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: **Cornell 4R**	Facility Type: **Gas Well**

Surface Owner **BLM**	Mineral Owner **BLM (SF-065557-A)**	API No.**30-045-30844**

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	**14**	**29N**	**12W**	**1695**	**North**	**1820**	**West**	**San Juan**

Latitude 36.72902 Longitude 108.07137

NATURE OF RELEASE

Type of Release **Hydrocarbons**	Volume of Release **Unknown**	Volume Recovered **32 cu. yds.**
Source of Release **Compressor Unit**	Date and Hour of Occurrence **Unknown**	Date and Hour of Discovery **December 7, 2012**
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*
N/A

RCVD MAR 11 '13
OIL CONS. DIV.
DIST. 3

Describe Cause of Problem and Remedial Action Taken.*
P&A Activities for subject well. Compressor removal closure activities.

Describe Area Affected and Cleanup Action Taken.*
Historical hydrocarbon impacted soil was found during the P&A closure activities for the subject well. The A excavation was 8'x 11' x 4.5' and B excavation was 11' x 7' x 6' and 32 yds of soil was transported to an approved landfarm and 32 yds of clean soil was transported and placed in the excavation site. The soil sampling 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

Printed Name: **Crystal Tafoya**

Title: **Field Environmental Specialist**

E-mail Address: crystal.tafoya@conocophillips.com

Date: 3/7/2013 Phone: (505) 326-9837

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: Jonathan D. Kelly

Approval Date: 5/21/2013 Expiration Date:

Conditions of Approval: Attached ☐

* Attach Additional Sheets If Necessary

nJK1314153656

Animas Environmental Services, LLC
www.animasenvironmental.com
624 E. Comanche
Farmington, NM 87401
505-564-2281
Durango, Colorado
970-403-3084

February 25, 2013

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

RE: Initial Release Assessment and Final Excavation Report
Cornell #4R
San Juan County, New Mexico

Dear Ms. Tafoya:

On December 7, 2012, and January 8, 2013, Animas Environmental Services, LLC (AES) completed an initial release assessment and environmental clearance of the final excavation limits at the ConocoPhillips (CoP) Cornell #4R, located in San Juan County, New Mexico. Stained soils were discovered near the compressor unit during plugging and abandoning activities at the location. The initial assessment was completed by AES on December 7, 2012. The final excavations were completed by CoP contractors while AES was on location January 8, 2013.

1.0 Site Information

1.1 Location

Site Name – Cornell #4R
Legal Description – SE¼ NW¼, Section 14, T29N, R12W, San Juan County, New Mexico
Well Head Latitude/Longitude – N36.72902 and W108.07137, respectively
Release Location Latitude/Longitude – N36.72923 and W108.07153 (Stain A) and N36.72921 and W108.07154 (Stain B)
Land Jurisdiction – Bureau of Land Management (BLM)
Figure 1. Topographic Site Location Map
Figure 2. Aerial Site Map, December 2012

1.2 NMOCD Ranking

Prior to site work, the New Mexico Oil Conservation Division (NMOCD) database was reviewed, and no prior ranking information was located. The New Mexico Office of the State Engineer (NMOSE) database was reviewed for nearby water wells, and no registered water wells were reported to be located within 1,000 feet of the location.

Additionally, Google Earth and the New Mexico Tech Petroleum Recovery Research Center online mapping tool (http://ford.nmt.edu/react/project.html) were accessed to aid in the identification of downgradient surface water.

Once on site, AES personnel further assessed the ranking using topographical interpretation, Global Positioning System (GPS) elevation readings, and visual reconnaissance. AES personnel concluded that depth to groundwater at the site was between 50 and 99 feet below ground surface (bgs) based on depth to water information from the nearest water wells located approximately 1,700 feet northwest of the location. An unnamed wash is located approximately 230 feet southeast of the location, which eventually drains to the San Juan River approximately 3.3 miles to the south. Based on this information, the location was assessed a ranking score of 20 per the *NMOCD Guidelines for Leaks, Spills, and Releases* (August 1993).

1.3 Assessment

AES was initially contacted by Jess Henson, CoP representative, on December 6, 2012, and on December 7, 2012, Corwin Lameman and Zach Truijillo of AES completed the release assessment field work. The assessment included collection and field screening of 25 soil samples from 9 soil borings (SB-1 through SB-9). Based on field screening results, AES recommended excavation of the stained soils (Area A and Area B). Sampling locations are shown on Figure 3.

On January 8, 2013, AES returned to the location to collect confirmation soil samples of the two excavations. The field screening activities included collection of confirmation soil samples of the walls and bases of each excavation, Area A (SC-1) and Area B (SC-2). The area of the final excavation for Area A was approximately 8 feet by 11 feet by 4.5 feet in depth, and the area of the final excavation for Area B was approximately 11 feet by 7 feet by 6 feet in depth. Sample locations and final excavation extents are presented on Figure 4.

2.0 Soil Sampling

A total of 25 soil samples from soil borings SB-1 through SB-9 and two composite samples (SC-1 and SC-2) were collected during the assessments. All soil samples were field screened for volatile organic compounds (VOCs), and selected samples were also analyzed for total petroleum hydrocarbons (TPH). One waste characterization sample was submitted for laboratory analysis.

2.1 Field Screening

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

Field TPH samples were analyzed 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*.

2.2 Field Screening Results

On December 7, 2012, initial release assessment field screening readings for VOCs via OVM ranged from 0.6 ppm in SB-1 up to 5.7 ppm in SB-3. Field TPH concentrations ranged from 20.2 mg/kg in SB-3 up to 1,630 mg/kg in SB-2.

On January 8, 2013, final excavation field screening results for VOCs via OVM were recorded as 0.1 ppm in SC-1 and 0.0 ppm in SC-2. Field TPH concentrations were less than 20.0 mg/kg in both SC-1 and SC-2. Results are included below in Table 1 and on Figures 3 and 4. The AES field screening reports are attached.

Table 1. Soil Field Screening VOCs and TPH Results
Cornell #4R Initial Release Assessment and Final Excavation
December 2012 and January 2013

Sample ID	*Date Sampled*	*Sample Depth (ft bgs)*	*VOCs via OVM (ppm)*	*Field TPH (mg/kg)*
	*NMOCD Action Level**		*100*	*100*
SB-1	12/07/12	0.5	3.1	**265**
		2	2.1	**118**
		5	0.6	33.6
SB-2	12/07/12	0.5	3.9	**1,630**
		2	4.1	**429**
		5	4.3	**1,170**
		6.5	3.4	**223**

Sample ID	Date Sampled	Sample Depth (ft bgs)	VOCs via OVM (ppm)	Field TPH (mg/kg)
	*NMOCD Action Level**		*100*	*100*
SB-3	12/07/12	0.5	5.7	28.2
		2	3.7	20.2
		5	5.0	30.9
SB-4	12/07/12	0.5	5.3	45.6
		2	1.8	26.9
		5	3.3	29.5
SB-5	12/07/12	3	2.9	NA
		6.5	1.8	34.9
SB-6	12/07/12	3	1.6	NA
		6.5	4.0	64.4
SB-7	12/07/12	3	2.6	NA
		6.5	3.1	36.2
SB-8	12/07/12	0.5	1.3	NA
		3	2.4	NA
		6.5	1.0	34.9
SB-9	12/07/12	0.5	4.3	NA
		3	2.0	NA
		6.5	1.4	28.2
SC-1	01/08/13	1 to 4.5	0.1	<20.0
SC-2	01/08/13	1 to 6	0.0	<20.0

NA – not analyzed
*Action level determined by the NMOCD ranking score per *NMOCD Guidelines for Leaks, Spills, and Releases* (August 1993)

3.0 Conclusions and Recommendations

On December 7, 2012, AES conducted an initial assessment of hydrocarbon impacted soils located at the Cornell #4R. Action levels for releases are determined by the NMOCD ranking score per *NMOCD Guidelines for Leaks, Spills, and Releases* (August 1993), and the site was assigned a rank of 20. Field screening results of VOCs were reported below the NMOCD action level of 100 ppm in all of the collected samples (SB-1 through SB-9). Field screening TPH results above the NMOCD action level of 100 mg/kg

were reported in SB-1 and SB-2, with the highest TPH concentration reported in SB-2 with 1,630 mg/kg.

On January 8, 2013, final assessment of the excavation areas was completed. Field screening results of Area A and Area B excavations showed that VOCs and TPH concentrations were reported below the applicable NMOCD action levels in both samples SC-1 and SC-2.

Based on the field screening results of the excavation of petroleum contaminated soils at the Cornell #4R, VOCs and TPH concentrations were below applicable NMOCD action levels for both Area A and Area B excavations. 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,

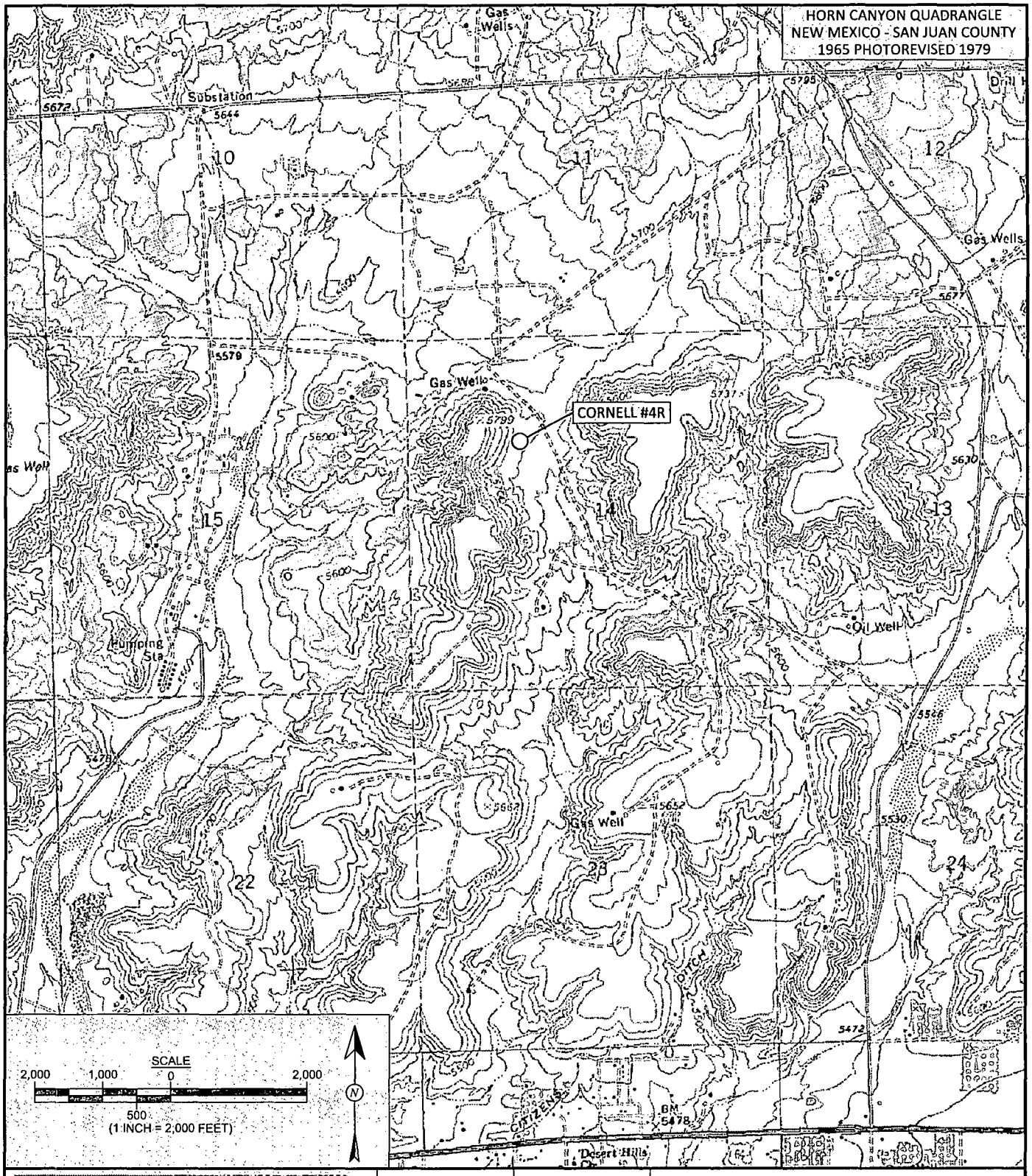
Kelsey Christiansen
Environmental Scientist

Elizabeth McNally, PE

Attachments:

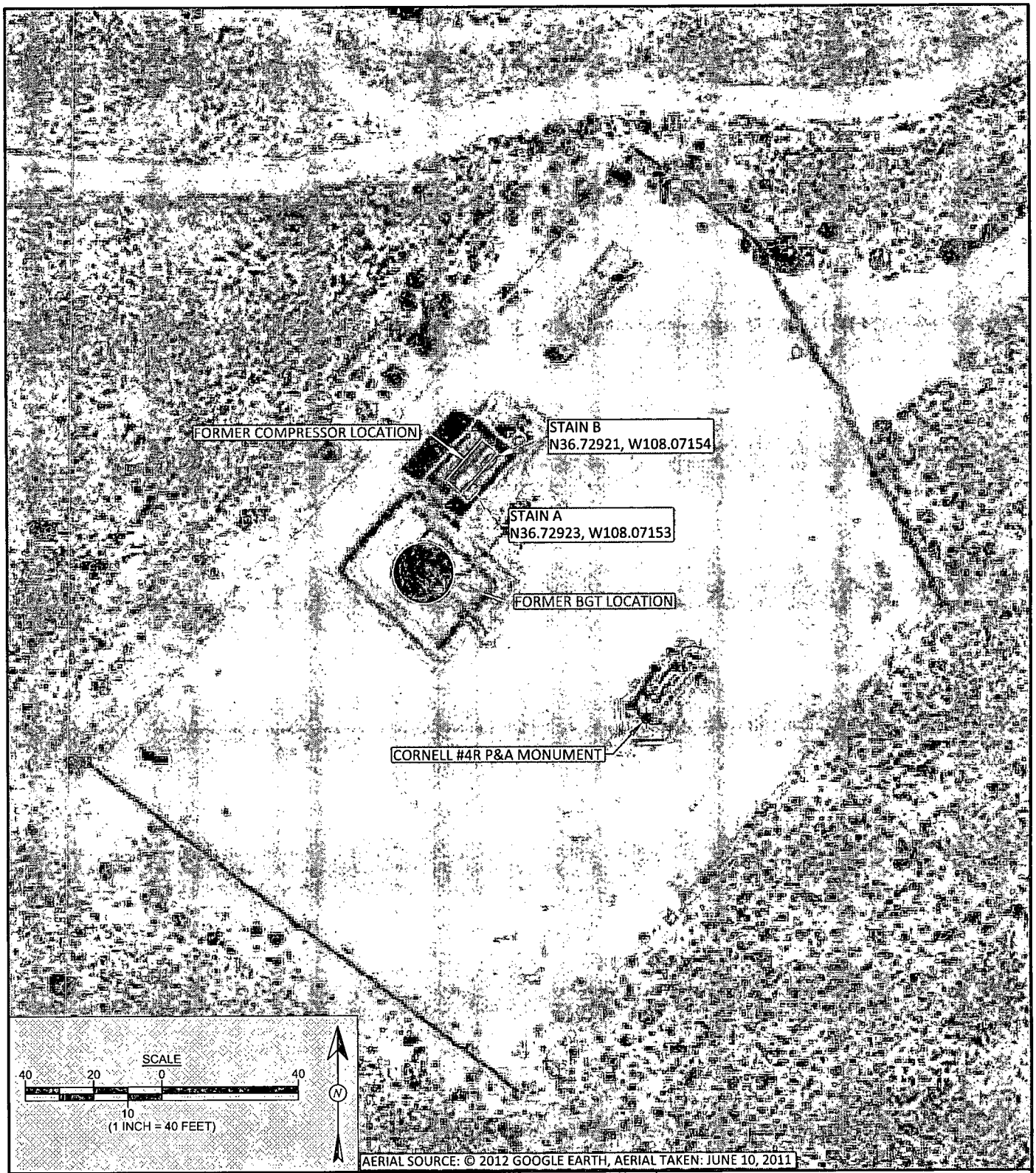
Figure 1. Topographic Site Location Map
Figure 2. Aerial Site Map, December 2012
Figure 3. Initial Assessment Sample Locations and Results, December 2012
Figure 4. Final Excavation Sample Locations and Results, January 2013
AES Field Screening Report 120712
AES Field Screening Report 010813
Hall Laboratory Analytical Report 1301228 (Waste Characterization)

R:\Animas 2000\Dropbox\2013 Projects\ConocoPhillips\Cornell #4R Assessment\Cornell #4R Release Assessment Report022513.docx



Animas Environmental Services, LLC

DRAWN BY: C. Lameman	**DATE DRAWN:** December 7, 2012	**FIGURE 1**
REVISIONS BY: C. Lameman	**DATE REVISED:** December 7, 2012	**TOPOGRAPHIC SITE LOCATION MAP**
CHECKED BY: D. Watson	**DATE CHECKED:** December 7, 2012	ConocoPhillips CORNELL #4R SAN JUAN COUNTY, NEW MEXICO
APPROVED BY: E. McNally	**DATE APPROVED:** December 7, 2012	SE¼ NW¼, SECTION 14, T29N, R12W N36.72902, W108.07137



Animas Environmental Services, LLC

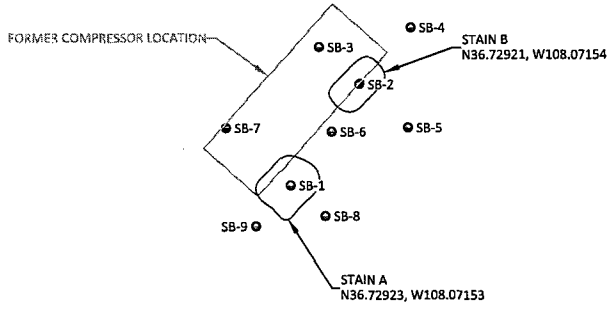
DRAWN BY: C. Lameman	**DATE DRAWN:** December 7, 2012
REVISIONS BY: C. Lameman	**DATE REVISED:** December 7, 2012
CHECKED BY: D. Watson	**DATE CHECKED:** December 7, 2012
APPROVED BY: E. McNally	**DATE APPROVED:** December 7, 2012

FIGURE 2

AERIAL SITE MAP
DECEMBER 2012
ConocoPhillips
CORNELL #4R
SAN JUAN COUNTY, NEW MEXICO
SE¼ NW¼, SECTION 14, T29N, R12W
N36.72902, W108.07137

FIGURE 3

INITIAL ASSESSMENT SAMPLE LOCATIONS AND RESULTS
DECEMBER 2012
ConocoPhillips
CORNELL #4R
SAN JUAN COUNTY, NEW MEXICO
SE¼ NW¼, SECTION 14, T29N, R12W
N36.72902, W108.07137



Field Screening Results				
Sample ID	*Date*	*Depth (ft)*	*OVM-PID (ppm)*	*TPH (mg/kg)*
NMOCD ACTION LEVEL			*100*	*100*
SB-1	12/7/12	0.5	3.1	**265**
		2	2.1	**118**
		5	0.6	33.6
SB-2	12/7/12	0.5	3.9	**1,630**
		2	4.1	**429**
		5	4.3	**1,170**
		6.5	3.4	**223**
SB-3	12/7/12	0.5	5.7	28.2
		2	3.7	20.2
		5	5.0	30.9
SB-4	12/7/12	0.5	5.3	45.6
		2	1.8	26.9
		5	3.3	29.5
SB-5	12/7/12	3	2.9	*NA*
		6.5	1.8	34.9
SB-6	12/7/12	3	1.6	*NA*
		6.5	4.0	64.4
SB-7	12/7/12	3	2.6	*NA*
		6.5	3.1	36.2
SB-8	12/7/12	0.5	1.3	*NA*
		3	2.4	*NA*
		6.5	1.0	34.9
SB-9	12/7/12	0.5	4.3	*NA*
		3	2.0	*NA*
		6.5	1.4	28.2
NA - NOT ANALYZED				

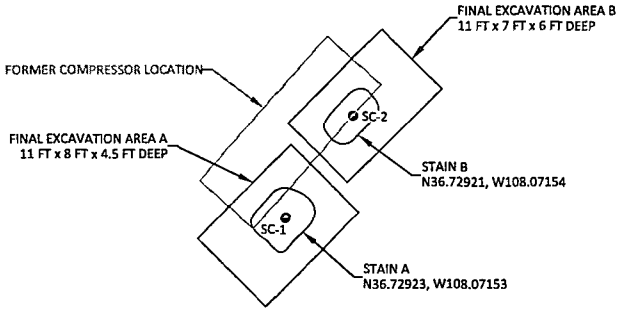
Animas Environmental Services, LLC

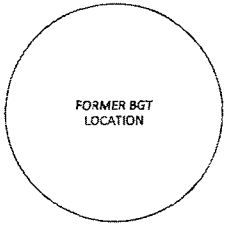
DRAWN BY: C. Lameman	**DATE DRAWN:** December 11, 2012
REVISIONS BY: C. Lameman	**DATE REVISED:** December 11, 2012
CHECKED BY: D. Watson	**DATE CHECKED:** December 11, 2012
APPROVED BY: E. McNally	**DATE APPROVED:** December 11, 2012

LEGEND

SB-1 SAMPLE LOCATIONS

SCALE
10 6 0 10
2
(1 INCH = 10 FEET)





Field Screening Results				
Sample ID	Date	Depth (ft)	OVM-PID (ppm)	TPH (mg/kg)
NMOCD ACTION LEVEL			100	100
SC-1	1/8/13	1 to 4.5	0.1	<20.0
SC-2	1/8/13	1 to 6	0.0	<20.0
SC-1 AND SC-2 WERE COMPOSITE SAMPLES FROM THE FOUR WALLS AND BASE OF EACH EXCAVATION.				

CORNELL #4R P&A MONUMENT

FIGURE 4

FINAL EXCAVATION SAMPLE LOCATIONS AND RESULTS
JANUARY 2013
ConocoPhillips
CORNELL #4R
SAN JUAN COUNTY, NEW MEXICO
SE¼ NW¼, SECTION 14, T29N, R12W
N36.72902, W108.07137

Animas Environmental Services, LLC

DRAWN BY:	DATE DRAWN:
C. Lameman	February 20, 2013
REVISIONS BY:	**DATE REVISED:**
C. Lameman	February 20, 2013
CHECKED BY:	**DATE CHECKED:**
D. Watson	February 20, 2013
APPROVED BY:	**DATE APPROVED:**
E. McNally	February 20, 2013

LEGEND

SAMPLE LOCATIONS

N

SCALE
10 6 0 10
2
(1 INCH = 10 FEET)

AES Field Screening Report

Animas Environmental Services, LLC
www.animasenvironmental.com
624 E. Comanche
Farmington, NM 87401
505-564-2281
Durango, Colorado
970-403-3084

Client: ConocoPhillips

Project Location: Cornell #4R

Date: 12/7/2012

Matrix: Soil

Sample ID	Collection Date	Collection Time	OVM (ppm)	Time of Sample Analysis	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SB-1 @ 0.5'	12/7/2012	11:03	3.1	11:31	265	20.0	1	CL
SB-1 @ 2'	12/7/2012	11:07	2.1	11:35	118	20.0	1	CL
SB-1 @ 5'	12/7/2012	11:12	0.6	11:39	33.6	20.0	1	CL
SB-2 @ 0.5'	12/7/2012	11:15	3.9	11:42	1,630	20.0	1	CL
SB-2 @ 2'	12/7/2012	11:19	4.1	11:46	429	20.0	1	CL
SB-2 @ 5'	12/7/2012	11:27	4.3	11:51	1,170	20.0	1	CL
SB-2 @ 6.5'	12/7/2012	12:05	3.4	12:36	223	20.0	1	CL
SB-3 @ 0.5'	12/7/2012	11:30	5.7	12:18	28.2	20.0	1	CL
SB-3 @ 2'	12/7/2012	11:34	3.7	12:21	20.2	20.0	1	CL
SB-3 @ 5'	12/7/2012	11:39	5.0	12:24	30.9	20.0	1	CL
SB-4 @ 0.5'	12/7/2012	11:42	5.3	12:27	45.6	20.0	1	CL
SB-4 @ 2'	12/7/2012	11:47	1.8	12:30	26.9	20.0	1	CL
SB-4 @ 5'	12/7/2012	11:54	3.3	12:33	29.5	20.0	1	CL
SB-5 @ 3'	12/7/2012	12:15	2.9	*Not Analyzed for TPH*				
SB-5 @ 6.5'	12/7/2012	12:20	1.8	13:10	34.9	20.0	1	CL
SB-6 @ 3'	12/7/2012	12:22	1.6	*Not Analyzed for TPH*				
SB-6 @ 6.5'	12/7/2012	12:32	4.0	13:14	64.4	20.0	1	CL
SB-7 @ 3'	12/7/2012	12:35	2.6	*Not Analyzed for TPH*				
SB-7 @ 6.5'	12/7/2012	12:38	3.1	13:17	36.2	20.0	1	CL
SB-8 @ 0.5'	12/7/2012	12:40	1.3	*Not Analyzed for TPH*				
SB-8 @ 3'	12/7/2012	12:42	2.4	*Not Analyzed for TPH*				
SB-8 @ 6.5'	12/7/2012	12:44	1.0	13:37	34.9	20.0	1	CL

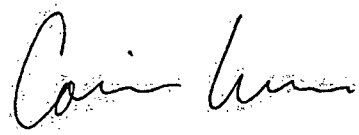
Report Finalized: 12/07/12

Sample ID	Collection Date	Collection Time	OVM (ppm)	Time of Sample Analysis	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SB-9 @ 0.5	12/7/2012	12:45	4.3	*Not Analyzed for TPH*				
SB-9 @ 3'	12/7/2012	12:48	2.0	*Not Analyzed for TPH*				
SB-9 @ 6.5'	12/7/2012	12:55	1.4	13:40	28.2	20.0	1	CL

Total Petroleum Hydrocarbons - USEPA 418.1

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

Analyst:



AES Field Screening Report

Animas Environmental Services, LLC
www.animasenvironmental.com
624 E. Comanche
Farmington, NM 87401
505-564-2281
Durango, Colorado
970-403-3084

Client: ConocoPhillips

Project Location: Cornell #4R

Date: 1/8/2013

Matrix: Soil

Sample ID	Collection Date	Collection Time	Sample Location	OVM (ppm)	Time of Sample Analysis	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SC-1	1/8/2013	9:40	Area A	0.1	9:57	<20.0	20.0	1	KC
SC-2	1/8/2013	10:15	Area B	0.0	10:35	<20.0	20.0	1	KC

Total Petroleum Hydrocarbons - USEPA 418.1

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

Analyst: Kelsey Christensen

Report Finalized: 01/08/13

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

January 15, 2013

Debbie Watson

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

RE: CoP Cornell #4R OrderNo.: 1301228

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 1/9/2013 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 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 **1301228**
Date Reported: **1/15/2013**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: Stockpile
Project: CoP Cornell #4R
Collection Date: 1/8/2013 10:40:00 AM
Lab ID: 1301228-001 **Matrix:** SOIL **Received Date:** 1/9/2013 10:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
MERCURY, TCLP						Analyst: **TMG**
Mercury	ND	0.020		mg/L	1	1/11/2013 11:52:20 AM
EPA METHOD 6010B: TCLP METALS						Analyst: **JLF**
Arsenic	ND	5.0		mg/L	1	1/14/2013 4:37:26 PM
Barium	ND	100		mg/L	1	1/14/2013 4:37:26 PM
Cadmium	ND	1.0		mg/L	1	1/14/2013 4:37:26 PM
Chromium	ND	5.0		mg/L	1	1/14/2013 4:37:26 PM
Lead	ND	5.0		mg/L	1	1/14/2013 4:37:26 PM
Selenium	ND	1.0		mg/L	1	1/14/2013 4:37:26 PM
Silver	ND	5.0		mg/L	1	1/14/2013 4:37:26 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#: **1301228**

15-Jan-13

Client: Animas Environmental Services

Project: CoP Cornell #4R

Sample ID	**MB-5640**	SampType: **MBLK**			TestCode: **MERCURY, TCLP**					
Client ID:	**PBW**	Batch ID: **5640**			RunNo: **7999**					
Prep Date:	**1/11/2013**	Analysis Date: **1/11/2013**			SeqNo: **231483**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020								

Sample ID	**LCS-5640**	SampType: **LCS**			TestCode: **MERCURY, TCLP**					
Client ID:	**LCSW**	Batch ID: **5640**			RunNo: **7999**					
Prep Date:	**1/11/2013**	Analysis Date: **1/11/2013**			SeqNo: **231484**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020	0.005000	0	101	80	120			

Sample ID	**1301217-001AMS**	SampType: **MS**			TestCode: **MERCURY, TCLP**					
Client ID:	**BatchQC**	Batch ID: **5640**			RunNo: **7999**					
Prep Date:	**1/11/2013**	Analysis Date: **1/11/2013**			SeqNo: **231486**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020	0.005000	0	99.4	75	125			

Sample ID	**1301217-001AMSD**	SampType: **MSD**			TestCode: **MERCURY, TCLP**					
Client ID:	**BatchQC**	Batch ID: **5640**			RunNo: **7999**					
Prep Date:	**1/11/2013**	Analysis Date: **1/11/2013**			SeqNo: **231487**		Units: **mg/L**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020	0.005000	0	99.5	75	125	0	20	

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#: **1301228**

15-Jan-13

Client: Animas Environmental Services

Project: CoP Cornell #4R

Sample ID	MB-5659	SampType:	MBLK	TestCode:	EPA Method 6010B: TCLP Metals				
Client ID:	PBW	Batch ID:	5659	RunNo:	8036				
Prep Date:	1/14/2013	Analysis Date:	1/14/2013	SeqNo:	232462	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	5.0								
Barium	ND	100								
Cadmium	ND	1.0								
Chromium	ND	5.0								
Lead	ND	5.0								
Selenium	ND	1.0								
Silver	ND	5.0								

Sample ID	LCS-5659	SampType:	LCS	TestCode:	EPA Method 6010B: TCLP Metals				
Client ID:	LCSW	Batch ID:	5659	RunNo:	8036				
Prep Date:	1/14/2013	Analysis Date:	1/14/2013	SeqNo:	232463	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	5.0	0.5000	0.01310	108	80	120			
Barium	ND	100	0.5000	0	101	80	120			
Cadmium	ND	1.0	0.5000	0	106	80	120			
Chromium	ND	5.0	0.5000	0	98.9	80	120			
Lead	ND	5.0	0.5000	0	99.5	80	120			
Selenium	ND	1.0	0.5000	0	110	80	120			
Silver	*ND*	*5.0*	*0.1000*	*0.0007900*	*104*	*80*	*120*			

Sample ID	1301312-001AMS	SampType:	MS	TestCode:	EPA Method 6010B: TCLP Metals				
Client ID:	BatchQC	Batch ID:	5659	RunNo:	8036				
Prep Date:	1/14/2013	Analysis Date:	1/14/2013	SeqNo:	232468	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	5.0	0.5000	0	107	75	125			
Cadmium	ND	1.0	0.5000	0.001660	104	75	125			
Chromium	ND	5.0	0.5000	0	97.7	75	125			
Lead	ND	5.0	0.5000	0.003730	99.3	75	125			

Sample ID	1301312-001AMSD	SampType:	MSD	TestCode:	EPA Method 6010B: TCLP Metals				
Client ID:	BatchQC	Batch ID:	5659	RunNo:	8036				
Prep Date:	1/14/2013	Analysis Date:	1/14/2013	SeqNo:	232469	Units:	mg/L		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	5.0	0.5000	0	107	75	125	0	20	
Cadmium	ND	1.0	0.5000	0.001660	104	75	125	0	20	
Chromium	ND	5.0	0.5000	0	97.4	75	125	0	20	
Lead	ND	5.0	0.5000	0.003730	98.8	75	125	0	20	

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

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

Sample Log-In Check List

Client Name: Animas Environmental

Work Order Number: 1301228

Received by/date: 01/09/13

Logged By: Ashley Gallegos 1/9/2013 10:43:00 AM

Completed By: Ashley Gallegos 1/9/2013 10:53:06 AM

Reviewed By:

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	# of preserved bottles checked for pH:
14. Are matrices correctly identified on Chain of Custody?	Yes ✓	No	(<2 or >12 unless noted)
15. Is it clear what analyses were requested?	Yes ✓	No	Adjusted?
16. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ✓	No	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	1.0	Good	Yes			

Chain-of-Custody Record

Client: Animas Environmental Services

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: 01/09/13
☒ Standard ☒ Rush Per DW

Project Name: CoP Cornell #4R

Project #:

Project Manager: DWatson

Sampler: D Watson

On Ice: ☒ Yes ☐ No

Sample Temperature: 0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1301238
1-8-13	1040	soil	Stockpile	2-4oz	—	-001

Analysis Request

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals TCLP	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
						X									

Date:	Time:	Relinquished by:	Received by:	Date	Time
1/8/13	1738	Debra Watson	Christine Walters	1/8/13	1738
1/8/13	1757	Christine Walters		01/09/13	10:43

Remarks: Bill to ConocoPhillips

Per DW Rush analysis @ 01/09/13

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.