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 **Burlington Resources Oil & Gas Company**	Contact **Crystal Tafoya**
Address 3401 East 30th St, Farmington, NM	Telephone No.(505) 326-9837
Facility Name: **Hale 4**	Facility Type: **Gas Well**

Surface Owner **BLM**	Mineral Owner **BLM (SF-079037)**	API No.**30-045-10119**

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	**34**	**31N**	**8W**	**2055**	**North**	**405**	**East**	**San Juan**

Latitude 36.85593 Longitude 107.65428

NATURE OF RELEASE

Type of Release **Produced Fluids**	Volume of Release **Unknown**	Volume Recovered **None**
Source of Release **Below Grade Tank**	Date and Hour of Occurrence **Unknown**	Date and Hour of Discovery **October 31, 2012**
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom? RCVD JAN 25 '13	
By Whom?	Date and Hour OIL CONS. DIV.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. DIST. 3	

If a Watercourse was Impacted, Describe Fully.*

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

Describe Area Affected and Cleanup Action Taken.*
The regulatory standard for closure at this site was determined to be 1000 ppm. Additionally, the sample was then transported to the lab and analytical results for TPH, BTEX and Chlorides were below the regulatory standards set forth in the NMOCD Guidelines for Remediation of Leaks, Spills and Release; therefore no further action is required. The final report is attached for review.

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

Signature: Crystal L. Tafoya	OIL CONSERVATION DIVISION Approved by Environmental Specialist: Jonathan D. Kelly
Printed Name: **Crystal Tafoya**	
Title: **Field Environmental Specialist**	Approval Date: 1/29/2013 Expiration Date:
E-mail Address: crystal.tafoya@conocophillips.com	Conditions of Approval: C-144 Closure Permit needed for BGT Closure Attached ☐
Date: 1/24/2013 Phone: (505) 326-9837	

* Attach Additional Sheets If Necessary

nJK1302953677

Animas Environmental Services, LLC
www.animasenvironmental.com
624 E. Comanche
Farmington, NM 87401
505-564-2281
Durango, Colorado
970-403-3274

December 17, 2012

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

RE: Below Grade Tank Closure Report
Hale #4
San Juan County, New Mexico

Dear Ms. Tafoya:

Animas Environmental Services, LLC (AES) is pleased to provide the final report associated with the below grade tank (BGT) closure at ConocoPhillips (CoP) Hale #4, located in San Juan County, New Mexico. Tank removal had been completed by CoP contractors prior to AES' arrival at the location.

1.0 Site Information

1.1 Location

Site Name – Hale #4
Legal Description - SE¼ NE¼, Section 34, T31N, R8W, San Juan County, New Mexico
Well Latitude/Longitude - N36.85640 and W107.65543, respectively
BGT Latitude/Longitude - N36.85617 and W107.65572, respectively
Land Jurisdiction - Bureau of Land Management (BLM)
Figure 1. Topographic Site Location Map
Figure 2. Aerial Site Map, October 2012

1.2 NMOCD Ranking

Prior to site work, the New Mexico Oil Conservation Division (NMOCD) database was reviewed, and a C-144 form dated January 2008 for the Blanco 7C well located approximately 1,400 feet northeast of the location reported the depth to groundwater as greater than 100 feet below ground surface (bgs). The New Mexico Office of the State Engineer (NMOSE) database was reviewed for nearby water wells, and no registered water wells were reported to be located within 1,000 feet of the location. Additionally, Google Earth and the New Mexico Tech Petroleum Recovery Research

Center online mapping tool (http://ford.nmt.edu/react/project.html) were accessed to aid in the identification of downgradient surface water.

Once on site, AES personnel further assessed the ranking using topographical interpretation, Global Positioning System (GPS) elevation readings, and visual reconnaissance. AES personnel concluded that depth to groundwater at the site was greater than 100 feet bgs. An unnamed ephemeral wash which drains into Simon Canyon is located approximately 850 feet northwest of the location. Based on this information, the location was assessed a ranking score of 10.

1.3 BGT Closure Assessment

AES was initially contacted by Bruce Yazzie, CoP representative, on October 31, 2012, and on the same day, Deborah Watson and Zach Trujillo of AES met with a CoP representative at the location. AES personnel collected six soil samples from below the BGT liner. Four samples were collected from the perimeter of the BGT footprint, one sample was collected from the center of the BGT footprint, and one sample was composited from the four perimeter samples and one center sample.

2.0 Soil Sampling

On October 31, 2012, AES personnel conducted field screening and collected five soil samples (S-1 through S-5) and one 5-point composite (SC-1) from below the BGT. Soil samples were collected from approximately 0.5 feet below the former BGT for field screening of volatile organic compounds (VOCs) and total petroleum hydrocarbon (TPH). Soil sample SC-1 was field screened for chlorides and submitted for confirmation laboratory analysis. Soil sample locations are included on Figure 2.

2.1 Field Screening

2.1.1 Volatile Organic Compounds

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

2.1.2 Total Petroleum Hydrocarbons

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

2.1.3 Chlorides

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

2.2 Laboratory Analyses

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

- Benzene, toluene, ethylbenzene, and xylene (BTEX) per U.S. Environmental Protection Agency (USEPA) Method 8260B;
- Total petroleum hydrocarbons (TPH) for gasoline range organics (GRO) and diesel range organics (DRO) per USEPA Method 8015B;
- Chloride per USEPA Method 300.0.

2.3 Field and Laboratory Analytical Results

Field screening readings for VOCs via OVM ranged from 0.6 ppm in S-3 up to 3.8 ppm in S-1. Field TPH concentrations ranged from 134 mg/kg in S-4 up to 328 mg/kg in S-2. The field chloride concentration was 40 mg/kg. Field screening results are summarized in Table 1 and presented on Figure 2. The AES Field Screening Report is attached.

Table 1. Soil Field Screening VOCs, TPH, and Chloride Results
Hale #4 BGT Closure, October 2012

Sample ID	*Date Sampled*	*Depth below BGT (ft)*	*VOCs OVM Reading (ppm)*	*Field TPH (mg/kg)*	*Field Chlorides (mg/kg)*
NMOCD Action Level (NMAC 19.15.17.13E)			*--*	***100***	***250***
S-1	10/31/12	0.5	3.8	**241**	NA
S-2	10/31/12	0.5	1.6	**328**	NA
S-3	10/31/12	0.5	0.6	**288**	NA
S-4	10/31/12	0.5	1.3	**134**	NA
S-5	10/31/12	0.5	2.0	**312**	NA
SC-1	10/31/12	0.5	NA	NA	40

NA - not analyzed

Laboratory analytical results reported benzene and total BTEX concentrations in SC-1 as less than 0.050 mg/kg and less than 0.25 mg/kg, respectively. TPH concentrations were reported as less than 5.0 mg/kg GRO and at 51 mg/kg DRO. The laboratory chloride concentration was below the laboratory detection limit of 30 mg/kg. Laboratory analytical results are summarized in Table 2 and included on Figure 2. Laboratory analytical reports are attached.

Table 2. Soil Laboratory Analytical Results
Hale #4 BGT Closure, October 2012

Sample ID	*Date Sampled*	*Depth (ft)*	*Benzene (mg/kg)*	*BTEX (mg/kg)*	*TPH-GRO (mg/kg)*	*TPH-DRO (mg/kg)*	*Chlorides (mg/kg)*
NMOCD Action Level (NMAC 19.15.17.13E)			***0.2***	***50***	***100***		***250***
SC-1	10/31/12	0.5	<0.050	<0.25	<5.0	51	<30

3.0 Conclusions and Recommendations

NMOCD action levels for BGT closures are specified in New Mexico Administrative Code (NMAC) 19.15.17.13E. Benzene and total BTEX concentrations were reported below the NMOCD action levels of 0.2 mg/kg and 50 mg/kg, respectively. Field TPH concentrations exceeded the NMOCD action level of 100 mg/kg in samples S-1 through S-5. However, laboratory analytical results for TPH as GRO/DRO in SC-1 were reported below the NMOCD action level of 100 mg/kg with 51 mg/kg. Chloride concentrations were below the NMOCD action level of 250 mg/kg. Based on field screening and laboratory analytical results for benzene, total BTEX, TPH, and chlorides, no further work is recommended.

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

Sincerely,

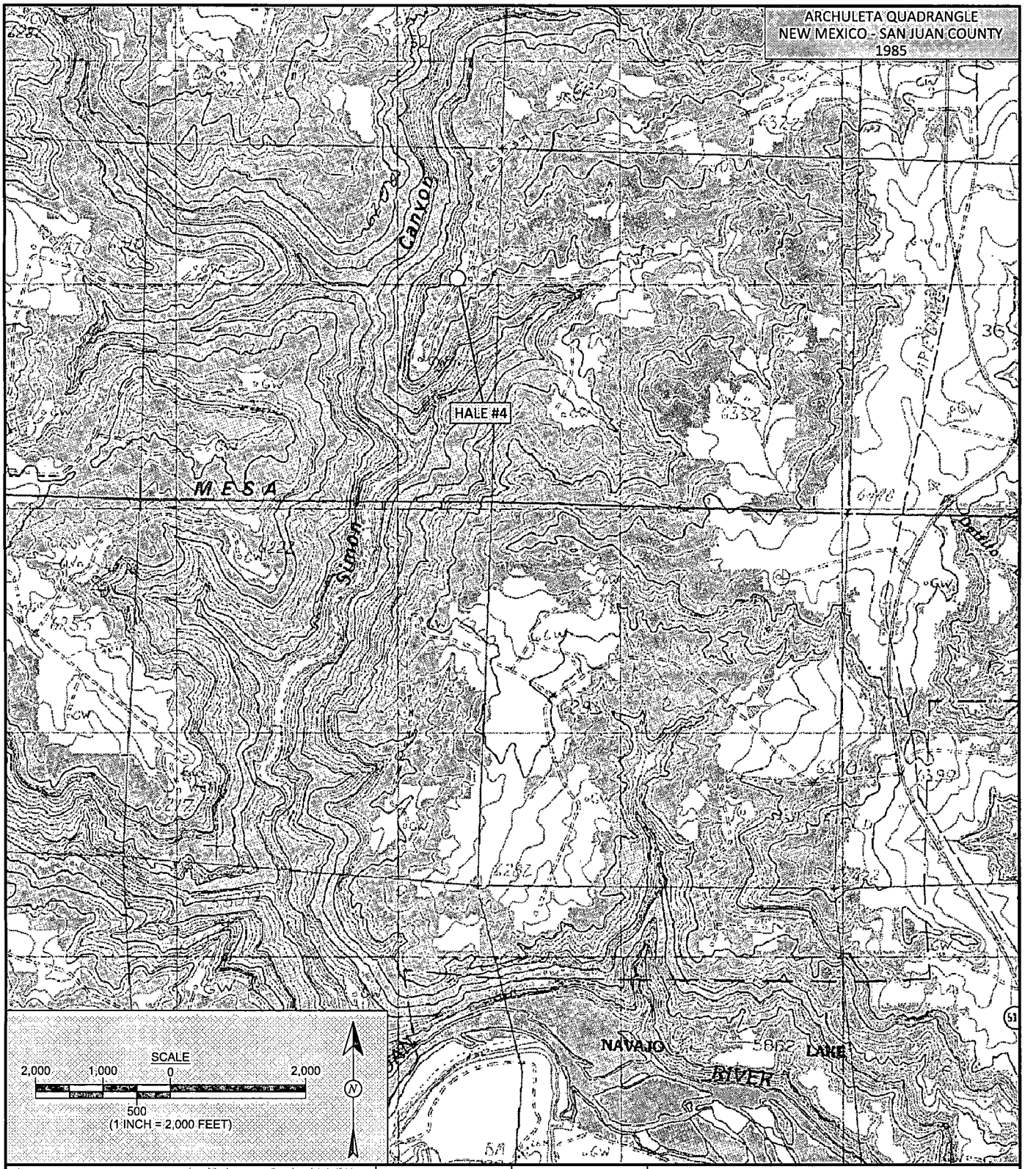
Kelsey Christiansen
Environmental Scientist

Elizabeth McNally, P.E.

Attachments:

Figure 1. Topographic Site Location Map
Figure 2. Aerial Site Map, October 2012
AES Field Screening Report 103112
Hall Analytical Report 1211009

C:\Dropbox\December 2012\ConocoPhillips\Hale #4\Hale #4 BGT Closure Report 121712.docx

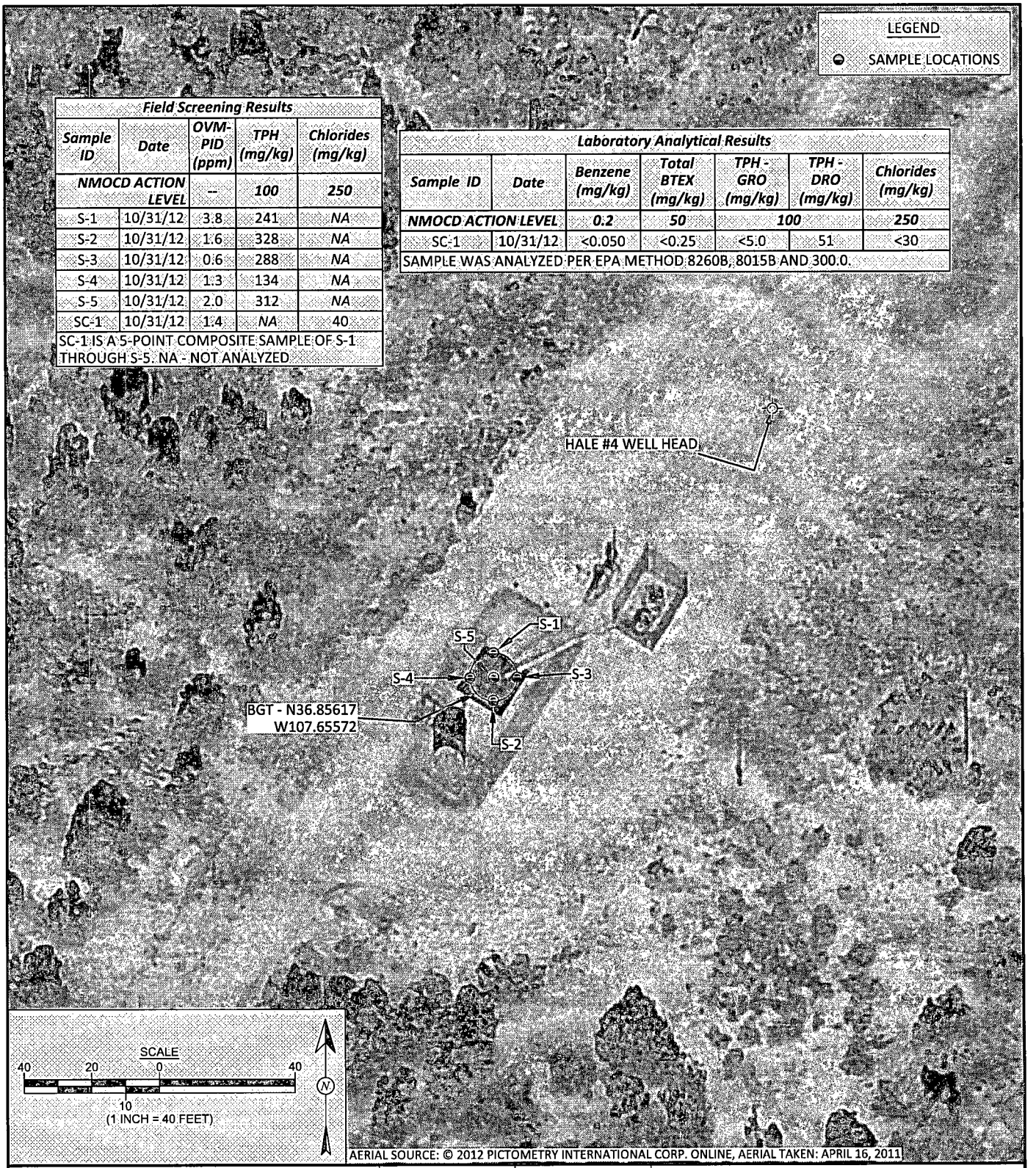


Animas Environmental Services, LLC

DRAWN BY: K. Christiansen	**DATE DRAWN:** November 1, 2012
REVISIONS BY: C. Lameman	**DATE REVISED:** November 1, 2012
CHECKED BY: D. Watson	**DATE CHECKED:** November 1, 2012
APPROVED BY: E. McNally	**DATE APPROVED:** November 1, 2012

FIGURE 1

TOPOGRAPHIC SITE LOCATION MAP
ConocoPhillips
HALE #4
SAN JUAN COUNTY, NEW MEXICO
SE¼ NE¼, SECTION 34, T31N, R8W
N36.85640, W107.65543



Field Screening Results

Sample ID	Date	OVM-PID (ppm)	TPH (mg/kg)	Chlorides (mg/kg)
NMOCD ACTION LEVEL		--	100	250
S-1	10/31/12	3.8	241	NA
S-2	10/31/12	1.6	328	NA
S-3	10/31/12	0.6	288	NA
S-4	10/31/12	1.3	134	NA
S-5	10/31/12	2.0	312	NA
SC-1	10/31/12	1.4	NA	40

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

Laboratory Analytical Results

Sample ID	Date	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH - GRO (mg/kg)	TPH - DRO (mg/kg)	Chlorides (mg/kg)
NMOCD ACTION LEVEL		0.2	50	100		250
SC-1	10/31/12	<0.050	<0.25	<5.0	51	<30

SAMPLE WAS ANALYZED PER EPA METHOD 8260B, 8015B AND 300.0.

Animas Environmental Services, LLC

DRAWN BY: K. Christiansen	**DATE DRAWN:** November 1, 2012
REVISIONS BY: C. Lameman	**DATE REVISED:** November 1, 2012
CHECKED BY: D. Watson	**DATE CHECKED:** November 1, 2012
APPROVED BY: E. McNally	**DATE APPROVED:** November 1, 2012

FIGURE 2

AERIAL SITE MAP
BELOW GRADE TANK CLOSURE
OCTOBER 2012
ConocoPhillips
HALE #4
SAN JUAN COUNTY, NEW MEXICO
SE¼ NE¼, SECTION 34, T31N, R8W
N36.85640, W107.65543

AES Field Screening Report

Animas Environmental Services, LLC
www.animasenvironmental.com
624 E. Comanche
Farmington, NM 87401
505-564-2281
Durango, Colorado
970-403-3274

Client: ConocoPhillips

Project Location: Hale #4

Date: 10/31/2012

Matrix: Soil

Sample ID	Collection Date	Time of Sample Collection	Sample Location	OVM (ppm)	Field Chloride (mg/kg)	Field TPH Analysis Time	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
S-1	10/31/2012	10:40	North	3.8	NA	11:22	241	20.0	1	DAW
S-2	10/31/2012	10:44	South	1.6	NA	11:33	328	20.0	1	DAW
S-3	10/31/2012	10:46	East	0.6	NA	11:36	288	20.0	1	DAW
S-4	10/31/2012	10:48	West	1.3	NA	11:42	134	20.0	1	DAW
S-5	10/31/2012	10:50	Center	2.0	NA	11:39	312	20.0	1	DAW
SC-1	10/31/2012	10:55	Composite	NA	80	*Laboratory Analyzed for BTEX and chlorides*				

PQL Practical Quantitation Limit

ND Not Detected at the Reporting Limit

DF Dilution Factor

**Field TPH concentrations recorded may be below PQL.*

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

Total Petroleum Hydrocarbons - USEPA 418.1

Analyst: Deborah Watson

Report Finalized: 10/31/12

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

November 07, 2012

Debbie Watson

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

RE: CoP Hale #4 OrderNo.: 1211009

Dear Debbie Watson:

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1211009**
Date Reported: **11/7/2012**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: SC-1
Project: CoP Hale #4
Collection Date: 10/31/2012 10:55:00 AM
Lab ID: 1211009-001
Matrix: MEOH (SOIL)
Received Date: 11/1/2012 9:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JMP**
Diesel Range Organics (DRO)	51	9.8		mg/Kg	1	11/1/2012 12:07:01 PM
Surr: DNOP	95.4	77.6-140		%REC	1	11/1/2012 12:07:01 PM
EPA METHOD 300.0: ANIONS						Analyst: **SRM**
Chloride	ND	30		mg/Kg	20	11/1/2012 11:39:23 AM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **RAA**
Benzene	ND	0.050		mg/Kg	1	11/1/2012 2:34:29 PM
Toluene	ND	0.050		mg/Kg	1	11/1/2012 2:34:29 PM
Ethylbenzene	ND	0.050		mg/Kg	1	11/1/2012 2:34:29 PM
Xylenes, Total	ND	0.10		mg/Kg	1	11/1/2012 2:34:29 PM
Surr: 1,2-Dichloroethane-d4	90.5	70-130		%REC	1	11/1/2012 2:34:29 PM
Surr: 4-Bromofluorobenzene	97.9	70-130		%REC	1	11/1/2012 2:34:29 PM
Surr: Dibromofluoromethane	93.9	70-130		%REC	1	11/1/2012 2:34:29 PM
Surr: Toluene-d8	98.5	70-130		%REC	1	11/1/2012 2:34:29 PM
EPA METHOD 8015B MOD: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/1/2012 2:34:29 PM
Surr: BFB	97.9	70-130		%REC	1	11/1/2012 2:34:29 PM

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
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#: **1211009**

07-Nov-12

Client: Animas Environmental Services

Project: CoP Hale #4

Sample ID	**MB-4627**	SampType:	**MBLK**		TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**4627**		RunNo:	**6661**					
Prep Date:	**11/1/2012**	Analysis Date:	**11/1/2012**		SeqNo:	**192293**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	ND	1.5									

Sample ID	**LCS-4627**	SampType:	**LCS**		TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**4627**		RunNo:	**6661**					
Prep Date:	**11/1/2012**	Analysis Date:	**11/1/2012**		SeqNo:	**192294**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	14	1.5	15.00	0	94.0	90	110				

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1211009**

07-Nov-12

Client: Animas Environmental Services

Project: CoP Hale #4

Sample ID **MB-4618**	SampType: **MBLK**	TestCode: **EPA Method 8015B: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **4618**	RunNo: **6627**
Prep Date: **10/31/2012**	Analysis Date: **11/1/2012**	SeqNo: **191363** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	9.8		10.00		97.7	77.6	140			

Sample ID **LCS-4618**	SampType: **LCS**	TestCode: **EPA Method 8015B: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **4618**	RunNo: **6627**
Prep Date: **10/31/2012**	Analysis Date: **11/1/2012**	SeqNo: **191364** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	39	10	50.00	0	77.1	52.6	130			
Surr: DNOP	4.4		5.000		87.1	77.6	140			

Sample ID **1210D52-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015B: Diesel Range Organics**
Client ID: **BatchQC**	Batch ID: **4618**	RunNo: **6627**
Prep Date: **10/31/2012**	Analysis Date: **11/1/2012**	SeqNo: **191366** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	9.7	48.64	0	100	57.2	146			
Surr: DNOP	4.3		4.864		89.1	77.6	140			

Sample ID **1210D52-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015B: Diesel Range Organics**
Client ID: **BatchQC**	Batch ID: **4618**	RunNo: **6627**
Prep Date: **10/31/2012**	Analysis Date: **11/1/2012**	SeqNo: **191367** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.15	0	92.4	57.2	146	5.08	24.5	
Surr: DNOP	4.3		5.015		86.7	77.6	140	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1211009**

07-Nov-12

Client: Animas Environmental Services

Project: CoP Hale #4

Sample ID **5ml-rb**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS**	Batch ID: **R6631**	RunNo: **6631**
Prep Date:	Analysis Date: **11/1/2012**	SeqNo: **191855** 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: 1,2-Dichloroethane-d4	0.46		0.5000		92.7	70	130			
Surr: 4-Bromofluorobenzene	0.55		0.5000		111	70	130			
Surr: Dibromofluoromethane	0.46		0.5000		92.9	70	130			
Surr: Toluene-d8	0.51		0.5000		102	70	130			

Sample ID **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **LCSS**	Batch ID: **R6631**	RunNo: **6631**
Prep Date:	Analysis Date: **11/1/2012**	SeqNo: **191868** 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	70	130			
Toluene	1.1	0.050	1.000	0	112	80	120			
Surr: 1,2-Dichloroethane-d4	0.47		0.5000		93.2	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		101	70	130			
Surr: Dibromofluoromethane	0.47		0.5000		93.6	70	130			
Surr: Toluene-d8	0.49		0.5000		97.1	70	130			

Sample ID **1211008-001a ms**	SampType: **MS**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC**	Batch ID: **R6631**	RunNo: **6631**
Prep Date:	Analysis Date: **11/1/2012**	SeqNo: **191899** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.050	0.8404	0	111	80.9	118			
Toluene	0.99	0.050	0.8404	0	118	69.5	119			
Surr: 1,2-Dichloroethane-d4	0.40		0.4202		95.9	70	130			
Surr: 4-Bromofluorobenzene	0.43		0.4202		102	70	130			
Surr: Dibromofluoromethane	0.40		0.4202		95.7	70	130			
Surr: Toluene-d8	0.42		0.4202		98.8	70	130			

Sample ID **1211008-001a msd**	SampType: **MSD**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC**	Batch ID: **R6631**	RunNo: **6631**
Prep Date:	Analysis Date: **11/1/2012**	SeqNo: **191903** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.050	0.8404	0	107	80.9	118	3.67	20	
Toluene	0.95	0.050	0.8404	0	113	69.5	119	4.56	20	
Surr: 1,2-Dichloroethane-d4	0.39		0.4202		92.7	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.43		0.4202		103	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1211009**

07-Nov-12

Client: Animas Environmental Services

Project: CoP Hale #4

Sample ID **1211008-001a msd**	SampType: **MSD**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC**	Batch ID: **R6631**	RunNo: **6631**
Prep Date:	Analysis Date: **11/1/2012**	SeqNo: **191903** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	0.41		0.4202		98.2	70	130	0	0	
Surr: Toluene-d8	0.42		0.4202		99.0	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1211009**

07-Nov-12

Client: Animas Environmental Services

Project: CoP Hale #4

Sample ID **5ml-rb**	SampType: **MBLK**	TestCode: **EPA Method 8015B Mod: Gasoline Range**
Client ID: **PBS**	Batch ID: **R6631**	RunNo: **6631**
Prep Date:	Analysis Date: **11/1/2012**	SeqNo: **191754** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	550		500.0		111	70	130			

Sample ID **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015B Mod: Gasoline Range**
Client ID: **LCSS**	Batch ID: **R6631**	RunNo: **6631**
Prep Date:	Analysis Date: **11/1/2012**	SeqNo: **191796** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	107	74.6	137			
Surr: BFB	530		500.0		107	70	130			

Sample ID **1211009-001A MS**	SampType: **MS**	TestCode: **EPA Method 8015B Mod: Gasoline Range**
Client ID: **SC-1**	Batch ID: **R6631**	RunNo: **6631**
Prep Date:	Analysis Date: **11/1/2012**	SeqNo: **191809** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	17.97	0	115	50.3	148			
Surr: BFB	350		359.4		97.7	70	130			

Sample ID **1211009-001A MSD**	SampType: **MSD**	TestCode: **EPA Method 8015B Mod: Gasoline Range**
Client ID: **SC-1**	Batch ID: **R6631**	RunNo: **6631**
Prep Date:	Analysis Date: **11/1/2012**	SeqNo: **191815** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	5.0	17.97	0	107	50.3	148	7.14	20	
Surr: BFB	350		359.4		96.6	70	130	0	0	

Qualifiers:

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

ENVIRONMENTAL ANALYSIS LABORATORY

4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Animas Environmental Work Order Number: 1211009

Received by/date: LM 11/01/12

Logged By: Michelle Garcia 11/1/2012 9:50:00 AM Michelle Garcia

Completed By: Michelle Garcia 11/1/2012 10:13:28 AM Michelle Garcia

Reviewed By: TO 11/01/12

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

18. Additional remarks:

19. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

Chain-of-Custody Record

Client: Animas Environmental Services LLC

Mailing Address: 624 E Comanche Farmington NM 87401

Phone #: 505 564 2281

email or Fax#:

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☐ Standard ☒ Rush same day

Project Name: CoP Hale #4

Project #:

Project Manager: D Watson

Sampler: D Watson

On Ice: ☒ Yes ☐ No

Sample Temperature: 1

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1211069	BTEX + ~~MTBE~~ + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel) 8015D/GRO	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	300.0 Chlorides				Air Bubbles (Y or N)
10-31-12	1055	Soil	SC-1	~~Mason Jar~~ 4oz	~~HgCl~~ non	-001	X		X									X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
10/31/12	1712	Deborah Watson	Christine Walters	10/31/12	1712
10/31/12	1721	Christine Walters		11/01/12	0950

Remarks: Bill to ConocoPhillips
wo: 10340231 UserID: KGARCIA
area: 5 supervisor: Harms Dee
activity code: C200 Ordered by: Bruce Yazzie

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.