

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


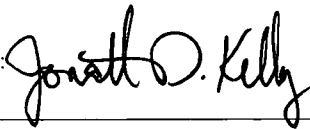
Name of Company <b>ConocoPhillips Company</b>	Contact <b>Crystal Tafoya</b>	
Address <b>3401 East 30<sup>th</sup> St, Farmington, NM</b>	Telephone No. <b>(505) 326-9837</b>	
Facility Name: <b>State Gas Com A I</b>	Facility Type: <b>Gas Well</b>	
Surface Owner <b>State</b>	Mineral Owner <b>State (E-3150)</b>	API No. <b>30-045-10062</b>

**LOCATION OF RELEASE**

Unit Letter <b>N</b>	Section <b>36</b>	Township <b>31N</b>	Range <b>12W</b>	Feet from the <b>1090</b>	North/South Line <b>South</b>	Feet from the <b>1650</b>	East/West Line <b>West</b>	County <b>San Juan</b>
-------------------------	----------------------	------------------------	---------------------	------------------------------	----------------------------------	------------------------------	-------------------------------	---------------------------

Latitude **36.85164** Longitude **-108.05347**

**NATURE OF RELEASE**

Type of Release <b>Produced Fluids</b>	Volume of Release <b>Unknown</b>	Volume Recovered <b>360 cubic yds.</b>
Source of Release <b>Below Grade Tank</b>	Date and Hour of Occurrence <b>Unknown</b>	Date and Hour of Discovery <b>January 29, 2014</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.* <b>N/A</b>		
Describe Cause of Problem and Remedial Action Taken.* <b>Below Grade Tank Closure Activities</b>		
Describe Area Affected and Cleanup Action Taken.* <b>The below grade tank sample results were above regulatory standards by USEPA method 418.1 for TPH confirming a release. The excavation was 35' x 31' x 9' and 360 cubic yards of soil was transported to a third party landfarm. Excavation and confirmation sampling occurred. 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.</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>9/4/2014</b>	Expiration Date:
E-mail Address: <b>crystal.tafoya@conocophillips.com</b>	Conditions of Approval: <b>C-141 Closure permit needs to be filled for indicated RGT closure.</b>	
Date: <b>5/12/2014</b>	Phone: <b>(505) 326-9837</b>	Attached <input type="checkbox"/>

\* Attach Additional Sheets If Necessary

nJK1424739881



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

April 28, 2014

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: Below Grade Tank Closure and Final Excavation Report  
State Gas Com A #1  
San Juan County, New Mexico**

Dear Ms. Tafoya:

On January 29 and 30, 2014, Animas Environmental Services, LLC (AES) completed below grade tank (BGT) closure sampling and environmental clearance of the final excavation limits at the ConocoPhillips (CoP) State Gas Com A #1, located in San Juan County, New Mexico. A historical release was discovered during BGT closure sampling at the location, and the final excavation of contaminated soils was completed by contractors while AES was on location on January 30, 2014.

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## 1.0 Site Information

### 1.1 Location

Site Name – State Gas Com A #1

Location – SE¼ SW¼, Section 36, T31N, R12W, San Juan County, New Mexico

Well Head Latitude/Longitude – N36.85164 and W108.05347, respectively

Release Location Latitude/Longitude – N36.85186 and W108.05363, respectively

Land Jurisdiction – State of New Mexico

Figure 1. Topographic Site Location Map

Figure 2. Aerial Site Map, January 2014

## 1.2 NMOCD Ranking

In accordance with New Mexico Oil Conservation Division (NMOCD) release protocols, action levels were established per NMOCD *Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993) prior to site work. The release was given a ranking score of 0 based on the following factors:

- **Depth to Groundwater:** A groundwater well (SJ 03309) located approximately 1,700 feet southwest of the location and at a lower elevation reported the depth to groundwater at 210 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:** Barton Arroyo is located approximately 2,800 feet west of the location, and Kochis Arroyo is located approximately 2,900 feet east of the location. (0 points)

## 1.3 Assessment

AES was initially contacted by Dan Rudder of CoP on January 28, 2014, and on January 29, 2014, Heather Woods and Emilee Skyles 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 (SC-1) was composited from the four perimeter samples and one center sample. Sample locations are shown on Figure 2.

Based on the field screening results from the BGT assessment, a release was confirmed at the location. AES recommended an area of excavation and provided excavation guidance while onsite on January 29, 2014.

On January 30, 2014, AES returned to the location to collect confirmation soil samples from the walls and base of the final excavation. AES personnel collected five confirmation soil samples (SC-2 through SC-6) from the walls and base of the excavation. The area of the final excavation was approximately 35 feet by 31 feet by 9 feet in depth. Sample locations and final excavation extents are presented on Figure 3.

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## 2.0 Soil Sampling

On January 29, 2014, AES personnel 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 analysis of total petroleum hydrocarbon (TPH). Composite

sample SC-1 was field sampled for VOCs, TPH, and chloride and was submitted for confirmation laboratory analysis.

In addition, AES personnel collected five 5-point composite (SC-2 through SC-6) soil samples from the walls and base of the final excavation for confirmation field sampling of VOCs and TPH on January 30, 2014. Composite samples SC-2, SC-4, and SC-5 were also submitted for confirmation laboratory analysis.

## **2.1 Field Sampling**

### **2.1.1 Volatile Organic Compounds**

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

### **2.1.2 Total Petroleum Hydrocarbons**

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

### **2.1.3 Chlorides**

Soil sample SC-1 was field screened for chlorides using Chloride Drop Count Titration with silver nitrate. Sampling and analysis methods followed procedures provided by Hach Company.

## **2.2 Laboratory Analyses**

The soil samples (SC-1, SC-2, SC-4, and SC-5) collected for laboratory analysis were placed into new, clean, laboratory-supplied containers, which were then labeled, placed on ice, and logged onto sample chain of custody records. Samples were maintained on ice until delivery to the analytical laboratory, Hall Environmental Analysis Laboratory (Hall) in Albuquerque, New Mexico. All soil samples were laboratory analyzed for:

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

In addition, soil sample SC-1 was laboratory analyzed for:

- Chlorides per USEPA Method 300.0.

## 2.3 Field and Laboratory Analytical Results

On January 29, 2014, BGT closure field screening results for VOCs via OVM showed concentrations ranging from 46.1 ppm in the S-2 up to 963 ppm in S-5. Field TPH concentrations were reported at 4,260 mg/kg in S-1 and 5,000 mg/kg in SC-1.

On January 30, 2014, final excavation field screening results for VOCs via OVM ranged from 82.9 ppm in SC-3 up to 658 ppm in SC-5. Field TPH concentrations ranged from 449 mg/kg in SC-3 up to 2,660 mg/kg in SC-5. Results are included below in Table 1 and on Figures 2 and 3. The AES Field Sampling Reports are attached.

Table 1. Soil Field Sampling VOCs, TPH, and Chloride Results  
State Gas Com A #1 BGT Closure and Final Excavation  
January 2014

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Sample Depth (ft bgs)</i>	<i>VOCs via OVM (ppm)</i>	<i>TPH 418.1 (mg/kg)</i>	<i>Field Chlorides (mg/kg)</i>
<b>NMOCD Action Level* (NMAC 19.15.17.13E)</b>			<b>100*</b>	<b>100/5,000*</b>	<b>250</b>
S-1	1/29/14	0.5	536	4,260	NA
S-2	1/29/14	0.5	46.1	NA	NA
S-3	1/29/14	0.5	770	NA	NA
S-4	1/29/14	0.5	784	NA	NA
S-5	1/29/14	0.5	963	NA	NA
SC-1	1/29/14	0.5	480	5,000	60
SC-2	1/30/14	1 to 9	389	1,100	NA
SC-3	1/30/14	1 to 9	82.9	449	NA
SC-4	1/30/14	1 to 9	429	2,110	NA
SC-5	1/30/14	9	658	2,660	NA
SC-6	1/30/14	1 to 9	92.1	722	NA

NA – not analyzed

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

Laboratory analyses for SC-1 were used to confirm BGT closure sampling results. Laboratory analytical results reported benzene and total BTEX concentrations at 0.065 mg/kg and 4.32 mg/kg, respectively. The laboratory chloride concentration was reported at 38 mg/kg.

Laboratory analyses for SC-2, SC-4, and SC-5 were used to confirm field sampling results from the final excavation extents. Benzene concentrations were reported below laboratory detection limits in all samples. Total BTEX concentrations ranged from 1.68 mg/kg in SC-2 up to 10.71 mg/kg in SC-5. Results are summarized in Table 2 and included on Figures 2 and 3. Laboratory analytical reports are attached.

Table 2. Soil Laboratory Analytical Results – Benzene, Total BTEX, and Chlorides  
State Gas Com A #1 BGT Closure and Final Excavation  
January 2014

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Sample Depth (ft bgs)</i>	<i>Benzene (mg/kg)</i>	<i>Total BTEX (mg/kg)</i>	<i>Chlorides (mg/kg)</i>
<b>NMOCD Action Level* (NMAC 19.15.17.13E)</b>			<b>0.2/10*</b>	<b>50</b>	<b>250</b>
SC-1	1/29/14	0.5	0.065	4.32	38
SC-2	1/30/14	1 to 9	<0.18	1.68	NA
SC-4	1/30/14	1 to 9	<0.32	2.99	NA
SC-5	1/30/14	9	<0.17	10.71	NA

NA – not analyzed

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

### 3.0 Conclusions and Recommendations

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 two samples, S-1 (4,260 mg/kg) and SC-1 (5,000 mg/kg). However, 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 sampling results from the BGT closure assessment, a release was confirmed at the State Gas Com A #1, and AES provided excavation guidance while onsite on January 29, 2014. 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.

Excavation of the petroleum contaminated soils was completed on January 30, 2014. Field screening results for VOCs via OVM were above the NMOCD action level of 100 ppm VOCs in SC-2 (389 ppm), SC-4 (429 ppm), and SC-5 (658 ppm). However, laboratory

analytical results from January 30, 2014, reported benzene and total BTEX concentrations in SC-2, SC-4, and SC-5 below NMOCD action levels of 10 mg/kg and 50 mg/kg, respectively. Field TPH concentrations were reported below the NMOCD action level of 5,000 mg/kg in each sample collected from the base and sidewalls of the final excavation, with the highest concentration reported in SC-5 with 2,660 mg/kg. The area of the final excavation was approximately 35 feet by 31 feet by 9 feet in depth.

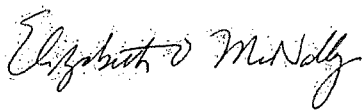
Based on final field and laboratory analytical results of the excavation of petroleum contaminated soils at the State Gas Com A #1, VOCs, benzene, total BTEX, and TPH concentrations were below applicable NMOCD action levels for each of the final sidewalls and base of the excavation. No further work is 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,



David J. Reese  
Environmental Scientist

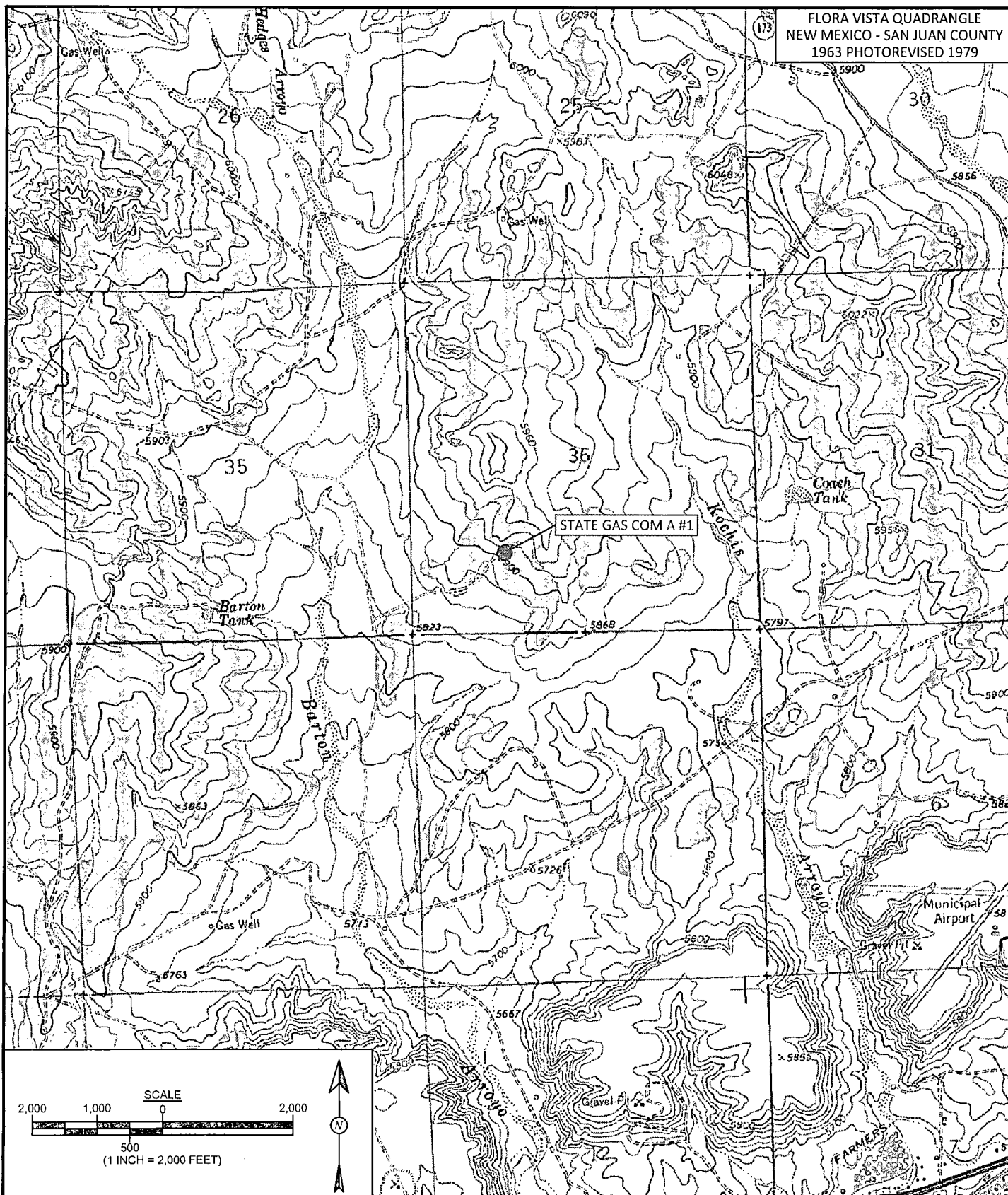


Elizabeth McNally, PE

Attachments:

- Figure 1. Topographic Site Location Map
- Figure 2. Aerial Site Map with BGT Closure, January 2014
- Figure 3. Final Excavation Sample Locations and Results, January 2014
- AES Field Sampling Report 012914
- AES Field Sampling Report 013014
- Hall Laboratory Analytical Report 1401C16
- Hall Laboratory Analytical Report 1401C21

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EM\2014 Projects\ConocoPhillips\State Gas Com A#1\State Gas Com A #1 BGT Closure and Final  
Excavation Report 042814.docx



Animas Environmental Services, LLC

**DRAWN BY:**

S. Glasses

**DATE DRAWN:**

February 4, 2014

**REVISIONS BY:**

C. Lameman

**DATE REVISED:**

April 21, 2014

**CHECKED BY:**

D. Watson

**DATE CHECKED:**

April 21, 2014

**APPROVED BY:**

E. McNally

**DATE APPROVED:**

April 21, 2014

## FIGURE 1

### TOPOGRAPHIC SITE LOCATION MAP

ConocoPhillips  
STATE GAS COM A #1  
SE $\frac{1}{4}$  SW $\frac{1}{4}$ , SECTION 36, T31N, R12W  
SAN JUAN COUNTY, NEW MEXICO  
N36.85164, W108.05347



# LEGEND

● SAMPLE LOCATIONS

## Field Sampling Results

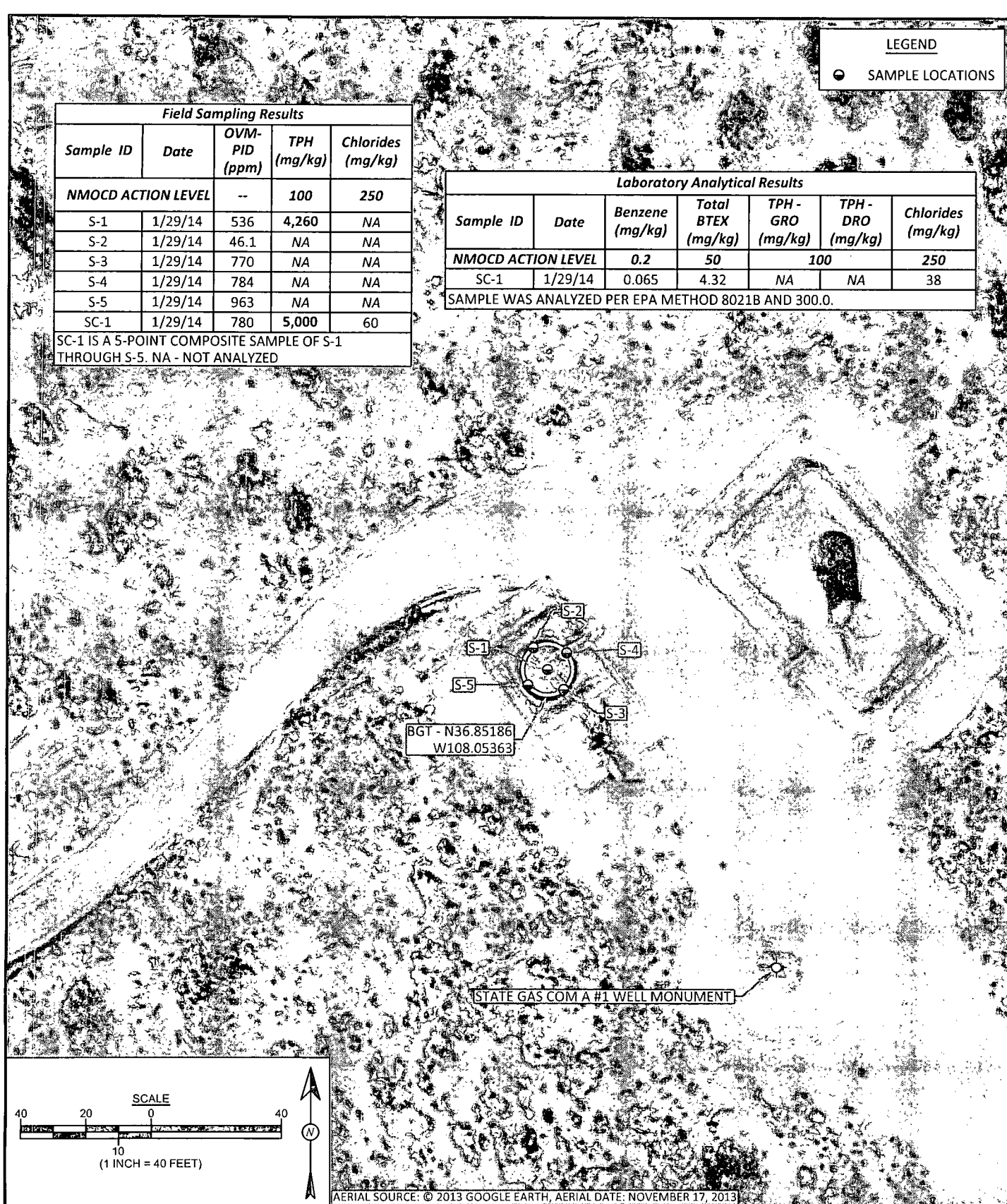
Sample ID	Date	OVM-PID (ppm)	TPH (mg/kg)	Chlorides (mg/kg)
NMOCD ACTION LEVEL	--	--	100	250
S-1	1/29/14	536	4,260	NA
S-2	1/29/14	46.1	NA	NA
S-3	1/29/14	770	NA	NA
S-4	1/29/14	784	NA	NA
S-5	1/29/14	963	NA	NA
SC-1	1/29/14	780	5,000	60

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)
NMOCD ACTION LEVEL		0.2	50	100		250
SC-1	1/29/14	0.065	4.32	NA	NA	38

SAMPLE WAS ANALYZED PER EPA METHOD 8021B AND 300.0.



Animas Environmental Services, LLC

DRAWN BY:

S. Glasses

DATE DRAWN:

February 4, 2014

REVISIONS BY:

C. Lameman

DATE REVISED:

April 21, 2014

CHECKED BY:

D. Watson

DATE CHECKED:

April 21, 2014

APPROVED BY:

E. McNally

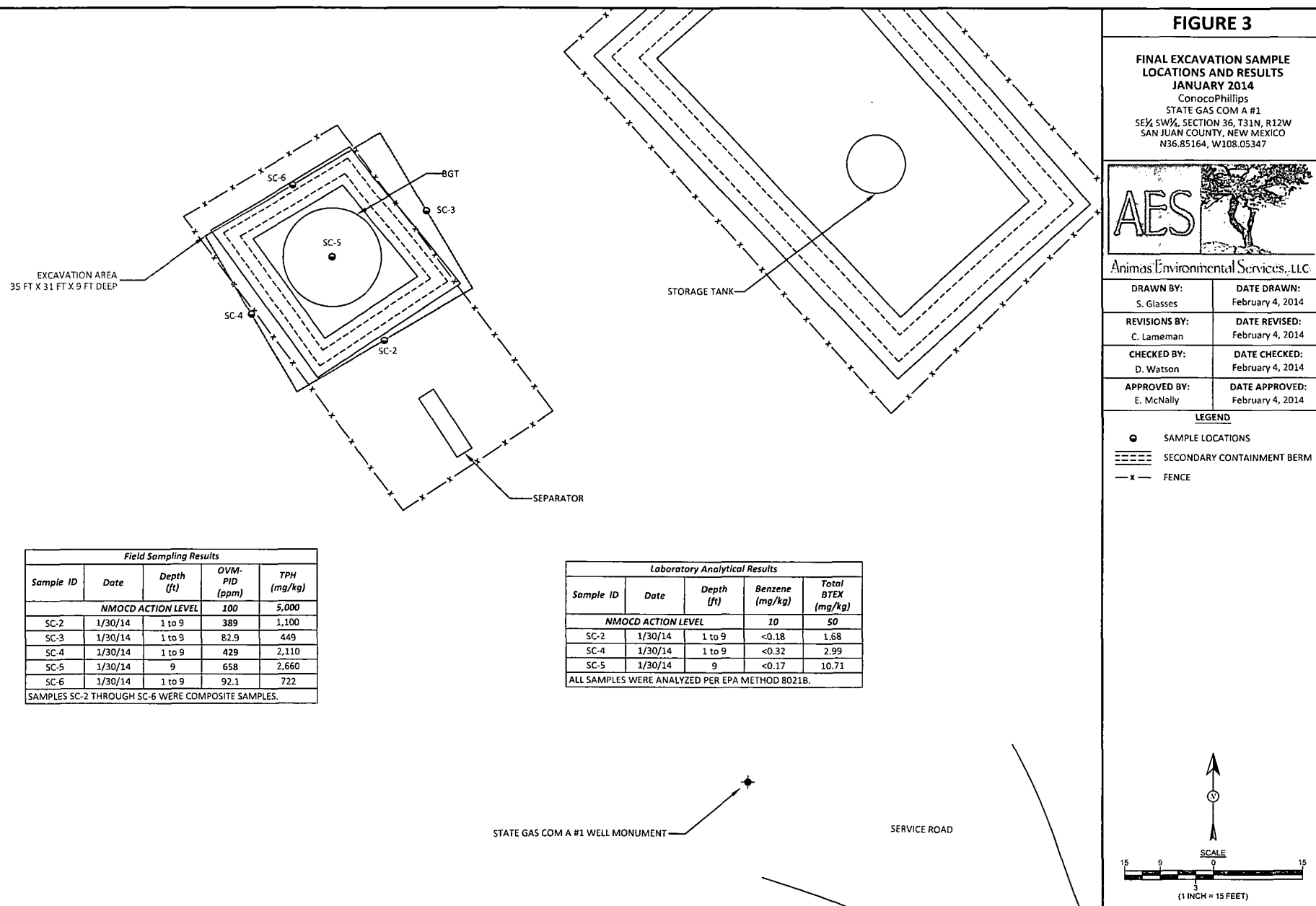
DATE APPROVED:

April 21, 2014

## FIGURE 2

### AERIAL SITE MAP BELOW GRADE TANK CLOSURE JANUARY 2014

ConocoPhillips  
STATE GAS COM A #1  
SE¼ SW¼, SECTION 36, T31N, R12W  
SAN JUAN COUNTY, NEW MEXICO  
N36.85164, W108.05347



# AES Field Sampling Report

Client: ConocoPhillips

Project Location: State Gas Com A #1

Date: 1/29/2014

Matrix: Soil



Animas Environmental Services, LLC

www.animasenvironmental.com

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

Durango, Colorado  
970-403-3084

Sample ID	Collection Date	Time of Sample Collection	Sample Location	OVN (ppm)	Field Chloride (mg/kg)	Field TPH Analysis Time	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
S-1	1/29/2014	11:52	Center	536	NA	12:20	4,263	200	10	HMW
S-2	1/29/2014	12:25	North	46.1	NA	Not Analyzed for TPH				
S-3	1/29/2014	12:26	South	770	NA	Not Analyzed for TPH				
S-4	1/29/2014	12:27	East	784	NA	Not Analyzed for TPH				
S-5	1/29/2014	12:28	West	963	NA	Not Analyzed for TPH				
SC-1	1/29/2014	12:30	Composite	480	60	13:01	5,000	200	10	HMW

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

\*Field TPH concentrations recorded may be below PQL.

Total Petroleum Hydrocarbons - USEPA 418.1

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

Analyst:

*Heather M. Woods*

# AES Field Sampling Report



Animas Environmental Services, LLC

www.animasenvironmental.com

Client: ConocoPhillips

Project Location: State Gas Com A #1

Date: 1/30/2014

Matrix: Soil

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

Durango, Colorado  
970-403-3084

Sample ID	Collection Date	Time of Sample Collection	Sample Location	OVM (ppm)	Field TPH Analysis Time	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SC-2	1/30/2014	13:50	South	389	14:41	1,102	20.0	1	DAW
SC-3	1/30/2014	14:00	East	82.9	14:47	449	20.0	1	DAW
SC-4	1/30/2014	14:05	West	429	14:50	2,111	20.0	1	DAW
SC-5	1/30/2014	14:10	Base	658	14:53	2,662	200	10	DAW
SC-6	1/30/2014	13:45	North	92.1	14:38	722	20.0	1	DAW

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

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

Analyst:

*Deborah Watten*



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)

February 06, 2014

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

RE: COP State Gas Com A #1

OrderNo.: 1401C16

Dear Debbie Watson:

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

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers 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,

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1401C16

Date Reported: 2/6/2014

**CLIENT:** Animas Environmental

**Client Sample ID:** SC-1

**Project:** COP State Gas Com A #1

**Collection Date:** 1/29/2014 12:30:00 PM

**Lab ID:** 1401C16-001

**Matrix:** SOIL

**Received Date:** 1/30/2014 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JMP</b>
Benzene	0.065	0.047		mg/Kg	1	2/4/2014 11:24:44 AM	11541
Toluene	0.10	0.047		mg/Kg	1	2/4/2014 11:24:44 AM	11541
Ethylbenzene	0.25	0.047		mg/Kg	1	2/4/2014 11:24:44 AM	11541
Xylenes, Total	3.9	0.094		mg/Kg	1	2/4/2014 11:24:44 AM	11541
Surr: 4-Bromofluorobenzene	135	80-120	S	%REC	1	2/4/2014 11:24:44 AM	11541
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>JRR</b>
Chloride	38	30		mg/Kg	20	2/4/2014 12:22:57 PM	11554

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

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1401C16

06-Feb-14

Client: Animas Environmental  
Project: COP State Gas Com A #1

Sample ID	MB-11554		SampType	MBLK		TestCode	EPA Method 300.0: Anions				
Client ID	PBS		Batch ID	11554		RunNo	16541				
Prep Date	2/4/2014		Analysis Date	2/4/2014		SeqNo	476212		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	ND	1.5									

Sample ID	LCS-11554		SampType	LCS		TestCode	EPA Method 300.0: Anions				
Client ID	LCSS		Batch ID	11554		RunNo	16541				
Prep Date	2/4/2014		Analysis Date	2/4/2014		SeqNo	476213		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	14	1.5	15.00	0	91.9	90	110				

## Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1401C16

06-Feb-14

Client: Animas Environmental  
Project: COP State Gas Com A #1

Sample ID	MB-11541		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	11541		RunNo:	16527			
Prep Date:	2/3/2014		Analysis Date:	2/4/2014		SeqNo:	475824		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	0.92		1.000		91.9	80	120			

Sample ID	LCS-11541		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	11541		RunNo:	16527			
Prep Date:	2/3/2014		Analysis Date:	2/4/2014		SeqNo:	475825		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	111	80	120			
Toluene	1.1	0.050	1.000	0	108	80	120			
Ethylbenzene	1.1	0.050	1.000	0	109	80	120			
Xylenes, Total	3.3	0.10	3.000	0	109	80	120			
Surr: 4-Bromofluorobenzene	0.96		1.000		96.3	80	120			

Sample ID	1401C16-001AMS		SampType:	MS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	SC-1		Batch ID:	11541		RunNo:	16527			
Prep Date:	2/3/2014		Analysis Date:	2/4/2014		SeqNo:	475827		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.4	0.048	0.9551	0.06513	135	67.4	135			S
Toluene	1.4	0.048	0.9551	0.1000	132	72.6	135			
Ethylbenzene	1.6	0.048	0.9551	0.2453	139	69.4	143			
Xylenes, Total	7.5	0.096	2.865	3.888	126	70.8	144			
Surr: 4-Bromofluorobenzene	1.3		0.9551		137	80	120			S

Sample ID	1401C16-001AMSD		SampType:	MSD		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	SC-1		Batch ID:	11541		RunNo:	16527			
Prep Date:	2/3/2014		Analysis Date:	2/4/2014		SeqNo:	475828		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.4	0.048	0.9542	0.06513	138	67.4	135	1.59	20	S
Toluene	1.4	0.048	0.9542	0.1000	136	72.6	135	2.61	20	S
Ethylbenzene	1.6	0.048	0.9542	0.2453	143	69.4	143	2.40	20	S
Xylenes, Total	7.6	0.095	2.863	3.888	131	70.8	144	1.57	20	
Surr: 4-Bromofluorobenzene	1.3		0.9542		137	80	120	0	0	S

### Qualifiers:

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



## Sample Log-In Check List

Client Name: Animas Environmental

Work Order Number: 1401C16

RcptNo: 1

Received by/date: umg 01/30/14

Logged By: **Ashley Gallegos** 1/30/2014 10:00:00 AM [Signature]

Completed By: **Ashley Gallegos** 1/30/2014 7:42:02 PM [Signature]

Reviewed By: [Signature] 02/03/14

### Chain of Custody

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

### Log In

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

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

### Special Handling (if applicable)

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

Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_

By Whom: \_\_\_\_\_ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_

17. Additional remarks:

### 18. Cooler Information

Cooler No.	Temp °C	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	1.5	Good	Yes			





Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

February 03, 2014

Debbie Watson

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

RE: COP State Gas Com A #1

OrderNo.: 1401C21

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 3 sample(s) on 1/31/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1401C21

Date Reported: 2/3/2014

**CLIENT:** Animas Environmental

**Client Sample ID:** SC-2

**Project:** COP State Gas Com A #1

**Collection Date:** 1/30/2014 1:50:00 PM

**Lab ID:** 1401C21-001

**Matrix:** MEOH (SOIL)

**Received Date:** 1/31/2014 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>JMP</b>
Benzene	ND	0.18		mg/Kg	5	1/31/2014 12:03:10 PM	R16424
Toluene	ND	0.18		mg/Kg	5	1/31/2014 12:03:10 PM	R16424
Ethylbenzene	0.28	0.18		mg/Kg	5	1/31/2014 12:03:10 PM	R16424
Xylenes, Total	1.4	0.35		mg/Kg	5	1/31/2014 12:03:10 PM	R16424
Surr: 4-Bromofluorobenzene	105	80-120		%REC	5	1/31/2014 12:03:10 PM	R16424

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		

Page 1 of 4

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1401C21

Date Reported: 2/3/2014

CLIENT: Animas Environmental

Client Sample ID: SC-4

Project: COP State Gas Com A #1

Collection Date: 1/30/2014 2:05:00 PM

Lab ID: 1401C21-002

Matrix: MEOH (SOIL)

Received Date: 1/31/2014 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: JMP
Benzene	ND	0.32		mg/Kg	10	1/31/2014 12:31:43 PM	R16424
Toluene	ND	0.32		mg/Kg	10	1/31/2014 12:31:43 PM	R16424
Ethylbenzene	0.69	0.32		mg/Kg	10	1/31/2014 12:31:43 PM	R16424
Xylenes, Total	2.3	0.64		mg/Kg	10	1/31/2014 12:31:43 PM	R16424
Surr: 4-Bromofluorobenzene	96.2	80-120		%REC	10	1/31/2014 12:31:43 PM	R16424

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

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

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1401C21

Date Reported: 2/3/2014

CLIENT: Animas Environmental

Client Sample ID: SC-5

Project: COP State Gas Com A #1

Collection Date: 1/30/2014 2:10:00 PM

Lab ID: 1401C21-003

Matrix: MEOH (SOIL)

Received Date: 1/31/2014 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: JMP
Benzene	ND	0.17		mg/Kg	5	1/31/2014 1:00:14 PM	R16424
Toluene	0.51	0.17		mg/Kg	5	1/31/2014 1:00:14 PM	R16424
Ethylbenzene	1.0	0.17		mg/Kg	5	1/31/2014 1:00:14 PM	R16424
Xylenes, Total	9.2	0.33		mg/Kg	5	1/31/2014 1:00:14 PM	R16424
Surr: 4-Bromofluorobenzene	106	80-120		%REC	5	1/31/2014 1:00:14 PM	R16424

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 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#: 1401C21

03-Feb-14

Client: Animas Environmental

Project: COP State Gas Com A #1

Sample ID	5ML RB	SampType	MBLK	TestCode	EPA Method 8021B: Volatiles					
Client ID	PBS	Batch ID	R16424	RunNo	16424					
Prep Date:		Analysis Date:	1/31/2014	SeqNo	474014	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	0.91		1.000		91.4	80	120			

Sample ID	100NG BTEX LCS	SampType	LCS	TestCode	EPA Method 8021B: Volatiles					
Client ID	LCSS	Batch ID	R16424	RunNo	16424					
Prep Date:		Analysis Date:	1/31/2014	SeqNo	474015	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	106	80	120			
Toluene	1.1	0.050	1.000	0	107	80	120			
Ethylbenzene	1.1	0.050	1.000	0	106	80	120			
Xylenes, Total	3.2	0.10	3.000	0	106	80	120			
Surr: 4-Bromofluorobenzene	0.94		1.000		93.7	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: **1401C21**

RcptNo: 1

Received by/date: [Signature] 01/31/14

Logged By: **Ashley Gallegos** 1/31/2014 10:10:00 AM [Signature]

Completed By: **Ashley Gallegos** 1/31/2014 10:22:09 AM [Signature]

Reviewed By: [Signature] 01/31/14

### Chain of Custody

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

### Log In

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

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

### Special Handling (if applicable)

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

Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_

By Whom: \_\_\_\_\_ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.4	Good	Yes			



<input type="checkbox"/> Standard	<input checked="" type="checkbox"/> Rush <u>Sameday</u>
Project Name: <u>CoP State Gas Com A #1</u>	
Project #:	
Project Manager: <u>D. Watson</u>	
Sampler: <u>D Watson</u>	
On Ice: <input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Sample Temperature: <u>3-11</u>	



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975      Fax 505-345-4107

## Analysis Request

[illegible]

Date:	Time:	Relinquished by:	Received by:	Date	Time
30/14	1720	Debra Wate	Christine Wall	30/14	1720
Date:	Time:	Relinquished by:	Received by:	Date	Time
30/14	1740	Christine Wall	Christine Wall	01/3/14	1740

Remarks:  
 Ponce to Conrado Phillips  
 Wo: 10354161  
 act code: T110  
 user: Benale  
 supervisor: Fasho Trujillo  
 identified by: Danny Rudder  
 area: 1

If necessary, samples submitted to Hal 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.