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: **Marx Federal 1M**	Facility Type: **Gas Well**

Surface Owner **BLM**	Mineral Owner **BLM (SF-078138)**	API No.**30-045-33924**

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	**20**	**30N**	**11W**	**945**	**South**	**1470**	**West**	**San Juan**

Latitude 36.7931 Longitude 108.01733

NATURE OF RELEASE

Type of Release **Produced Water/Hydrocarbon**	Volume of Release **60bbls/2bbls**	Volume Recovered **59bbls/1bbl**
Source of Release **Production Pit**	Date and Hour of Occurrence **Unknown**	Date and Hour of Discovery **9/5/2013 at 11:00AM**
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? **Shari Ketcham (BLM) & Jonathan Kelly (OCD)**	
By Whom? **Crystal Tafoya**	Date and Hour **9/6/2013 at 8:03AM**	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

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

RCVD MAR 11 '14
OIL CONS. DIV.
DIST. 3

Describe Cause of Problem and Remedial Action Taken.*
Discovered corrosion hole in production pit allowing 62bbls of produced water and hydrocarbon to be released into secondary containment. Immediately shut-in the well and dispatched a water truck. Recovered 59bbls of produced water and 1bbls of hydrocarbon.

Describe Area Affected and Cleanup Action Taken.*
NMOCD action levels for releases are specified in NMOCD's Guidelines for Leaks, Spills and Releases and the release was asssigned a ranking score of 20. Samples were above regulatory standards. An excavation was performed and measured 25' X 25' X 8'. Historic impacted soil was encountered during facility re-set and an excavation was performed and was 28' X 25' X 7'. Confirmation sampling occurred and analytical results were below regulatory standards set forth; 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 Tafoya	OIL CONSERVATION DIVISION Approved by Environmental Specialist:
Printed Name: **Crystal Tafoya**	
Title: **Field Environmental Specialist**	Approval Date: 5/7/14 Expiration Date:
E-mail Address: crystal.tafoya@conocophillips.com	Conditions of Approval: TPH Sample Req After 4/4/14 Attached ☐
Date: 3/10/2014 Phone: (505) 326-9837	

#NCS 1412731025

24

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

March 5, 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

RE: Initial Release Assessment and Final Excavation Report
Marx Federal #1M
San Juan County, New Mexico

Dear Ms. Tafoya:

On September 30 and October 1, 2013, Animas Environmental Services, LLC (AES) completed an initial release assessment and environmental clearance of the final excavation limits of two releases at the ConocoPhillips (CoP) Marx Federal #1M, located in San Juan County, New Mexico. The release at the production tank consisted of approximately 62 barrels (bbls) of produced water and hydrocarbons, of which approximately 59 bbls of produced water and 1 bbl of hydrocarbons were recovered. A historic release was also discovered below the onsite below grade tank (BGT) during facility reset activities. The initial release assessment was completed by AES on September 30, 2013, and the final excavation was completed by CoP contractors while AES was on location on October 1, 2013.

1.0 Site Information

1.1 Location

Location – SE¼ SW¼, Section 20, T30N, R11W, San Juan County, New Mexico
Well Head Latitude/Longitude – N36.79310 and W108.01794, respectively
Production Tank Release Location Latitude/Longitude – N36.79334 and W108.01777, respectively
BGT Release Location Latitude/Longitude – N36.79325 and W108.01772, respectively
Land Jurisdiction – Bureau of Land Management
Figure 1. Topographic Site Location Map
Figure 2. Aerial Site Map, September 2013

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 location was given a ranking score of 20 based on the following factors:

- **Depth to Groundwater:** A Pit or Below-Grade Tank Registration or Closure (C-144) form dated October 2007 estimated the depth to groundwater at the site at between 50 and 99 feet below ground surface (bgs). (10 points)
- **Wellhead Protection Area:** The release location is not within a wellhead protection area. (0 points)
- **Distance to Surface Water Body:** Cook Arroyo is located approximately 880 feet north-northwest of the location and ultimately discharges to the Animas River. (10 points)

1.3 Assessment

AES was initially contacted by Crystal Tafoya of CoP on September 9, 2013, and on September 30, 2013, Heather Woods and Stephanie Lynn of AES completed the release assessment field work. The assessment included collection and field screening of eight soil samples from in and around the release areas. Based on the field screening results, AES recommended further excavation of the release areas. Sample locations are presented on Figure 3.

On October 1, 2013, AES personnel returned to the location to collect confirmation soil samples of the excavation. The field screening activities included collection of nine confirmation soil samples. Soil samples SC-2 through SC-4 were collected from the sidewalls and base of the BGT excavation, and soil samples SC-5 through SC-10 were collected from the sidewalls and base of the production tank excavation. The area of the final excavation was approximately 25 feet by 25 feet by 8 feet in depth at the BGT release location, and the excavation at the production tank release location measured 28 feet by 25 feet by 5.5 to 7 feet in depth. Sample locations and final excavation extents are shown on Figure 4.

2.0 Soil Sampling

A total of seven soil samples (TH-1, and S-1 through S-5) and ten composite samples (SC-1 through SC-10) 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). Composite samples SC-1 and SC-4 were field screened for chloride. One composite sample (SC-4) collected during the

excavation clearance was submitted for confirmation laboratory analysis, and a waste characterization sample was also 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 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 samples SC-1 and SC-4 were 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 sample collected for laboratory analysis was placed into a new, clean, laboratory-supplied container, which was then labeled, placed on ice, and logged onto a sample chain of custody record. The sample was maintained on ice until delivery to the analytical laboratory, Hall Environmental Analysis Laboratory (Hall) in Albuquerque, New Mexico. Soil sample SC-4 was laboratory analyzed for:

- Chlorides per USEPA Method 300.0.

2.3 Field Screening and Laboratory Analytical Results

On September 30, 2013, initial assessment field screening results for VOCs via OVM showed concentrations ranging from 0.0 ppm in TH-1, S-1 through S-3, and S-5 up to 484 ppm in S-4. Field TPH concentrations ranged from 42.6 mg/kg in TH-1 up to 786 mg/kg in S-1. The field chloride concentration in SC-1 was 120 mg/kg.

On October 1, 2013, final excavation field screening results for VOCs via OVM were reported and ranged from 0.0 ppm in SC-2 through SC-4 and SC-7 through SC-10 up to 4.6 ppm in SC-5. Field TPH concentrations ranged from 54.4 mg/kg in SC-3 up to 97.7 mg/kg in SC-5 and SC-9. The field chloride concentration in SC-4 was 60 mg/kg. Results are

included below in Table 1 and on Figure 3. The AES Field Screening Reports are attached.

Table 1. Field Screening VOCs and TPH Results
Marx Federal #1M Initial Release Assessment and Final Excavation,
September and October 2013

Sample ID	***Date Sampled***	***Sample Depth (ft bgs)***	***VOCs via OVM (ppm)***	***Field TPH (mg/kg)***
	*NMOCD Action Level**		*100*	*100*
TH-1	9/30/13	5	9.5	49.2
		7	0.0	42.6
SC-1	9/30/13	5.5	15.8	**326**
S-1	9/30/13	Surface	0.0	**786**
S-2	9/30/13	Surface	0.0	NA
S-3	9/30/13	Surface	0.0	**155**
S-4	9/30/13	Surface	**484**	**717**
S-5	9/30/13	0.5	0.0	**235**
SC-2	10/1/13	1 to 8	0.0	93.8
SC-3	10/1/13	1 to 8	0.0	54.4
SC-4	10/1/13	8	0.0	79.4
SC-5	10/1/13	1 to 7	4.6	97.7
SC-6	10/1/13	1 to 5.5	2.5	68.9
SC-7	10/1/13	5.5 to 7	0.0	96.4
SC-8	10/1/13	1 to 5.5	0.0	92.5
SC-9	10/1/13	1 to 7	0.0	97.7
SC-10	10/1/13	1 to 7	0.0	95.1

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

Laboratory results for SC-4 reported a chloride concentration of 190 mg/kg. Results are presented in Table 2 and on Figure 4. The laboratory analytical report is attached.

Table 2. Laboratory Analytical Results – Chlorides
Marx Federal #1M Final Excavation, September and October, 2013

Sample ID	*Date*	*Depth (ft)*	*Chlorides (mg/kg)*
*NMOCD Action Level**			*NE*
SC-4	10/1/13	8	190

NE – not established; 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 September 30, 2013, AES conducted assessment of hydrocarbon impacted soils associated with a produced water and hydrocarbon release from the production tank and a historic release discovered below the onsite BGT at the Marx Federal #1M. 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 20. Initial field screening results above the NMOCD action level of 100 ppm VOCs were reported in S-4 with 484 ppm. Field screening results above the NMOCD action level of 100 mg/kg TPH were reported in SC-1, S-1, S-3, S-4, and S-5, with the highest TPH concentration reported in S-1 with 786 mg/kg.

On October 1, 2013, final clearance of the excavation areas was completed. Field screening results of the excavation extents showed that VOC and TPH concentrations were below applicable NMOCD action levels for the final walls and base of both the production tank and BGT excavations. Laboratory analytical results reported a chloride concentration in SC-4 of 190 mg/kg.

Based on final field screening and laboratory analytical results of the excavation of petroleum contaminated soils at the Marx Federal #1M, VOC and TPH concentrations were below applicable NMOCD action levels for each excavation. No further work is recommended.

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

Sincerely,

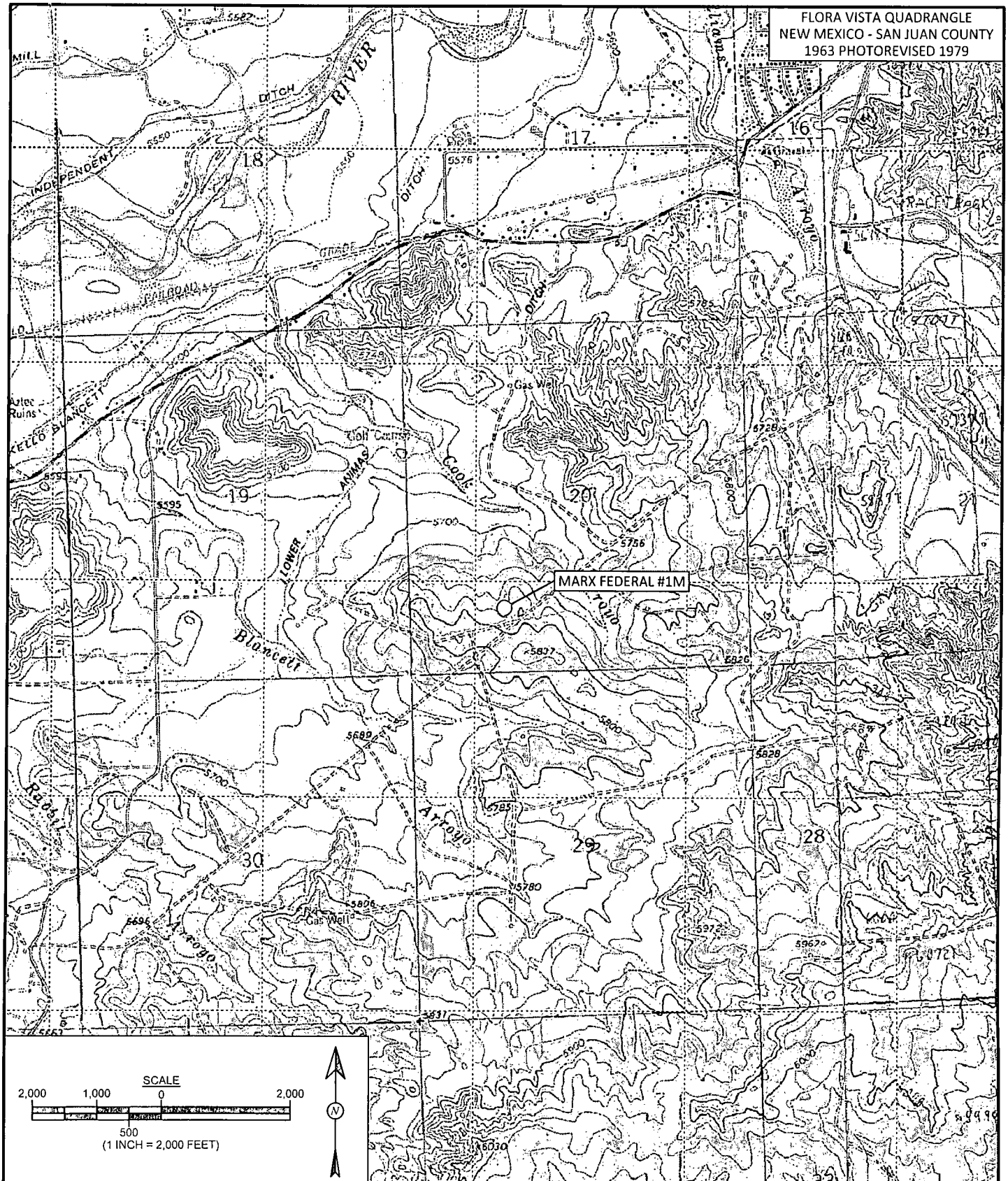
Deborah Watson, P.G.
Project Manager

Elizabeth McNally, PE

Attachments:

- Figure 1. Topographic Site Location Map
- Figure 2. Aerial Site Map, September 2013
- Figure 3. Initial Assessment Sample Locations and Results, September 2013
- Figure 4. Final Excavation Sample Locations and Results, October 2013
- AES Field Screening Report 093013
- AES Field Screening Report 100113
- Hall Laboratory Analytical Report 1310002
- Hall Laboratory Analytical Report 1310190

R:\Animas 2000\Dropbox\0000 Animas Server Dropbox EM\2014 Projects\ConocoPhillips\Marx Federal #1M\Marx Federal #1M Initial Release Assessment and Final Excavation Report 030514.docx



Animas Environmental Services, LLC	**DRAWN BY:** S. Glasses	**DATE DRAWN:** December 12, 2013	**FIGURE 1**
	REVISIONS BY: C. Lameman	**DATE REVISED:** February 27, 2014	**TOPOGRAPHIC SITE LOCATION MAP** ConocoPhillips MARX FEDERAL #1M SE¼ SW¼, SECTION 20, T30N, R11W SAN JUAN COUNTY, NEW MEXICO N36.79310, W108.01794
	CHECKED BY: D. Watson	**DATE CHECKED:** February 27, 2014	
	APPROVED BY: E. McNally	**DATE APPROVED:** February 27, 2014	

Animas Environmental Services, LLC

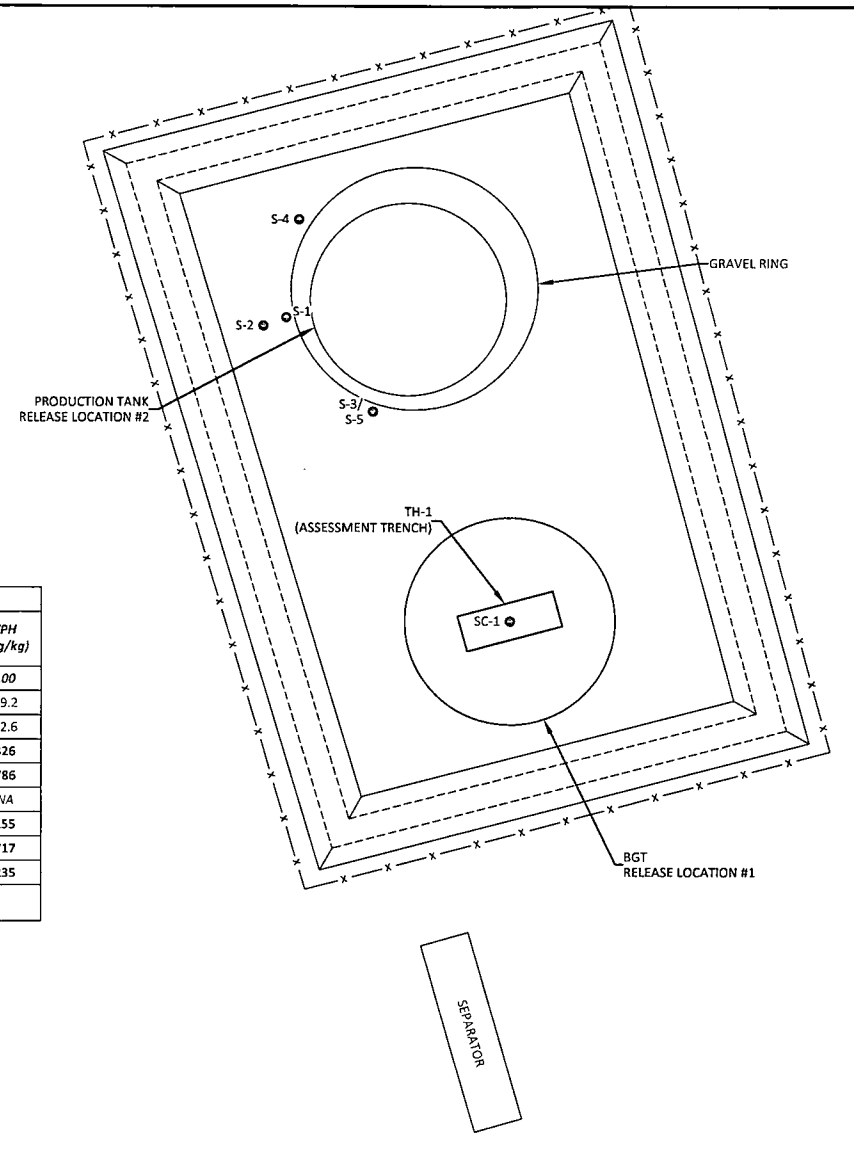
DRAWN BY: S. Glasses	**DATE DRAWN:** December 12, 2013
REVISIONS BY: C. Lameman	**DATE REVISED:** February 27, 2014
CHECKED BY: D. Watson	**DATE CHECKED:** February 27, 2014
APPROVED BY: E. McNally	**DATE APPROVED:** February 27, 2014

FIGURE 2

AERIAL SITE MAP
SEPTEMBER 2013
ConocoPhillips
MARX FEDERAL #1M
SE¼ SW¼, SECTION 20, T30N, R11W
SAN JUAN COUNTY, NEW MEXICO
N36.79310, W108.01794

FIGURE 3

INITIAL ASSESSMENT SAMPLE LOCATIONS AND RESULTS
SEPTEMBER 2013
ConocoPhillips
MARX FEDERAL #1M
SE¼ SW¼, SECTION 20, T30N, R11W
SAN JUAN COUNTY, NEW MEXICO
N36.79310, W108.01794



Field Screening Results				
Sample ID	*Date*	*Depth (ft)*	*OVM-PID (ppm)*	*TPH (mg/kg)*
NMOCD ACTION LEVEL			*100*	*100*
TH-1	9/30/13	5	9.5	49.2
	9/30/13	7	0.0	42.6
SC-1	9/30/13	5.5	15.8	**326**
S-1	9/30/13	Surface	0.0	**786**
S-2	9/30/13	Surface	0.0	*NA*
S-3	9/30/13	Surface	0.0	**155**
S-4	9/30/13	Surface	**484**	**717**
S-5	9/30/13	0.5	0.0	**235**
SC-1 WAS A 5-POINT COMPOSITE OF THE BGT BASE.				

Animas Environmental Services, LLC

DRAWN BY: C. Lameman	**DATE DRAWN:** January 3, 2014
REVISIONS BY: C. Lameman	**DATE REVISED:** February 27, 2014
CHECKED BY: D. Watson	**DATE CHECKED:** February 27, 2014
APPROVED BY: E. McNally	**DATE APPROVED:** February 27, 2014

LEGEND

- SAMPLE LOCATIONS
- SECONDARY CONTAINMENT BERM
- —x— FENCE

N

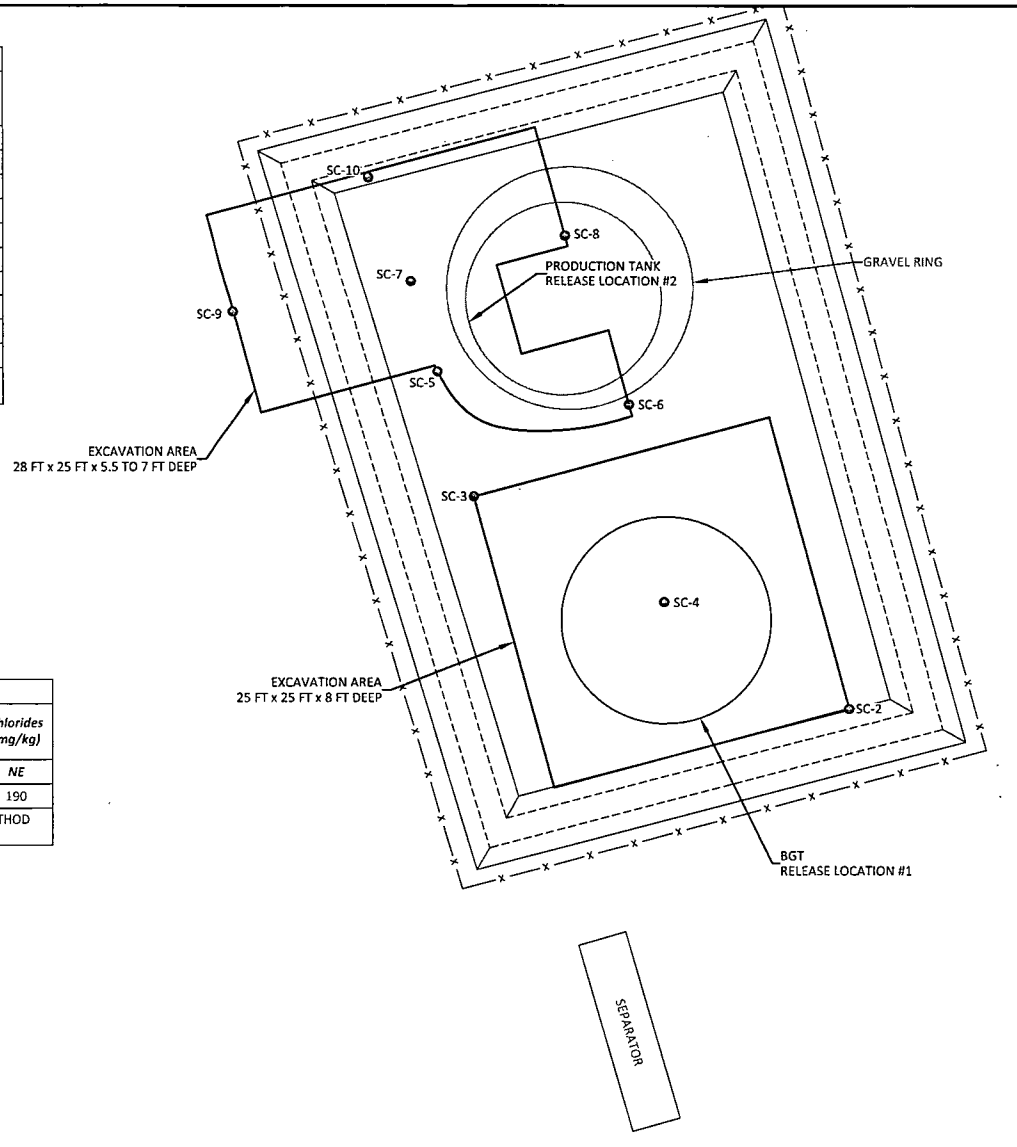
SCALE
10 6 0 10
2
(1 INCH = 10 FEET)

FIGURE 4

FINAL EXCAVATION SAMPLE LOCATIONS AND RESULTS
OCTOBER 2013
ConocoPhillips
MARX FEDERAL #1M
SE¼ SW¼, SECTION 20, T30N, R11W
SAN JUAN COUNTY, NEW MEXICO
N36.79310, W108.01794

Field Screening Results				
Sample ID	Date	Depth (ft)	OVM-PID (ppm)	TPH (mg/kg)
NMOCD ACTION LEVEL			100	100
SC-2	10/1/13	1 to 8	0.0	93.8
SC-3	10/1/13	1 to 8	0.0	54.4
SC-4	10/1/13	8	0.0	79.4
SC-5	10/1/13	1 to 7	4.6	97.7
SC-6	10/1/13	1 to 5.5	2.5	68.9
SC-7	10/1/13	5.5 to 7	0.0	96.4
SC-8	10/1/13	1 to 5.5	0.0	92.5
SC-9	10/1/13	1 to 7	0.0	97.7
SC-10	10/1/13	1 to 7	0.0	95.1
ALL SAMPLES WERE COMPOSITE SAMPLES				

Laboratory Analytical Results			
Sample ID	Date	Depth (ft)	Chlorides (mg/kg)
NMOCD ACTION LEVEL			NE
SC-4	10/1/13	8	190
ALL SAMPLES WERE ANALYZED PER EPA METHOD 300.0. NE - NOT ESTABLISHED			



Animas Environmental Services, LLC

DRAWN BY: C. Lameman	DATE DRAWN: January 3, 2014
REVISIONS BY: S. Glasses	DATE REVISED: March 5, 2014
CHECKED BY: D. Watson	DATE CHECKED: March 5, 2014
APPROVED BY: E. McNally	DATE APPROVED: March 5, 2014

LEGEND

- SAMPLE LOCATIONS
- SECONDARY CONTAINMENT BERM
- —x— FENCE

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: Marx Federal #1M
Date: 9/30/2013
Matrix: Soil

Sample ID	Collection Date	Time of Sample Collection	OVM (ppm)	Chlorides (mg/kg)	Field TPH Analysis Time	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
BGT									
TH-1 @ 5'	9/30/2013	10:40	9.5	NA	11:01	49.2	20.0	1	HMW
TH-1 @ 7'	9/30/2013	10:41	0.0	NA	11:03	42.6	20.0	1	HMW
SC-1	9/30/2013	12:06	15.8	120	12:20	326	20.0	1	HMW
Production Tank									
S-1	9/30/2013	11:20	0.0	NA	11:35	786	20.0	1	HMW
S-2	9/30/2013	12:50	0.0	NA	*Not Analyzed for TPH*				
S-3	9/30/2013	12:51	0.0	NA	13:22	155	20.0	1	HMW
S-4	9/30/2013	12:52	484	NA	13:25	717	20.0	1	HMW
S-5 @ 0.5'	9/30/2013	12:54	0.0	NA	13:28	235	40.0	1	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.*

Field Chloride - Quantab Chloride Titrators or Drop Count Titration with Silver Nitrate
Total Petroleum Hydrocarbons - USEPA 418.1

Analyst: Heather M Woods

Report Finalized: 9/30/13

AES Field Screening Report

Client: ConocoPhillips
Project Location: Marx Federal # 1M
Date: 10/1/2013
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	OVM (ppm)	Chlorides (mg/kg)	Field TPH Analysis Time	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
BGT										
SC-2	10/1/2013	10:40	S and E Walls	0.0	NA	11:11	93.8	20.0	1	HMW
SC-3	10/1/2013	10:45	N and W Walls	0.0	NA	11:14	54.4	20.0	1	HMW
SC-4	10/1/2013	10:50	Base	0.0	60.0	11:16	79.4	20.0	1	HMW
Production Tank										
SC-5	10/1/2013	15:45	South Wall	4.6	NA	16:09	97.7	20.0	1	HMW
SC-6	10/1/2013	15:47	East Wall	2.5	NA	16:12	68.9	20.0	1	HMW
SC-7	10/1/2013	16:30	Base	0.0	NA	16:49	96.4	20.0	1	HMW
SC-8	10/1/2013	16:43	East Wall	0.0	NA	17:24	92.5	20.0	1	HMW
SC-9	10/1/2013	17:38	West Wall	0.0	NA	17:48	97.7	20.0	1	HMW
SC-10	10/1/2013	17:09	North Wall	0.0	NA	17:30	95.1	20.0	1	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.*

Field Chloride - Quantab Chloride Titrators or Drop Count Titration with Silver Nitrate
Total Petroleum Hydrocarbons - USEPA 418.1

Analyst: Heather M. Woods

Report Finalized: 10/1/13

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

October 04, 2013

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

RE: CoP Marx Federal #1M OrderNo.: 1310002

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 10/1/2013 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. 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

Analytical Report
Lab Order **1310002**
Date Reported: **10/4/2013**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental
Project: CoP Marx Federal #1M
Lab ID: 1310002-001
Matrix: SOIL

Client Sample ID: S-1
Collection Date: 9/30/2013 11:20:00 AM
Received Date: 10/1/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
MERCURY, TCLP						Analyst: **TES**	
Mercury	ND	0.020		mg/L	1	10/3/2013 3:21:53 PM	9621
EPA METHOD 6010B: TCLP METALS						Analyst: **ELS**	
Arsenic	ND	5.0		mg/L	1	10/3/2013 4:42:29 PM	9625
Barium	ND	100		mg/L	1	10/3/2013 4:42:29 PM	9625
Cadmium	ND	1.0		mg/L	1	10/3/2013 4:42:29 PM	9625
Chromium	ND	5.0		mg/L	1	10/3/2013 4:42:29 PM	9625
Lead	ND	5.0		mg/L	1	10/3/2013 4:42:29 PM	9625
Selenium	ND	1.0		mg/L	1	10/3/2013 4:42:29 PM	9625
Silver	ND	5.0		mg/L	1	10/3/2013 4:42:29 PM	9625

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#: **1310002**

04-Oct-13

Client: Animas Environmental

Project: CoP Marx Federal #1M

Sample ID	MB-9621	SampType:	MBLK		TestCode:	MERCURY, TCLP					
Client ID:	PBW	Batch ID:	9621		RunNo:	13846					
Prep Date:	10/2/2013	Analysis Date:	10/3/2013		SeqNo:	395733	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	ND	0.020									

Sample ID	LCS-9621	SampType:	LCS		TestCode:	MERCURY, TCLP					
Client ID:	LCSW	Batch ID:	9621		RunNo:	13846					
Prep Date:	10/2/2013	Analysis Date:	10/3/2013		SeqNo:	395734	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	1310002-001AMS	SampType:	MS		TestCode:	MERCURY, TCLP					
Client ID:	S-1	Batch ID:	9621		RunNo:	13846					
Prep Date:	10/2/2013	Analysis Date:	10/3/2013		SeqNo:	395737	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	ND	0.020	0.005000	0	100	75	125				

Sample ID	1310002-001AMSD	SampType:	MSD		TestCode:	MERCURY, TCLP					
Client ID:	S-1	Batch ID:	9621		RunNo:	13846					
Prep Date:	10/2/2013	Analysis Date:	10/3/2013		SeqNo:	395738	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	ND	0.020	0.005000	0	102	75	125	0	20		

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1310002**

04-Oct-13

Client: Animas Environmental

Project: CoP Marx Federal #1M

Sample ID **MB-9625**	SampType: **MBLK**	TestCode: **EPA Method 6010B: TCLP Metals**
Client ID: **PBW**	Batch ID: **9625**	RunNo: **13816**
Prep Date: **10/3/2013**	Analysis Date: **10/3/2013**	SeqNo: **394771** 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-9625**	SampType: **LCS**	TestCode: **EPA Method 6010B: TCLP Metals**
Client ID: **LCSW**	Batch ID: **9625**	RunNo: **13816**
Prep Date: **10/3/2013**	Analysis Date: **10/3/2013**	SeqNo: **394772** 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	80	120			
Barium	ND	100	0.5000	0	97.0	80	120			
Cadmium	ND	1.0	0.5000	0	102	80	120			
Chromium	ND	5.0	0.5000	0	95.4	80	120			
Lead	ND	5.0	0.5000	0	98.0	80	120			
Selenium	ND	1.0	0.5000	0	109	80	120			
Silver	ND	5.0	0.1000	0	90.6	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

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: 1310002 RcptNo: 1

Received by/date: 10/01/13

Logged By: Lindsay Mangin 10/1/2013 10:00:00 AM

Completed By: Lindsay Mangin 10/1/2013 10:28:36 AM

Reviewed By: 10/1/13

Chain of Custody

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

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
9. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
11. Were any sample containers received broken?	Yes ☐	No ☑	
12. Does paperwork match bottle labels? (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	1.0	Good	Yes			

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

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)

☐ Standard ☒ Rush ASAP

Project Name: Col Marx Federal #1M

Project #:

Project Manager: D. Watson

Sampler: H. Woods / S. Lynn

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1310002-	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)
9/30/13	1120	Soil	S-1	1-4oz	—	-001							X				

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/30/13	1736	Heather M. Woods	Christine Walker	9/30/13	1736
9/30/13	1757	Christine Walker		10/01/13	1000

Remarks: Bill to ConocoPhillips

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

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

October 10, 2013

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

RE: CoP Marx Federal #1M OrderNo.: 1310190

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 10/3/2013 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. 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

Analytical Report
Lab Order **1310190**
Date Reported: **10/10/2013**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental
Project: CoP Marx Federal #1M
Lab ID: 1310190-001 **Matrix:** SOIL

Client Sample ID: SC-4
Collection Date: 10/1/2013 10:50:00 AM
Received Date: 10/3/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	190	30		mg/Kg	20	10/7/2013 6:24:55 PM	9665

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1310190**

10-Oct-13

Client: Animas Environmental

Project: CoP Marx Federal #1M

Sample ID	**MB-9665**	SampType:	**MBLK**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**PBS**	Batch ID:	**9665**		RunNo:	**13905**				
Prep Date:	**10/7/2013**	Analysis Date:	**10/7/2013**		SeqNo:	**397291**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-9665**	SampType:	**LCS**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**LCSS**	Batch ID:	**9665**		RunNo:	**13905**				
Prep Date:	**10/7/2013**	Analysis Date:	**10/7/2013**		SeqNo:	**397292**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	96.7	90	110			

Qualifiers:

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

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: 1310190 | RcptNo: 1

Received by/date: LH 10/03/13

Logged By: Michelle Garcia 10/3/2013 10:00:00 AM Michelle Garcia

Completed By: Michelle Garcia 10/3/2013 11:25:37 AM Michelle Garcia

Reviewed By: AT 10/03/13

Chain of Custody

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

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
9. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
11. Were any sample containers received broken?	Yes ☐	No ☑	
12. Does paperwork match bottle labels? (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	1.0	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:

☒ Standard ☐ Rush _____

Project Name:

CoP Marx Federal #1M

Project #:

Project Manager:

D. Watson

Sampler: H. Woods

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

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. 1310903	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	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4) 300.0 Cl	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
10/1/13	1050	Soil	SC-4	1-4oz Jar	Non	-001								X								

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Date	Time
10/2/13	1720	Heather M. Woods	Christine Walker	10/2/13	1720
10/2/13	1800	Christine Walker		10/03/13	1000

Remarks: Bill to ConocoPhillips

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.