

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 30-6 Unit 446</b>	Facility Type: <b>Gas Well</b>
Surface Owner <b>BLM</b>	Mineral Owner <b>BLM (NM-04139)</b>
API No. <b>30-039-24590</b>	

**LOCATION OF RELEASE**

Unit Letter <b>N</b>	Section <b>35</b>	Township <b>30N</b>	Range <b>6W</b>	Feet from the <b>1295</b>	North/South Line <b>South</b>	Feet from the <b>1630</b>	East/West Line <b>West</b>	County <b>Rio Arriba</b>
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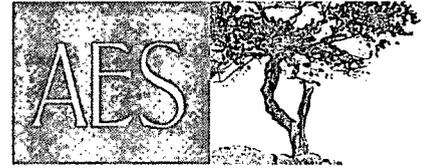
Latitude 36.7653 Longitude 107.43531

**NATURE OF RELEASE**

Type of Release <b>Produced Water</b>	Volume of Release <b>5.57 bbls</b>	Volume Recovered <b>2 bbls</b>
Source of Release <b>Wellhead</b>	Date and Hour of Occurrence <b>Unknown</b>	Date and Hour of Discovery <b>11/5/12 at 8:00 am</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. <b>RCVD JUL 26 '13</b>	
If a Watercourse was Impacted, Describe Fully.* <b>N/A</b>	<b>OIL CONS. DIV. DIST. 3</b>	
Describe Cause of Problem and Remedial Action Taken.* <b>Well head packing failed and released approximately 5.57 bbls onto soil. Water truck was contacted to pull standing water and treatment will be implemented.</b>		
Describe Area Affected and Cleanup Action Taken.* <b>NMOCD action levels for releases are specified in NMOCD's Guidelines for Leaks, Spills and Releases and the release was assigned a ranking score of 10. Samples were collected and analytical results are below applicable NMOCD action levels. No further work will be performed. The final report is attached for review.</b>		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		
Signature: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: <b>Crystal Tafoya</b>	Approved by Environmental Specialist: 	
Title: <b>Field Environmental Specialist</b>	Approval Date: <b>8/16/2013</b>	Expiration Date:
E-mail Address: <b>crystal.tafoya@conocophillips.com</b>	Conditions of Approval:	
Date: <b>7/25/2013</b> Phone: <b>(505) 326-9837</b>	Attached <input type="checkbox"/>	

\* Attach Additional Sheets If Necessary

**NSK1328831209**



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

July 23, 2013

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

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

**RE: Produced Water Release Report  
San Juan 30-6 #446  
Rio Arriba County, New Mexico**

Dear Ms. Tafoya:

Animas Environmental Services, LLC (AES) is pleased to provide the final report associated with the approximately 5.6 barrel (bbl) produced water release at the ConocoPhillips (CoP) San Juan 30-6 #446, located in Rio Arriba County, New Mexico. The release from the well head was due to a packing failure.

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## 1.0 Site Information

### 1.1 Location

Site Name – San Juan 30-6 #446

Legal Description – SE¼ SW¼, Section 35, T30N, R6W, Rio Arriba County, New Mexico

Well/Release Latitude/Longitude – N36.76547 and W107.43576, respectively

Land Jurisdiction – Bureau of Land Management (BLM)

Figure 1. Topographic Site Location Map

Figure 2. Aerial Site Map, June 2013

### 1.2 NMOCD Ranking

In accordance with NMOCD release protocols, action levels were established per NMOCD *Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993) prior to the initial assessment. The release was given a ranking score of 10 based on the following factors:

- **Depth to Groundwater:** Based on a Cathodic Protection Report dated May 1991 for the San Juan 30-6 #446, depth to groundwater at the site is greater than 100 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:** A stock pond is located approximately 980 feet northeast of the location. (10 points)

### 1.3 Confirmation Sampling

AES was contacted by Crystal Tafoya, CoP representative, on June 24, 2013, and on June 28, 2013, Heather Woods of AES completed the field work. Confirmation sampling included the collection of one 5-point composite soil sample following removal of impacted soil from the location. Sample locations are shown on Figure 2.

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## 2.0 Soil Sampling

On June 28, 2013, AES personnel collected one 5-point composite soil sample (SC-1) at approximately 0.25 feet bgs from around the well head. Soil sample SC-1 was submitted for confirmation laboratory analysis.

### 2.1 Laboratory Analyses

The composite soil sample 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 8015D; and
- Chloride per USEPA Method 300.0.

### 2.2 Laboratory Analytical Results

Laboratory analytical results reported the benzene concentration in SC-1 as less than 0.047 mg/kg, and total BTEX was reported as less than 0.234 mg/kg. TPH concentrations were reported as less than 4.7 mg/kg GRO and less than 9.9 mg/kg DRO. The laboratory chloride concentration was reported at 210 mg/kg. Laboratory analytical

results are summarized in Table 1 and included on Figure 2. The laboratory analytical report is attached.

Table 1. Soil Laboratory Analytical Results  
San Juan 30-6 #446 Produced Water Release, June 2013

Sample ID	Date Sampled	Depth	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH- GRO (mg/kg)	TPH- DRO (mg/kg)	Chlorides (mg/kg)
<b>NMOCD Action Level*</b>			<b>10</b>	<b>50</b>	<b>1,000</b>		<b>--</b>
SC-1	6/28/13	0.25	<0.047	<0.234	<4.7	<9.9	210

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

### 3.0 Conclusions and Recommendations

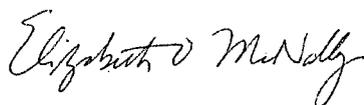
On June 28, 2013, AES conducted confirmation sampling of a produced water release at the San Juan 30-6 #446. Action levels for releases are determined by the NMOCD ranking score per NMOCD's *Guidelines for Leaks, Spills, and Releases* (August 1993), and the site was assigned a ranking score of 10. Laboratory analytical results from composite sample SC-1 reported benzene, total BTEX, and TPH as GRO/DRO below NMOCD action levels. The chloride concentration in SC-1 was 210 mg/kg. No further work is recommended at the San Juan 30-6 #446 produced water release location.

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

Sincerely,



Landrea Cupps  
Environmental Scientist



Elizabeth McNally, P.E.

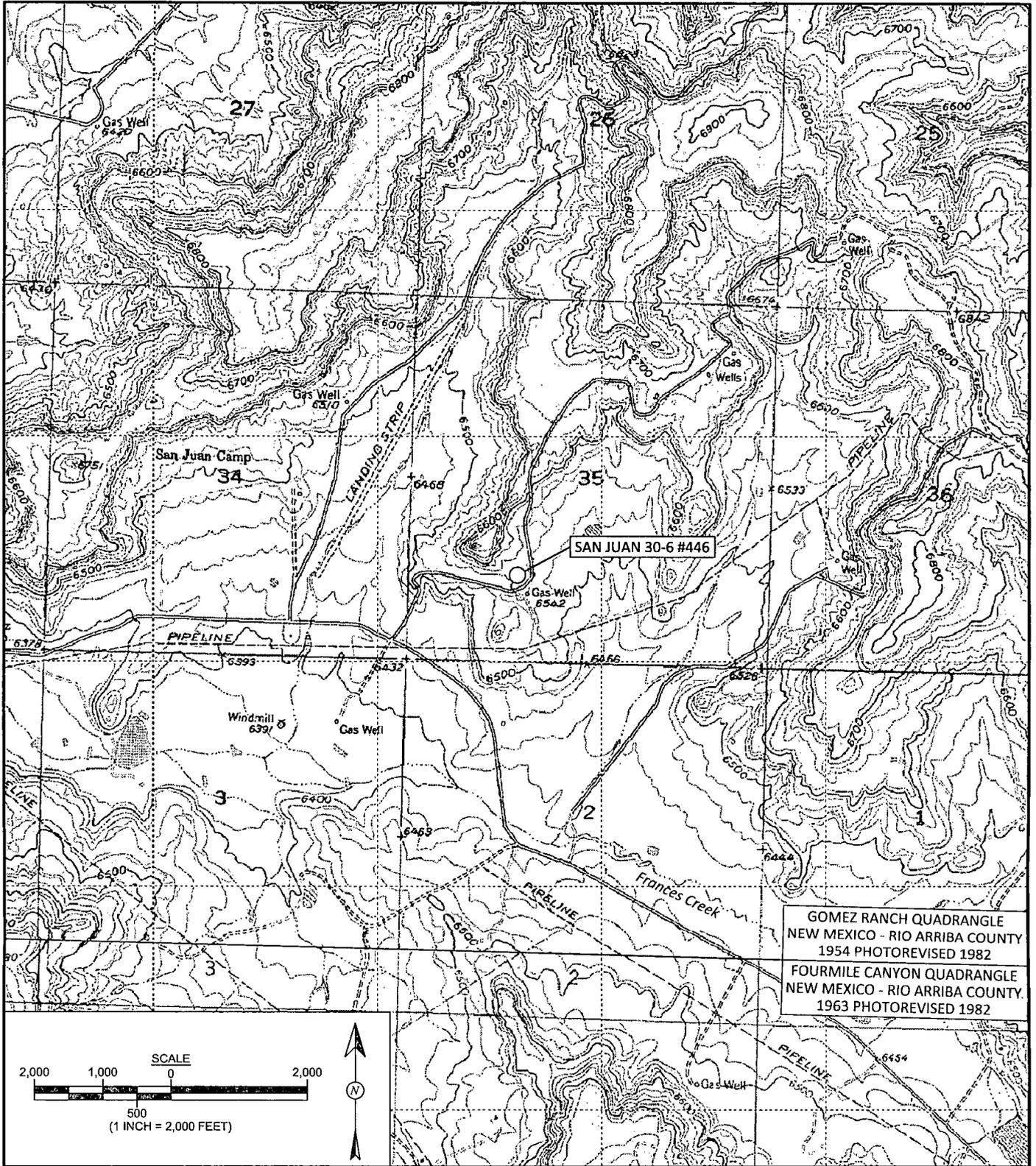
**Attachments:**

**Figure 1. Topographic Site Location Map**

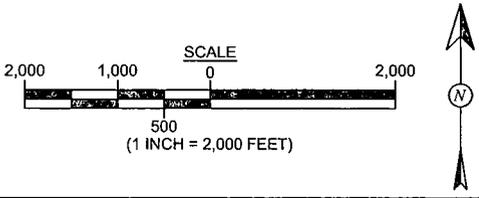
**Figure 2. Aerial Site Map, June 2013**

**Hall Analytical Report 1307016**

R:\Animas 2000\Dropbox\2013 Projects\ConocoPhillips\SJ 30-6 Unit #446\SJ 30-6 #446 Produced Water Release Report 072313.docx



GOMEZ RANCH QUADRANGLE  
 NEW MEXICO - RIO ARRIBA COUNTY  
 1954 PHOTOREVISED 1982  
 FOURMILE CANYON QUADRANGLE  
 NEW MEXICO - RIO ARRIBA COUNTY  
 1963 PHOTOREVISED 1982



Animas Environmental Services, LLC

<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> July 22, 2013
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> July 22, 2013
<b>CHECKED BY:</b> D. Watson	<b>DATE CHECKED:</b> July 22, 2013
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> July 22, 2013

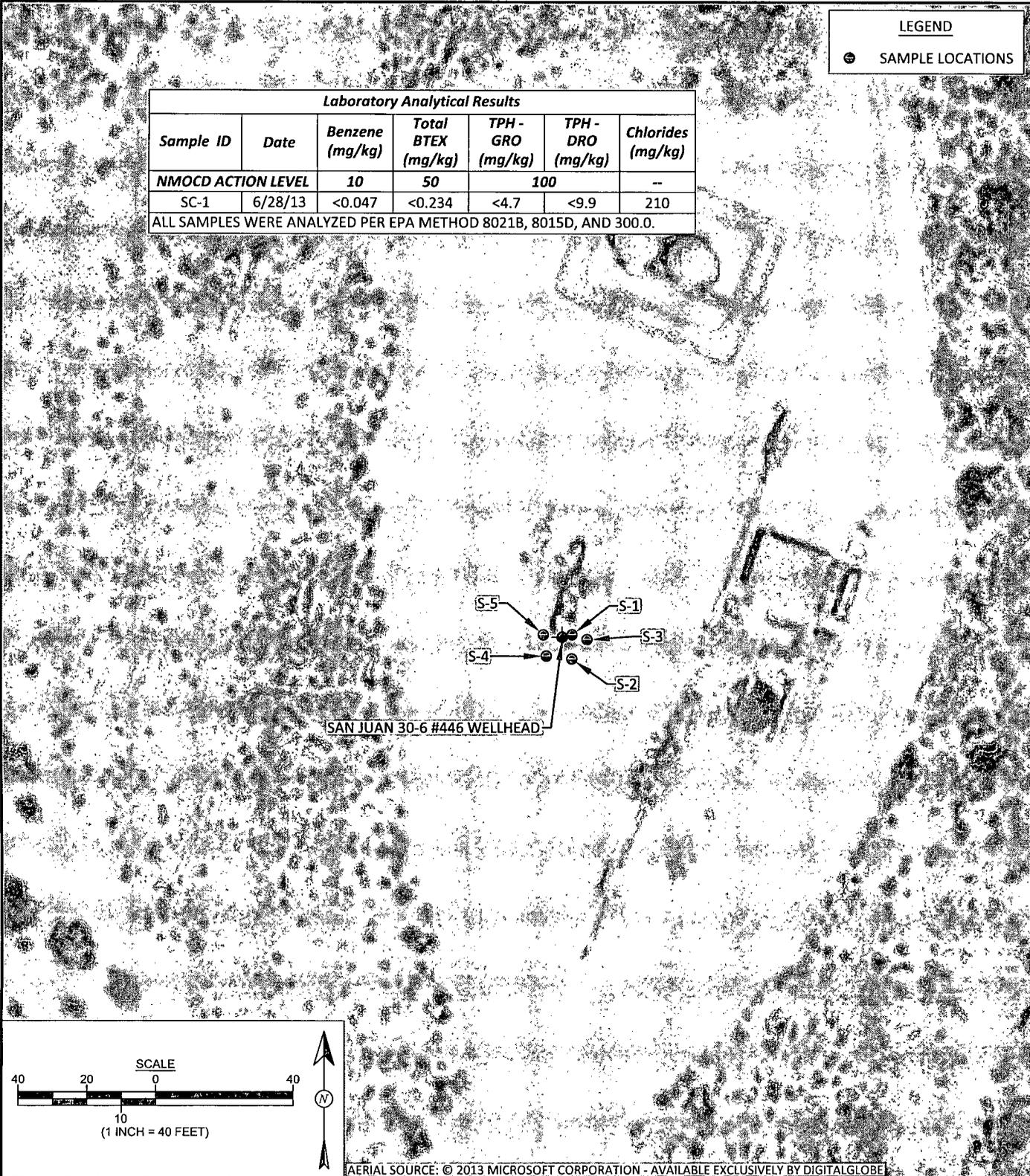
**FIGURE 1**  
**TOPOGRAPHIC SITE LOCATION MAP**  
 ConocoPhillips  
 SAN JUAN 30-6 #446  
 SE¼ SW¼, SECTION 35, T30N, R6W  
 RIO ARRIBA COUNTY, NEW MEXICO  
 N36.76547, W107.43576

**LEGEND**

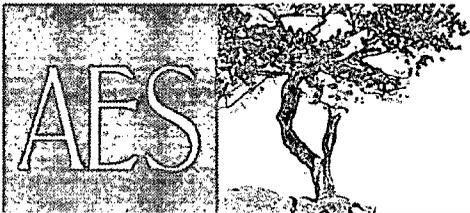
⊙ SAMPLE LOCATIONS

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>		<b>10</b>	<b>50</b>	<b>100</b>		<b>--</b>
SC-1	6/28/13	<0.047	<0.234	<4.7	<9.9	210

ALL SAMPLES WERE ANALYZED PER EPA METHOD 8021B, 8015D, AND 300.0.



AERIAL SOURCE: © 2013 MICROSOFT CORPORATION - AVAILABLE EXCLUSIVELY BY DIGITALGLOBE



Animas Environmental Services, LLC

<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> July 22, 2013
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> July 22, 2013
<b>CHECKED BY:</b> D. Watson	<b>DATE CHECKED:</b> July 22, 2013
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> July 22, 2013

**FIGURE 2**

**AERIAL SITE MAP AND  
SAMPLE LOCATIONS AND RESULTS  
JUNE 2013**

ConocoPhillips  
SAN JUAN 30-6 #446  
SE¼ SW¼, SECTION 35, T30N, R6W  
RIO ARriba COUNTY, NEW MEXICO  
N36.76547, W107.43576



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)

July 05, 2013

Debbie Watson

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

RE: CoP San Juan 30-6 #446

OrderNo.: 1307016

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 6/29/2013 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Animas Environmental  
**Project:** CoP San Juan 30-6 #446  
**Lab ID:** 1307016-001

**Matrix:** SOIL

**Client Sample ID:** SC-1  
**Collection Date:** 6/28/2013 11:05:00 AM  
**Received Date:** 6/29/2013 10:00:00 AM

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)	ND	9.9		mg/Kg	1	7/3/2013 11:19:22 AM	8196
Surr: DNOP	120	63-147		%REC	1	7/3/2013 11:19:22 AM	8196
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/2/2013 12:33:21 PM	8182
Surr: BFB	90.1	80-120		%REC	1	7/2/2013 12:33:21 PM	8182
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.047		mg/Kg	1	7/2/2013 12:33:21 PM	8182
Toluene	ND	0.047		mg/Kg	1	7/2/2013 12:33:21 PM	8182
Ethylbenzene	ND	0.047		mg/Kg	1	7/2/2013 12:33:21 PM	8182
Xylenes, Total	ND	0.093		mg/Kg	1	7/2/2013 12:33:21 PM	8182
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	7/2/2013 12:33:21 PM	8182
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	210	30		mg/Kg	20	7/3/2013 1:00:52 PM	8229

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

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1307016

05-Jul-13

Client: Animas Environmental  
Project: CoP San Juan 30-6 #446

Sample ID	MB-8229	SampType	MBLK	TestCode	EPA Method 300.0: Anions					
Client ID	PBS	Batch ID	8229	RunNo	11735					
Prep Date	7/3/2013	Analysis Date	7/3/2013	SeqNo	333334	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-8229	SampType	LCS	TestCode	EPA Method 300.0: Anions					
Client ID	LCSS	Batch ID	8229	RunNo	11735					
Prep Date	7/3/2013	Analysis Date	7/3/2013	SeqNo	333335	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.4	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
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1307016

05-Jul-13

**Client:** Animas Environmental  
**Project:** CoP San Juan 30-6 #446

Sample ID: <b>MB-8196</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>8196</b>	RunNo: <b>11717</b>								
Prep Date: <b>7/2/2013</b>	Analysis Date: <b>7/3/2013</b>	SeqNo: <b>332961</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	14		10.00		143	63	147			

Sample ID: <b>LCS-8196</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>8196</b>	RunNo: <b>11717</b>								
Prep Date: <b>7/2/2013</b>	Analysis Date: <b>7/3/2013</b>	SeqNo: <b>332962</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	93.7	77.1	128			
Surr: DNOP	5.3		5.000		106	63	147			

Sample ID: <b>1307016-001AMS</b>	SampType: <b>MS</b>	TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>								
Client ID: <b>SC-1</b>	Batch ID: <b>8196</b>	RunNo: <b>11717</b>								
Prep Date: <b>7/2/2013</b>	Analysis Date: <b>7/3/2013</b>	SeqNo: <b>333152</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	49.85	9.735	69.6	61.3	138			
Surr: DNOP	5.3		4.985		106	63	147			

Sample ID: <b>1307016-001AMSD</b>	SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>								
Client ID: <b>SC-1</b>	Batch ID: <b>8196</b>	RunNo: <b>11717</b>								
Prep Date: <b>7/2/2013</b>	Analysis Date: <b>7/3/2013</b>	SeqNo: <b>333164</b>			Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	57	9.9	49.65	9.735	96.0	61.3	138	25.5	20	R
Surr: DNOP	5.4		4.965		108	63	147	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
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1307016

05-Jul-13

**Client:** Animas Environmental  
**Project:** CoP San Juan 30-6 #446

Sample ID <b>MB-8182</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>8182</b>		RunNo: <b>11714</b>							
Prep Date: <b>7/1/2013</b>	Analysis Date: <b>7/2/2013</b>		SeqNo: <b>332746</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	900		1000		90.3	80	120			

Sample ID <b>LCS-8182</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>8182</b>		RunNo: <b>11714</b>							
Prep Date: <b>7/1/2013</b>	Analysis Date: <b>7/2/2013</b>		SeqNo: <b>332747</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	90.2	62.6	136			
Surr: BFB	980		1000		97.5	80	120			

Sample ID <b>1307016-001AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>SC-1</b>	Batch ID: <b>8182</b>		RunNo: <b>11714</b>							
Prep Date: <b>7/1/2013</b>	Analysis Date: <b>7/2/2013</b>		SeqNo: <b>332749</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	4.7	23.32	0	106	76	156			
Surr: BFB	960		932.8		102	80	120			

Sample ID <b>1307016-001AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>SC-1</b>	Batch ID: <b>8182</b>		RunNo: <b>11714</b>							
Prep Date: <b>7/1/2013</b>	Analysis Date: <b>7/2/2013</b>		SeqNo: <b>332750</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	23.30	0	102	76	156	3.87	17.7	
Surr: BFB	900		932.0		96.4	80	120	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
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1307016

05-Jul-13

**Client:** Animas Environmental  
**Project:** CoP San Juan 30-6 #446

Sample ID	<b>MB-8182</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>8182</b>	RunNo:	<b>11714</b>					
Prep Date:	<b>7/1/2013</b>	Analysis Date:	<b>7/2/2013</b>	SeqNo:	<b>332780</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		106	80	120			

Sample ID	<b>LCS-8182</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>8182</b>	RunNo:	<b>11714</b>					
Prep Date:	<b>7/1/2013</b>	Analysis Date:	<b>7/2/2013</b>	SeqNo:	<b>332781</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.050	1.000	0	97.8	80	120			
Toluene	0.96	0.050	1.000	0	95.9	80	120			
Ethylbenzene	0.97	0.050	1.000	0	96.8	80	120			
Xylenes, Total	2.9	0.10	3.000	0	98.0	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		111	80	120			

Sample ID	<b>1307019-001AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>BatchQC</b>	Batch ID:	<b>8182</b>	RunNo:	<b>11714</b>					
Prep Date:	<b>7/1/2013</b>	Analysis Date:	<b>7/2/2013</b>	SeqNo:	<b>332798</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.047	0.9443	0	95.6	67.3	145			
Toluene	1.1	0.047	0.9443	0.01485	117	66.8	144			
Ethylbenzene	0.90	0.047	0.9443	0	95.3	61.9	153			
Xylenes, Total	2.7	0.094	2.833	0.02509	95.6	65.8	149			
Surr: 4-Bromofluorobenzene	0.97		0.9443		103	80	120			

Sample ID	<b>1307019-001AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>BatchQC</b>	Batch ID:	<b>8182</b>	RunNo:	<b>11714</b>					
Prep Date:	<b>7/1/2013</b>	Analysis Date:	<b>7/2/2013</b>	SeqNo:	<b>332799</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.047	0.9425	0	101	67.3	145	5.14	20	
Toluene	0.94	0.047	0.9425	0.01485	97.7	66.8	144	18.1	20	
Ethylbenzene	0.96	0.047	0.9425	0	102	61.9	153	6.32	20	
Xylenes, Total	2.9	0.094	2.828	0.02509	101	65.8	149	5.44	20	
Surr: 4-Bromofluorobenzene	1.0		0.9425		108	80	120	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
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit



Hall Environmental Analysis Laboratory  
 4901 Hawkins NE  
 Albuquerque, NM 87105  
 TEL: 505-345-3975 FAX: 505-345-4107  
 Website: www.hallenvironmental.com

# Sample Log-In Check List

Client Name: Animas Environmental

Work Order Number: 1307016

RcptNo: 1

Received by/date: AF 06/29/13

Logged By: Michelle Garcia 6/29/2013 10:00:00 AM *Michelle Garcia*

Completed By: Michelle Garcia 7/1/2013 10:24:43 AM *Michelle Garcia*

Reviewed By: IO 07/01/13

### Chain of Custody

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

### Log In

- 4. Was an attempt made to cool the samples? Yes  No  NA
- 5. Were all samples received at a temperature of >0° C to 8.0°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	2.8	Good	Yes			

