

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 28-4 Unit 30</b>	Facility Type: <b>Gas Well</b>

Surface Owner <b>USFS</b>	Mineral Owner <b>BLM</b>	API No. <b>3003920078</b>
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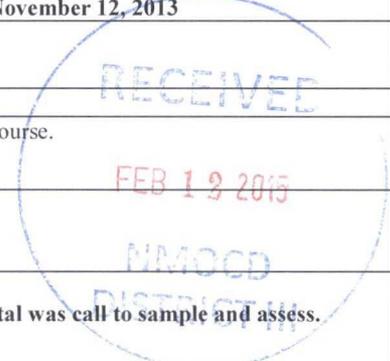
**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
<b>G</b>	<b>31</b>	<b>28N</b>	<b>04W</b>	<b>1565</b>	<b>North</b>	<b>1830</b>	<b>East</b>	<b>Rio Arriba</b>

Latitude 36.61924 Longitude -107.28871

**NATURE OF RELEASE**

Type of Release <b>Historic Hydrocarbon</b>	Volume of Release <b>Unknown</b>	Volume Recovered <b>N/A</b>
Source of Release <b>Below Grade Tank</b>	Date and Hour of Occurrence <b>Unknown</b>	Date and Hour of Discovery <b>November 12, 2013</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.	
If a Watercourse was Impacted, Describe Fully.* <b>N/A</b>		
Describe Cause of Problem and Remedial Action Taken.* <b>Evidence of a historic release was discovered during a Below Grade Tank closure. Third-party environmental was call to sample and assess.</b>		
Describe Area Affected and Cleanup Action Taken.* <b>Release assessment was completed by third-party environmental and Analytical results were below the NMOCD regulatory standards – no further action required. The soil sampling report is attached for review. No further remediation required.</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: <i>[Handwritten Signature]</i>	<u>OIL CONSERVATION DIVISION</u>	
Printed Name: <b>Lisa Hunter</b>	Approved by Environmental Specialist: <i>[Handwritten Signature]</i>	
Title: <b>Field Environmental Specialist</b>	Approval Date: <b>4/13/15</b>	Expiration Date:
E-mail Address: <b>Lisa.Hunter@cop.com</b>	Conditions of Approval:	Attached <input type="checkbox"/>
Date: <b>February 9, 2015</b>	Phone: <b>(505) 326-9786</b>	

\* Attach Additional Sheets If Necessary

*HNCS 1510348739*

*16*



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

December 30, 2013

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

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

**RE: Below Grade Tank Closure Report  
San Juan 28-4 #30  
Rio Arriba County, New Mexico**

Dear Ms. Dumas:

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 28-4 #30, located in Rio Arriba 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 28-4 #30

Legal Description - SW¼ NE¼, Section 31, T28N, R4W, Rio Arriba County, New Mexico

Well Latitude/Longitude – N36.61941 and W107.28889, respectively

BGT Latitude/Longitude - N36.61926 and W107.28866, respectively

Land Jurisdiction – U.S. Forest Service (USFS)

Figure 1 - Topographic Site Location Map

Figure 2 - Aerial Site Map, November 2013

### 1.2 NMOCD Ranking

In accordance with the New Mexico Oil Conservation Division (NMOCD) *Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993), the location was given a ranking score of 0 based on the following factors:

- **Depth to Groundwater:** Based on the elevation differential between the location and the nearest surface water, AES personnel estimated that depth groundwater is greater than 100 feet below ground surface (bgs). (0 points)
- **Wellhead Protection Area:** The location is not within a wellhead protection area. (0 points)
- **Distance to Surface Water Body:** An unnamed wash which discharges to the wash in Muñoz Canyon and ultimately to the San Juan River is located approximately 1,650 feet west of the location. (0 points)

### 1.3 BGT Closure Assessment

AES was initially contacted by Fred Martinez, CoP representative, on November 12, 2013, and on the same day, Deborah Watson and Heather Woods of AES mobilized to 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 12, 2013, 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 VOCs and 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;
- TPH for gasoline range organics (GRO) and diesel range organics (DRO) per USEPA Method 8015D; and
- Chloride per USEPA Method 300.0.

## 2.3 Field and Laboratory Analytical Results

Field screening readings for VOCs via OVM ranged from 1.0 ppm in S-4 up to 7.2 ppm in S-5. Field TPH concentrations ranged from 92.7 mg/kg in S-3 up to 587 mg/kg in S-5. 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 28-4 #30 BGT Closure, November 2013

<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>--</b>	<b>100</b>	<b>250</b>
S-1	11/12/13	0.5	1.6	156	NA
S-2	11/12/13	0.5	2.7	132	NA
S-3	11/12/13	0.5	1.7	92.7	NA
S-4	11/12/13	0.5	1.0	228	NA
S-5	11/12/13	0.5	7.2	587	NA
SC-1	11/12/13	0.5	3.8	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 at 110 mg/kg, respectively. The laboratory chloride concentration was reported at 31 mg/kg. Laboratory analytical results are summarized in Table 2 and included on Figure 2. The laboratory analytical report is attached.

Table 2. Soil Laboratory Analytical Results  
 San Juan 28-4 #30 BGT Closure, November 2013

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Depth (ft)</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>
<i>NMOCD Action Level (NMAC 19.15.17.13E)</i>			<i>0.2/10*</i>	<i>50</i>	<i>100/5,000*</i>		<i>250</i>
SC-1	11/12/13	0.5	<0.50	<2.5	<5.0	110	31

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

### 3.0 Conclusions and Recommendations

#### 3.1 BGT Closure

NMOCD action levels for BGT closures are specified in New Mexico Administrative Code (NMAC) 19.15.17.13E. Field TPH concentrations exceeded the NMOCD action level of 100 mg/kg in four samples, with the highest concentration reported in S-5 with 587 mg/kg. Laboratory analytical results for TPH (as GRO/DRO) in SC-1 were reported above the NMOCD action level of 100 mg/kg with 110 mg/kg. Benzene and total BTEX concentrations in SC-1 were below the NMOCD action levels of 0.2 mg/kg and 50 mg/kg, respectively. Chloride concentrations in SC-1 were below the NMOCD action level of 250 mg/kg. Based on field screening and laboratory analytical results on November 12, 2013, a release is confirmed at the San Juan 28-4 #30.

#### 3.2 Release Confirmation

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 0. Benzene and total BTEX concentrations in SC-1 were below the NMOCD action levels of 10 mg/kg and 50 mg/kg, respectively. TPH concentrations as GRO/DRO in SC-1 were reported below the NMOCD action level of 5,000 mg/kg. Soil laboratory analyses showed that benzene, total BTEX, TPH and chloride concentrations were below the NMOCD action levels for SC-1. Release notification should follow the

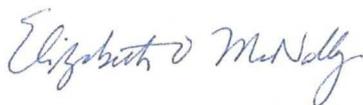
protocols outlined in NMAC 19.15.29 and 30. No further work is recommended for the San Juan 28-4 #30 BGT release.

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

Sincerely,



David J. Reese  
Environmental Scientist

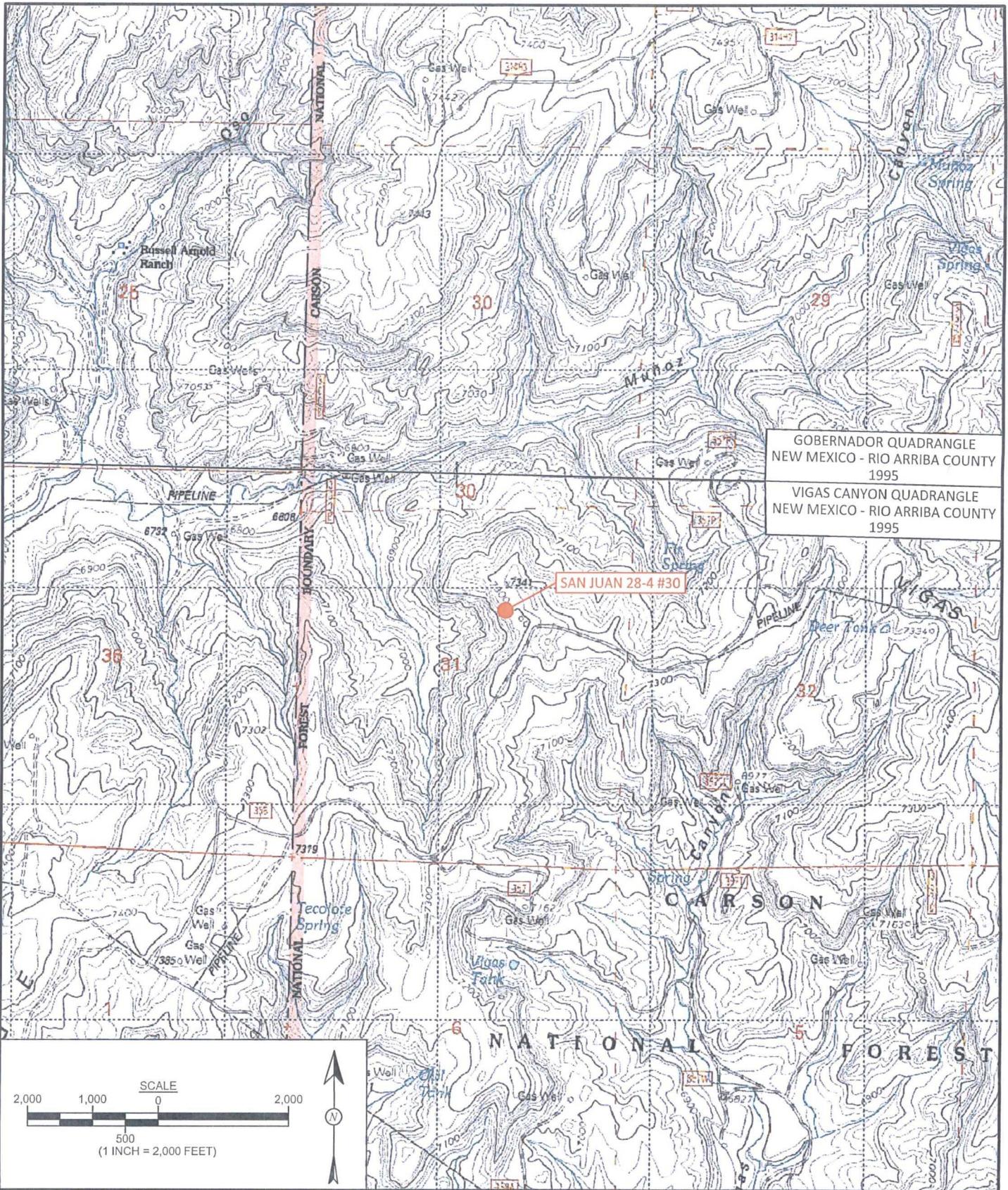


Elizabeth McNally, P.E.

Attachments:

- Figure 1. Topographic Site Location Map
- Figure 2. Aerial Site Map, November 2013
- AES Field Screening Report 111213
- Hall Analytical Report 1311503

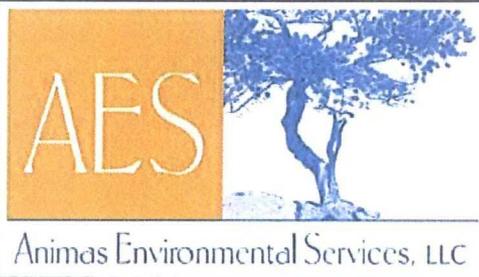
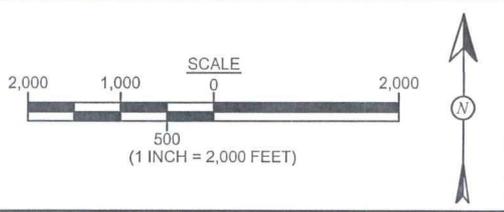
R:\Animas 2000\Dropbox\2013 Projects\ConocoPhillips\SJ 28-4 #30\San Juan 28-4 #30 BGT Closure Report 123013.docx



GOVERNADOR QUADRANGLE  
 NEW MEXICO - RIO ARRIBA COUNTY  
 1995

VIGAS CANYON QUADRANGLE  
 NEW MEXICO - RIO ARRIBA COUNTY  
 1995

SAN JUAN 28-4 #30



<b>DRAWN BY:</b> S. Glasses	<b>DATE DRAWN:</b> November 18, 2013
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> November 18, 2013
<b>CHECKED BY:</b> D. Watson	<b>DATE CHECKED:</b> November 18, 2013
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> November 18, 2013

**FIGURE 1**

**TOPOGRAPHIC SITE LOCATION MAP**  
 ConocoPhillips  
 SAN JUAN 28-4 #30  
 SW¼ NE¼, SECTION 31, T28N, R4W  
 RIO ARRIBA COUNTY, NEW MEXICO  
 N36.61941, W107.28889

LEGEND

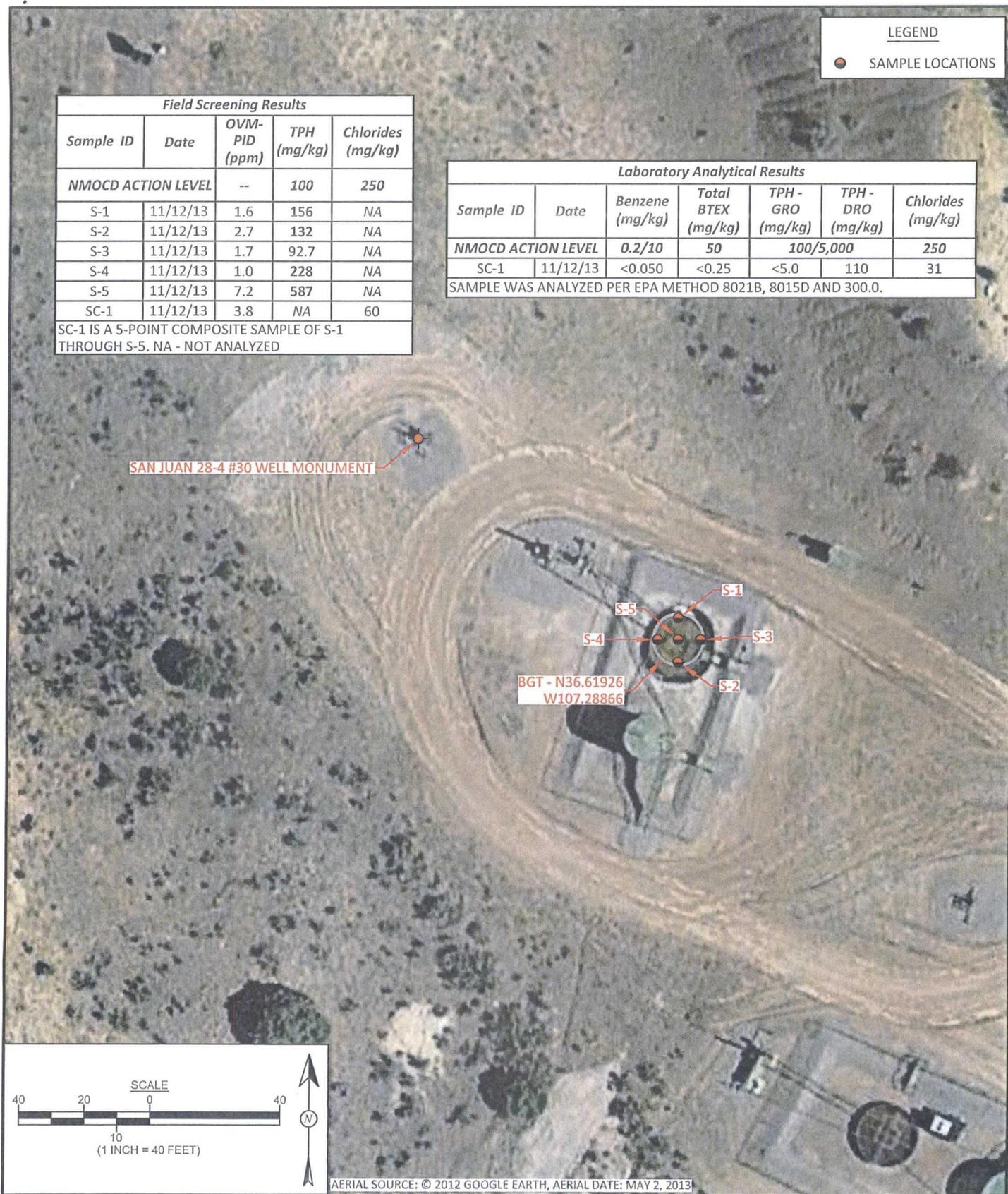
● SAMPLE LOCATIONS

Field Screening Results				
Sample ID	Date	OVM-PID (ppm)	TPH (mg/kg)	Chlorides (mg/kg)
<b>NMOCD ACTION LEVEL</b>		--	100	250
S-1	11/12/13	1.6	156	NA
S-2	11/12/13	2.7	132	NA
S-3	11/12/13	1.7	92.7	NA
S-4	11/12/13	1.0	228	NA
S-5	11/12/13	7.2	587	NA
SC-1	11/12/13	3.8	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>NMOCD ACTION LEVEL</b>		0.2/10	50	100/5,000		250
SC-1	11/12/13	<0.050	<0.25	<5.0	110	31

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



AERIAL SOURCE: © 2012 GOOGLE EARTH, AERIAL DATE: MAY 2, 2013



Animas Environmental Services, LLC

<b>DRAWN BY:</b> S. Glasses	<b>DATE DRAWN:</b> November 18, 2013
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> November 18, 2013
<b>CHECKED BY:</b> D. Watson	<b>DATE CHECKED:</b> November 18, 2013
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> November 18, 2013

**FIGURE 2**  
**AERIAL SITE MAP**  
**BELOW GRADE TANK CLOSURE**  
**NOVEMBER 2013**  
 ConocoPhillips  
 SAN JUAN 28-4 #30  
 SW¼ NE¼, SECTION 31, T28N, R4W  
 RIO ARRIBA COUNTY, NEW MEXICO  
 N36.61941, W107.28889



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)

November 15, 2013

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

RE: CoP San Juan 28-4 #30

OrderNo.: 1311503

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 11/13/2013 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".

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Animas Environmental **Client Sample ID:** SC-1  
**Project:** CoP San Juan 28-4 #30 **Collection Date:** 11/12/2013 3:20:00 PM  
**Lab ID:** 1311503-001 **Matrix:** SOIL **Received Date:** 11/13/2013 9:47:00 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)	110	9.9		mg/Kg	1	11/13/2013 12:07:19 PM	10315
Surr: DNOP	96.3	66-131		%REC	1	11/13/2013 12:07:19 PM	10315
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/13/2013 12:29:45 PM	R14768
Surr: BFB	103	74.5-129		%REC	1	11/13/2013 12:29:45 PM	R14768
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.050		mg/Kg	1	11/13/2013 12:29:45 PM	R14768
Toluene	ND	0.050		mg/Kg	1	11/13/2013 12:29:45 PM	R14768
Ethylbenzene	ND	0.050		mg/Kg	1	11/13/2013 12:29:45 PM	R14768
Xylenes, Total	ND	0.10		mg/Kg	1	11/13/2013 12:29:45 PM	R14768
Surr: 4-Bromofluorobenzene	114	80-120		%REC	1	11/13/2013 12:29:45 PM	R14768
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	31	30		mg/Kg	20	11/13/2013 12:30:15 PM	10324

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

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1311503

15-Nov-13

**Client:** Animas Environmental  
**Project:** CoP San Juan 28-4 #30

Sample ID	MB-10324	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	10324	RunNo:	14791					
Prep Date:	11/13/2013	Analysis Date:	11/13/2013	SeqNo:	426109	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-10324	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	10324	RunNo:	14791					
Prep Date:	11/13/2013	Analysis Date:	11/13/2013	SeqNo:	426111	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.3	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 for VOA and TOC only.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1311503

15-Nov-13

**Client:** Animas Environmental  
**Project:** CoP San Juan 28-4 #30

Sample ID <b>MB-10315</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>								
Client ID: <b>PBS</b>	Batch ID: <b>10315</b>	RunNo: <b>14753</b>								
Prep Date: <b>11/13/2013</b>	Analysis Date: <b>11/13/2013</b>	SeqNo: <b>424980</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	8.6		10.00		85.9	66	131			

Sample ID <b>LCS-10315</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D: Diesel Range Organics</b>								
Client ID: <b>LCSS</b>	Batch ID: <b>10315</b>	RunNo: <b>14753</b>								
Prep Date: <b>11/13/2013</b>	Analysis Date: <b>11/13/2013</b>	SeqNo: <b>425003</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	10	50.00	0	78.9	62.1	127			
Surr: DNOP	4.3		5.000		85.7	66	131			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2 for VOA and TOC only.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1311503

15-Nov-13

**Client:** Animas Environmental  
**Project:** CoP San Juan 28-4 #30

Sample ID	<b>MB-10303 MK</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R14768</b>	RunNo:	<b>14768</b>					
Prep Date:		Analysis Date:	<b>11/13/2013</b>	SeqNo:	<b>425628</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	910		1000		91.5	74.5	129			

Sample ID	<b>LCS-10303 MK</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R14768</b>	RunNo:	<b>14768</b>					
Prep Date:		Analysis Date:	<b>11/13/2013</b>	SeqNo:	<b>425629</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	102	74.5	126			
Surr: BFB	970		1000		96.9	74.5	129			

Sample ID	<b>MB-10303</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>10303</b>	RunNo:	<b>14768</b>					
Prep Date:	<b>11/12/2013</b>	Analysis Date:	<b>11/13/2013</b>	SeqNo:	<b>425633</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	910		1000		91.5	74.5	129			

Sample ID	<b>LCS-10303</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015D: Gasoline Range</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>10303</b>	RunNo:	<b>14768</b>					
Prep Date:	<b>11/12/2013</b>	Analysis Date:	<b>11/13/2013</b>	SeqNo:	<b>425634</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	970		1000		96.9	74.5	129			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits  
S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2 for VOA and TOC only.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1311503  
15-Nov-13

**Client:** Animas Environmental  
**Project:** CoP San Juan 28-4 #30

Sample ID	<b>MB-10303 MK</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>R14768</b>	RunNo:	<b>14768</b>					
Prep Date:		Analysis Date:	<b>11/13/2013</b>	SeqNo:	<b>425652</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		109	80	120			

Sample ID	<b>LCS-10303 MK</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>R14768</b>	RunNo:	<b>14768</b>					
Prep Date:		Analysis Date:	<b>11/13/2013</b>	SeqNo:	<b>425653</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	80	120			
Toluene	1.0	0.050	1.000	0	99.9	80	120			
Ethylbenzene	1.0	0.050	1.000	0	101	80	120			
Xylenes, Total	3.1	0.10	3.000	0	102	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		115	80	120			

Sample ID	<b>MB-10303</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>10303</b>	RunNo:	<b>14768</b>					
Prep Date:	<b>11/12/2013</b>	Analysis Date:	<b>11/13/2013</b>	SeqNo:	<b>425656</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		109	80	120			

Sample ID	<b>LCS-10303</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8021B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>10303</b>	RunNo:	<b>14768</b>					
Prep Date:	<b>11/12/2013</b>	Analysis Date:	<b>11/13/2013</b>	SeqNo:	<b>425657</b>	Units:	<b>%REC</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.2		1.000		115	80	120			

**Qualifiers:**

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

**Sample Log-In Check List**

Client Name: **Animas Environmental**

Work Order Number: **1311503**

RcptNo: **1**

Received by/date: AG 11/13/13

Logged By: **Anne Thorne** 11/13/2013 9:47:00 AM *Anne Thorne*

Completed By: **Anne Thorne** 11/13/2013 *Anne Thorne*

Reviewed By: **IO** 11/13/13

**Chain of Custody**

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

**Log In**

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

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

**Special Handling (if applicable)**

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

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

17. Additional remarks:

**18. Cooler Information**

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

