

RECEIVED

By JKeyes at 9:38 am, Apr 06, 2016



APPROVED

Ensure BLM concurrence/approval.

CONOCOPHILLIPS

P.O. Box 2197
Houston, TX 77252-2197
Phone 281.293.1000

Ruby Unit #19
(1RP-3623)

Corrective Action Plan

API No. 30-025-41015

Release Date: April 30th, 2015

Unit Letter I, Section 18, Township 17S, Range 32E



PO Box 2948 | Hobbs, NM 88241 | Phone 575.393.2967

April 5th, 2016

Jamie Keyes

Environmental Specialist – New Mexico Oil Conservation Division
Energy, Minerals and Natural Resources Department
1625 N. French Dr.
Hobbs, NM 88240

**RE: Corrective Action Plan
ConocoPhillips Ruby Unit 19 (1RP-3623)
UL/I sec. 18 T17S R32E
API No. 30-025-41015**

Mr. Keyes:

ConocoPhillips (CoP) has retained Basin Environmental Service Technologies to address potential environmental concerns at the above-referenced site.

Background and Previous Work

The site is located approximately 2.6 miles southwest of Maljamar, New Mexico at UL/I sec. 18 T17S R32E. NM OSE and BLM installed monitor well records indicate that groundwater will likely be encountered at a depth of approximately 145 +/- feet.

On April 30th, 2015, CoP discovered a flow line leak. A total of 1.8 barrels of oil and 8 barrels of produced water was released over 668 sq ft of Pasture land. None of the fluid was recovered. BLM and NMOCD were notified of the release on April 30th, 2015, and an initial C-141 was submitted to both parties the same day. NMOCD approved the initial C-141 on May 1st, 2015 (Appendix A).

On March 1st, 2016, Basin personnel were on site to assess the release. Three points within the release area were sampled with depth (Figure 1). All samples were field tested for chlorides and organic vapors, and representative samples were taken to a commercial laboratory for analysis (Appendix B).

Photo Documentation of these activities may be found in Appendix C.

Corrective Action Plan

Based on the assessment and sampling data, the release will be excavated down at various depths. The area around Point 1 as depicted in (Figure 1), will be excavated to a depth of three and one-half (3.5) feet bgs. The area around Point 2 will be excavated to a depth of one (1) feet bgs. The area around Point 3 will be excavated to a depth of three (3) feet bgs.

All excavated soil will be taken to a NMOCD approved facility for disposal. Clean soil will be imported to the site to serve as backfill. A sample of the backfill soil will be taken to a commercial laboratory to confirm that the chloride reading is below regulatory standards. The site will be contoured to the surrounding location. The pasture area will be seeded with a blend of native vegetation.

Once these activities have been completed, a report will be sent to NMOCD and BLM requesting 'remediation termination' and site closure.

Basin appreciates the opportunity to work with you on this project. Please contact me if you have any questions or wish to discuss the site.

Sincerely,

A handwritten signature in black ink, appearing to read "Kyle Norman", followed by a horizontal line.

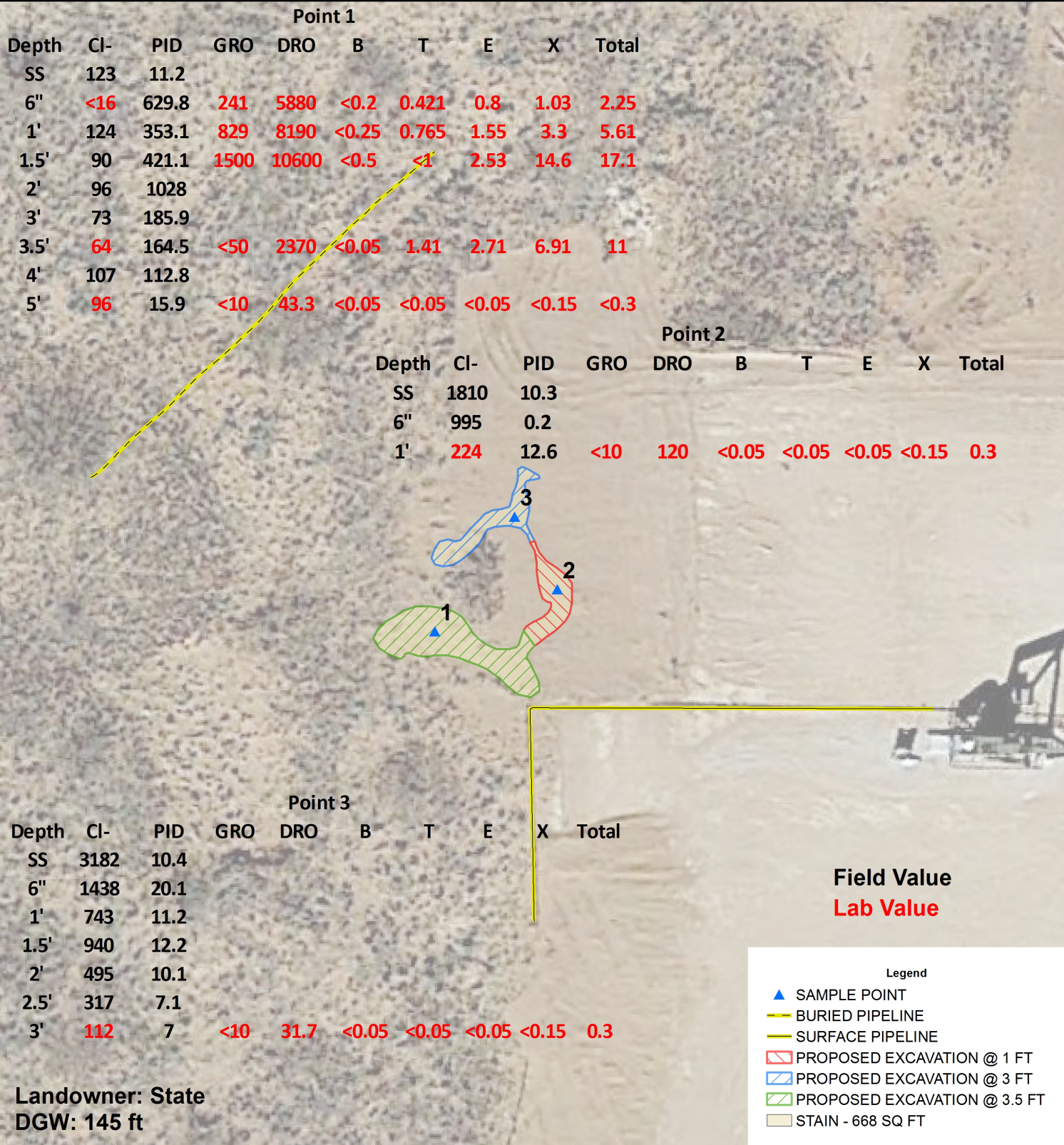
Kyle Norman
Project Lead
Basin Environmental Service Technologies
(575) 942-8542

Attachments:

- Figure 1 – Initial Sampling
- Appendix A – Initial C-141
- Appendix B – Laboratory Analysis
- Appendix C – Photo Documentation

Figures

Proposed Excavation



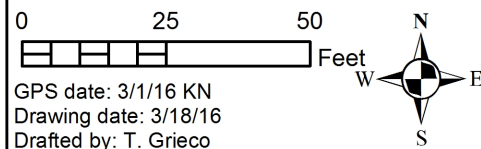
CONOCOPHILLIPS RUBY UNIT #19

1RP-3623

UL I SECTION 18
T-17-S R-32-E
LEA COUNTY, NM

Figure 1

GPS: 32.831905 -103.798338



Appendix A

Intial C-141

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: ConocoPhillips	Contact: Jay Garcia	
Address: 29 Vacuum Complex Lane	Telephone No. 575-704-2455	
Facility Name: Ruby Unit #19	Facility Type: Well	
Surface Owner: NMOCD	Mineral Owner: BLM	API No. 30-025-41015

LOCATION OF RELEASE

Unit Letter I	Section 18	Township 17S	Range 32E	Feet from the 1650	North/South Line North	Feet from the 330	East/West Line East	County LEA
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Latitude 32.8319050826125,- Longitude 103.798338235027

NATURE OF RELEASE

Type of Release: Spill	Volume of Release: 8BPW/1.8BO	Volume Recovered: 0 BBLs
Source of Release: Flow Line	Date and Hour of Occurrence 04/30/2015 9:15 am	Date and Hour of Discovery 04/30/2015 9:15 am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Tomas Oberding NMOCD & S Hughes BLM	
By Whom? Jay Garcia	Date and Hour: 04/30/2015 2:30 pm	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		

RECEIVED
By OCD District 1 at 8:12 am, May 01, 2015

Describe Area Affected and Cleanup Action Taken.*

ENV -Agency Reportable - 8 BPW & 1.8 BO - Ruby Unit # 19 - RR II - MCBU - Maljamar:
On Thursday April 30, 2015 at 9:00 MDT, at Ruby Unit # 19 a flow line leak was found during normal rounds resulting in a release of 8 bbl. of produced water and 1.8 bbl. of oil with none recovered. The affected area will be remediated according to BLM/NMOCD and COPC guidelines. This is a PSE Tier 3 event. Consequence: 1, Likelihood: 5, RR: 2

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: <i>Jay Garcia</i>		OIL CONSERVATION DIVISION	
Printed Name: Jay Garcia		Approved by Environmental Specialist: <i>Keller</i>	
Title: LEAD HSE		Approval Date: 05/01/2015	Expiration Date: 08/01/2015
E-mail Address: jay.c.garcia@conocophillips.com		Conditions of Approval: Site samples required. Delineate and remediate as per MNOCD guides. Geotag photographs of remediation required.	
Date: 04/30/2015 Phone: 575-704-2455		Attached <input type="checkbox"/> 217817 1RP-3623	

* Attach Additional Sheets If Necessary

pKJ1512130746
nKJ1512130095

Appendix B

Laboratory Analysis

Basin Environmental Service Technologies, LLC
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

March 07, 2016

KYLE NORMAN

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: RUBY UNIT #19

Enclosed are the results of analyses for samples received by the laboratory on 03/04/16 14:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

Basin Environmental Service
KYLE NORMAN
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received: 03/04/2016
Reported: 03/07/2016
Project Name: RUBY UNIT #19
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 03/01/2016
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: PT. 1 @ 6" (H600485-01)

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	03/04/2016	ND	1.94	96.9	2.00	4.20	
Toluene*	0.421	0.200	03/04/2016	ND	1.89	94.5	2.00	5.36	
Ethylbenzene*	0.798	0.200	03/04/2016	ND	1.71	85.5	2.00	5.61	
Total Xylenes*	1.03	0.600	03/04/2016	ND	5.27	87.9	6.00	5.93	
Total BTX	2.25	1.20	03/04/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 120 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	03/04/2016	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	241	200	03/04/2016	ND	190	95.0	200	5.89		
DRO >C10-C28	5880	200	03/04/2016	ND	206	103	200	6.70		

Surrogate: 1-Chlorooctane 95.0 % 35-147

Surrogate: 1-Chlorooctadecane 207 % 28-171

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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Basin Environmental Service
KYLE NORMAN
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received: 03/04/2016
Reported: 03/07/2016
Project Name: RUBY UNIT #19
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 03/01/2016
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: PT. 2 @ 1' (H600485-02)

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/04/2016	ND	1.94	96.9	2.00	4.20		
Toluene*	<0.050	0.050	03/04/2016	ND	1.89	94.5	2.00	5.36		
Ethylbenzene*	<0.050	0.050	03/04/2016	ND	1.71	85.5	2.00	5.61		
Total Xylenes*	<0.150	0.150	03/04/2016	ND	5.27	87.9	6.00	5.93		
Total BTX	<0.300	0.300	03/04/2016	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.8 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	03/04/2016	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/04/2016	ND	190	95.0	200	5.89	
DRO >C10-C28	120	10.0	03/04/2016	ND	206	103	200	6.70	

Surrogate: 1-Chlorooctane 96.7 % 35-147

Surrogate: 1-Chlorooctadecane 106 % 28-171

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*=Accredited Analyte

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P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received: 03/04/2016
Reported: 03/07/2016
Project Name: RUBY UNIT #19
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 03/01/2016
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: PT. 3 @ 3' (H600485-03)

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	03/04/2016	ND	1.94	96.9	2.00	4.20		
Toluene*	<0.050	0.050	03/04/2016	ND	1.89	94.5	2.00	5.36		
Ethylbenzene*	<0.050	0.050	03/04/2016	ND	1.71	85.5	2.00	5.61		
Total Xylenes*	<0.150	0.150	03/04/2016	ND	5.27	87.9	6.00	5.93		
Total BTX	<0.300	0.300	03/04/2016	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.0 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	03/04/2016	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/04/2016	ND	190	95.0	200	5.89	
DRO >C10-C28	31.7	10.0	03/04/2016	ND	206	103	200	6.70	

Surrogate: 1-Chlorooctane 97.5 % 35-147

Surrogate: 1-Chlorooctadecane 108 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

- S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
- Samples reported on an as received basis (wet) unless otherwise noted on report

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



ARDINAL LABORATORIES
101 East Mainland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

Rush!

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: ComocoPhillips Project Manager: Kyle Norman Address: 419 W Cain City: Hobbs State: NM Zip: 88240 Phone #: 575-393-2967 Fax #: 575-393-0293 Project #: Project Name: Ruby Unit #19 Project Location: Sample Name: Skamplain <small>FOR LAB USE ONLY</small>										P.O. #: Company: Basin Attn: Address: 419 W Cain City: Hobbs State: NM Zip: 88240 Phone #: 575-393-2967 Fax #: 575-393-0293									
Lab I.D. Sample I.D. H000445 1 7+1 @ 6" 2 2 @ 1" 3 2 @ 3"										(G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER : ACID/BASE: ICE / COOL OTHER :									
										DATE TIME 3-1-16 7:00 4:30 10:00									
Relinquished By: [Signature] Received By: [Signature] Date: 3-4-16 Time: 2:10 Relinquished By: [Signature] Received By: [Signature]										Chlorides TPH 8015 M BTEX Texas TPH Complete Cations/Anions TDS									
Delivered By: (Circle One) Sampler - UPS - Bus - Other: 3.60										Sample Condition Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Checked By: [Signature]									
REMARKS: email results: knorman@basineny.com; jkamplain@basineny.com										Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Add'l Phone #: Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Add'l Fax #:									

March 09, 2016

KYLE NORMAN

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: RUBY UNIT #19

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Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
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Sincerely,



Celey D. Keene

Lab Director/Quality Manager

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Basin Environmental Service
KYLE NORMAN
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received: 03/08/2016
Reported: 03/09/2016
Project Name: RUBY UNIT #19
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 03/01/2016
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: PT. 1 @ 1' (H600494-01)

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.250	0.250	03/09/2016	ND	2.08	104	2.00	0.193	
Toluene*	0.765	0.500	03/09/2016	ND	2.03	102	2.00	0.140	
Ethylbenzene*	1.55	0.500	03/09/2016	ND	1.83	91.3	2.00	0.480	
Total Xylenes*	3.30	1.50	03/09/2016	ND	5.63	93.8	6.00	0.275	
Total BTEX	5.61	2.75	03/09/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 73.6-140

TPH 8015M		mg/kg		Analyzed By: CK				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	829	200	03/08/2016	ND	198	98.8	200	3.81	
DRO >C10-C28	8190	200	03/08/2016	ND	209	104	200	4.50	

Surrogate: 1-Chlorooctane 155 % 35-147

Surrogate: 1-Chlorooctadecane 158 % 28-171

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*=Accredited Analyte

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***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

Pash

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

March 10, 2016

KYLE NORMAN

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: RUBY UNIT #19

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Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
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Accreditation applies to public drinking water matrices.

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Sincerely,

A handwritten signature in black ink that reads "Coley D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

 Basin Environmental Service
 KYLE NORMAN
 P.O. Box 301
 Lovington NM, 88260
 Fax To: (575) 396-1429

 Received: 03/09/2016
 Reported: 03/10/2016
 Project Name: RUBY UNIT #19
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 03/01/2016
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Amanda Ponce

Sample ID: PT. 1 @ 1.5' (H600503-01)

BTEX 8021B		mg/kg	Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	03/09/2016	ND	1.92	95.8	2.00	0.125	
Toluene*	<1.00	1.00	03/09/2016	ND	1.89	94.5	2.00	0.0761	
Ethylbenzene*	2.53	1.00	03/09/2016	ND	1.72	85.9	2.00	0.302	
Total Xylenes*	14.6	3.00	03/09/2016	ND	5.30	88.4	6.00	0.314	
Total BTEX	17.1	5.50	03/09/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.6-140

TPH 8015M		mg/kg		Analyzed By: CK				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	1500	200	03/09/2016	ND	172	85.8	200	15.6	
DRO >C10-C28	10600	200	03/09/2016	ND	162	80.8	200	28.1	

Surrogate: 1-Chlorooctane 173 % 35-147

Surrogate: 1-Chlorooctadecane 242 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

Handwritten signature: JCSH

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: CorrocoPhillips

Project Manager: Kyle Norman

Address:

City: State: Zip:

Phone #: Fax #:

Project #: Project Owner:

Project Name: State: NM Zip: 88240

Project Location: Ruby Unit #19

Sampler Name: Jacob Kamplain

FOR LAB USE ONLY

Lab I.D. Sample I.D.

Handwritten: H160562

Pl. 1 @ 1.5'

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

DATE

TIME

Chlorides

TPH 8015 M

BTEX

Texas TPH

Complete Cations/Anions

TDS

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Relinquished By:

Date: 3-7-15

Received By:

Jacob Kamplain

Relinquished By:

Date: 3-7-15

Received By:

Delivered By: (Circle One)

Sampler - UPS - Bus - Other: 1.6 C #54

Sample Condition

Cool ☒ Intact ☒ Yes ☐ No ☐

CHECKED BY:

(Initials)

Phone Result: ☐ Yes ☒ No Add'l Phone #:
Fax Result: ☐ Yes ☒ No Add'l Fax #:

email results: knorman@basineny.com
company: jkamplain@basineny.com

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

March 30, 2016

KYLE NORMAN

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: RUBY UNIT #19

Enclosed are the results of analyses for samples received by the laboratory on 03/29/16 14:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

Basin Environmental Service
KYLE NORMAN
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received: 03/29/2016
Reported: 03/30/2016
Project Name: RUBY UNIT #19
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 03/28/2016
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: PT. 1 @ 5' (H600657-01)

BTX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/29/2016	ND	2.07	104	2.00	5.25	
Toluene*	<0.050	0.050	03/29/2016	ND	1.96	97.8	2.00	7.05	
Ethylbenzene*	<0.050	0.050	03/29/2016	ND	1.72	85.9	2.00	8.63	
Total Xylenes*	<0.150	0.150	03/29/2016	ND	5.28	87.9	6.00	8.62	
Total BTX	<0.300	0.300	03/29/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.6-140

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	03/30/2016	ND	400	100	400	7.69	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/29/2016	ND	176	88.2	200	6.12	
DRO >C10-C28	43.3	10.0	03/29/2016	ND	166	83.1	200	12.3	

Surrogate: 1-Chlorooctane 86.7 % 35-147

Surrogate: 1-Chlorooctadecane 95.6 % 28-171

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

March 18, 2016

KYLE NORMAN

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: RUBY UNIT #19

Enclosed are the results of analyses for samples received by the laboratory on 03/17/16 9:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-15-7. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

Basin Environmental Service
KYLE NORMAN
P.O. Box 301
Lovington NM, 88260
Fax To: (575) 396-1429

Received: 03/17/2016
Reported: 03/18/2016
Project Name: RUBY UNIT #19
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 03/16/2016
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: PT. 1 @ 3.5' (H600584-01)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/17/2016	ND	2.16	108	2.00	2.97	
Toluene*	1.41	0.050	03/17/2016	ND	2.09	104	2.00	3.59	
Ethylbenzene*	2.71	0.050	03/17/2016	ND	1.87	93.3	2.00	3.70	
Total Xylenes*	6.91	0.150	03/17/2016	ND	5.65	94.2	6.00	3.39	
Total BTX	11.0	0.300	03/17/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	03/17/2016	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	03/17/2016	ND	192	95.8	200	0.136	
DRO >C10-C28	2370	50.0	03/17/2016	ND	194	97.0	200	0.564	

Surrogate: 1-Chlorooctane 102 % 35-147

Surrogate: 1-Chlorooctadecane 125 % 28-171

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside if QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

Appendix C

Photo Documentation

Basin Environmental Service Technologies, LLC
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

ConocoPhillips Ruby Unit #19 (1RP-3623)

Unit Letter I, Section 18, T17S, R32E



Initial Release, Facing East

3/1/2016



Initial Release, Facing North West

3/1/2016



Collecting Sample, Facing North West

3/1/2016



Collecting Sample, Facing North West

3/1/2016