



**RECEIVED**

By OCD; Dr. Oberding at 8:59 am, Mar 26, 2015

# CONOCOPHILLIPS

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

## Warren Unit Injection Trunkline 1RP-3135

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### Corrective Action Plan

**APPROVED** Conditionally

By OCD; Dr. Oberding at 9:25 am, Mar 26, 2015

Conditional approval with the following stipulations:

- 1) Obtain concurrence from the BLM;
- 2) Please delineate to a depth of at least 4 feet in all bottom samples (points 1-3); (based on the depth to groundwater, and the images this appears to be sandy soil, and we want to ensure that no migration of contaminants occurred);
- 3) Add an additional sample/delineation point between 2 and 3 in the larger pooling area (between the surface and buried lines indicated on the map).

API No. 30-025-07878

Release Date June 23, 2014

Unit Letter P, Section 27, Township 20S, Range 38E

**March 26, 2015**

**Dr. Tomáš Oberding, PhD**

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 – Warren Unit ROE (1RP-3135)  
UL/P sec. 27 T20S R38E  
API No. 3002507878**

Dr. Oberding:

ConocoPhillips (CoP) has retained Rice Environmental Consulting and Safety (RECS) to address potential environmental concerns at the above-referenced site.

### **Background and Previous Work**

The site is located approximately 7.3 miles north of Eunice, New Mexico at UL/P Sec. 27 T20S R38E. NM OSE records indicate that groundwater will likely be encountered at a depth of approximately 65 +/- feet.

On June 23<sup>rd</sup>, 2014, a leak in the injection trunk line released 45 barrels of produced water over 3,666 sq ft of pasture. A vacuum truck was called to the site and 5 barrels of produced water were recovered. NMOCD was notified of the release on June 23<sup>rd</sup>, 2014, and an initial C-141 was submitted to NMOCD on June 24<sup>th</sup>, 2014. NMOCD approved the initial C-141 on July 2<sup>nd</sup>, 2014 (Appendix A).

RECS personnel were on site June 23<sup>rd</sup>, 2014, to visually assess the release. The release was mapped and photographed (Figure 1). CoP excavated to 8 ft bgs in order to repair the damaged line, excavating approximately 1,100 cubic yards of contaminated soil. On July 2<sup>nd</sup> 2014, wall and bottom samples were taken from the completed excavation and sent to a commercial laboratory for analysis. Laboratory analysis confirmed low chloride and hydrocarbon levels (Appendix B).

To further investigate the presence of chlorides and hydrocarbons, 3 sample points were hand augered to six inches bgs on February 11<sup>th</sup>, 2015. The samples from each vertical were taken to a commercial laboratory for analyses. Laboratory analysis confirmed chloride and hydrocarbon levels below regulatory standards in each vertical (Appendix B).

Photo documentation of these activities can be found in Appendix C.

## **Corrective Action Plan**

Based on the laboratory analysis of the release, the 1,100 yards of excavated soil will be exported to a NMOCD approved facility and clean soil will be imported to the site to serve as backfill. A sample of the imported soil will be taken to a commercial laboratory to confirm that the chloride reading is below regulatory standards. The excavation will be backfilled with the imported soil and contoured to the surrounding location. All disturbed areas in the pasture 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.

RECS appreciates the opportunity to work with you on this project. Please call Hack Conder at (575) 631-6432 or me if you have any questions or wish to discuss the site.

Sincerely,

A handwritten signature in cursive script that reads "Kyle Norman" followed by a horizontal line.

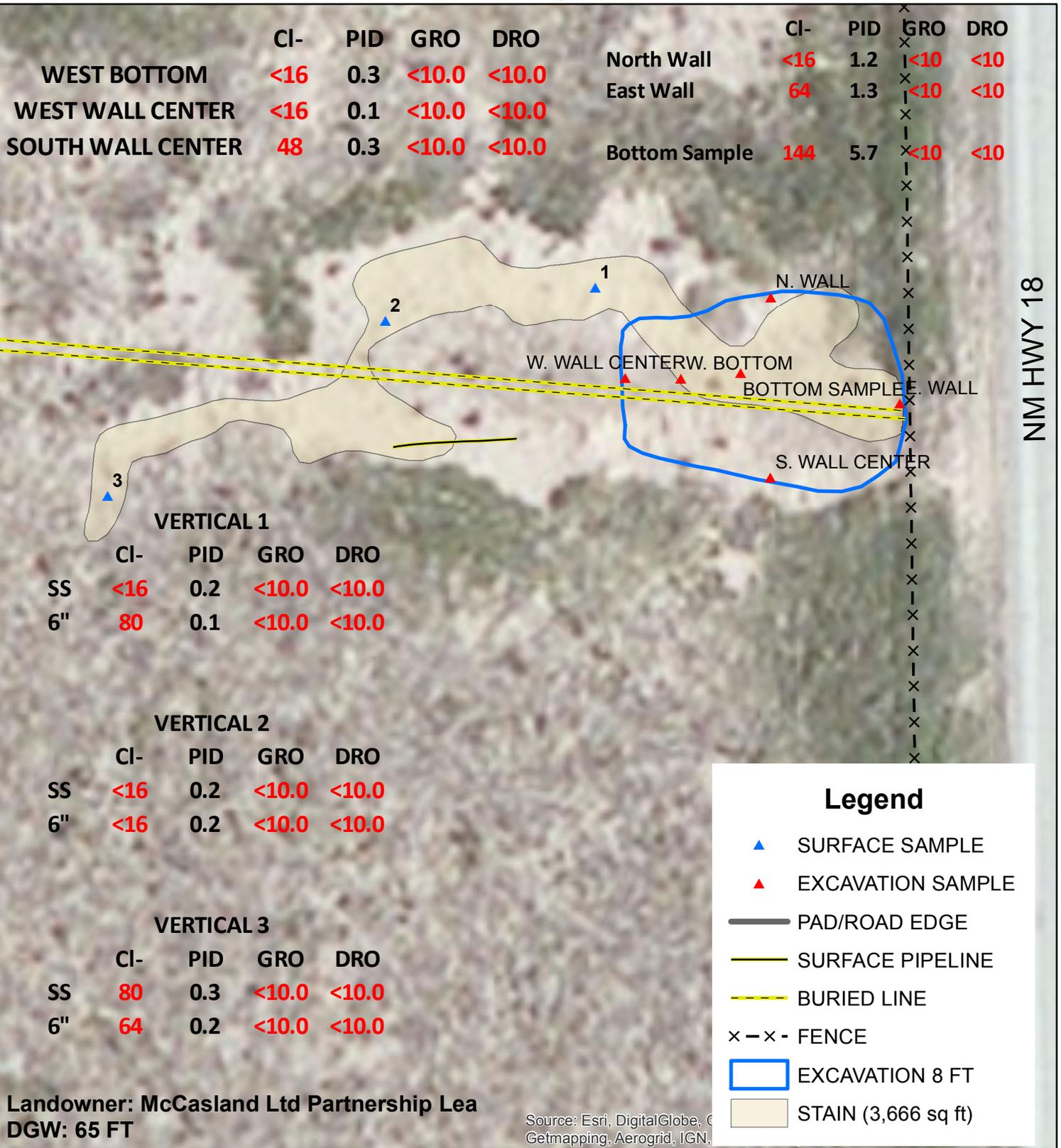
Kyle Norman  
Project Lead  
RECS  
(575) 942-8542

### **Attachments:**

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

# Figures

# Initial Sampling Data



Landowner: McCasland Ltd Partnership Lea  
 DGW: 65 FT

Source: Esri, DigitalGlobe, C  
 Getmapping, Aerogrid, IGN,

### Legend

- ▲ SURFACE SAMPLE
- ▲ EXCAVATION SAMPLE
- PAD/ROAD EDGE
- SURFACE PIPELINE
- - - BURIED LINE
- x - x - FENCE
- EXCAVATION 8 FT
- STAIN (3,666 sq ft)



**CONOCOPHILLIPS**  
**WARREN UNIT**  
**INJECTION**  
**TRUNKLINE**  
 1RP-3135

UL P SECTION 27  
 T-20-S R-38-E  
 LEA COUNTY, NM

## Figure 1

0 20 40  
 Feet

GPS date: 2/11 & 12/15 KS  
 Drawing date: 2/12/15  
 Drafted by: B. Cooper

# 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

**HOBBS OGD**

State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

**HOBBS OGD**

Form C-141  
Revised August 8, 2011

JUN 24 2014

JUN 24

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

RECEIVED

RECEIVED

**Release Notification and Corrective Action**

**OPERATOR**

Initial Report  Final Report

Name of Company: <b>ConocoPhillips</b>	Contact: <b>Jose A Zepeda</b>
Address: <b>1410 N West County Road</b>	Telephone No. <b>575-391-3165</b>
Facility Name: <b>Warren Unit ROE</b>	Facility Type: <b>Trunk Line</b>

Surface Owner: <b>Fed LSE</b>	Mineral Owner: <b>N/A</b>	API No. <b>LC-031695B</b>
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**LOCATION OF RELEASE**

30-025-07878 76

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	27	T20S	38E					Lea

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

**NATURE OF RELEASE**

Type of Release: <b>Produce Water</b>	Volume of Release: <b>45 BBLs</b>	Volume Recovered: <b>5.0 BBLs</b>
Source of Release: <b>Pipeline</b>	Date and Hour of Occurrence <b>06/23/2014 ~0430 am</b>	Date and Hour of Discovery <b>06/23/2014 ~ 0700 am</b>
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? <b>Geoffrey Leking</b>	
By Whom? <b>Jose A Zepeda</b>	Date and Hour: <b>06/23/2014 ~ 1200 am Email</b>	
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.\*  
N/A

Depth to GH<sub>2</sub>O = 50-75

Describe Cause of Problem and Remedial Action Taken.\*  
ENV – Agency Reportable - MCBU – Permian – SENM – Hobbs – Warren Unit Trunk Line + ~ 45 bbl. of Produce Water - RR2. On June 23, 2014 @ ~0430 am @ the Warren Unit Trunk Line, there was an accidental release of ~ 45 bbl. of Produce Water.  
COPC employee was contacted via SCADA of an injection pump that was down. Upon arrival on location COPC employee noticed that the pump was down on low pressure and started driving out injection line and trunk line and found a leak on the injection trunk line on the west side of Hwy 18. COPC employee isolated the trunk line going to the east separators injection header and started pump to check if the values was holding. COPC employee then contacted vacuum truck to pick up spill; vacuum truck picked up 5 bbl. of produced water, COPC employee then called Supervisor about the leak. A work order will be generated for cleanup and repairs. The spill site will be remediated in accordance with COPC and NMOCD guidelines. An investigation into the cause of the incident is ongoing.

Describe Area Affected and Cleanup Action Taken.\*

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.

**OIL CONSERVATION DIVISION**

Signature: <b>JOSE A ZEPEDA</b>	Approved by Environmental Specialist:	
Printed Name: <b>Jose A Zepeda</b>	Approval Date:	Expiration Date:
Title: <b>LEAD HSE</b>	Conditions of Approval:	
E-mail Address: <b>Jose. A. Zepeda@conocophillips.com</b>	Attached <input type="checkbox"/>	
Date: <b>06/23/2014</b>	Phone: <b>575-391-3158</b>	<b>7-19-3135</b>

\* Attach Additional Sheets If Necessary

JUL 02 2014

ogrid 217812  
n70 1418 350244  
p70 1418 35059

# Appendix B

## Laboratory Analyses

**RICE Environmental Consulting and Safety (RECS)**  
P.O. Box 2948 Hobbs, NM 88241  
Phone 575.393.2967



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

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July 09, 2014

KYLE NORMAN

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

419 W. CAIN

HOBBS, NM 88240

RE: WARREN UNIT INJECTION TRUNKLINE

Enclosed are the results of analyses for samples received by the laboratory on 07/03/14 12:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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](http://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".

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 RICE ENVIRONMENTAL CONSULTING & SAFETY  
 KYLE NORMAN  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	07/03/2014	Sampling Date:	07/02/2014
Reported:	07/09/2014	Sampling Type:	Soil
Project Name:	WARREN UNIT INIJECTION TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Kathy Perez
Project Location:	CONOCO PHILLIPS		

**Sample ID: NORTH WALL (H402032-01)**

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	07/09/2014	ND	416	104	400	3.92	
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	07/07/2014	ND	177	88.4	200	0.325	
DRO >C10-C28	<10.0	10.0	07/07/2014	ND	192	95.8	200	0.241	
<i>Surrogate: 1-Chlorooctane</i>		<i>118 %</i>	<i>65.2-140</i>						
<i>Surrogate: 1-Chlorooctadecane</i>		<i>127 %</i>	<i>63.6-154</i>						

**Sample ID: EAST WALL (H402032-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<b>64.0</b>	16.0	07/09/2014	ND	416	104	400	3.92	
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	07/07/2014	ND	177	88.4	200	0.325	
DRO >C10-C28	<10.0	10.0	07/07/2014	ND	192	95.8	200	0.241	
<i>Surrogate: 1-Chlorooctane</i>		<i>118 %</i>	<i>65.2-140</i>						
<i>Surrogate: 1-Chlorooctadecane</i>		<i>125 %</i>	<i>63.6-154</i>						

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 RICE ENVIRONMENTAL CONSULTING & SAFETY  
 KYLE NORMAN  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	07/03/2014	Sampling Date:	07/03/2014
Reported:	07/09/2014	Sampling Type:	Soil
Project Name:	WARREN UNIT INJECTION TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Kathy Perez
Project Location:	CONOCO PHILLIPS		

**Sample ID: BOTTOM SAMPLE (H402032-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>144</b>	16.0	07/09/2014	ND	416	104	400	3.92	
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	07/07/2014	ND	177	88.4	200	0.325	
DRO >C10-C28	<10.0	10.0	07/07/2014	ND	192	95.8	200	0.241	

<i>Surrogate: 1-Chlorooctane</i>	<i>118 %</i>	<i>65.2-140</i>
<i>Surrogate: 1-Chlorooctadecane</i>	<i>128 %</i>	<i>63.6-154</i>

Cardinal Laboratories

\* = Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

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



---

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <b>RECS</b>		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>															
Project Manager: <b>Laura Flores, Kyle Norman</b>		P.O. #:		Chlorides	TPH 8015 M	BTEX	Texas TPH	Complete Cations/Anions	TDS										
Address:		Company:																	
City: Hobbs State: NM Zip: 88240		Attn:																	
Phone #: Fax #:		Address:																	
Project #: Project Owner:		City:																	
Project Name: <b>Conoco Phillips</b>		State: Zip:																	
Project Location: <b>Warren Unit Injection Trunkline</b>		Phone #:																	
Sampler Name: <b>Chris Flores</b>		Fax #:																	
FOR LAB USE ONLY																			
Lab I.D.	Sample I.D.	(GRAB OR (C)OMP. # CONTAINERS	MATRIX							PRESEV.	SAMPLING								
			GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER:	ACID/BASE: ICE/COOL OTHER:	DATE	TIME													
<b>H402032</b>																			
1	North wall	G	✓	✓	7-2-2014	4:00 PM	X	X											
2	East wall	G	✓	✓	7-3-2014	9:35 AM	X	X											
3	Bottom Sample	G	✓	✓	7-3-2014	9:40 AM	X	X											

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Relinquished By: <b>Chris Flores</b>	Date: <b>7-3-2014</b>	Received By: <b>Danny Herzog</b>	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:
	Time: <b>12:55</b>		Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:	
	Time:		email: hconder@riceswd.com; lflores@rice-ecs.com; lweinheimer@rice-ecs.com; knorman@rice-ecs.com; jkamplain@rice-ecs.com; sedwards@rice-ecs.com; cursanic@rice-ecs.com Environmental Tech: <b>cflores@rice-ecs.com</b>	
Delivered By: (Circle One)	Sample Condition	CHECKED BY: (Initials)		
Sampler - UPS - Bus - Other: <b>UPS</b>	Cool Intact <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No	<b>KP</b>		

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

February 17, 2015

KYLE NORMAN

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

419 W. CAIN

HOBBS, NM 88240

RE: WARREN UNIT INJECTION TRUNKLINE

Enclosed are the results of analyses for samples received by the laboratory on 02/16/15 9:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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](http://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:**

 RICE ENVIRONMENTAL CONSULTING & SAFETY  
 KYLE NORMAN  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	02/16/2015	Sampling Date:	02/12/2015
Reported:	02/17/2015	Sampling Type:	Soil
Project Name:	WARREN UNIT INIJECTION TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	CONOCO PHILLIPS		

**Sample ID: PT. 1 @ SURFACE (H500444-01)**

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	02/16/2015	ND	400	100	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	<10.0	10.0	02/16/2015	ND	201	101	200	3.26	
DRO >C10-C28	<10.0	10.0	02/16/2015	ND	187	93.5	200	4.78	
<i>Surrogate: 1-Chlorooctane</i>		<i>97.3 %</i>	<i>47.2-157</i>						
<i>Surrogate: 1-Chlorooctadecane</i>		<i>98.6 %</i>	<i>52.1-176</i>						

**Sample ID: PT. 1 @ 6" (H500444-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<b>80.0</b>	16.0	02/16/2015	ND	400	100	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	<10.0	10.0	02/16/2015	ND	201	101	200	3.26	
DRO >C10-C28	<10.0	10.0	02/16/2015	ND	187	93.5	200	4.78	
<i>Surrogate: 1-Chlorooctane</i>		<i>118 %</i>	<i>47.2-157</i>						
<i>Surrogate: 1-Chlorooctadecane</i>		<i>115 %</i>	<i>52.1-176</i>						

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 RICE ENVIRONMENTAL CONSULTING & SAFETY  
 KYLE NORMAN  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	02/16/2015	Sampling Date:	02/12/2015
Reported:	02/17/2015	Sampling Type:	Soil
Project Name:	WARREN UNIT INJECTION TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	CONOCO PHILLIPS		

**Sample ID: PT. 2 @ SURFACE (H500444-03)**

Chloride, SM4500CI-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	02/16/2015	ND	400	100	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	<10.0	10.0	02/16/2015	ND	201	101	200	3.26	
DRO >C10-C28	<10.0	10.0	02/16/2015	ND	187	93.5	200	4.78	
<i>Surrogate: 1-Chlorooctane</i>		<i>113 %</i>	<i>47.2-157</i>						
<i>Surrogate: 1-Chlorooctadecane</i>		<i>115 %</i>	<i>52.1-176</i>						

**Sample ID: PT. 2 @ 6" (H500444-04)**

Chloride, SM4500CI-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	02/16/2015	ND	400	100	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	<10.0	10.0	02/16/2015	ND	201	101	200	3.26	
DRO >C10-C28	<10.0	10.0	02/16/2015	ND	187	93.5	200	4.78	
<i>Surrogate: 1-Chlorooctane</i>		<i>113 %</i>	<i>47.2-157</i>						
<i>Surrogate: 1-Chlorooctadecane</i>		<i>115 %</i>	<i>52.1-176</i>						

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 RICE ENVIRONMENTAL CONSULTING & SAFETY  
 KYLE NORMAN  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	02/16/2015	Sampling Date:	02/12/2015
Reported:	02/17/2015	Sampling Type:	Soil
Project Name:	WARREN UNIT INJECTION TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	CONOCO PHILLIPS		

**Sample ID: PT. 3 @ SURFACE (H500444-05)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>80.0</b>	16.0	02/16/2015	ND	400	100	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	<10.0	10.0	02/16/2015	ND	201	101	200	3.26		
DRO >C10-C28	<10.0	10.0	02/16/2015	ND	187	93.5	200	4.78		
<i>Surrogate: 1-Chlorooctane</i>	<i>126 %</i>	<i>47.2-157</i>								
<i>Surrogate: 1-Chlorooctadecane</i>	<i>122 %</i>	<i>52.1-176</i>								

**Sample ID: PT. 3 @ 6" (H500444-06)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>64.0</b>	16.0	02/16/2015	ND	400	100	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	<10.0	10.0	02/16/2015	ND	201	101	200	3.26		
DRO >C10-C28	<10.0	10.0	02/16/2015	ND	187	93.5	200	4.78		
<i>Surrogate: 1-Chlorooctane</i>	<i>117 %</i>	<i>47.2-157</i>								
<i>Surrogate: 1-Chlorooctadecane</i>	<i>114 %</i>	<i>52.1-176</i>								

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 RICE ENVIRONMENTAL CONSULTING & SAFETY  
 KYLE NORMAN  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	02/16/2015	Sampling Date:	02/12/2015
Reported:	02/17/2015	Sampling Type:	Soil
Project Name:	WARREN UNIT INJECTION TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	CONOCO PHILLIPS		

**Sample ID: WEST BOTTOM @ 8' (H500444-07)**

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	02/16/2015	ND	400	100	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	<10.0	10.0	02/16/2015	ND	201	101	200	3.26	
DRO >C10-C28	<10.0	10.0	02/16/2015	ND	187	93.5	200	4.78	
<i>Surrogate: 1-Chlorooctane</i>		<i>116 %</i>	<i>47.2-157</i>						
<i>Surrogate: 1-Chlorooctadecane</i>		<i>115 %</i>	<i>52.1-176</i>						

**Sample ID: WEST WALL CENTER (H500444-08)**

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	02/16/2015	ND	400	100	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	<10.0	10.0	02/16/2015	ND	201	101	200	3.26	
DRO >C10-C28	<10.0	10.0	02/16/2015	ND	187	93.5	200	4.78	
<i>Surrogate: 1-Chlorooctane</i>		<i>116 %</i>	<i>47.2-157</i>						
<i>Surrogate: 1-Chlorooctadecane</i>		<i>114 %</i>	<i>52.1-176</i>						

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 RICE ENVIRONMENTAL CONSULTING & SAFETY  
 KYLE NORMAN  
 419 W. CAIN  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	02/16/2015	Sampling Date:	02/12/2015
Reported:	02/17/2015	Sampling Type:	Soil
Project Name:	WARREN UNIT INIJECTION TRUNKLINE	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	CONOCO PHILLIPS		

**Sample ID: SOUTH WALL CENTER (H500444-09)**

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>48.0</b>	16.0	02/16/2015	ND	400	100	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	<10.0	10.0	02/16/2015	ND	201	101	200	3.26	
DRO >C10-C28	<10.0	10.0	02/16/2015	ND	187	93.5	200	4.78	
<i>Surrogate: 1-Chlorooctane</i>	<i>123 %</i>	<i>47.2-157</i>							
<i>Surrogate: 1-Chlorooctadecane</i>	<i>126 %</i>	<i>52.1-176</i>							

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

- 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



# CARDINAL 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

# RUSH

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 8 of 8

Company Name: <b>RECS</b>		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>																					
Project Manager: <b>Laura Flores, Kyle Norman</b>		P.O. #:		Chlorides TPH 8015 M BTEX Texas TPH Complete Cations/Anions TDS																					
Address:		Company:																							
City: Hobbs State: NM Zip: 88240		Attn:																							
Phone #: Fax #:		Address:																							
Project #: Project Owner:		City:																							
Project Name:		State: Zip:																							
Project Location: <b>Warren Unit Injection Trunk Line</b>		Phone #:																							
Sampler Name: <b>Kyle Schnaidt</b>		Fax #:																							
FOR LAB USE ONLY	Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP. # CONTAINERS	MATRIX					PRESERV.	SAMPLING															
			GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE/COOL	OTHER:	DATE	TIME												
	<b>H500444</b>																								
	1	Point 1 @ surface	6									2-12-15	10:00	X	X										
	2	Point 1 @ 6"	6										10:05	X	X										
	3	Point 2 @ surface	6										10:10	X	X										
	4	Point 2 @ 6"	6										10:15	X	X										
	5	Point 3 @ surface	6										10:20	X	X										
	6	Point 3 @ 6"	6										10:25	X	X										
	7	West Bottom @ 8"	6										10:30	X	X										
	8	West Wall Center	6										10:35	X	X										
	9	South Wall Center	6										10:40	X	X										

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Relinquished By: <b>Kyle Schnaidt</b>	Date: <b>2-16-15</b> Time: <b>9:10</b>	Received By: <b>Jodi Henson</b>	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:
Relinquished By:	Date:	Received By:	Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other: <b>0.6°C</b>	Sample Condition Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	CHECKED BY: <b>[Signature]</b>	REMARKS: email: hconder@riceswd.com; lflores@rice-ecs.com; lweinheimer@rice-ecs.com; knorman@rice-ecs.com; jkamplain@rice-ecs.com; sedwards@rice-ecs.com; cursanic@rice-ecs.com Environmental Tech: <b>Kschnaidt</b> @rice-ecs.com	

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

# #54

# Appendix C

Photo Documentation

**RICE Environmental Consulting and Safety (RECS)**  
P.O. Box 2948 Hobbs, NM 88241  
Phone 575.393.2967

# ConocoPhillips Warren Unit Injection Trunkline

Unit Letter P, Section 27, T20S, R38E



Initial release area, facing east 6/23/14



Initial release area, facing west 6/23/14



Initial release area, facing east 6/23/14



Excavating, facing southeast 7/2/14



Excavating, facing northeast

7/2/14



Excavation, facing northeast

7/2/14



Excavation, facing northeast

2/11/15



Excavation, facing southwest

2/11/15