District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., 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 in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company **Burlington Resources, a Wholly Owned Subsidiary of ConocoPhillips Company**	Contact **Lisa Hunter**
Address **3401 East 30th Street, Farmington, NM 87402**	Telephone No. **505-326-9786**
Facility Name **Frontier C #1**	Facility Type **Gas Well**

Surface Owner **Federal**	Mineral Owner **Federal**	API No. **3004506585**

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	**16**	**27N**	**11W**	**890'**	**North**	**890'**	**West**	**San Juan**

Latitude 36.57993 Longitude -108.01453

NATURE OF RELEASE

Type of Release **Conventional/Produced Water**	Volume of Release **8 BBL**	Volume Recovered **0 BBL**
Source of Release **Tank**	Date and Hour of Occurrence **Unknown**	Date and Hour of Discovery **05-21-13 2:00 PM**
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	RCVD SEP 5 '13
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	OIL CONS. DIV. DIST. 3

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
During maintenance, a small leak was discovered on the welded area that attaches the manway to the tank, causing the release of 8 BBLs of Produced Water, in which zero BBls were recovered. Leak was plugged and tanker truck call to remove product from tank. Vacuum truck removed remaining product. Spill was contained within the Berm.

Describe Area Affected and Cleanup Action Taken.*
ConocoPhillips will replace tank, and will assess the soils to determine further action, if needed. **5/29/2013 - Soils were assessed and field and laboratory analytical results were below regulatory requirements. Stained soils removed and no further remediation is required.**

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:	OIL CONSERVATION DIVISION
Printed Name: **Lisa M. Hunter**	Approved by Environmental Specialist: Jonathan D. Kelly
Title: **Field Environmental Specialist**	Approval Date: 1/13/2014 Expiration Date:
E-mail Address: **Lisa.Hunter@cop.com**	Conditions of Approval: Rake crusting as needed when crusting develops. Attached ☐
Date: **August 29, 2013** Phone: **505-326-9786**	

* Attach Additional Sheets If Necessary

nJK1401341629

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

August 7, 2013

Lisa Hunter
ConocoPhillips
San Juan Business Unit
Office 214-4
5525 Hwy 64
Farmington, New Mexico 87401

Via electronic mail to: SJBUE-Team@ConocoPhillips.com

RE: Produced Water Release Report
Frontier C #1
San Juan County, New Mexico

Dear Ms. Hunter:

Animas Environmental Services, LLC (AES) is pleased to provide the final report associated with the 8 barrel (bbl) produced water release from a tank at the ConocoPhillips (CoP) Frontier C #1, located in San Juan County, New Mexico.

1.0 Site Information

1.1 Location

Site Name – Frontier C #1
Legal Description – NW¼ NW¼, Section 16, T27N, R11W, San Juan County, New Mexico
Well Latitude/Longitude – N36.58001 and W108.01519, respectively
Land Jurisdiction – Navajo Agricultural Products Industry (NAPI)
Figure 1. Topographic Site Location Map
Figure 2. Aerial Site Map, May 2013

1.2 NMOCD Ranking

The site is located within the boundaries of the Navajo Nation. Navajo Nation Environmental Protection Agency (NNEPA) adheres to action levels for releases and spills as established by the New Mexico Oil Conservation Division (NMOCD). Prior to site work, the New Mexico Oil Conservation Division (NMOCD) database was reviewed, and a Pit Remediation and Closure Report dated April 2003 for the Frontier C #1 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. The nearest surface waters are NAPI irrigation lines located approximately 2,600 feet southeast and 4,500 feet east of the location. Based on this information, the location was assessed a ranking score of 0 per *NMOCD Guidelines for Leaks, Spills, and Releases* (August 1993).

1.3 Release Assessment

AES was initially contacted by Lisa Hunter, CoP representative, on May 28, 2013, and on May 29, 2013, Deborah Watson and Jesse Christopherson of AES completed the field work. The release assessment included the collection of a total of 10 soil samples from 5 soil borings. One 5-point composite soil sample was also collected. Sample locations are presented on Figure 3.

2.0 Soil Sampling

On May 29, 2013, AES personnel collected a total of 10 soil samples from 5 soil borings each installed to a total depth of approximately 1 foot bgs. Additionally, one 5-point composite soil sample (SC-1) was collected from surface staining within the release area. The soil samples were field screened for volatile organic compounds (VOCs) and selected samples were also field screened for total petroleum hydrocarbons (TPH). Soil sample SC-1 was submitted for confirmation laboratory analysis.

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*.

2.2 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:

- Chloride per USEPA Method 300.0.

2.3 Field and Laboratory Analytical Results

Field screening readings for VOCs via OVM ranged from 0.0 ppm in SB-3 up to 40.3 ppm in SB-1. Field TPH concentrations ranged from 46.9 mg/kg in SB-4 up to 254 mg/kg in SB-1. Field screening results are summarized in Table 1 and presented on Figure 3. The AES Field Screening Report is attached.

Table 1. Soil Field Screening VOCs and TPH
Frontier C #1 Produced Water Release, May 2013

Sample ID	Date Sampled	Depth below BGT (ft)	VOCs OVM Reading (ppm)	Field TPH (mg/kg)
NMOCD Action Level*			***100***	***5,000***
SB-1	5/29/13	Surface	40.3	254
		1	0.4	64.9
SB-2	5/29/13	Surface	1.1	60.7
		1	0.1	NA
SB-3	5/29/13	Surface	0.0	62.1
		1	0.0	NA
SB-4	5/29/13	Surface	0.1	46.9
		1	0.1	NA
SB-5	5/29/13	Surface	0.1	63.8
		1	0.1	NA

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

2.4 Laboratory Analytical Results

Laboratory analytical results reported the chloride concentration as 1,500 mg/kg. Laboratory analytical results are summarized in Table 2 and included on Figure 3, and the laboratory analytical report is attached.

Table 2. Soil Laboratory Analytical Results
Frontier C #1 Produced Water Release, May 2013

Sample ID	*Date Sampled*	*Depth*	*Chlorides (mg/kg)*
	NMOCD Action Level*		*--*
SC-1	5/29/13/13	Surface	1,500

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

3.0 Conclusions and Recommendations

On May 29, 2013, AES conducted a produced water release assessment at the Frontier C #1. NNEPA utilizes NMOCD action levels for releases, which are determined by NMOCD's *Guidelines for Leaks, Spills, and Releases* (August 1993), and the site was assigned a ranking score of 0. For each sample collected, concentrations of VOCs via OVM and field TPH were below NMOCD action levels of 100 ppm and 5,000 mg/kg, respectively. Laboratory analytical results from composite sample SC-1 reported a chloride concentration of 1,500 mg/kg.

Based on field screening results, VOCs and TPH were below applicable NMOCD action levels. Following removal of stained soils, no further work is recommended at the Frontier C #1 produced water release location.

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

Sincerely,

Landrea R. Cupps

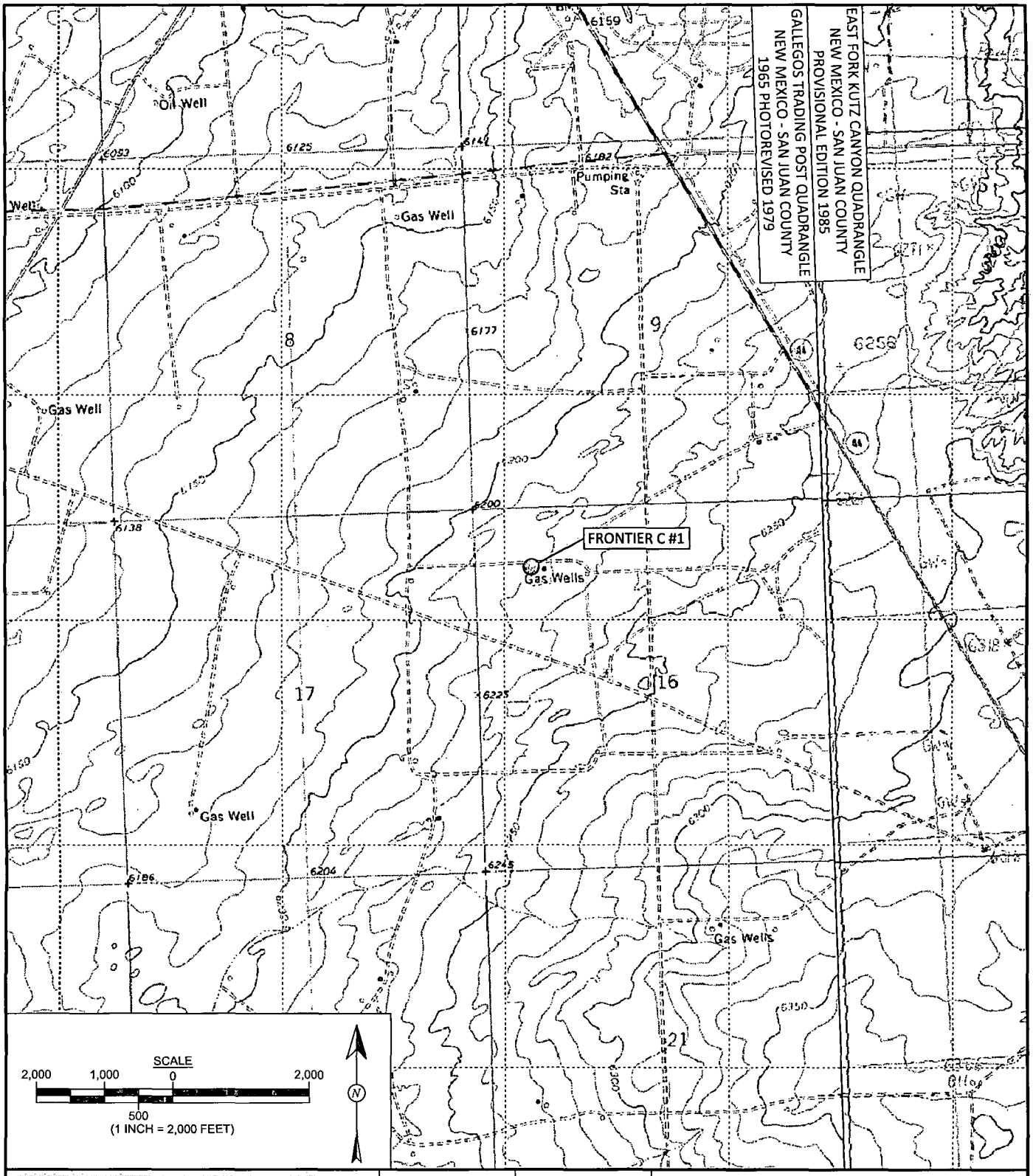
Landrea Cupps
Environmental Scientist

Elizabeth McNally, P.E.

Attachments:

Figure 1. Topographic Site Location Map
Figure 2. Aerial Site Map, May 2013
Figure 3. Initial Assessment Sample Locations and Results, May 2013
AES Field Screening Report 052913
Hall Analytical Report 1305B24

R:\Animas 2000\Dropbox\2013 Projects\ConocoPhillips\Frontier C #1\Frontier C #1 Produced Water Release Report 080713.docx

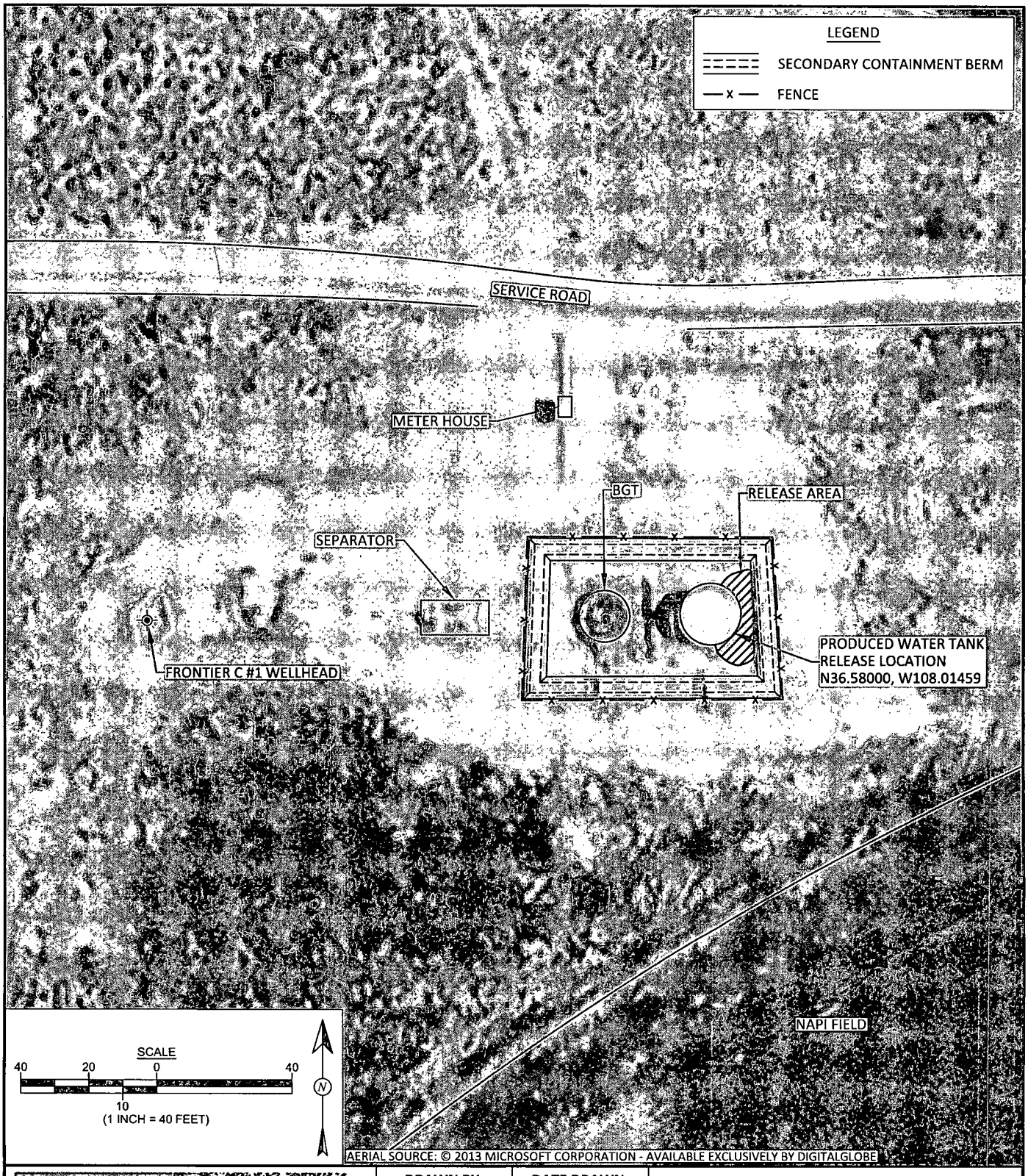


Animas Environmental Services, LLC

DRAWN BY: C. Lameman	**DATE DRAWN:** May 29, 2013
REVISIONS BY: C. Lameman	**DATE REVISED:** May 29, 2013
CHECKED BY: D. Watson	**DATE CHECKED:** May 29, 2013
APPROVED BY: E. McNally	**DATE APPROVED:** May 29, 2013

FIGURE 1

TOPOGRAPHIC SITE LOCATION MAP
ConocoPhillips
FRONTIER C #1
NW¼ NW¼, SECTION 16, T27N, R11W
SAN JUAN COUNTY, NEW MEXICO
N36.58001, W108.01519



Animas Environmental Services, LLC

DRAWN BY: C. Lameman	**DATE DRAWN:** May 29, 2013
REVISIONS BY: C. Lameman	**DATE REVISED:** May 29, 2013
CHECKED BY: D. Watson	**DATE CHECKED:** May 29, 2013
APPROVED BY: E. McNally	**DATE APPROVED:** May 29, 2013

FIGURE 2

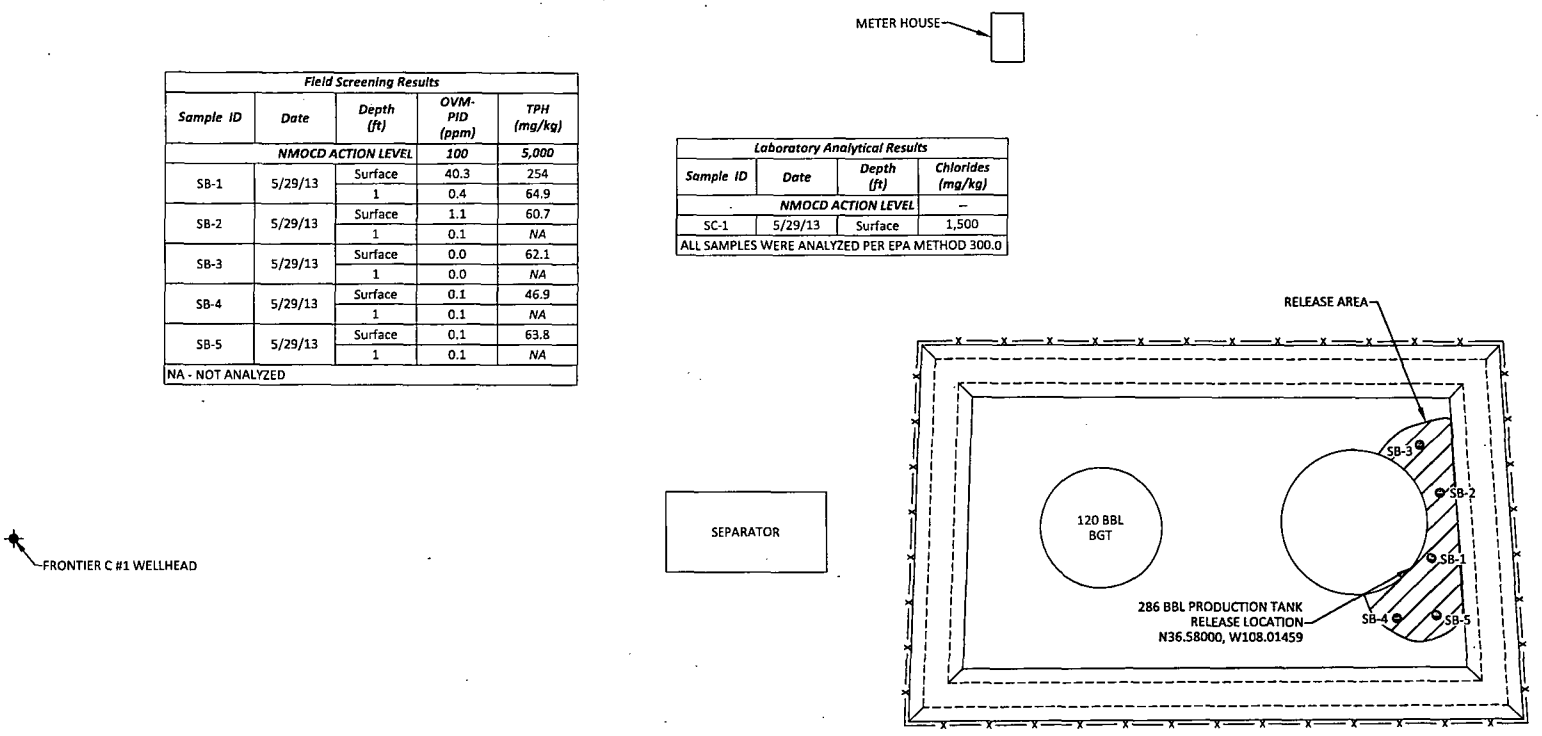
AERIAL SITE MAP
MAY 2013
ConocoPhillips
FRONTIER C #1
NW¼ NW¼, SECTION 16, T27N, R11W
SAN JUAN COUNTY, NEW MEXICO
N36.58001, W108.01519

FIGURE 3

INITIAL ASSESSMENT SAMPLE LOCATIONS AND RESULTS
MAY 2013
ConocoPhillips
FRONTIER C #1
NW¼ NW¼, SECTION 16, T27N, R11W
SAN JUAN COUNTY, NEW MEXICO
N36.58001, W108.01519

Field Screening Results				
Sample ID	Date	Depth (ft)	OVM-PID (ppm)	TPH (mg/kg)
NMOCD ACTION LEVEL			100	5,000
SB-1	5/29/13	Surface	40.3	254
		1	0.4	64.9
SB-2	5/29/13	Surface	1.1	60.7
		1	0.1	NA
SB-3	5/29/13	Surface	0.0	62.1
		1	0.0	NA
SB-4	5/29/13	Surface	0.1	46.9
		1	0.1	NA
SB-5	5/29/13	Surface	0.1	63.8
		1	0.1	NA
NA - NOT ANALYZED				

Laboratory Analytical Results			
Sample ID	Date	Depth (ft)	Chlorides (mg/kg)
NMOCD ACTION LEVEL			–
SC-1	5/29/13	Surface	1,500
ALL SAMPLES WERE ANALYZED PER EPA METHOD 300.0			



Animas Environmental Services, LLC

DRAWN BY:	DATE DRAWN:
C. Lameman	May 29, 2013
REVISIONS BY:	DATE REVISED:
C. Lameman	May 29, 2013
CHECKED BY:	DATE CHECKED:
D. Watson	May 29, 2013
APPROVED BY:	DATE APPROVED:
E. McNally	May 29, 2013

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

N

SCALE
15 9 0 15
3
(1 INCH = 15 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: Frontier C #1

Date: 5/29/2013

Matrix: Soil

Sample ID	Collection Date	Time of Sample Collection	OVM (ppm)	Field TPH Analysis Time	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SB-1 @ Surface	5/29/2013	9:53	40.3	10:51	254	40.0	1	DAW
SB-1 @ 1'	5/29/2013	9:55	0.4	10:53	64.9	20.0	1	DAW
SB-2 @ Surface	5/29/2013	9:57	1.1	10:57	60.7	20.0	1	DAW
SB-2 @ 1'	5/29/2013	10:00	0.1	*Not Analyzed for TPH.*				
SB-3 @ Surface	5/29/2013	10:02	0.0	11:04	62.1	20.0	1	DAW
SB-3 @ 1'	5/29/2013	10:05	0.0	*Not Analyzed for TPH.*				
SB-4 @ Surface	5/29/2013	10:08	0.1	11:10	46.9	20.0	1	DAW
SB-4 @ 1'	5/29/2013	10:10	0.1	*Not Analyzed for TPH.*				
SB-5 @ Surface	5/29/2013	10:12	0.1	11:15	63.8	20.0	1	DAW
SB-5 @ 1'	5/29/2013	10:15	0.1	*Not Analyzed for TPH.*				

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

Total Petroleum Hydrocarbons - USEPA 418.1

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

Analyst: Deborah Watson

Report Finalized: 05/29/13

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

June 06, 2013

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

RE: COP Frontier C #1 OrderNo.: 1305B24

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 5/30/2013 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.

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1305B24**
Date Reported: **6/6/2013**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental
Project: COP Frontier C #1
Lab ID: 1305B24-001 **Matrix:** SOIL

Client Sample ID: SC-1
Collection Date: 5/29/2013 10:41:00 AM
Received Date: 5/30/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **JRR**
Chloride	1500	75		mg/Kg	50	6/4/2013 11:26:06 PM

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#: **1305B24**

06-Jun-13

Client: Animas Environmental

Project: COP Frontier C #1

Sample ID	**MB-7715**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**7715**	RunNo:	**11047**					
Prep Date:	**6/3/2013**	Analysis Date:	**6/3/2013**	SeqNo:	**312505**	Units:	**mg/Kg**			

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

Sample ID	**LCS-7715**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**7715**	RunNo:	**11047**					
Prep Date:	**6/3/2013**	Analysis Date:	**6/3/2013**	SeqNo:	**312506**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.5	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
R	RPD outside accepted recovery limits	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: 1305B24 RcptNo: 1

Received by/date: AR 05/30/13

Logged By: **Lindsay Mangin** 5/30/2013 10:00:00 AM

Completed By: **Lindsay Mangin** 5/30/2013 10:28:15 AM

Reviewed By: TO 05/30/13

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	2.8	Good	Yes			

Chain-of-Custody Record

Client: Animas Environmental Services LLC

Mailing Address: 624 E Comanche Farmington NM 87401

Phone #:

email or Fax#:

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

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: CoP Frontier C #1

Project #:

Project Manager: D. Watson

Sampler: D Watson

On Ice: ☒ Yes ☐ No

Sample Temperature: 7

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 1305192	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)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	300.0 (Cl) TEP D. WATSON			Air Bubbles (Y or N)
5-29-13	1041	Soil	SC-1	1-4oz		-001												X			

Analysis Request

Relinquished by:	Received by:	Date	Time
Debra Watson	Christy Walker	5/29/13	1722
Christy Walker		5/29/13	1722
		05/30/13	1000

Remarks: Bill to ConocoPhillips
WO: 9606515 user: MKSPENC
area: 21 ordered by: Lisa Hunter
Supervisor: Cary Green