

## **CONOCOPHILLIPS**

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



Ruby 46 (1RP-3027)

# **Corrective Action Plan**

API No. 30-025-41508

Release Date: April 20<sup>th</sup>, 2014

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



PO Box 2948 | Hobbs, NM 88241 | Phone 575.393.2967

August XX, 2014

**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 Ruby 46 (1RP-3027) UL/B sec. 18 T17S R32E API No. 30-025-41508



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 3 miles southwest of Maljamar, New Mexico at UL/B sec. 18 T17S R32E. NMOCD stated that groundwater will be located at a depth of approximately +/-175 feet.

On April 20<sup>th</sup>, 2014, CoP discovered a stuffing box leak that had released 12.4 barrels of primarily produced water over 2,906 square feet of lease pad. A total of 10 barrels of this fluid was recovered. NMOCD was notified of the release on April 22<sup>nd</sup>, 2014, and an initial C-141 was approved by NMOCD on the same day (Appendix A)

RECS personnel were on site beginning on July 10<sup>th</sup>, 2014 to assess the site. Two points within the release area were sampled at the surface and with depth (Figure 1). The samples were field tested for chlorides and organic vapors, and the samples were taken to a commercial laboratory for analysis (Appendix B). Laboratory chloride readings returned values of 192 mg/kg at 6 inches bgs at Point 1, 320 mg/kg at 6 inches bgs at Point 2 and 240 mg/kg at 1 foot bgs at Point 2. Gasoline Range Organics (GRO) and BTEX readings returned levels of non-detect at all depths at both points. Diesel Range Organics (DRO) readings were elevated at the surface of both points but dropped below regulatory standards at 6 inches bgs.

Photo documentation of the site can be found in Appendix C.

#### **Corrective Action Plan**

Based on the laboratory analysis, the release area will be scraped down to 6 inches bgs and the excavated soil will be taken to a NMOCD approved facility for disposal. At the base of the

scrape a bottom composite sample will be taken to confirm that chloride, GRO and DRO levels are below regulatory standards. Clean caliche will be imported to the site to serve as backfill. A sample of the caliche will be taken to a commercial laboratory to confirm that chloride levels are below regulatory standards. The scrape will be backfilled with the imported caliche and contoured to the surrounding location.

Once these activities have been completed, a Termination Request will be submitted 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) 393-2967 or me if you have any questions or wish to discuss the site.

Sincerely,

JC.W.

Lara Weinheimer Project Scientist RECS (575) 441-0431

Attachments:

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

# Figures

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

### **Initial Sampling Data**



# Appendix A Initial C-141

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

| District I<br>1625 N. French Dr., Hobbs, NM 88240<br>District II<br>811 S. First SL, Artesia, NM 88210<br>District III<br>1000 Rio Brazos Road, Aztec, NM 87410<br>District IV   | Energy Minerals<br>Oil Conse  | State of New Mexico<br>Minerals and Natural Resources<br>il Conservation Division<br>20 South St. Francis Dr. |   |  | HOBBS OCD<br>Form C-141<br>APR 2 2 2014 Revised August 8, 2011<br>Submit 1 Copy to appropriate District Office in<br>accordance with 19.15.29 NMAC.<br>RECEIVED |  |  |  |
|--|---|---|---|--|---|--|--|--|
| 1220 S. St. Francis Dr., Santa Fe, NM 87505  |   | Fe, NM 875  |   |  | roit late   |  |  |  |
| 1  | <b>Release Notificatio</b>  | on and Co   | orrective A   | ction  |   |  |  |  |
|  |   | <b>OPERA</b>  |   | 🛛 Ini  | tial Report 🔲 Final Repor   |  |  |  |
| Name of Company: ConocoPhillips  |   |   | encer Cluff   | 12   |   |  |  |  |
| Address: 29 Vacuum Complex Lane<br>Facility Name: Ruby 46  |   |   | No. 575-391-31<br>be: Oil Well  | 43   |   |  |  |  |
|  |   |   | c. on wen   |  |   |  |  |  |
| Surface Owner: NMOCD   | Mineral Owner   | NMOCD   |   | APIN   | lo. 30-025-41508  |  |  |  |
|  | LOCATIO   |   | LEASE   |  |   |  |  |  |
| Unit LetterSectionTownshipRaB1817S32   |   | h/South Line<br>h   | Feet from the 2310  | East/West Line<br>East   | LEA   |  |  |  |
| Latitude 32.7832838382327 Longitu  |   | OF REL  | FASE  |  |   |  |  |  |
| Type of Release: Spill - PREDUMINANT   |   |   | Release: 12.4 BI  | BLS Volume   | Recovered: 10 BBLS  |  |  |  |
| Source of Release: Stuffing Case   | OSRL 4122114  | Date and I  | lour of Occurrent   | ce Date an   | d Hour of Discovery   |  |  |  |
| Was Immediate Notice Given?  |   | 04/20/2014 03:30 am SAME<br>If YES, To Whom?  |   |  |   |  |  |  |
|  | s 🛛 No 🗌 Not Required   |   |   |  |   |  |  |  |
| By Whom? Spencer Cluff   |   | Date and I  | lour: 04/22/2014  | 2:00 pm  |   |  |  |  |
| Was a Watercourse Reached?   | es 🖾 No   | If YES, Volume Impacting the Watercourse.   |   |  |   |  |  |  |
| If a Watercourse was Impacted, Describe F  | ully.*  | Å   | - 24  | DTW=1  | 751   |  |  |  |
| Describe Cause of Problem and Remedial leak. Total amount was 11.4 BBLS of BBLS of oil recovered.  |   |   |   |  |   |  |  |  |
| Describe Area Affected and Cleanup Action<br>Caliche pad area was 84" X 38" X 0.25" of   |   | l 16" X 6" X 1  | 2" deep and will b  | be remediated acc  | ording to NMOCD requirements.   |  |  |  |
| I hereby certify that the information given<br>regulations all operators are required to rep<br>public health or, the environment. The acce<br>should their operations have failed to adequ<br>or the environment. In addition, NMOCD<br>federal, state, or local laws and/or regulation | ort and/or file certain release<br>eptance of a C-141 report by t<br>uately investigate and remedia<br>acceptance of a C-141 report | notifications a<br>he NMOCD m<br>ate contaminat   | nd perform correct<br>arked as "Final R<br>on that pose a thir<br>the operator of | ctive actions for n<br>leport" does not re<br>reat to ground wat<br>responsibility for | eleases which may endanger<br>elieve the operator of liability<br>ter, surface water, human health<br>compliance with any other                                 |  |  |  |
|  |   |   | OIL CON   | SERVATION  | N DIVISION  |  |  |  |
| Signature: Sponcer A. Cluff  |   | Approved by   | Environmental   | eiffer   | y Leking  |  |  |  |
| Printed Name: Spencer Cluff  |   |   |   |  | ntal Specialist   |  |  |  |
| Title: LEAD HSE  |   | Approval Da   | te: 4/22/11   | Expiratio  | n Date: 6 23/14   |  |  |  |
| E-mail Address: <b>spencer.a.cluff@co</b>  | nocophillips.com  |   | f Approval: SJB<br>( 6 23 )4,   | mot FINAL  | Attached  |  |  |  |
| Date: 4/22/2014  | Phone:575-391-3143  | _   |   |  | 1RP-04-14-3027  |  |  |  |

\* Attach Additional Sheets If Necessary

APR 2 3 2014

### Appendix B Initial Sampling Lab

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



July 24, 2014

LAURA FLORES RICE ENVIRONMENTAL CONSULTING & SAFETY LLC 419 W. CAIN HOBBS, NM 88240

RE: RUBY FEDERAL #46

Enclosed are the results of analyses for samples received by the laboratory on 07/16/14 15:00.

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 <a href="https://www.tceq.texas.gov/field/qa/lab\_accred\_certif.html">www.tceq.texas.gov/field/qa/lab\_accred\_certif.html</a>.

Cardinal Laboratories is accreditated 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. Keine

Celey D. Keene Lab Director/Quality Manager



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

| Received:         | 07/16/2014       | Sampling Date:      | 07/16/2014    |
|-------------------|------------------|---------------------|---------------|
| Reported:         | 07/24/2014       | Sampling Type:      | Soil          |
| Project Name:     | RUBY FEDERAL #46 | Sampling Condition: | Cool & Intact |
| Project Number:   | NONE GIVEN       | Sample Received By: | Jodi Henson   |
| Project Location: | NOT GIVEN        |                     |               |

#### Sample ID: PT. 1 @ SURFACE (H402159-01)

| BTEX 8021B                           | mg/    | kg              | Analyze    | d By: CK     |      |            |               |      |           |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|------|-----------|
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| Benzene*                             | <0.050 | 0.050           | 07/23/2014 | ND           | 2.41 | 120        | 2.00          | 2.72 |           |
| Toluene*                             | <0.050 | 0.050           | 07/23/2014 | ND           | 2.20 | 110        | 2.00          | 3.49 |           |
| Ethylbenzene*                        | <0.050 | 0.050           | 07/23/2014 | ND           | 2.45 | 122        | 2.00          | 4.14 |           |
| Total Xylenes*                       | <0.150 | 0.150           | 07/23/2014 | ND           | 7.86 | 131        | 6.00          | 4.44 |           |
| Total BTEX                           | <0.300 | 0.300           | 07/23/2014 | ND           |      |            |               |      |           |
| Surrogate: 4-Bromofluorobenzene (PID | 103 9  | % 89.4-12       | 6          |              |      |            |               |      |           |
| Chloride, SM4500Cl-B                 | mg/    | kg              | Analyze    | d By: AP     |      |            |               |      |           |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                             | 2160   | 16.0            | 07/21/2014 | ND           | 400  | 100        | 400           | 3.92 |           |
| TPH 8015M                            | mg/    | kg              | Analyze    | d By: MS     |      |            |               |      | S-06      |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| GRO C6-C10                           | <50.0  | 50.0            | 07/17/2014 | ND           | 179  | 89.7       | 200           | 2.05 |           |
| DRO >C10-C28                         | 4950   | 50.0            | 07/17/2014 | ND           | 194  | 96.8       | 200           | 2.02 |           |
| Surrogate: 1-Chlorooctane            | 113 %  | 65.2-14         | 0          |              |      |            |               |      |           |
| Surrogate: 1-Chlorooctadecane        | 214 9  | 63.6-15         |            |              |      |            |               |      |           |

#### **Cardinal Laboratories**

#### \*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

| Received:         | 07/16/2014       | Sampling Date:      | 07/16/2014    |
|-------------------|------------------|---------------------|---------------|
| Reported:         | 07/24/2014       | Sampling Type:      | Soil          |
| Project Name:     | RUBY FEDERAL #46 | Sampling Condition: | Cool & Intact |
| Project Number:   | NONE GIVEN       | Sample Received By: | Jodi Henson   |
| Project Location: | NOT GIVEN        |                     |               |

#### Sample ID: PT. 1 @ 6" (H402159-02)

| BTEX 8021B                           | mg/    | kg              | Analyze    | d By: ms     |      |            |               |      |           |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|------|-----------|
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| Benzene*                             | <0.050 | 0.050           | 07/21/2014 | ND           | 2.41 | 120        | 2.00          | 2.72 |           |
| Toluene*                             | <0.050 | 0.050           | 07/21/2014 | ND           | 2.20 | 110        | 2.00          | 3.49 |           |
| Ethylbenzene*                        | <0.050 | 0.050           | 07/21/2014 | ND           | 2.45 | 122        | 2.00          | 4.14 |           |
| Total Xylenes*                       | <0.150 | 0.150           | 07/21/2014 | ND           | 7.86 | 131        | 6.00          | 4.44 |           |
| Total BTEX                           | <0.300 | 0.300           | 07/21/2014 | ND           |      |            |               |      |           |
| Surrogate: 4-Bromofluorobenzene (PID | 103 9  | % 89.4-12       | 6          |              |      |            |               |      |           |
| Chloride, SM4500Cl-B                 | mg/    | kg              | Analyze    | d By: AP     |      |            |               |      |           |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                             | 192    | 16.0            | 07/21/2014 | ND           | 400  | 100        | 400           | 3.92 |           |
| TPH 8015M                            | mg/    | kg              | Analyze    | d By: MS     |      |            |               |      |           |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| GRO C6-C10                           | <10.0  | 10.0            | 07/17/2014 | ND           | 189  | 94.3       | 200           | 2.51 |           |
| DRO >C10-C28                         | 146    | 10.0            | 07/17/2014 | ND           | 210  | 105        | 200           | 4.14 |           |
| Surrogate: 1-Chlorooctane            | 107 9  | 65.2-14         | 0          |              |      |            |               |      |           |
| Surrogate: 1-Chlorooctadecane        | 116 9  | 63.6-15         | 4          |              |      |            |               |      |           |

#### **Cardinal Laboratories**

#### \*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

| Received:         | 07/16/2014       | Sampling Date:      | 07/16/2014    |
|-------------------|------------------|---------------------|---------------|
| Reported:         | 07/24/2014       | Sampling Type:      | Soil          |
| Project Name:     | RUBY FEDERAL #46 | Sampling Condition: | Cool & Intact |
| Project Number:   | NONE GIVEN       | Sample Received By: | Jodi Henson   |
| Project Location: | NOT GIVEN        |                     |               |

#### Sample ID: PT. 2 @ SURFACE (H402159-03)

| BTEX 8021B                           | mg/    | kg              | Analyze    | d By: ms     |      |            |               |      |           |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|------|-----------|
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| Benzene*                             | <0.050 | 0.050           | 07/21/2014 | ND           | 2.41 | 120        | 2.00          | 2.72 |           |
| Toluene*                             | <0.050 | 0.050           | 07/21/2014 | ND           | 2.20 | 110        | 2.00          | 3.49 |           |
| Ethylbenzene*                        | <0.050 | 0.050           | 07/21/2014 | ND           | 2.45 | 122        | 2.00          | 4.14 |           |
| Total Xylenes*                       | <0.150 | 0.150           | 07/21/2014 | ND           | 7.86 | 131        | 6.00          | 4.44 |           |
| Total BTEX                           | <0.300 | 0.300           | 07/21/2014 | ND           |      |            |               |      |           |
| Surrogate: 4-Bromofluorobenzene (PID | 103 9  | % 89.4-12       | 6          |              |      |            |               |      |           |
| Chloride, SM4500Cl-B                 | mg/    | kg              | Analyze    | d By: AP     |      |            |               |      |           |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                             | 5600   | 16.0            | 07/21/2014 | ND           | 400  | 100        | 400           | 3.92 |           |
| TPH 8015M                            | mg/    | kg              | Analyze    | d By: MS     |      |            |               |      | S-06      |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| GRO C6-C10                           | <50.0  | 50.0            | 07/18/2014 | ND           | 189  | 94.3       | 200           | 2.51 |           |
| DRO >C10-C28                         | 5680   | 50.0            | 07/18/2014 | ND           | 210  | 105        | 200           | 4.14 |           |
| Surrogate: 1-Chlorooctane            | 109 9  | 65.2-14         | 0          |              |      |            |               |      |           |
| Surrogate: 1-Chlorooctadecane        | 231 9  | 63.6-15         | 4          |              |      |            |               |      |           |

#### **Cardinal Laboratories**

#### \*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

| Received:         | 07/16/2014       | Sampling Date:      | 07/16/2014    |
|-------------------|------------------|---------------------|---------------|
| Reported:         | 07/24/2014       | Sampling Type:      | Soil          |
| Project Name:     | RUBY FEDERAL #46 | Sampling Condition: | Cool & Intact |
| Project Number:   | NONE GIVEN       | Sample Received By: | Jodi Henson   |
| Project Location: | NOT GIVEN        |                     |               |

#### Sample ID: PT. 2 @ 6" (H402159-04)

| BTEX 8021B                           | mg/    | ′kg             | Analyze    | d By: ms     |      |            |               |      |           |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|------|-----------|
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| Benzene*                             | <0.050 | 0.050           | 07/21/2014 | ND           | 2.41 | 120        | 2.00          | 2.72 |           |
| Toluene*                             | <0.050 | 0.050           | 07/21/2014 | ND           | 2.20 | 110        | 2.00          | 3.49 |           |
| Ethylbenzene*                        | <0.050 | 0.050           | 07/21/2014 | ND           | 2.45 | 122        | 2.00          | 4.14 |           |
| Total Xylenes*                       | <0.150 | 0.150           | 07/21/2014 | ND           | 7.86 | 131        | 6.00          | 4.44 |           |
| Total BTEX                           | <0.300 | 0.300           | 07/21/2014 | ND           |      |            |               |      |           |
| Surrogate: 4-Bromofluorobenzene (PID | 103 9  | % 89.4-12       | 6          |              |      |            |               |      |           |
| Chloride, SM4500Cl-B                 | mg/    | ′kg             | Analyze    | d By: AP     |      |            |               |      |           |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                             | 320    | 16.0            | 07/21/2014 | ND           | 400  | 100        | 400           | 3.92 |           |
| TPH 8015M                            | mg/    | ′kg             | Analyze    | d By: MS     |      |            |               |      |           |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| GRO C6-C10                           | <10.0  | 10.0            | 07/18/2014 | ND           | 189  | 94.3       | 200           | 2.51 |           |
| DRO >C10-C28                         | 70.0   | 10.0            | 07/18/2014 | ND           | 210  | 105        | 200           | 4.14 |           |
| Surrogate: 1-Chlorooctane            | 101 9  | 65.2-14         | 0          |              |      |            |               |      |           |
| Surrogate: 1-Chlorooctadecane        | 118 9  | 63.6-15         | 4          |              |      |            |               |      |           |

#### **Cardinal Laboratories**

#### \*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

| Received:         | 07/16/2014       | Sampling Date:      | 07/16/2014    |
|-------------------|------------------|---------------------|---------------|
| Reported:         | 07/24/2014       | Sampling Type:      | Soil          |
| Project Name:     | RUBY FEDERAL #46 | Sampling Condition: | Cool & Intact |
| Project Number:   | NONE GIVEN       | Sample Received By: | Jodi Henson   |
| Project Location: | NOT GIVEN        |                     |               |

#### Sample ID: PT. 2 @ 1' (H402159-05)

| BTEX 8021B                           | mg/    | ′kg             | Analyze    | d By: ms     |      |            |               |      |           |
|--------------------------------------|--------|-----------------|------------|--------------|------|------------|---------------|------|-----------|
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| Benzene*                             | <0.050 | 0.050           | 07/21/2014 | ND           | 2.41 | 120        | 2.00          | 2.72 |           |
| Toluene*                             | <0.050 | 0.050           | 07/21/2014 | ND           | 2.20 | 110        | 2.00          | 3.49 |           |
| Ethylbenzene*                        | <0.050 | 0.050           | 07/21/2014 | ND           | 2.45 | 122        | 2.00          | 4.14 |           |
| Total Xylenes*                       | <0.150 | 0.150           | 07/21/2014 | ND           | 7.86 | 131        | 6.00          | 4.44 |           |
| Total BTEX                           | <0.300 | 0.300           | 07/21/2014 | ND           |      |            |               |      |           |
| Surrogate: 4-Bromofluorobenzene (PID | 102 9  | % 89.4-12       | 6          |              |      |            |               |      |           |
| Chloride, SM4500Cl-B                 | mg/    | ′kg             | Analyze    | d By: AP     |      |            |               |      |           |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride                             | 240    | 16.0            | 07/21/2014 | ND           | 400  | 100        | 400           | 3.92 |           |
| TPH 8015M                            | mg/    | ′kg             | Analyze    | d By: MS     |      |            |               |      |           |
| Analyte                              | Result | Reporting Limit | Analyzed   | Method Blank | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| GRO C6-C10                           | <10.0  | 10.0            | 07/18/2014 | ND           | 189  | 94.3       | 200           | 2.51 |           |
| DRO >C10-C28                         | <10.0  | 10.0            | 07/18/2014 | ND           | 210  | 105        | 200           | 4.14 |           |
| Surrogate: 1-Chlorooctane            | 98.7   | % 65.2-14       | 0          |              |      |            |               |      |           |
| Surrogate: 1-Chlorooctadecane        | 105 9  | 63.6-15         | 4          |              |      |            |               |      |           |

#### **Cardinal Laboratories**

#### \*=Accredited Analyte

Celey D. Keine

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 SM4500CI-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

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

| Company Name: RECS   |                  |              |             |            |        |             | BILL TO  |            |                       |   |           |                    | ANALYSIS REQUEST |      |        |                |          |   |   |   |   |   |
|--|------------------|--------------|-------------|------------|--------|-------------|----------|------------|-----------------------|---|-----------|--------------------|------------------|------|--------|----------------|----------|---|---|---|---|---|
| Project Manager: Laura Flores, Kyle Norman                                 |                  |              |             |            |        |             | P.0      | ). #:      |                       |   |           |                    |                  |      |        |                |          |   |   |   |   |   |
| Address:   |                  |              |             |            |        |             | Company: |            |                       |   |           |                    |                  |      |        |                | SL       |   |   |   |   |   |
| City: Hobbs State: NM Zip: 88240   |                  |              |             |            |        |             | Attn:    |            |                       |   |           |                    |                  |      |        |                | ion      |   |   |   |   |   |
| Phone #: Fax #:  |                  |              |             |            |        |             | Address: |            |                       |   |           |                    |                  |      |        |                | An       |   |   |   |   |   |
| Project #: Project Owner:  |                  |              |             |            |        | _           | City:    |            |                       |   |           | S                  | PH 8015 M        | втех | IS TPH | Cations/Anions |          |   |   |   |   |   |
| Project Name:  |                  |              |             |            | _      | State: Zip: |          |            |                       |   | Chlorides | 0                  |                  |      |        |                |          |   |   |   |   |   |
| Project Location: Ruby Federal #46<br>Sampler Name: Kyle Schwardt          |                  |              |             |            | _      | Phone #:    |          |            |                       |   |           | TDS                |                  |      |        |                |          | - | - | - |   |   |
| Sampler Name: Kyle Schwardt  | _                | _            | _           |            |        | _           | Fax      | -          |                       | - |           |                    | Ĕ                | I    | m      | Texas          |          | - |   |   |   |   |
| FOR LAB USE ONLY   |                  |              | ⊢           | M          | ATRI   | X           |          | PRE        | SERV                  | 4 | SAMPL     | NG                 | 0                | 6    |        | E              | ete      |   |   |   |   |   |
| Lab I.D. Sample I.D.   | (G)RAB OR (C)OMP | # CONTAINERS | GROUNDWATER | WASTEWATER | SOIL   | SLUDGE      | OTHER :  | ACID/BASE: | ICE / COOL<br>OTHER : |   | DATE      | TIME               |                  |      |        |                | Complete |   |   |   |   |   |
| 1 point 1@ sortace   | 6                | 1            |             |            | X      |             |          | 4          |                       | Ŀ | 7-16-14   |                    | X                | X    | K      |                |          |   | _ |   | _ | - |
| 1 point 1@ sortace<br>2 point 1@ 8"<br>3 point 2@ Surface<br>4 point 2@ 6" | 6                | 1            |             | 5          | 1      | -           |          | 1          | Ķ                     | + | (         | 11:05              | K                | K    | X      |                | -        |   | _ | - | - | _ |
| 3 point 2@ Surface   | 6                | 1            | +           |            | Ķ      | -           | -        |            | K.                    | Ŧ | 1         | 11:10              | X                | X    | X      |                | -        |   | - | - | - | - |
| 4 point 2 @ 6"   | 6                | 1            | ⊢           |            | K<br>K | -           | -        |            |                       | ł | )         | 11:15              | 17               | Ne   | 12     |                |          |   | _ | - | - | - |
| 5 point 2 @ 1'   | 6                | 1            | t           |            | ~      | +           |          |            | -                     | t | 1         | 11.20              | $\sim$           | 1    | 11     |                | -        |   |   |   |   |   |
|  | +                | t            |             |            |        | 1           |          |            |                       | t |           |                    |                  |      |        |                | -        |   |   |   |   |   |
|  | 1                | t            | t           |            | -      |             |          |            |                       | t |           |                    |                  |      |        |                |          |   |   |   |   |   |
|  | 1                | 1            | 1           |            |        |             |          |            |                       |   |           |                    |                  |      |        |                |          |   |   |   |   |   |
|  |                  |              |             |            |        |             |          |            |                       |   |           | id by the client f |                  |      |        |                |          |   |   |   |   |   |

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 the client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client's exclusive remedy and unless made in writing and received by Cardinal within 30 days after completion of the applicable contract or tort, shall be limited to the amount paid by the client's exclusive remediates and the shall be demendenced without unless made in writing and received by Cardinal within 30 days after completion of the applicable contract or tort, shall be demendenced without unless made in writing and received by Cardinal within 30 days after completion of the applicable contract or tort, shall be demendenced without unless made in writing and received by Cardinal within 30 days after completion of the applicable contract or tort, shall be demendenced by Cardinal writin 30 days after completion of the applicable contract or tort, shall be demendenced by Cardinal writin 30 days after completion of the applicable contract or tort, shall be demendenced by Cardinal writing and the shall be demendenced by Cardi

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| Relinguished By:   | Date:<br>-16-14<br>Tinge: | Received By:  | ison                      | Phone Result: Yes No Add'l Phone #:   Fax Result: Yes No Add'l Fax #:   REMARKS: email: hconder@riceswd.com; Iflores@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: @rice-ecs.com |  |  |  |  |  |  |
|--|---------------------------|---|---------------------------|---|--|--|--|--|--|--|
| Relinquished By:   | Date:<br>Time:            | Received By:  |                           |   |  |  |  |  |  |  |
| Delivered By: (Circle One)<br>Sampler - UPS - Bus - Other: |                           | Sample Condition<br>Cool Infact<br>Ves Ves<br>No No | CHECKED BY:<br>(Initials) |   |  |  |  |  |  |  |

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

### Appendix C Photo Documentation

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

### **ConocoPhillips Ruby 46**

Unit Letter B, Section 18, T17S, R32E



Initial release area, facing west

7/10/14



Initial release area, facing north

7/10/14



Hand auguring for depth, facing northwest 7/16/14