

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised August 8, 2011

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

**Release Notification and Corrective Action**

**OPERATOR**

Initial Report  Final Report

Name of Company <b>Burlington Resources Oil &amp; Gas Company</b>	Contact <b>Crystal Tafoya</b>
Address <b>3401 East 30<sup>th</sup> St, Farmington, NM</b>	Telephone No. <b>(505) 326-9837</b>
Facility Name: <b>San Juan 32-9 Unit 221</b>	Facility Type: <b>Gas Well</b>
Surface Owner <b>BLM</b>	Mineral Owner <b>BLM (SF-078389-A)</b>
API No. <b>3004528850</b>	

**LOCATION OF RELEASE**

Unit Letter <b>M</b>	Section <b>11</b>	Township <b>31N</b>	Range <b>10W</b>	Feet from the <b>795</b>	North/South Line <b>South</b>	Feet from the <b>1170</b>	East/West Line <b>West</b>	County <b>San Juan</b>
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Latitude 36.90779 Longitude 107.85626

**NATURE OF RELEASE**

Type of Release <b>Produced Fluids</b>	Volume of Release <b>Unknown</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>August 2, 2012</b>
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? <b>RCUD JAN 25 '13</b>	
By Whom?	Date and Hour <b>OIL CONS. DIV.</b>	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. <b>DIST. 3</b>	

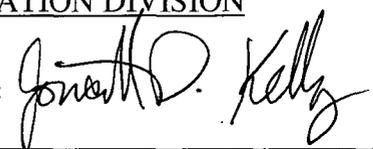
If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*  
**Below Grade Tank Closure Activities**

Describe Area Affected and Cleanup Action Taken.\*

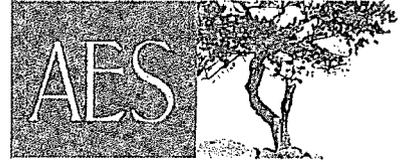
**The regulatory standard for closure at this site was determined to be 100 ppm. Samples were taken and analytical results for TPH, BTEX and Chlorides were below the regulatory standards set forth in the NMOCD Guidelines for Remediation of Leaks, Spills and Release; therefore no further action is required.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

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

Signature: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: <b>Crystal Tafoya</b>	Approved by Environmental Specialist: 	
Title: <b>Field Environmental Specialist</b>	Approval Date: <b>1/29/2013</b>	Expiration Date:
E-mail Address: <b>crystal.tafoya@conocophillips.com</b>	Conditions of Approval: <b>C-144 Closure Permit needed for BGT Closure</b>	Attached <input type="checkbox"/>
Date: <b>1/24/2013</b>	Phone: <b>(505) 326-9837</b>	

\* Attach Additional Sheets If Necessary

NJK13029 53257



Animas Environmental Services, LLC

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

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

Durango, Colorado  
970-403-3274

November 28, 2012

Crystal Tafoya  
ConocoPhillips  
San Juan Business Unit  
Office 214-5  
5525 Hwy 64  
Farmington, New Mexico 87401

**RE: Below Grade Tank Closure Report  
San Juan 32-9 #221  
San Juan 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 32-9 #221, located in San Juan County, New Mexico. Tank removal had been completed by CoP contractors prior to AES' arrival at the location.

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## 1.0 Site Information

### 1.1 Location

Site Name – San Juan 32-9 #221

Legal Description - SW $\frac{1}{4}$  SW $\frac{1}{4}$ , Section 11, T31N, R10W, San Juan County, New Mexico

Well Latitude/Longitude - N36.90779 and W107.85675, respectively

BGT Latitude/Longitude - N36.90781 and W107.85715, respectively

Land Jurisdiction - Bureau of Land Management (BLM)

Figure 1. Topographic Site Location Map

Figure 2. Aerial Site Map, August 2012

### 1.2 NMOCD Ranking

Prior to site work, the New Mexico Oil Conservation Division (NMOCD) database was reviewed, and a cathodic protection report dated January 1994 for the San Juan 32-9 #221 reported the depth to groundwater as 80 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 between 50 and 99 feet bgs. An unnamed ephemeral wash is located approximately 170 feet south of the BGT. Based on this information, the location was assessed a ranking score of 30 per the *NMOCD Guidelines for Leaks, Spills, and Releases* (August 1993).

### 1.3 BGT Closure Assessment

AES was initially contacted by Jess Henson, CoP representative, on August 2, 2012, and on the same day Heather Woods and Zachary Trujillo 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.

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## 2.0 Soil Sampling

On August 2, 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 S-1 through S-5 were collected from approximately 0.5 feet below the former BGT for field screening of volatile organic compounds (VOCs) and total petroleum hydrocarbons (TPH). Soil sample SC-1 was field screened for chlorides and 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 (TPH) for 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 1.1 ppm in S-2 up to 7.2 ppm in SC-1. Field TPH concentrations ranged from 102 mg/kg in S-2 up to 505 mg/kg in S-3. The field chloride concentration in SC-1 was 40 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 32-9 #221 BGT Closure, August 2012

Sample ID	Date Sampled	Depth below BGT (ft)	VOCs OVM Reading (ppm)	Field TPH (mg/kg)	Field Chlorides (mg/kg)
<b>NMOCDC Action Level (NMAC 19.15.17.13E)</b>			--	<b>100</b>	<b>250</b>
S-1	8/2/12	0.5	1.2	<b>194</b>	NA
S-2	8/2/12	0.5	1.1	<b>102</b>	NA
S-3	8/2/12	0.5	6.2	<b>505</b>	NA
S-4	8/2/12	0.5	2.7	<b>111</b>	NA
S-5	8/2/12	0.5	4.9	<b>431</b>	NA

<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>			--	100	250
SC-1	8/2/12	0.5	7.2	NA	40

NA = not analyzed

Laboratory analytical results reported benzene and total BTEX concentrations in SC-1 less than 0.050 mg/kg and 0.25 mg/kg, respectively. TPH concentrations were reported at less than 5.0 mg/kg GRO and 12 mg/kg DRO. The laboratory chloride concentration was reported below the laboratory detection limit of 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 32-9 #221 BGT Closure, August 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>100</b>	<b>250</b>
SC-1	8/2/12	0.5	<0.050	<0.25	<5.0	12	<30

### 3.0 Conclusions and Recommendations

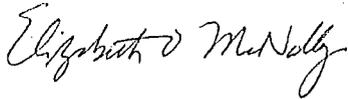
NMOCD action levels for BGT closures are specified in New Mexico Administrative Code (NMAC) 19.15.17.13E. Benzene and total BTEX concentrations in SC-1 were below the NMOCD Action Levels of 0.2 mg/kg and 50 mg/kg, respectively. Field TPH concentrations exceeded the NMOCD action level of 100 mg/kg in all samples, with the highest concentration reported in S-3 (505 mg/kg). However, TPH concentrations as GRO/DRO were reported below the NMOCD threshold of 100 mg/kg with 12 mg/kg. The chloride concentration for SC-1 was below the NMOCD action level of 250 mg/kg. Based on field screening and laboratory analytical results for benzene, 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

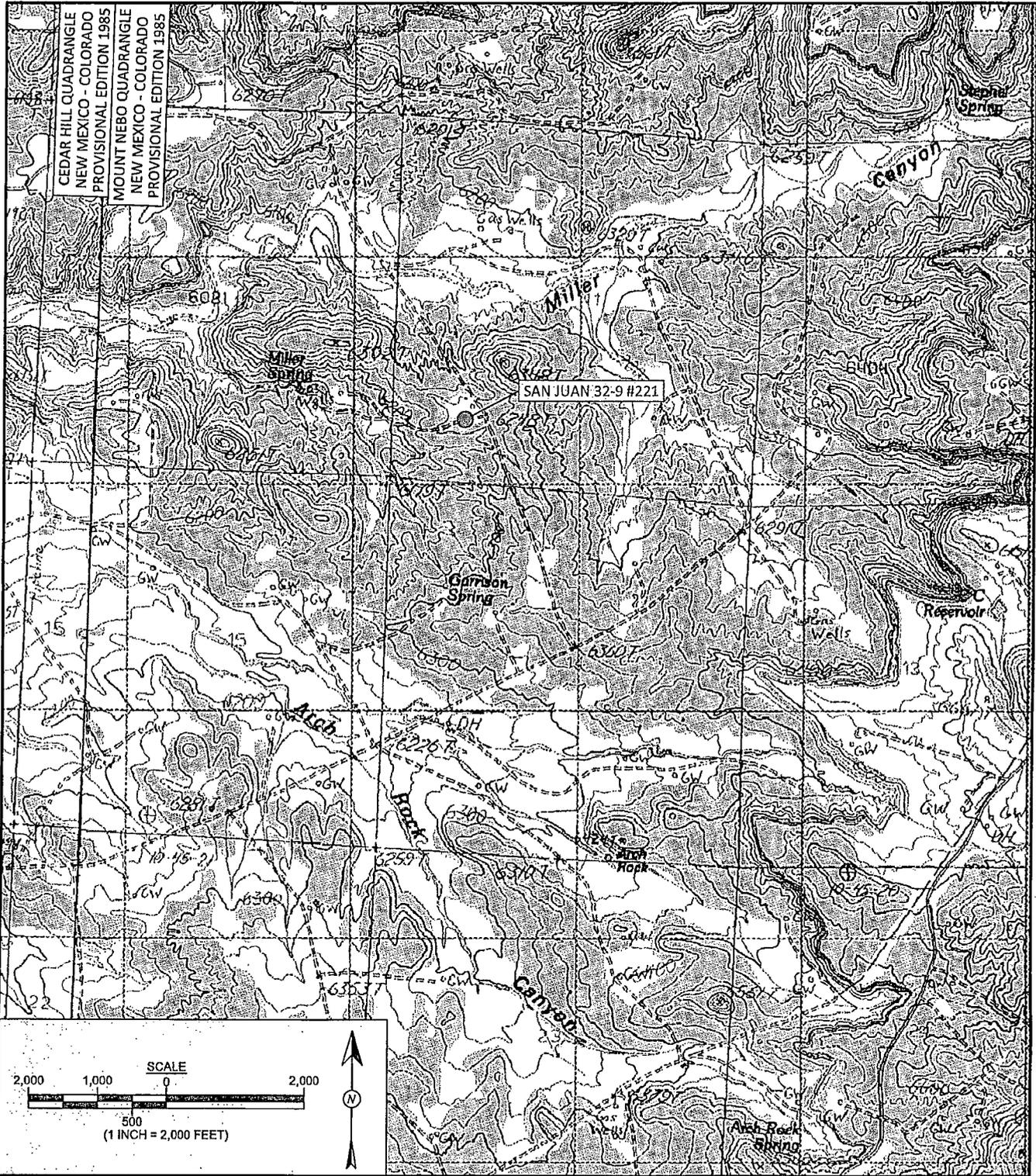


Elizabeth McNally, P.E.

Attachments:

- Figure 1. Topographic Site Location Map
- Figure 2. Aerial Site Map, August 2012
- AES Field Screening Report 080212
- Hall Analytical Report 1208182

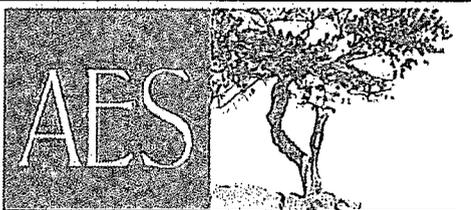
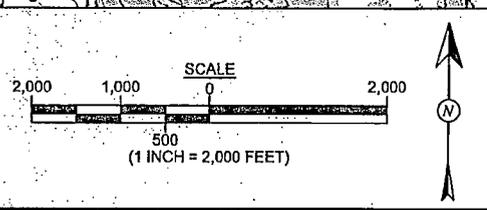
S:\Animas 2000\2012 Projects\Conoco Phillips\San Juan 32-9 #221\San Juan 32-9 #221 BGT Closure Report 112812.docx



CEDAR HILL QUADRANGLE  
 NEW MEXICO - COLORADO  
 PROVISIONAL EDITION 1985

MOUNT NEBO QUADRANGLE  
 NEW MEXICO - COLORADO  
 PROVISIONAL EDITION 1985

SAN JUAN 32-9 #221



Animas Environmental Services, LLC

<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> September 18, 2012
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> September 18, 2012
<b>CHECKED BY:</b> D. Watson	<b>DATE CHECKED:</b> September 18, 2012
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> September 18, 2012

**FIGURE 1**

**TOPOGRAPHIC SITE LOCATION MAP**  
 ConocoPhillips  
 SAN JUAN 32-9 #221  
 SAN JUAN COUNTY, NEW MEXICO  
 SW¼ SW¼, SECTION 11, T31N, R10W  
 N36.90779, W107.85675

**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	8/2/12	1.2	194	NA
S-2	8/2/12	1.1	102	NA
S-3	8/2/12	6.2	505	NA
S-4	8/2/12	2.7	111	NA
S-5	8/2/12	4.9	431	NA
SC-1	8/2/12	7.2	NA	40

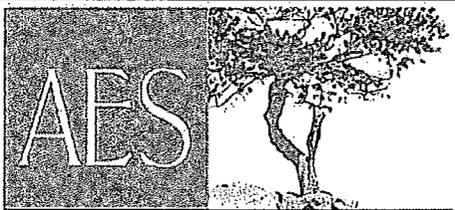
SC-1 IS A 5-POINT COMPOSITE SAMPLE OF S-1 THROUGH S-5. NA - NOT ANALYZED

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	8/2/12	<0.050	<0.25	<5.0	12	<30

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



AERIAL SOURCE: © 2012 PICTOMETRY INTERNATIONAL CORP. ONLINE, AERIAL TAKEN: MARCH 14, 2011

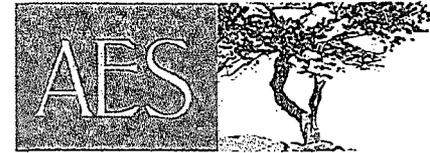


Animas Environmental Services, LLC

<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> September 18, 2012
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> September 18, 2012
<b>CHECKED BY:</b> D. Watson	<b>DATE CHECKED:</b> September 18, 2012
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> September 18, 2012

**FIGURE 2**  
**AERIAL SITE MAP**  
**BELOW GRADE TANK CLOSURE**  
**AUGUST 2012**  
 ConocoPhillips  
 SAN JUAN 32-9 #221  
 SAN JUAN COUNTY, NEW MEXICO  
 SW¼ SW¼, SECTION 11, T31N, R10W  
 N36.90779, W107.85675

# AES Field Screening Report



Animas Environmental Services, LLC

www.animasenvironmental.com

624 E. Comanche  
Farmington, NM 87401  
505-564-2261

Durango, Colorado  
970-403-3274

Client: ConocoPhillips

Project Location: San Juan 32-9 #221

Date: 8/2/2012

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	8/2/2012	10:45	North	1.2	NA	11:30	194	20.0	1	HMW
S-2	8/2/2012	10:48	South	1.1	NA	11:35	102	20.0	1	HMW
S-3	8/2/2012	10:50	East	6.2	NA	11:38	505	20.0	1	HMW
S-4	8/2/2012	10:54	West	2.7	NA	11:41	111	20.0	1	HMW
S-5	8/2/2012	10:57	Center	4.9	NA	11:44	431	20.0	1	HMW
SC-1	8/2/2012	10:59	Composite	7.2	40	Not Analyzed for TPH.				

PQL Practical Quantitation Limit

ND Not Detected at the Reporting Limit

DF Dilution Factor

\*Field TPH concentrations recorded may be below PQL.

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

Total Petroleum Hydrocarbons - USEPA 418.1

Analyst: *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)

August 08, 2012

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

RE: COP SJ 32-9 #221

OrderNo.: 1208182

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/3/2012 for the analyses presented in the following report.

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

Analytical Report

Lab Order 1208182

Date Reported: 8/8/2012

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Animas Environmental Services

Client Sample ID: SC-1

Project: COP SJ 32-9 #221

Collection Date: 8/2/2012 10:59:00 AM

Lab ID: 1208182-001

Matrix: MEOH (SOIL)

Received Date: 8/3/2012 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>JMP</b>
Diesel Range Organics (DRO)	12	10		mg/Kg	1	8/3/2012 11:55:18 AM
Surr: DNOP	110	77.6-140		%REC	1	8/3/2012 11:55:18 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/3/2012 12:44:59 PM
Surr: BFB	96.9	84-116		%REC	1	8/3/2012 12:44:59 PM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: <b>NSB</b>
Benzene	ND	0.050		mg/Kg	1	8/3/2012 12:44:59 PM
Toluene	ND	0.050		mg/Kg	1	8/3/2012 12:44:59 PM
Ethylbenzene	ND	0.050		mg/Kg	1	8/3/2012 12:44:59 PM
Xylenes, Total	ND	0.10		mg/Kg	1	8/3/2012 12:44:59 PM
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	8/3/2012 12:44:59 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: <b>SRM</b>
Chloride	ND	30		mg/Kg	20	8/3/2012 11:18:20 AM

Qualifiers: \*X Value exceeds Maximum Contaminant Level.  
 E Value above quantitation range  
 J Analyte detected below quantitation limits  
 R RPD outside accepted recovery limits  
 S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 ND Not Detected at the Reporting Limit  
 RL Reporting Detection Limit  
 U Samples with CalcVal < MDL

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1208182

08-Aug-12

**Client:** Animas Environmental Services  
**Project:** COP SJ 32-9 #221

Sample ID	1208057-001BMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	3181	RunNo:	4648					
Prep Date:	8/3/2012	Analysis Date:	8/3/2012	SeqNo:	130730	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0.5005	90.9	64.4	117			

Sample ID	1208057-001BMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	3181	RunNo:	4648					
Prep Date:	8/3/2012	Analysis Date:	8/3/2012	SeqNo:	130731	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0.5005	90.3	64.4	117	0.654	20	

Sample ID	MB-3181	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	3181	RunNo:	4648					
Prep Date:	8/3/2012	Analysis Date:	8/3/2012	SeqNo:	130738	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-3181	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	3181	RunNo:	4648					
Prep Date:	8/3/2012	Analysis Date:	8/3/2012	SeqNo:	130739	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.2	90	110			

**Qualifiers:**

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208182

08-Aug-12

Client: Animas Environmental Services

Project: COP SJ 32-9 #221

Sample ID	MB-3179	SampType:	MBLK	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	PBS	Batch ID:	3179	RunNo:	4631					
Prep Date:	8/3/2012	Analysis Date:	8/3/2012	SeqNo:	130294	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	12		10.00		118	77.6	140			

Sample ID	LCS-3179	SampType:	LCS	TestCode:	EPA Method 8015B: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	3179	RunNo:	4631					
Prep Date:	8/3/2012	Analysis Date:	8/3/2012	SeqNo:	130295	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	36	10	50.00	0	71.8	52.6	130			
Surr: DNOP	4.1		5.000		81.8	77.6	140			

### Qualifiers:

\*X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1208182  
08-Aug-12

Client: Animas Environmental Services  
Project: COP SJ 32-9 #221

Sample ID	MB-3170	SampType:	MBLK	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	PBS	Batch ID:	3170	RunNo:	4638					
Prep Date:	8/2/2012	Analysis Date:	8/3/2012	SeqNo:	130903	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	970		1000		96.9	84	116			

Sample ID	LCS-3170	SampType:	LCS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	LCSS	Batch ID:	3170	RunNo:	4638					
Prep Date:	8/2/2012	Analysis Date:	8/3/2012	SeqNo:	130904	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	85	115			
Surr: BFB	1000		1000		101	84	116			

Sample ID	1208009-001AMS	SampType:	MS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	BatchQC	Batch ID:	3170	RunNo:	4638					
Prep Date:	8/2/2012	Analysis Date:	8/3/2012	SeqNo:	130908	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	4.7	23.50	2.207	113	70	130			
Surr: BFB	1200		939.8		125	84	116			S

Sample ID	1208009-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	BatchQC	Batch ID:	3170	RunNo:	4638					
Prep Date:	8/2/2012	Analysis Date:	8/3/2012	SeqNo:	130909	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	4.7	23.74	2.207	105	70	130	6.12	22.1	
Surr: BFB	1100		949.7		115	84	116	0	0	

**Qualifiers:**

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1208182  
08-Aug-12

Client: Animas Environmental Services  
Project: COP SJ 32-9 #221

Sample ID	MB-3170	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	3170	RunNo:	4638					
Prep Date:	8/2/2012	Analysis Date:	8/3/2012	SeqNo:	130928	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		103	80	120			

Sample ID	LCS-3170	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	3170	RunNo:	4638					
Prep Date:	8/2/2012	Analysis Date:	8/3/2012	SeqNo:	130929	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.050	1.000	0	96.7	76.3	117			
Toluene	0.98	0.050	1.000	0	97.9	80	120			
Ethylbenzene	1.0	0.050	1.000	0	99.9	77	116			
Xylenes, Total	3.0	0.10	3.000	0	101	76.7	117			
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

Sample ID	1208045-001AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	BatchQC	Batch ID:	3170	RunNo:	4638					
Prep Date:	8/2/2012	Analysis Date:	8/3/2012	SeqNo:	130937	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.047	0.9497	0.004648	114	67.2	113			S
Toluene	2.0	0.047	0.9497	0.8163	123	62.1	116			S
Ethylbenzene	1.1	0.047	0.9497	0	116	67.9	127			
Xylenes, Total	3.3	0.095	2.849	0	116	60.6	134			
Surr: 4-Bromofluorobenzene	1.0		0.9497		107	80	120			

Sample ID	1208045-001AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	BatchQC	Batch ID:	3170	RunNo:	4638					
Prep Date:	8/2/2012	Analysis Date:	8/3/2012	SeqNo:	130938	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.047	0.9398	0.004648	100	67.2	113	13.5	14.3	
Toluene	1.8	0.047	0.9398	0.8163	103	62.1	116	10.7	15.9	
Ethylbenzene	0.94	0.047	0.9398	0	99.9	67.9	127	15.9	14.4	R
Xylenes, Total	2.8	0.094	2.820	0	99.7	60.6	134	16.5	12.6	R
Surr: 4-Bromofluorobenzene	1.0		0.9398		107	80	120	0	0	

### Qualifiers:

\*X Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
RL Reporting Detection Limit



Hall Environmental Analysis Laboratory  
 4901 Hawkins NE  
 Albuquerque, NM 87105  
 TEL: 505-345-3975 FAX: 505-345-410;  
 Website: www.hallenvironmental.com

# Sample Log-In Check List

Client Name: Animas Environmental Work Order Number: 1208182  
 Received by/date: mg 08/03/12  
 Logged By: Ashley Gallegos 8/3/2012 10:00:00 AM AG  
 Completed By: Ashley Gallegos 8/3/2012 10:20:13 AM AG  
 Reviewed By: mg 08/03/12

**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	7.0	Good	Yes			

