					
Prep Date:	<b>11/30/2012</b>	Analysis Date:	<b>11/30/2012</b>	SeqNo:	<b>209562</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	30	15.00	0	124	64.4	117			S

Sample ID	<b>1211A82-001BMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 300.0: Anions</b>					
Client ID:	<b>SC-1</b>	Batch ID:	<b>5048</b>	RunNo:	<b>7229</b>					
Prep Date:	<b>11/30/2012</b>	Analysis Date:	<b>11/30/2012</b>	SeqNo:	<b>209563</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	30	15.00	0	124	64.4	117	0	20	S

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1211A82

05-Dec-12

**Client:** Animas Environmental Services  
**Project:** CoP San Juan 30-6 #473S

Sample ID <b>MB-5043</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015B: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>5043</b>		RunNo: <b>7210</b>							
Prep Date: <b>11/30/2012</b>	Analysis Date: <b>11/30/2012</b>		SeqNo: <b>209012</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	11		10.00		107	77.6	140			

Sample ID <b>LCS-5043</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015B: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>5043</b>		RunNo: <b>7210</b>							
Prep Date: <b>11/30/2012</b>	Analysis Date: <b>11/30/2012</b>		SeqNo: <b>209013</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	89.7	47.4	122			
Surr: DNOP	4.8		5.000		96.9	77.6	140			

Sample ID <b>1211A74-001AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015B: Diesel Range Organics</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>5043</b>		RunNo: <b>7233</b>							
Prep Date: <b>11/30/2012</b>	Analysis Date: <b>12/3/2012</b>		SeqNo: <b>209787</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.56	0	84.7	12.6	148			
Surr: DNOP	3.1		5.056		60.8	77.6	140			S

Sample ID <b>1211A74-001AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015B: Diesel Range Organics</b>							
Client ID: <b>BatchQC</b>	Batch ID: <b>5043</b>		RunNo: <b>7233</b>							
Prep Date: <b>11/30/2012</b>	Analysis Date: <b>12/3/2012</b>		SeqNo: <b>209788</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	39	9.9	49.36	0	79.9	12.6	148	8.22	22.5	
Surr: DNOP	2.7		4.936		53.7	77.6	140	0	0	S

Sample ID <b>MB-5065</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015B: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>5065</b>		RunNo: <b>7233</b>							
Prep Date: <b>12/3/2012</b>	Analysis Date: <b>12/3/2012</b>		SeqNo: <b>209790</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.3		10.00		83.3	77.6	140			

Sample ID <b>LCS-5065</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015B: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>5065</b>		RunNo: <b>7233</b>							
Prep Date: <b>12/3/2012</b>	Analysis Date: <b>12/3/2012</b>		SeqNo: <b>209791</b>		Units: <b>%REC</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.1		5.000		81.2	77.6	140			

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1211A82

05-Dec-12

**Client:** Animas Environmental Services  
**Project:** CoP San Juan 30-6 #473S

Sample ID	<b>5ML RB</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015B: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R7211</b>	RunNo:	<b>7211</b>					
Prep Date:		Analysis Date:	<b>11/30/2012</b>	SeqNo:	<b>209495</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	960		1000		95.5	84	116			

Sample ID	<b>2.5UG GRO LCS</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015B: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R7211</b>	RunNo:	<b>7211</b>					
Prep Date:		Analysis Date:	<b>11/30/2012</b>	SeqNo:	<b>209496</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	98.1	74	117			
Surr: BFB	1000		1000		102	84	116			

Sample ID	<b>1211A82-001AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 8015B: Gasoline Range</b>					
Client ID:	<b>SC-1</b>	Batch ID:	<b>R7211</b>	RunNo:	<b>7211</b>					
Prep Date:		Analysis Date:	<b>11/30/2012</b>	SeqNo:	<b>209513</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	16	5.0	17.24	0	93.3	70	130			
Surr: BFB	680		689.6		98.0	84	116			

Sample ID	<b>1211A82-001AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 8015B: Gasoline Range</b>					
Client ID:	<b>SC-1</b>	Batch ID:	<b>R7211</b>	RunNo:	<b>7211</b>					
Prep Date:		Analysis Date:	<b>11/30/2012</b>	SeqNo:	<b>209523</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	16	5.0	17.24	0	90.9	70	130	2.56	22.1	
Surr: BFB	690		689.6		99.5	84	116	0	0	

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1211A82

05-Dec-12

**Client:** Animas Environmental Services  
**Project:** CoP San Juan 30-6 #473S

Sample ID	<b>5ML RB</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R7211</b>	RunNo:	<b>7211</b>					
Prep Date:		Analysis Date:	<b>11/30/2012</b>	SeqNo:	<b>209540</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		105	80	120			

Sample ID	<b>100NG BTEX LCS</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R7211</b>	RunNo:	<b>7211</b>					
Prep Date:		Analysis Date:	<b>11/30/2012</b>	SeqNo:	<b>209541</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.050	1.000	0	97.2	76.3	117			
Toluene	0.99	0.050	1.000	0	99.1	80	120			
Ethylbenzene	0.99	0.050	1.000	0	99.2	77	116			
Xylenes, Total	3.0	0.10	3.000	0	99.5	76.7	117			
Surr: 4-Bromofluorobenzene	1.1		1.000		111	80	120			

Sample ID	<b>1211A80-001AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>BatchQC</b>	Batch ID:	<b>R7211</b>	RunNo:	<b>7211</b>					
Prep Date:		Analysis Date:	<b>11/30/2012</b>	SeqNo:	<b>209543</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.77	0.050	0.8022	0	96.2	67.2	113			
Toluene	0.77	0.050	0.8022	0	96.4	62.1	116			
Ethylbenzene	0.78	0.050	0.8022	0	97.3	67.9	127			
Xylenes, Total	2.3	0.10	2.407	0	97.6	60.6	134			
Surr: 4-Bromofluorobenzene	0.85		0.8022		106	80	120			

Sample ID	<b>1211A80-001AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>BatchQC</b>	Batch ID:	<b>R7211</b>	RunNo:	<b>7211</b>					
Prep Date:		Analysis Date:	<b>11/30/2012</b>	SeqNo:	<b>209544</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.80	0.050	0.8022	0	99.6	67.2	113	3.54	14.3	
Toluene	0.80	0.050	0.8022	0	100	62.1	116	3.84	15.9	
Ethylbenzene	0.80	0.050	0.8022	0	100	67.9	127	3.01	14.4	
Xylenes, Total	2.4	0.10	2.407	0	102	60.6	134	4.22	12.6	
Surr: 4-Bromofluorobenzene	0.90		0.8022		112	80	120	0	0	

**Qualifiers:**

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

# Sample Log-In Check List

Client Name: Animas Environmental Work Order Number: 1211A82  
 Received by/date: LM 11/30/12  
 Logged By: Michelle Garcia 11/30/2012 9:45:00 AM *Michelle Garcia*  
 Completed By: Michelle Garcia 11/30/2012 10:04:31 AM *Michelle Garcia*  
 Reviewed By: *[Signature]* 11/30/12

**Chain of Custody**

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

**Log In**

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

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

**Special Handling (if applicable)**

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

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

18. Additional remarks:

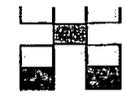
**19. Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.3	Good	Yes			

# Chain-of-Custody Record

Client: Animas Environmental Services LLC  
 Mailing Address: 624 E Comanche Farmington NM 87401  
 Phone #: 505 564 2281  
 email or Fax#:  
 QA/QC Package:  
 Standard  Level 4 (Full Validation)  
 Accreditation  
 NELAP  Other \_\_\_\_\_  
 EDD (Type) \_\_\_\_\_

Turn-Around Time:  
 Standard  Rush Same day  
 Project Name: CoP San Juan 30-6 #4735  
 Project #:  
 Project Manager: D Watson  
 Sampler: D Watson  
 Office:  Yes  No  
 Sample Temperature: 5



## 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's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	300.0 Chlorides	Air, Drinking Water
11-29-12	1500	Soil	SC-1	meath	meoh	1211182	X	X										X	

Date: 11-29-12 Time: 2145 Relinquished by: Derek Watson

Received by: [Signature] Date: 11/30/12 Time: 0945

Remarks: Bill to ConocoPhillips well 30-6 #4735 area: 8 act. code: C20D wo: 10340827  
 User ID: KGARCIA  
 Supervisor: Harry Dee  
 ordered by: Bruce Yazzie

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.