

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  
Department  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-144  
Revised June 6, 2013

For temporary pits, below-grade tanks, and multi-well fluid management pits, submit to the appropriate NMOCD District Office.  
For permanent pits submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

Pit, Below-Grade Tank, or

14306 Proposed Alternative Method Permit or Closure Plan Application

Type of action: ☐ Below grade tank registration  
☐ Permit of a pit or proposed alternative method  
☒ Closure of a pit, below-grade tank, or proposed alternative method  
☐ Modification to an existing permit/or registration  
☐ Closure plan only submitted for an existing permitted or non-permitted pit, below-grade tank, or proposed alternative method

OIL CONS. DIV DIST. 3

APR 06 2016

Instructions: Please submit one application (Form C-144) per individual pit, below-grade tank or alternative request

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.  
Operator: ConocoPhillips Company OGRID #: 217817  
Address: PO BOX 4289, Farmington, NM 87499  
Facility or well name: SAN JUAN 29-6 UNIT 14  
API Number: 30-039-07673 OCD Permit Number: \_\_\_\_\_  
U/L or Qtr/Qtr B (NWNE) Section 7 Township 29N Range 6W County: Rio Arriba  
Center of Proposed Design: Latitude 36.74477 °N Longitude -107.50063 °W NAD: ☐ 1927 ☒ 1983  
Surface Owner: ☐ Federal ☐ State ☒ Private ☐ Tribal Trust or Indian Allotment

**DENIED** \*No closure  
Pictures of  
Soil cover

BY: Cory Smith  
DATE: 4/6/16 (505) 334-6178 Ext. 115  
Low Chloride Drilling Fluid ☐ yes ☐ no

2.  
☐ Pit: Subsection F, G or J of 19.15.17.11 NMAC  
Temporary: ☐ Drilling ☐ Workover  
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A ☐ Multi-Well Fluid Management  
☐ Lined ☐ Unlined Liner type: Thickness \_\_\_\_\_ mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_  
☐ String-Reinforced  
Liner Seams: ☐ Welded ☐ Factory ☐ Other \_\_\_\_\_ Volume: \_\_\_\_\_ bbl Dimensions: L \_\_\_\_\_ x W \_\_\_\_\_ x D \_\_\_\_\_

3.  
☒ Below-grade tank: Subsection I of 19.15.17.11 NMAC  
Volume: 120 bbl Type of fluid: Produced Water  
Tank Construction material: Metal  
☐ Secondary containment with leak detection ☒ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off  
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☐ Other \_\_\_\_\_  
Liner type: Thickness \_\_\_\_\_ mil ☐ HDPE ☐ PVC ☒ Other UNSPECIFIED

4.  
☐ Alternative Method:  
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

5.  
Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tanks)  
☐ Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residence, school, hospital, institution or church)  
☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet  
☐ Alternate. Please specify \_\_\_\_\_

27



6.

**Netting:** Subsection E of 19.15.17.11 NMAC (*Applies to permanent pits and permanent open top tanks*)

☐ Screen ☐ Netting ☐ Other \_\_\_\_\_

☐ Monthly inspections (If netting or screening is not physically feasible)

7.

**Signs:** Subsection C of 19.15.17.11 NMAC

☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers

☐ Signed in compliance with 19.15.16.8 NMAC

8.

**Variances and Exceptions:**

Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.

**Please check a box if one or more of the following is requested, if not leave blank:**

☐ Variance(s): Requests must be submitted to the appropriate division district for consideration of approval.

☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

9.

**Siting Criteria (regarding permitting):** 19.15.17.10 NMAC

**Instructions:** *The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Siting criteria does not apply to drying pads or above-grade tanks.*

**General siting**

**Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank.**

- ☐ NM Office of the State Engineer - iWATERS database search; ☐ USGS; ☐ Data obtained from nearby wells

☐ Yes ☐ No

☒ NA

**Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit.**

NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☐ Yes ☐ No

☒ NA

Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. (**Does not apply to below grade tanks**)

- Written confirmation or verification from the municipality; Written approval obtained from the municipality

☐ Yes ☐ No

Within the area overlying a subsurface mine. (**Does not apply to below grade tanks**)

- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

☐ Yes ☐ No

Within an unstable area. (**Does not apply to below grade tanks**)

- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map

☐ Yes ☐ No

Within a 100-year floodplain. (**Does not apply to below grade tanks**)

- FEMA map

☐ Yes ☐ No

**Below Grade Tanks**

Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark).

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☒ No

Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;

- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

☐ Yes ☒ No

**Temporary Pit using Low Chloride Drilling Fluid** (maximum chloride content 15,000 mg/liter)

Within 100 feet of a continuously flowing watercourse, or any other significant watercourse or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). (Applies to low chloride temporary pits.)

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial application.

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

☐ Yes ☐ No

Within 200 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 300feet of any other fresh water well or spring, in existence at the time of the initial application.

NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

☐ Yes ☐ No



Within 100 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

### **Temporary Pit Non-low chloride drilling fluid**

Within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

☐ Yes ☐ No

Within 500 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application;

- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 300 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

### **Permanent Pit or Multi-Well Fluid Management Pit**

Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

☐ Yes ☐ No

Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application.

- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 500 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

10.

#### **Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist:** Subsection B of 19.15.17.9 NMAC

**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
- ☐ Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

☐ Previously Approved Design (attach copy of design) API Number: \_\_\_\_\_ or Permit Number: \_\_\_\_\_

11.

#### **Multi-Well Fluid Management Pit Checklist:** Subsection B of 19.15.17.9 NMAC

**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ A List of wells with approved application for permit to drill associated with the pit.
- ☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
- ☐ Hydrogeologic Data - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC

☐ Previously Approved Design (attach copy of design) API Number: \_\_\_\_\_ or Permit Number: \_\_\_\_\_



12.

**Permanent Pits Permit Application Checklist:** Subsection B of 19.15.17.9 NMAC

**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC  
☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC  
☐ Climatological Factors Assessment  
☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Quality Control/Quality Assurance Construction and Installation Plan  
☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC  
☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Nuisance or Hazardous Odors, including H<sub>2</sub>S, Prevention Plan  
☐ Emergency Response Plan  
☐ Oil Field Waste Stream Characterization  
☐ Monitoring and Inspection Plan  
☐ Erosion Control Plan  
☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

13.

**Proposed Closure:** 19.15.17.13 NMAC

**Instructions:** Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.

- Type: ☐ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☐ Permanent Pit ☐ Below-grade Tank ☐ Multi-well Fluid Management Pit  
☐ Alternative
- Proposed Closure Method: ☒ Waste Excavation and Removal  
☐ Waste Removal (Closed-loop systems only)  
☐ On-site Closure Method (Only for temporary pits and closed-loop systems)  
☐ In-place Burial ☐ On-site Trench Burial  
☐ Alternative Closure Method

14.

**Waste Excavation and Removal Closure Plan Checklist:** (19.15.17.13 NMAC) **Instructions:** Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.

- ☒ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC  
☒ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC  
☒ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)  
☒ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  
☒ Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  
☒ Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

15.

**Siting Criteria (regarding on-site closure methods only):** 19.15.17.10 NMAC

**Instructions:** Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. Please refer to 19.15.17.10 NMAC for guidance.

|   |   |
|---|---|
| Ground water is less than 25 feet below the bottom of the buried waste.<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells   | <input type="checkbox"/> Yes <input type="checkbox"/> No<br><input type="checkbox"/> NA |
| Ground water is between 25-50 feet below the bottom of the buried waste<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells   | <input type="checkbox"/> Yes <input type="checkbox"/> No<br><input type="checkbox"/> NA |
| Ground water is more than 100 feet below the bottom of the buried waste.<br>- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells  | <input type="checkbox"/> Yes <input type="checkbox"/> No<br><input type="checkbox"/> NA |
| Within 100 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).<br>- Topographic map; Visual inspection (certification) of the proposed site                        | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.<br>- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image  | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Within 300 horizontal feet of a private, domestic fresh water well or spring used for domestic or stock watering purposes, in existence at the time of initial application.<br>- NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Written confirmation or verification from the municipality; Written approval obtained from the municipality   | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Within 300 feet of a wetland.<br>US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site   | <input type="checkbox"/> Yes <input type="checkbox"/> No                                |
| Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance   |   |



adopted pursuant to NMSA 1978, Section 3-27-3, as amended.

- Written confirmation or verification from the municipality; Written approval obtained from the municipality

☐ Yes ☐ No

Within the area overlying a subsurface mine.

- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

☐ Yes ☐ No

Within an unstable area.

- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map

☐ Yes ☐ No

Within a 100-year floodplain.

- FEMA map

☐ Yes ☐ No

16.

**On-Site Closure Plan Checklist:** (19.15.17.13 NMAC) *Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.*

- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection E of 19.15.17.13 NMAC
- ☐ Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of Subsection K of 19.15.17.11 NMAC
- ☐ Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☐ Waste Material Sampling Plan - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)
- ☐ Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

17.

**Operator Application Certification:**

I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

e-mail address: \_\_\_\_\_ Telephone: \_\_\_\_\_

18.

**OCD Approval:** ☐ Permit

OCD Representative Signature: \_\_\_\_\_

Title: \_\_\_\_\_

**DENIED**

n (only) ☐ OCD Conditions (see attachment)

Approval Date: \_\_\_\_\_

OCD Permit Number: \_\_\_\_\_

19.

**Closure Report (required within 60 days of closure completion):** 19.15.17.13 NMAC

*Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.*

☒ Closure Completion Date: 2/22/2016

20.

**Closure Method:**

- ☒ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-loop systems only)
- ☐ If different from approved plan, please explain.

21.

**Closure Report Attachment Checklist:** *Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.*

- ☒ Proof of Closure Notice (surface owner and division)
- ☐ Proof of Deed Notice (required for on-site closure for private land only)
- ☐ Plot Plan (for on-site closures and temporary pits)
- ☒ Confirmation Sampling Analytical Results (if applicable)
- ☐ Waste Material Sampling Analytical Results (required for on-site closure)
- ☐ Disposal Facility Name and Permit Number
- ☒ Soil Backfilling and Cover Installation
- ☒ Re-vegetation Application Rates and Seeding Technique
- ☒ Site Reclamation (Photo Documentation)

On-site Closure Location: Latitude \_\_\_\_\_ °N \_\_\_\_\_ Longitude \_\_\_\_\_ °W \_\_\_\_\_ NAD: ☐ 1927 ☐ 1983

**Operator Closure Certification:**

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print) Crystal Walker Title: Regulatory Coordinator

Signature:  Date: 4/5/14

e-mail address: crystal.walker@cop.com Telephone: (505) 326-9837



**ConocoPhillips Company  
San Juan Basin  
Below Grade Tank Closure Report**

**Lease Name: San Juan 29-6 Unit 14**

**API No.: 30-039-07673**

In accordance with Rule 19.15.17.13 NMAC the following information describes the closure of the below-grade tank referenced above. All proper documentation regarding closure activities is being included with the C-144.

**General Plan:**

1. COPC shall close a below-grade tank within 60 days of cessation of operations per Subsection G.4 of 19.15.17.13 NMAC. This will include a) below-grade tanks that do not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC or is not included in Paragraph (5) of Subsection I of 19.15.17.11 NMAC within five years, if not retrofitted to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC; b) an earlier date that the division requires because of imminent danger to fresh water, public health or the environment. For any closure, COPC will file the C144 Closure Report as required.

**The below-grade tank referenced above was permitted and closed within 60 days of cessation of the below-grade tanks operation.**

2. COPC shall remove liquids and sludge from a below-grade tank prior to implementing a closure method and shall dispose of the liquids and sludge in a division-approved facility. The facilities to be used will be Basin Disposal (Permit #NM-01-005), JFJ Landfarm % Industrial Ecosystem Inc. (Permit # NM-01-0010B) and Envirotech Land Farm (Permit #NM-01-011). The liner after being cleaned well (Subsection D, Paragraph 1, Subparagraph (m) of 19.15.9.712 NMAC) will be disposed of at the San Juan County Regional Landfill located on CR 3100.

**All recovered liquids were disposed of at Basin Disposal (Permit #NM-01-005) and any sludge or soil required to be removed to facilitate closure was hauled to Envirotech Land Farm (Permit #NM-01-011) and JFJ Landfarm % IEI (Permit #NM-01-0010B). The liner was cleaned per Subsection D, Paragraph 1, Subparagraph (m) of 19.15.9.712 NMAC was disposed of at the San Juan County Regional Landfill located on CR 3100.**

3. COPC will receive prior approval to remove the below-grade tank and dispose of it in a division-approved facility or recycle, reuse, or reclaim it in a manner that the appropriate division district office approves.

**The below-grade tank was disposed of in a division-approved manner.**

4. If there is any on-site equipment associated with a below-grade tank, then COPC shall remove the equipment, unless the equipment is required for some other purpose.

**All on-site equipment associated with the below-grade tank was removed.**

5. COPC will test the soils beneath the below-grade tank to determine whether a release has occurred. COPC shall collect, at a minimum, a five point, composite sample; collect individual grab samples from any area that is wet, discolored or showing other evidence of a release; and analyzed for the constituents listed in Table I of 19.15.17.13 NMAC. COPC shall notify the division of its results on form C-141.

4/5/2016



A five point composite sample was taken of the below-grade tank using sampling tools and all samples tested per Subsection B of 19.15.17.1 3(B)(1)(b). (Sample results attached). Form C-141 is attached.

| Components | Tests Method              | Limit (mg/kg) |
|------------|---------------------------|---------------|
| Benzene    | EPA SW-846 8021B or 8260B | 0.2           |
| BTEX       | EPA SW-846 8021B or 8260B | 50            |
| TPH        | EPA SW-846 418.1          | 100           |
| Chlorides  | EPA 300.0                 | 250           |

6. If COPC or the division determines that a release has occurred, then COPC shall comply with 19.15.3.116 NMAC and 19.15.1.19 NMAC, as appropriate.

**A release was not determined for the above referenced well.**

7. If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in Table I of 19.15.17.13 NMAC, then COPC shall backfill the excavation with compacted, non-waste containing, earthen material; construct a division-prescribed soil cover; recontour and re-vegetate the site.

**The below-grade tank area passed all requirements of Paragraph (4) of Subsection E of 19.15.17.13 NMAC and was backfilled with compacted, non-waste containing, earthen material.**

8. Notice of Closure will be given prior to closure to the Aztec Division office between 72 hours and one week via email or verbally. The notification of closure will include the following:
- Operator's name
  - Location by Unit Letter, Section, Township, and Range. Well name and API number.

**Notification is attached.**

9. The surface owner shall be notified of COPC's closing of the below-grade tank 72 hours, but not more than one week, prior to closure as per the approved closure plan via certified mail, return receipt requested.

**The closure process notification to the landowner was sent via certified mail. (See Attached) (Well located on Federal Land, certified mail is not required for Federal Land per BLM/OCD MOU.)**

10. Re-contouring of location will match fit, shape, line, form and texture of the surrounding. Re-shaping will include drainage control, prevent ponding, and prevent erosion. Natural drainages will be unimpeded and water bars and/or silt traps will be place in areas where needed to prevent erosion on a large scale. Final re-contour shall have a uniform appearance with smooth surface, fitting the natural landscape.

**The below-grade tank area was re-contoured to match fit, shape, line, form and texture of the surrounding area. Re-shaping including drainage control, to prevent ponding and erosion. Natural drainages were unimpeded and water bars and/or silt traps were placed in areas where needed to prevent erosion on a large scale. Final recontour has a uniform appearance with smooth surface, fitting the natural landscape.**

11. COPC shall seed the disturbed areas the first favorable growing season following closure of a below-grade tank. Seeding will be accomplished via drilling on the contour whenever practical or by other division-approved methods. BLM stipulated seed mixes will used on federally regulated lands and division-approved seed mixtures (administratively approved if required) will be utilized on all State or private lands. A uniform vegetative cover has been established that reflects a life-form ratio of plus or minus fifty percent (50%) of pre- disturbance levels and a total percent plant cover of at least seventy percent (70%) of pre-disturbance levels, excluding noxious weeds. If alternate seed mix is required by the state, private owner or tribe, it will be implemented with administrative approval if needed. COPC will repeat seeding or planting will be continued until successful vegetative growth occurs.



**Provision 13 was accomplished through complying with BLM seeding requirements as allowed by the BLM/OCD MOU.**

12. A minimum of four feet of cover shall be achieved and the cover shall include one foot of suitable material, with chloride concentrations less than 600 mg/kg as analyzed by EPA Method 300.0, to establish vegetation at the site, or the background thickness of topsoil, whichever is greater.

**The below-grade tank area was backfilled and more than four feet of cover was achieved and the cover included one foot of suitable material to establish vegetation at the site.**

13. All closure activities will include proper documentation and be available for review upon request and will be submitted to OCD within 60 days of closure of the below-grade tank. Closure report will be filed on C-144 and incorporate the following:

- Soil Backfilling and Cover Installation **(See Report)**
- Re-vegetation application rates and seeding techniques **(See Report)**
- Photo documentation of the site reclamation **(Included as an attachment)**
- Confirmation Sampling Results **(Included as an attachment)**
- Proof of closure notice **(Included as an attachment)**



## Walker, Crystal

---

**From:** Busse, Dollie L  
**Sent:** Wednesday, February 17, 2016 12:56 PM  
**To:** Smith, Cory, EMNRD; Vanessa.Fields@state.nm.us; 'Brandon.Powell@state.nm.us'  
**Cc:** GRP:SJBU Regulatory; Notor, Lori; Fincher, Shawn S; Payne, Wendy F; Dixon, Shorell (PAC); Hunter, Lisa; Spearman, Bobby E; Farrell, Juanita R  
**Subject:** San Juan 29-6 Unit 14 - 72 Hour BGT Closure Notification  
**Attachments:** SJ 29-6 Unit 14 - Private Landowner BGT Notification.pdf  
  
**Importance:** High

**Subject: 72 Hour BGT Closure Notification**

**Anticipated Start Date:** Monday, February 22, 2016

The subject well has a below-grade tank that will begin the closure process between 72 hours and one week from this notification. Please contact me at any time if you have any questions or concerns.

**Well Name:** San Juan 29-6 Unit 14

**API#:** 30-039-07673

**Location:** Unit B (NWNE), Section 7, T29N, R6W

**Footages:** 990' FNL & 1650' FEL

**Operator:** ConocoPhillips

**Surface Owner:** Private (Notification attached)

**Reason:** P&A'd 8/3/15

Dollie L. Busse  
Regulatory Technician  
ConocoPhillips Company  
505-324-6104  
505-215-3069  
[Dollie.L.Busse@cop.com](mailto:Dollie.L.Busse@cop.com)





Juanita Farrell  
Senior Associate  
Surface Land

ConocoPhillips Company  
3401 E. 30<sup>th</sup> Street  
PO Box 4289  
Farmington, NM 87499-1429  
(505) 326-9597  
(505) 324-6136

**CERTIFIED MAIL – RETURN RECEIPT REQUESTED**

9214 7969 0099 9790 1002 9037 71

February 17, 2016

Mr. Bill Smith  
#5 CR 2978  
Aztec, NM 87410

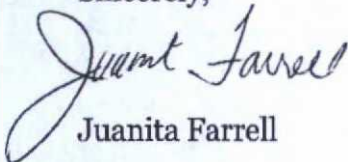
Re: **San Juan 29-6 Unit 14**  
API: 30-039-07673  
NENE Section 7, T29N, R6W  
Rio Arriba County, New Mexico

Dear Landowner:

Pursuant to New Mexico Administrative Code § 19.15.17.13 (E) (1) operator shall provide the surface owner of the operator's proposal to close a below- grade tank. In compliance with this requirement, please consider this letter as notification that ConocoPhillips intends to close a below-grade tank on the subject well pad. Closure will occur on 2/22/2016.

If you have any questions, please contact the Surface Land Department at (505) 324-6111.

Sincerely,



Juanita Farrell



District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised August 8, 2011

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

### Release Notification and Corrective Action

#### OPERATOR

☐ Initial Report ☒ Final Report

|                 |   |               |                |
|-----------------|---|---------------|----------------|
| Name of Company | ConocoPhillips Company                        | Contact       | Crystal Walker |
| Address         | 3401 East 30 <sup>th</sup> St, Farmington, NM | Telephone No. | (505) 326-9837 |
| Facility Name   | San Juan 29-6 Unit 14                         | Facility Type | Gas Well       |

|               |         |               |         |         |              |
|---------------|---------|---------------|---------|---------|--------------|
| Surface Owner | PRIVATE | Mineral Owner | FEDERAL | API No. | 30-039-07673 |
|---------------|---------|---------------|---------|---------|--------------|

#### LOCATION OF RELEASE

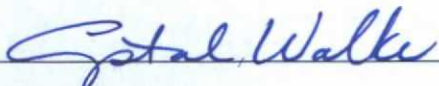
|             |         |          |       |               |                  |               |                |            |
|-------------|---------|----------|-------|---------------|------------------|---------------|----------------|------------|
| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County     |
| B           | 7       | 29N      | 6W    | 990           | North            | 1650          | East           | Rio Arriba |

Latitude 36.74477 Longitude -107.50063

#### NATURE OF RELEASE

|  |   |                            |
|--|---|----------------------------|
| Type of Release  | Volume of Release                         | Volume Recovered           |
| Source of Release  | Date and Hour of Occurrence               | Date and Hour of Discovery |
| Was Immediate Notice Given?<br><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required | If YES, To Whom?                          |                            |
| By Whom?   | Date and Hour                             |                            |
| Was a Watercourse Reached?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  | If YES, Volume Impacting the Watercourse. |                            |
| If a Watercourse was Impacted, Describe Fully.*<br>N/A   |   |                            |
| Describe Cause of Problem and Remedial Action Taken.*<br>No release was encountered during the BGT Closure.                              |   |                            |
| Describe Area Affected and Cleanup Action Taken.*<br>N/A   |   |                            |

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:  | <u>OIL CONSERVATION DIVISION</u>      |                  |                                   |
| Printed Name: Crystal Walker   | Approved by Environmental Specialist: |                  |                                   |
| Title: <b>Regulatory Coordinator</b>   | Approval Date:                        | Expiration Date: |                                   |
| E-mail Address: crystal.walker@cop.com   | Conditions of Approval:               |                  | Attached <input type="checkbox"/> |
| Date: <u>4/5/16</u> Phone: (505) 326-9837  |                                       |                  |                                   |

\* Attach Additional Sheets If Necessary



# **Rule** Engineering, LLC

Solutions to Regulations for Industry

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March 21, 2016

Ms. Lisa Hunter  
ConocoPhillips  
San Juan Business Unit  
5525 Highway 64  
Farmington, New Mexico 87401

**Re: San Juan 29-6 #14  
Below Grade Tank Closure Sampling Report**

Dear Ms. Hunter:

This report summarizes the below grade tank (BGT) closure sampling activities conducted by Rule Engineering, LLC (Rule) at the ConocoPhillips San Juan 29-6 #14 located in Unit Letter B, Section 7, Township 29N, Range 6W in Rio Arriba County, New Mexico. Activities included collection and analysis of a 5-point composite soil confirmation sample from beneath the BGT on February 22, 2016. A topographic map of the location is included as Figure 1 and an aerial site map is included as Figure 2.

## **BGT Summary**

**Site Name** – San Juan 29-6 #14

**Location** – Unit Letter B, Section 7 Township 29N, Range 7W

**API Number** – 30-039-07673

**Wellhead Latitude/Longitude** – N36.74473 and W107.50095

**BGT Latitude/Longitude** – N36.74477 and W107.50063

**Land Jurisdiction** – Private

**Size of BGT** – 45 barrels

**Date of BGT Closure Soil Sampling** – February 22, 2016

## **BGT Closure Standards**

As outlined in 19.15.17.13 New Mexico Administrative Code (NMAC), BGT closure standards for the San Juan 29-6 #14 are as follows: 10 milligrams per kilogram (mg/kg) benzene, 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX), 100 mg/kg total petroleum hydrocarbons (TPH), and 600 mg/kg chlorides.

## **Field Activities**

On February 22, 2016, following removal of the BGT tank and liner, Rule personnel conducted a visual inspection for surface/subsurface indications of a release. No evidence of a release was observed. Rule personnel then collected five soil samples (S-1 through S-5) from 0.5 feet beneath the floor of the BGT excavation. Figure 2 provides the location of the soil samples collected from below the BGT. The field work summary sheet is attached.



### **Soil Sampling**

The five soil samples (S-1 through S-5) collected from below the floor of the BGT excavation were combined to create soil confirmation sample SC-1. A portion of SC-1 was field screened for volatile organic compounds (VOCs) and chlorides, and field analyzed for TPH.

Field screening for VOC vapors was conducted with a photo-ionization detector (PID). Prior to field screening, the PID was calibrated with 100 parts per million (ppm) isobutylene gas. Field analysis for TPH was conducted per U.S. Environmental Protection Agency (USEPA) Method 418.1, utilizing a total hydrocarbon analyzer. Prior to field analysis, the machine was calibrated following the manufacturer's procedure with includes calculation of a calibration curve using known concentration standards. Field screening for chloride was conducted using the Hach chloride low range test kit. Chloride concentrations were determined by drop count titration method using silver nitrate titrant.

The portion of SC-1 collected for laboratory analysis was placed into laboratory supplied glassware, labeled, and maintained on ice until delivery to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico. The sample was analyzed for BTEX per USEPA Method 8021B, TPH per USEPA Method 8015D, and chlorides per USEPA Method 300.0.

### **Field and Analytical Results**

Field sampling results for soil confirmation sample SC-1 indicated a VOC concentration of 0.5 ppm and a TPH concentration of below the practical quantitation limit of 20.0 mg/kg. Field chloride concentrations were reported at 80 mg/kg.

Laboratory analytical results for sample SC-1 reported benzene and total BTEX concentrations below the laboratory reporting limits of 0.048 mg/kg and 0.241 mg/kg, respectively. Laboratory analytical results for SC-1 reported TPH as gasoline range organics (GRO) and diesel range organics (DRO) concentrations below the laboratory reporting limits of 4.8 mg/kg and 9.6 mg/kg, respectively. The laboratory analytical result for chloride concentration was below the laboratory reporting limits of 7.5 mg/kg. Field and laboratory results for SC-1 are summarized in Table 1, and the analytical laboratory report is attached.

### **Conclusions**

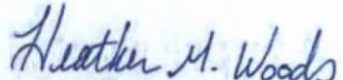
On February 22, 2016, BGT closure sampling activities were conducted at the ConocoPhillips San Juan 29-6 #14. Field and laboratory results for confirmation sample SC-1 were reported below the BGT closure standards for benzene, total BTEX, TPH, and chlorides as outlined in 19.15.17.13 NMAC. Based on field sampling and laboratory analytical results, no release occurred from the BGT and no further work is recommended.



Ms. Lisa Hunter  
San Juan 29-6 #14  
March 21, 2016  
Page 3 of 3

Rule Engineering appreciates the opportunity to provide services to ConocoPhillips.  
If you have any questions, please contact me at (505) 325-1055.

Sincerely,  
**Rule Engineering, LLC**

  
Heather M. Woods, P.G.

**Attachments:**

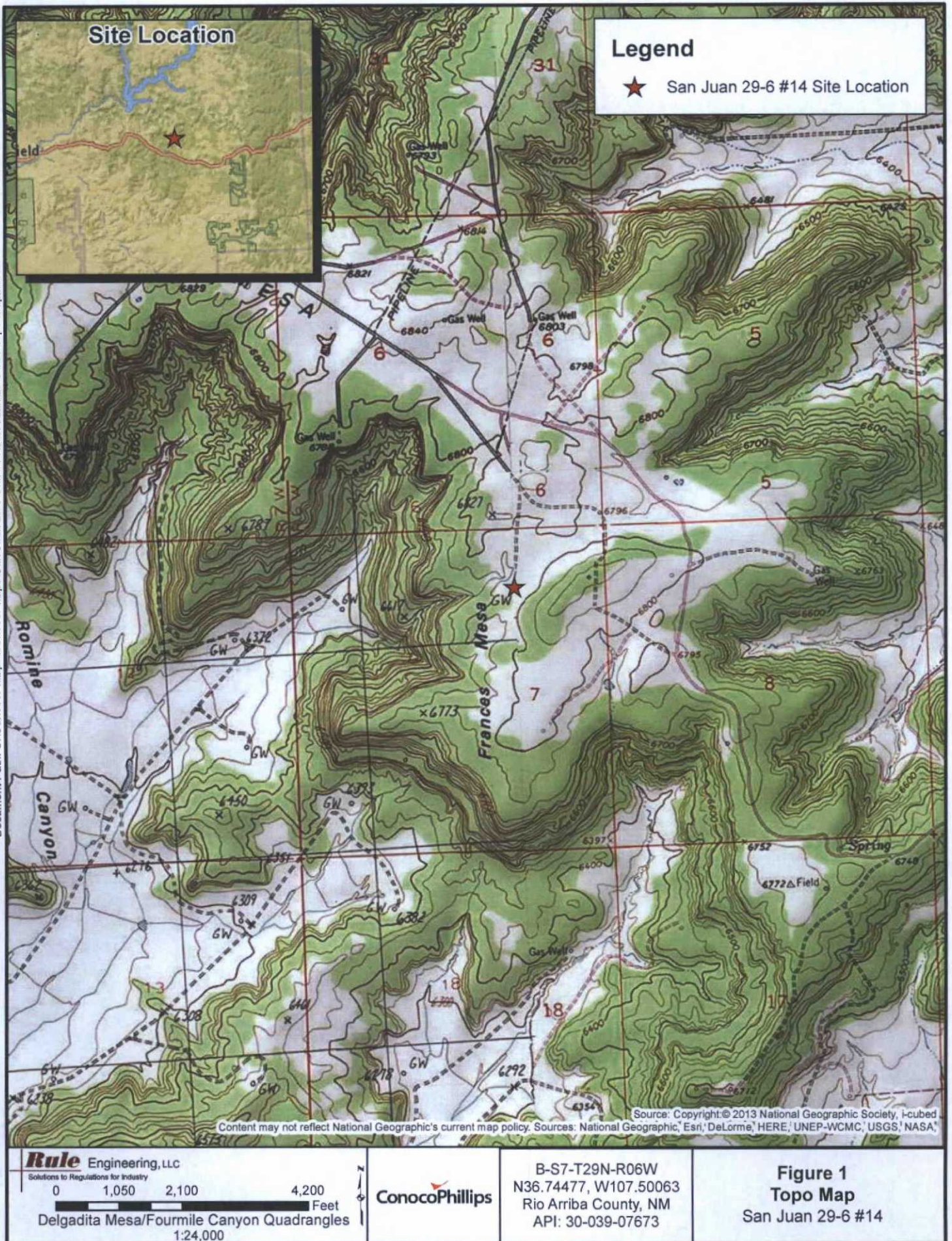
Table 1. BGT Soil Sampling Results  
Figure 1. Topographic Map  
Figure 2. Aerial Site Map  
Field Work Summary Sheet  
Analytical Laboratory Report

**Table 1. BGT Soil Sampling Results**  
**San Juan 29-6 #14**  
**Rio Arriba County, New Mexico**  
**ConocoPhillips**

| Sample ID              | Date    | Sample Type | Sample Depth<br>(ft below BGT liner) | Field Sampling Results |                        |                       | Laboratory Analytical Results |                       |                      |                      |                       |
|------------------------|---------|-------------|--------------------------------------|------------------------|------------------------|-----------------------|-------------------------------|-----------------------|----------------------|----------------------|-----------------------|
|                        |         |             |                                      | VOCs (PID)<br>(ppm)    | TPH - 418.1<br>(mg/kg) | Chloride**<br>(mg/kg) | Benzene<br>(mg/kg)            | Total BTEX<br>(mg/kg) | TPH - GRO<br>(mg/kg) | TPH - DRO<br>(mg/kg) | Chloride**<br>(mg/kg) |
| BGT Closure Standards* |         |             |                                      | -----                  | 100                    | 600                   | 10                            | 50                    | 100                  |                      | 600                   |
| SC-1                   | 2/22/16 | Composite   | 0.5                                  | 0.5                    | <20.0                  | 80                    | <0.048                        | <0.241                | <4.8                 | <9.6                 | <7.5                  |

Notes: PID - photo-ionization detector  
 ppm - parts per million  
 mg/kg - milligrams/kilograms  
 VOCs - volatile organic compounds  
 TPH-total petroleum hydrocarbons per USEPA Method 418.1  
 BTEX - benzene, toluene, ethylbenzene, and total xylenes  
 \*19.15.17.13 NMAC  
 \*\*Per Hach chloride low-range test kit  
 \*\*\*Per USEPA Method 300.0 chlorides







## Legend



Soil Sample Locations



Berm

Meter House

Separator

Below Grade Tank  
GPS: N36.74476, W107.50064

Above Ground Tank

San Juan 29-6 #14 Wellhead  
GPS: N36.74473, W107.50095

Source: Google Earth

**Rule** Engineering, LLC  
Solutions to Regulations for Industry

0 10 20 40  
Feet  
1:250

**ConocoPhillips**

B-S7-T29N-R06W  
N36.74477, W107.50063  
Rio Arriba County, NM  
API: 30-039-07673

**Figure 2**  
**Aerial Site Map**  
San Juan 29-6 #14



## Rule Engineering Field Work Summary Sheet

Company: ConocoPhillips  
Location: San Juan 29-6 #14  
API: 30-039-07673  
Legals: B-S7-T29N-R07W  
County: Rio Arriba  
Land Jurisdiction: Private

|        |                                |
|--------|--------------------------------|
| Date:  | 2/22/16                        |
| Staff: | Heather Woods<br>Justin Valdez |

Wellhead GPS: 36.74473, -107.50095

BGT GPS: 36.74477, -107.50063

### Siting Information based on BGT Location:

Site Rank **10**

Groundwater: Estimated to be greater than 100 feet below grade surface, based on a cathodic report for this well.

Surface Water: An unnamed ephemeral wash and stock pond are located approximately 230 northwest of BGT.

Wellhead Protection: No wells identified within 1,000 ft of location.

Objective: Closure sampling for BGT

Tank Size: 45 barrels, removed during closure activities

Liner: Liner removed during closure activities

Observations: No staining or excess moisture was observed below liner. Excess moisture related to recent precipitation was observed above the liner.

Notes: No NMOCD representative was onsite during closure activities.

### Field Sampling Information

| Name | Type of Sample | Collection Time | Collection Location | VOCs <sup>1</sup> (ppm) | VOCs time | TPH <sup>2</sup> mg/kg | TPH Time | Chloride <sup>3</sup> mg/kg | Chloride Time |
|------|----------------|-----------------|---------------------|-------------------------|-----------|------------------------|----------|-----------------------------|---------------|
| SC-1 | Composite      | 9:40            | See below           | 0.5                     | 9:45      | <20.0                  | 10:05    | 80                          | 10:03         |

SC-1 is a 5-point composite of S-1 through S-5, collected 0.5 ft below BGT.

Sample SC-1 was laboratory analyzed for TPH (8015), BTEX (8021) and chlorides (300.0).



### Field Sampling Notes:

<sup>1</sup> Field screening for volatile organic compounds (VOC) vapors was conducted with a photo-ionization detector (PID). Before beginning field screening, the PID was calibrated with 100 parts per million (ppm) isobutylene gas.

<sup>2</sup> Field analysis for TPH was conducted using a total hydrocarbon analyzer. Prior to field analysis, the machine was calibrated following the manufacturer's procedure which includes calculation of a calibration curve using known concentration standards.

<sup>3</sup> Field screening for chlorides was conducted using the Hach chloride low range test kit. Chloride concentrations are determined by drop count titration method using silver nitrate titrant.



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

March 17, 2016

Heather Woods

Rule Engineering LLC  
501 Airport Dr., Ste 205  
Farmington, NM 87401  
TEL: (505) 325-1055  
FAX

RE: CoP San Juan 29-6 #14

OrderNo.: 1602A81

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 1 sample(s) on 2/24/2016 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued March 02, 2016.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109



**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Rule Engineering LLC  
**Project:** CoP San Juan 29-6 #14  
**Lab ID:** 1602A81-001

**Matrix:** SOIL

**Client Sample ID:** SC-1  
**Collection Date:** 2/22/2016 10:15:00 AM  
**Received Date:** 2/24/2016 8:05:00 AM

| Analyses   | Result | PQL      | Qual | Units | DF | Date Analyzed        | Batch               |
|--|--------|----------|------|-------|----|----------------------|---------------------|
| <b>EPA METHOD 300.0: ANIONS</b>                  |        |          |      |       |    |                      | Analyst: <b>LGT</b> |
| Chloride   | ND     | 7.5      |      | mg/Kg | 5  | 2/29/2016 2:44:33 PM | 23979               |
| <b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b> |        |          |      |       |    |                      | Analyst: <b>KJH</b> |
| Diesel Range Organics (DRO)                      | ND     | 9.6      |      | mg/Kg | 1  | 2/26/2016 6:21:01 PM | 23931               |
| Motor Oil Range Organics (MRO)                   | ND     | 48       |      | mg/Kg | 1  | 2/26/2016 6:21:01 PM | 23931               |
| Surr: DNOP                                       | 102    | 70-130   |      | %Rec  | 1  | 2/26/2016 6:21:01 PM | 23931               |
| <b>EPA METHOD 8015D: GASOLINE RANGE</b>          |        |          |      |       |    |                      | Analyst: <b>NSB</b> |
| Gasoline Range Organics (GRO)                    | ND     | 4.8      |      | mg/Kg | 1  | 2/26/2016 6:39:20 PM | 23942               |
| Surr: BFB  | 91.9   | 66.2-112 |      | %Rec  | 1  | 2/26/2016 6:39:20 PM | 23942               |
| <b>EPA METHOD 8021B: VOLATILES</b>               |        |          |      |       |    |                      | Analyst: <b>NSB</b> |
| Benzene  | ND     | 0.048    |      | mg/Kg | 1  | 2/26/2016 6:39:20 PM | 23942               |
| Toluene  | ND     | 0.048    |      | mg/Kg | 1  | 2/26/2016 6:39:20 PM | 23942               |
| Ethylbenzene                                     | ND     | 0.048    |      | mg/Kg | 1  | 2/26/2016 6:39:20 PM | 23942               |
| Xylenes, Total                                   | ND     | 0.097    |      | mg/Kg | 1  | 2/26/2016 6:39:20 PM | 23942               |
| Surr: 4-Bromofluorobenzene                       | 109    | 80-120   |      | %Rec  | 1  | 2/26/2016 6:39:20 PM | 23942               |

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

|                    |   |   |
|--------------------|---|---|
| <b>Qualifiers:</b> | * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
|                    | D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
|                    | H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
|                    | ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
|                    | R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
|                    | S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1602A81

17-Mar-16

Client: Rule Engineering LLC

Project: CoP San Juan 29-6 #14

|            |           |                |           |             |                          |          |           |      |          |      |
|------------|-----------|----------------|-----------|-------------|--------------------------|----------|-----------|------|----------|------|
| Sample ID  | MB-23979  | SampType:      | MBLK      | TestCode:   | EPA Method 300.0: Anions |          |           |      |          |      |
| Client ID: | PBS       | Batch ID:      | 23979     | RunNo:      | 32483                    |          |           |      |          |      |
| Prep Date: | 2/29/2016 | Analysis Date: | 2/29/2016 | SeqNo:      | 993599                   | Units:   | mg/Kg     |      |          |      |
| Analyte    | Result    | PQL            | SPK value | SPK Ref Val | %REC                     | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride   | ND        | 1.5            |           |             |                          |          |           |      |          |      |

|            |           |                |           |             |                          |          |           |      |          |      |
|------------|-----------|----------------|-----------|-------------|--------------------------|----------|-----------|------|----------|------|
| Sample ID  | LCS-23979 | SampType:      | LCS       | TestCode:   | EPA Method 300.0: Anions |          |           |      |          |      |
| Client ID: | LCSS      | Batch ID:      | 23979     | RunNo:      | 32483                    |          |           |      |          |      |
| Prep Date: | 2/29/2016 | Analysis Date: | 2/29/2016 | SeqNo:      | 993600                   | Units:   | mg/Kg     |      |          |      |
| Analyte    | Result    | PQL            | SPK value | SPK Ref Val | %REC                     | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride   | 14        | 1.5            | 15.00     | 0           | 95.2                     | 90       | 110       |      |          |      |

## Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1602A81

17-Mar-16

Client: Rule Engineering LLC

Project: CoP San Juan 29-6 #14

|                             |           |     |                          |             |   |          |              |      |          |      |
|-----------------------------|-----------|-----|--------------------------|-------------|---|----------|--------------|------|----------|------|
| Sample ID                   | LCS-23931 |     | SampType: LCS            |             | TestCode: EPA Method 8015M/D: Diesel Range Organics |          |              |      |          |      |
| Client ID:                  | LCSS      |     | Batch ID: 23931          |             | RunNo: 32421  |          |              |      |          |      |
| Prep Date:                  | 2/25/2016 |     | Analysis Date: 2/26/2016 |             | SeqNo: 991463                                       |          | Units: mg/Kg |      |          |      |
| Analyte                     | Result    | PQL | SPK value                | SPK Ref Val | %REC  | LowLimit | HighLimit    | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 38        | 10  | 50.00                    | 0           | 76.2  | 65.8     | 136          |      |          |      |
| Surr: DNOP                  | 4.0       |     | 5.000                    |             | 79.5  | 70       | 130          |      |          |      |

|                                |           |                |           |             |           |   |           |       |          |      |
|--------------------------------|-----------|----------------|-----------|-------------|-----------|---|-----------|-------|----------|------|
| Sample ID                      | MB-23931  | SampType:      | MBLK      |             | TestCode: | EPA Method 8015M/D: Diesel Range Organics |           |       |          |      |
| Client ID:                     | PBS       | Batch ID:      | 23931     |             | RunNo:    | 32421                                     |           |       |          |      |
| Prep Date:                     | 2/25/2016 | Analysis Date: | 2/26/2016 |             | SeqNo:    | 991465                                    | Units:    | mg/Kg |          |      |
| Analyte                        | Result    | PQL            | SPK value | SPK Ref Val | %REC      | LowLimit                                  | HighLimit | %RPD  | RPDLimit | Qual |
| Diesel Range Organics (DRO)    | ND        | 10             |           |             |           |   |           |       |          |      |
| Motor Oil Range Organics (MRO) | ND        | 50             |           |             |           |   |           |       |          |      |
| Surr: DNOP                     | 7.7       |                | 10.00     |             | 77.3      | 70  | 130       |       |          |      |

### Qualifiers:

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1602A81

17-Mar-16

Client: Rule Engineering LLC

Project: CoP San Juan 29-6 #14

|                               |           |               |           |             |                                  |              |           |      |          |      |
|-------------------------------|-----------|---------------|-----------|-------------|----------------------------------|--------------|-----------|------|----------|------|
| Sample ID                     | MB-23942  | SampType      | MBLK      | TestCode    | EPA Method 8015D: Gasoline Range |              |           |      |          |      |
| Client ID                     | PBS       | Batch ID      | 23942     | RunNo       | 32426                            |              |           |      |          |      |
| Prep Date                     | 2/25/2016 | Analysis Date | 2/26/2016 | SeqNo       | 992147                           | Units: mg/Kg |           |      |          |      |
| Analyte                       | Result    | PQL           | SPK value | SPK Ref Val | %REC                             | LowLimit     | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND        | 5.0           |           |             |                                  |              |           |      |          |      |
| Surr: BFB                     | 910       |               | 1000      |             | 91.5                             | 66.2         | 112       |      |          |      |

|                               |           |               |           |             |                                  |              |           |      |          |      |
|-------------------------------|-----------|---------------|-----------|-------------|----------------------------------|--------------|-----------|------|----------|------|
| Sample ID                     | LCS-23942 | SampType      | LCS       | TestCode    | EPA Method 8015D: Gasoline Range |              |           |      |          |      |
| Client ID                     | LCSS      | Batch ID      | 23942     | RunNo       | 32426                            |              |           |      |          |      |
| Prep Date                     | 2/25/2016 | Analysis Date | 2/26/2016 | SeqNo       | 992148                           | Units: mg/Kg |           |      |          |      |
| Analyte                       | Result    | PQL           | SPK value | SPK Ref Val | %REC                             | LowLimit     | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 28        | 5.0           | 25.00     | 0           | 112                              | 79.6         | 122       |      |          |      |
| Surr: BFB                     | 990       |               | 1000      |             | 98.6                             | 66.2         | 112       |      |          |      |

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1602A81

17-Mar-16

Client: Rule Engineering LLC

Project: CoP San Juan 29-6 #14

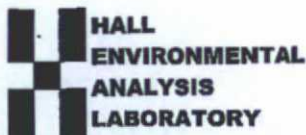
|                            |           |                |           |             |                             |          |           |      |          |      |
|----------------------------|-----------|----------------|-----------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID                  | MB-23942  | SampType:      | MBLK      | TestCode:   | EPA Method 8021B: Volatiles |          |           |      |          |      |
| Client ID:                 | PBS       | Batch ID:      | 23942     | RunNo:      | 32426                       |          |           |      |          |      |
| Prep Date:                 | 2/25/2016 | Analysis Date: | 2/26/2016 | SeqNo:      | 992277                      | Units:   | mg/Kg     |      |          |      |
| Analyte                    | Result    | PQL            | SPK value | SPK Ref Val | %REC                        | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene                    | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| Toluene                    | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| Ethylbenzene               | ND        | 0.050          |           |             |                             |          |           |      |          |      |
| Xylenes, Total             | ND        | 0.10           |           |             |                             |          |           |      |          |      |
| Surr: 4-Bromofluorobenzene | 1.1       |                | 1.000     |             | 111                         | 80       | 120       |      |          |      |

|                            |           |                |           |             |                             |          |           |      |          |      |
|----------------------------|-----------|----------------|-----------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID                  | LCS-23942 | SampType:      | LCS       | TestCode:   | EPA Method 8021B: Volatiles |          |           |      |          |      |
| Client ID:                 | LCSS      | Batch ID:      | 23942     | RunNo:      | 32426                       |          |           |      |          |      |
| Prep Date:                 | 2/25/2016 | Analysis Date: | 2/26/2016 | SeqNo:      | 992282                      | Units:   | mg/Kg     |      |          |      |
| Analyte                    | Result    | PQL            | SPK value | SPK Ref Val | %REC                        | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene                    | 1.1       | 0.050          | 1.000     | 0           | 111                         | 80       | 120       |      |          |      |
| Toluene                    | 1.2       | 0.050          | 1.000     | 0           | 118                         | 80       | 120       |      |          |      |
| Ethylbenzene               | 1.2       | 0.050          | 1.000     | 0           | 115                         | 80       | 120       |      |          |      |
| Xylenes, Total             | 3.5       | 0.10           | 3.000     | 0           | 115                         | 80       | 120       |      |          |      |
| Surr: 4-Bromofluorobenzene | 1.2       |                | 1.000     |             | 122                         | 80       | 120       |      |          | S    |

## Qualifiers:

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Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: RULE ENGINEERING LL

Work Order Number: 1602A81

RcptNo: 1

Received by/date: JA 02/24/16

Logged By: Anne Thorne

2/24/2016 8:05:00 AM

*Anne Thorne*

Completed By: Anne Thorne

2/25/2016

*Anne Thorne*

Reviewed By: JA

02/25/16

### Chain of Custody

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

### Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐

# of preserved  
bottles checked  
for pH: \_\_\_\_\_  
( $<2$  or  $>12$  unless noted)  
Adjusted? \_\_\_\_\_  
Checked by: \_\_\_\_\_

### Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: \_\_\_\_\_

Date: \_\_\_\_\_

By Whom: \_\_\_\_\_

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_

17. Additional remarks:

### 18. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1         | 1.0                     | Good      | Yes         |         |           |           |



If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.