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 Proposed Alternative Method Permit or Closure Plan Application

15704

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

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: EDGAR FEDERAL 2
API Number: 30-045-06893 OCD Permit Number: _____
U/L or Qtr/Qtr G Section 1 Township 27N Range 12W County: San Juan
Center of Proposed Design: Latitude 36.60714 °N Longitude -108.05936 °W NAD: ☐1927 ☒ 1983
Surface Owner: ☒ Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment

OIL CONS. DIV DIST. 3
DEC 15 2016

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 Low Chloride Drilling Fluid ☐ yes ☐ no
☐ 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_____

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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_2S, 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. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Ground water is between 25-50 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ 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). - 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 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. - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ 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
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 Application (including closure plan) ☒ Closure Plan ~~(only)~~ ☐ OCD Conditions (see attachment)

OCD Representative Signature: _____ **Approval Date:** 12/30/2016

Title: Environmental Specialist **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:** 7/18/2016

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

22.

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: Crystal Walker Date: 12/14/2016

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

ConocoPhillips Company
San Juan Basin
Below Grade Tank Closure Report

Lease Name: Edgar Federal 2
API No.: 30-045-06893

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.

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 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:
   i. Operator's name
   ii. 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 email. (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 be 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: Monday, February 15, 2016 3:06 PM
To: Smith, Cory, EMNRD; 'Brandon.Powell@state.nm.us'
Cc: mflanike@blm.gov; kdiemer@blm.gov; GRP:SJBU Regulatory; Hunter, Lisa; Spearman, Bobby E; Payne, Wendy F; Fincher, Shawn S; Notor, Lori
Subject: RE: Edgar Federal 2 - 72 Hour BGT Closure Notification

Importance: High

All,

Please note that the date has been changed for the BGT Closure for the subject well. It has been re-scheduled for **Wednesday, February 17th at 9:00 a.m.** Please let me know if you have any questions.

Thanks!
Dollie

From: Busse, Dollie L
Sent: Friday, February 12, 2016 12:04 PM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; 'Brandon.Powell@state.nm.us' <Brandon.Powell@state.nm.us>
Cc: mflanike@blm.gov; kdiemer@blm.gov; GRP:SJBU Regulatory <SJBURegulatory@conocophillips.com>; Hunter, Lisa <Lisa.Hunter@conocophillips.com>; Spearman, Bobby E <Robert.E.Spearman@conocophillips.com>; Payne, Wendy F <Wendy.F.Payne@conocophillips.com>; Fincher, Shawn S <Shawn.S.Fincher@conocophillips.com>; 'Leonard.Lowe@state.nm.us' <Leonard.Lowe@state.nm.us>
Subject: Edgar Federal 2 - 72 Hour BGT Closure Notification

Subject: 72 Hour BGT Closure Notification

Anticipated Start Date: Friday, 2/19/16

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: Edgar Federal 2

API#: 30-045-06893

Location: Unit G (SWNE), Sec. 1, T27N, R12W, San Juan County, NM

Footages: 1650' FNL & 1650' FEL

Operator: ConocoPhillips **Surface Owner:** BLM / Lease #SF-079116

Reason: P&A'd 8/11/15

Dollie L. Busse
Regulatory Technician
ConocoPhillips Company
505-324-6104
505-215-3069
Dollie.L.Busse@cop.com

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 **Lisa Hunter**
Address **3401 East 30th St, Farmington, NM**	Telephone No. **(505) 258-1607**
Facility Name: **Edgar Federal #2**	Facility Type: **Gas Well**

Surface Owner **Federal**	Mineral Owner **Federal (SF-079116)**	API No. **3004506893**

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	**01**	**27N**	**12W**	**1650**	**North**	**1650**	**East**	**San Juan**

Latitude 36.60714 Longitude -108.05936

NATURE OF RELEASE

Type of Release **Hydrocarbon (Historic)**	Volume of Release **Unknown**	Volume Recovered **None**
Source of Release **Below Grade Tank (BGT)**	Date and Hour of Occurrence **Unknown**	Date and Hour of Discovery **February 17, 2016**
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom? **N/A**	
By Whom? **N/A**	Date and Hour **N/A**	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. **N/A**	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*
Below-Grade Tank Closure activities with samples taken resulting in constituents exceeded standards outlined by 19.15.17.13 NMAC.

Describe Area Affected and Cleanup Action Taken.*
The below grade tank field sample results were above regulatory standard by USEPA method 418.1 for TPH and Organic Vapors, confirming a release. Test pits reveal contamination was >10 feet. Further delination was completed and excavation terminated at approximately 26.5' x 21.5' x 14' deep. Analytical results were below the regulatory standards set forth in the NMOCD Guidelines for Remediation of Leaks, Spills and Release. No further work will be performed. The final report is attached for review.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION Approved by Environmental Specialist:	
Printed Name: **Lisa Hunter**		
Title: **Field Environmental Specialist**	Approval Date:	Expiration Date:
E-mail Address: **Lisa.Hunter@cop.com**	Conditions of Approval:	Attached ☐
Date: **November 16, 2016** Phone: **(505) 258-1607**		

* Attach Additional Sheets If Necessary

Edgar Federal #2 Release Report

Unit Letter G, Section 1, Township 27 North, Range 12 West
San Juan County, New Mexico

November 9, 2016

Prepared for:
ConocoPhillips
5525 Highway 64
Farmington, New Mexico 87401

Prepared by:
Rule Engineering, LLC
501 Airport Drive, Suite 205
Farmington, New Mexico 87401

Rule Engineering, LLC
Solutions to Regulations for Industry

ConocoPhillips
Edgar Federal #2 Release Report

Prepared for:

ConocoPhillips
5525 Highway 64
Farmington, New Mexico 87401

Prepared by:

Rule Engineering, LLC
501 Airport Drive, Suite 205
Farmington, New Mexico 87401

Heather M. Woods

Heather M. Woods, P.G., Area Manager

Reviewed by:

Russell Knight, PG, Principal Hydrogeologist

November 9, 2016

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Tables

Figures

Appendices

1.0 Introduction

The ConocoPhillips Edgar Federal #2 release site is located in Unit Letter G, Section 1, Township 27 North, Range 12 West, in San Juan County, New Mexico. A historical release was discovered on February 17, 2016, during below grade tank (BGT) closure activities at the site.

A topographic map of the location reproduced from the United States Geological Society quadrangle map of the area is included as Figure 1 and an aerial site map is included as Figure 2.

2.0 Release Summary

Site Name	Edgar Federal #2		
Site Location Description	Unit Letter G, Section 1, Township 27 North, Range 12 West		
Wellhead GPS Location	N36.60686 and W108.05967	***Release GPS Location***	N36.60714 and W108.05936
Land Jurisdiction	Navajo Nation	***Discovery Date***	February 17, 2016
Release Description	Historical		
NNEPA/NMOCD Site Rank	10		
Distance to Nearest Surface Water	Unnamed, ephemeral wash located approximately 660 feet to the southwest of the release location		
Estimated Depth to Groundwater	Greater than 100 feet below grade surface (bgs)	***Distance to Nearest Water Well or Spring***	Greater than 1,000 feet

3.0 NNEPA/NMOCD Site Ranking

The release site is located on the Navajo Nation under the jurisdiction of the Navajo Nation Environmental Protection Agency (NNEPA). Based on NNEPA recommendations, remediation of soils associated with natural gas and condensate releases are assigned a rank in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills, and Releases (August 1993). This site was assigned a ranking score of 10 (Table 1).

Depth to groundwater at the site is estimated to be greater than 100 feet bgs based on the information published on the New Mexico Office of the State Engineer (NMOSE) online New Mexico Water Rights Reporting System (NMWRRS) and elevation differential between the location and large, local washes.

A review was completed of the NMWRRS and no water wells were identified within a 1,000 foot radius of the location. No water wells were observed within a 1,000 foot radius of the location during a visual inspection.

An unnamed, ephemeral wash traverses the area approximately 660 feet southwest of the release location.

As outlined in 19.15.17.13 New Mexico Administrative Code (NMAC), BGT closure standards for the Edgar Federal #2 are as follows: 0.2 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 250 mg/kg chlorides.

Based on the ranking score of 10, NNEPA/NMOCD action levels for remediated soils at the site are as follows: 10 milligrams per kilogram (mg/kg) benzene, 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX), and 1,000 mg/kg total petroleum hydrocarbons (TPH) as gasoline range organics (GRO) and diesel range organics (DRO).

4.0 Below Grade Tank Closure Sampling

4.1 Field Activities

On February 17, 2016, following removal of the BGT tank and liner, Rule Engineering, LLC (Rule) personnel conducted a visual inspection for surface/subsurface indications of a release. Staining and odor was observed in the western portion of the BGT excavation. 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 and the field work summary sheet is included in Appendix A.

4.2 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 BGT-1. A portion of BGT-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 BGT-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.

4.3 Field Screening and Laboratory Analytical Results

Field sampling results for soil composite sample BGT-1 indicated a VOC concentration of 934 ppm and a TPH concentration of greater than 2,500 mg/kg. Field chloride concentration was reported at 80 mg/kg.

Laboratory analytical results for sample BGT-1 reported a benzene concentration below the laboratory reporting limit of 0.047 mg/kg and a total BTEX concentration of 0.14 mg/kg. Laboratory analytical results for sample BGT-1 reported the TPH concentrations of 19 mg/kg as GRO and 300 mg/kg DRO by USEPA Method 8015D. The laboratory analytical result for sample BGT-1 for chloride concentration was 59 mg/kg.

Field and laboratory results for BGT-1 are summarized in Table 2, and the analytical laboratory report is attached.

5.0 Site Assessment

Field screening of the BGT sample indicated the presence of petroleum hydrocarbons in excess of NNEPA/NMOCD BGT closure standards. The same day of BGT closure sampling, Rule initiated an initial site assessment to delineate the horizontal and vertical extents of the historical release. Due to the limitations of the backhoe, the initial assessment was suspended and a continued site assessment was conducted utilizing a Geoprobe® on April 20, 2016.

5.1 Field Activities

On February 17, 2016, the initial site assessment included advancing three backhoe test pits (TP-1 through TP-3). Test pits were advanced to the limits of the equipment at depths ranging from 11 to 12 feet bgs. Backhoe test pit operations were suspended in favor of returning to the location at a later date to continue the assessment utilizing a Geoprobe®.

On April 20, 2016, Rule returned to the location to continue the site assessment utilizing a Geoprobe® to advance five soil borings (SB-1 though SB-5) at the location. Soil borings were advanced to depths ranging from 11 to 12 feet bgs where refusal on weathered sandstone was encountered. Test pit and soil boring locations are illustrated on Figure 2.

5.2 Soil Sampling

Rule collected soil samples from the test pits and soil borings at selected intervals. The lithology encountered at the site included clayey silty sand underlain by weathered sandstone. A portion of each sample was field screened for VOCs and selected samples were analyzed for TPH. Field screening for VOC vapors was conducted with a PID. Prior to field screening, the PID was calibrated with 100 ppm isobutylene gas. Field analysis for TPH was conducted for selected samples per USEPA Method 418.1, utilizing 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.

5.3 Field Screening Results

Field screening results for site assessment samples collected from test pits TP-1 through TP-3 and soil borings SB-1 through SB-5 indicated VOC concentrations ranging from 0.0 ppm to 2,050 ppm. Field TPH results for selected site assessment samples indicated TPH concentrations ranging from 690 mg/kg to greater than 2,500 mg/kg. Site assessment field screening results are summarized in Table 3.

6.0 Excavation Confirmation Sampling

6.1 Field Activities

On July 18, 2016, Rule personnel returned to the location to provide excavation guidance and collect confirmation samples from the resultant excavation. The maximum extent of the excavation measured approximately 26.5 feet by 21.5 feet by 14 feet deep. Approximately 330 cubic yards of excavated soils were transported to the Envirotech Landfarm near Bloomfield, New Mexico for disposal/remediation and the excavation was backfilled with clean, imported material. A depiction of the final excavation with sample locations is included on Figure 3.

6.2 Soil Sampling

Rule collected six composite confirmation soil samples (SC-1 and SC-6) from the final excavation for field screening and laboratory analysis. Each confirmation soil sample is a representative composite comprised of five equivalent portions of soil collected from the sampled area.

A portion of each sample was field screened for VOCs and TPH. Field screening for VOC vapors was conducted with a PID. Prior to field screening, the PID was calibrated with 100 ppm isobutylene gas. Field analysis for TPH was conducted for selected samples per USEPA Method 418.1, utilizing 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.

Soil samples collected for laboratory analysis were placed into laboratory supplied glassware, labeled, and maintained on ice until delivery to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico. All samples were analyzed for BTEX per USEPA Method 8021B and TPH (GRO/DRO) per USEPA 8015D.

Field screening and laboratory analytical results are summarized in Table 4. The analytical laboratory report is included in Appendix B.

6.3 Field Screening Results

Field screening results for soil confirmation samples SC-1 through SC-6 indicated VOC concentrations ranging from 15 ppm to 339 ppm. The field TPH concentration results for samples SC-1 through SC-6 ranged from 80.8 mg/kg to 1,079 mg/kg. Excavation confirmation field screening results are summarized in Table 4.

6.4 Laboratory Analytical Results

Laboratory analytical results for excavation confirmation samples SC-1 through SC-6 reported benzene concentrations below the laboratory reporting limits, which are below the NNEPA/NMOCD action level of 10 mg/kg. Total BTEX concentrations for samples SC-1 though SC-6 ranged from below the laboratory reporting limits to 1.1 mg/kg, which are below the NNEPA/NMOCD action level of 50 mg/kg. Concentrations of TPH (GRO/DRO) for samples SC-1 through SC-6 ranged from below the laboratory reporting limits to 713 mg/kg, which are below the NNEPA/NMOCD action level of 1,000 mg/kg for a site rank of 10.

Excavation confirmation laboratory analytical results are summarized in Table 4. The analytical laboratory report is included in Appendix B.

7.0 Conclusions

The ConocoPhillips Edgar Federal #2 release site is located in Unit Letter G, Section 1, Township 27 North, Range 12 West, in San Juan County, New Mexico. A historical release was discovered on February 17, 2016, during BGT closure activities at the site. A site assessment was conducted utilizing both test pits and soil borings to delineate as best as possible the vertical and horizontal extents of the historical release. Following the excavation of hydrocarbon impacted soils, confirmation samples SC-1 through SC-6 were collected from the resultant excavation which measured approximately 26.5 feet by 21.5 feet by 14 feet deep. Laboratory analytical results for confirmation samples SC-1 through SC-6 reported benzene, total BTEX, and total TPH (GRO/DRO) concentrations below the applicable NNEPA/NMOCD action levels for a site rank of 10. Approximately 330 cubic yards of impacted soil was transported to the Envirotech Landfarm for disposal/remediation and the excavation was backfilled with clean, imported material.

Based on laboratory analytical results of the confirmation soil samples, no further work is recommended.

8.0 Closure and Limitations

This report has been prepared for the exclusive use of ConocoPhillips and is subject to the terms, conditions, and limitations stated in Rule's report and Service Agreement with ConocoPhillips. All work has been performed in accordance with generally accepted professional environmental consulting practices. No other warranty is expressed or implied.

Tables

Table 1. NMOCD Site Ranking Determination
ConocoPhillips
Edgar Federal #2
San Juan County, New Mexico

Ranking Criteria	Ranking Score	Site-Based Ranking Score	Basis for Determination	Data Sources
Depth to Groundwater				
<50 feet	20	0	Elevation differential information derived from the topographic map of the area between the site and large, local washes.	NMOCD Online database, Gallegos Trading Post Quadrangle, Google Earth, and Visual Inspection
50-99 feet	10			
>100 feet	0			
Wellhead Protection Area				
<1,000 feet from a water source, or <200 feet from private domestic water source	20 (Yes)	0	No water source or recorded water wells within 1,000 foot radius of location.	NMOSE NMWRRS, Gallegos Trading Post Quadrangle, Google Earth, and Visual Inspection
	0 (No)			
Distance to Surface Water Body				
<200 horizontal feet	20	10	An unnamed, ephemeral wash located approximately 660 feet southwest of release location.	Gallegos Trading Post Quadrangle, Google Earth, and Visual Inspection
200 to 1,000 horizontal feet	10			
>1,000 horizontal feet	0			
Site Based Total Ranking Score		**10**		

Table 2. BGT Soil Sampling Results
ConocoPhillips
Edgar Federal #2
San Juan County, New Mexico

Sample ID	Date	Sample Type	Sample Depth (ft below BGT liner)	Field Sampling Results			Laboratory Analytical Results				
				VOCs (PID) (ppm)	TPH - 418.1 (mg/kg)	Chloride** (mg/kg)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH - GRO (mg/kg)	TPH - DRO (mg/kg)	Chloride*** (mg/kg)
BGT Closure Standards*				--	100	250	0.2	50	100		250
BGT-1	2/17/16	Composite	0.5	934	>2,500	80	<0.047	0.14	19	300	59

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

Table 3. Site Assessment Field Soil Sampling Results - VOCs and TPH
Edgar Federal #2
San Juan County, New Mexico
ConocoPhillips

Sample ID	Date	Sample Depth (ft bgs)	VOCs* (PID) (ppm)	TPH* (418.1) (mg/kg)
NNEPA/NMOCD Action Levels**			100	1,000
TP-1	2/17/16	3.5	**934**	**>2,500**
		7	**353**	**1,540**
		11	**1,330**	--
TP-2	2/17/16	7	3.0	--
		9	0.4	--
		11	1.2	--
TP-3	2/17/16	2	0.6	--
		10	**667**	--
		12	**2,050**	--
SB-1	4/20/16	3.5 to 4	0.6	--
		4 to 6	0.8	--
		6 to 8	0.8	--
		8 to 10	0.5	--
		10 to 12	0.4	--
SB-2	4/20/16	3 to 4	0.7	--
		4 to 6	0.2	--
		6 to 8	0.3	--
		8 to 10	0.2	--
		10 to 12	0.3	--
SB-3	4/20/16	3 to 4	0.5	--
		4 to 5	3.4	--
		5 to 6	**103**	--
		6 to 7	**215**	690
		7 to 8	2.2	--
		8 to 9	1.5	--
		9 to 10	2.7	--
		10 to 11	0.5	--
		11 to 12	1.0	--
SB-4	4/20/16	2 to 4	1.0	--
		4 to 6	0.8	--
		6 to 8	0.3	--
		8 to 9	0.7	--
		9 to 10	0.1	--
		10 to 11	0.5	--

Table 3. Site Assessment Field Soil Sampling Results - VOCs and TPH
Edgar Federal #2
San Juan County, New Mexico
ConocoPhillips

Sample ID	Date	Sample Depth (ft bgs)	VOCs* (PID) (ppm)	TPH* (418.1) (mg/kg)
NNEPA/NMOCD Action Levels**			100	1,000
SB-5	4/20/16	2 to 3	0.5	--
		4 to 6	0.8	--
		6 to 8	0.7	--
		8 to 9	0.7	--
		9 to 11	0.6	--

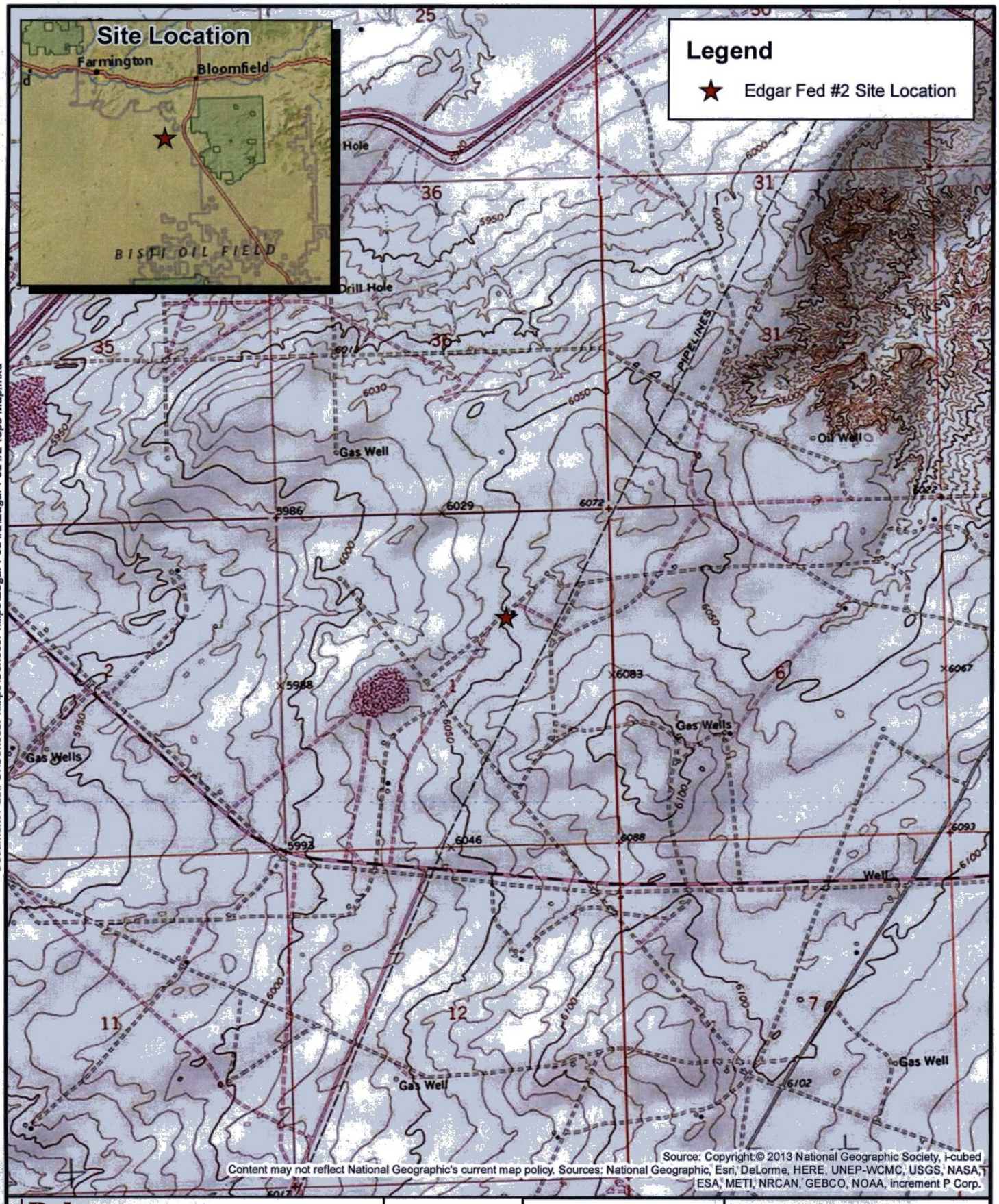
Notes: VOCs - volatile organic compounds
PID - photo-ionization detector
ft bgs - feet below ground surface
ppm - parts per million
mg/kg - milligrams/kilograms
TPH-total petroleum hydrocarbons per USEPA Method 418.1
NNEPA - Navajo Nation Environmental Protection Agency
NMOCD - New Mexico Oil Conservation Division
* field results
**NMOCD Guidelines for Remediation of Leaks, Spills, and Releases (1993)

Table 4. Excavation Confirmation Field Screening and Laboratory Analytical Results
ConocoPhillips
Edgar Federal #2
San Juan County, New Mexico

Sample Name	Date	Approximate Sample Depth (ft bgs)	Field VOCs by PID (ppm)	Field TPH by 418.1 (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylben-zene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH as GRO (mg/kg)	TPH as DRO (mg/kg)
NNEPA/NMOCD Action Level*			100	1,000**	10	NE	NE	NE	50	1,000**	
SC-1	7/18/2016	14	**339**	**1,079**	<0.025	<0.050	0.055	0.12	0.18	29	240
SC-2	7/18/2016	14	**300**	169	<0.024	<0.049	<0.049	<0.093	ND	<4.9	99
SC-3	7/18/2016	0 to 14	**300**	824	<0.025	<0.049	0.15	0.93	1.1	63	650
SC-4	7/18/2016	0 to 14	**235**	203	<0.025	<0.050	<0.050	<0.099	ND	<5.0	20
SC-5	7/18/2016	0 to 14	50	185	<0.023	<0.046	<0.046	<0.092	ND	<4.6	22
SC-6	7/18/2016	0 to 14	15	80.8	<0.023	<0.047	<0.047	<0.094	ND	<4.7	<9.9

Notes:
VOCs - volatile organic compounds
PID - photoionization detector
ft bgs - feet below grade surface
ppm - parts per million
mg/kg - milligrams per kilogram
NNEPA - Navajo Nation Environmental Protection Agency
NMOCD - New Mexico Oil Conservation Division
NE - not-established
ND - not detected above laboratory reporting limits
BTEX - benzene, toluene, ethylbenzene, and xylenes
TPH - total petroleum hydrocarbons
GRO - gasoline range organics
DRO - diesel range organics
*Based on the NMOCD *Guidelines for Remediation of Leaks, Spills and Releases (August 1993)*
**Based on a site ranking of 10.

Figures



Document Path: U:\ConocoPhillips\ConocoPhillips\Edgar Fed #2\Edgar Fed #2 Topo Map.mxd

Rule Engineering, LLC
Solutions to Regulations for Industry

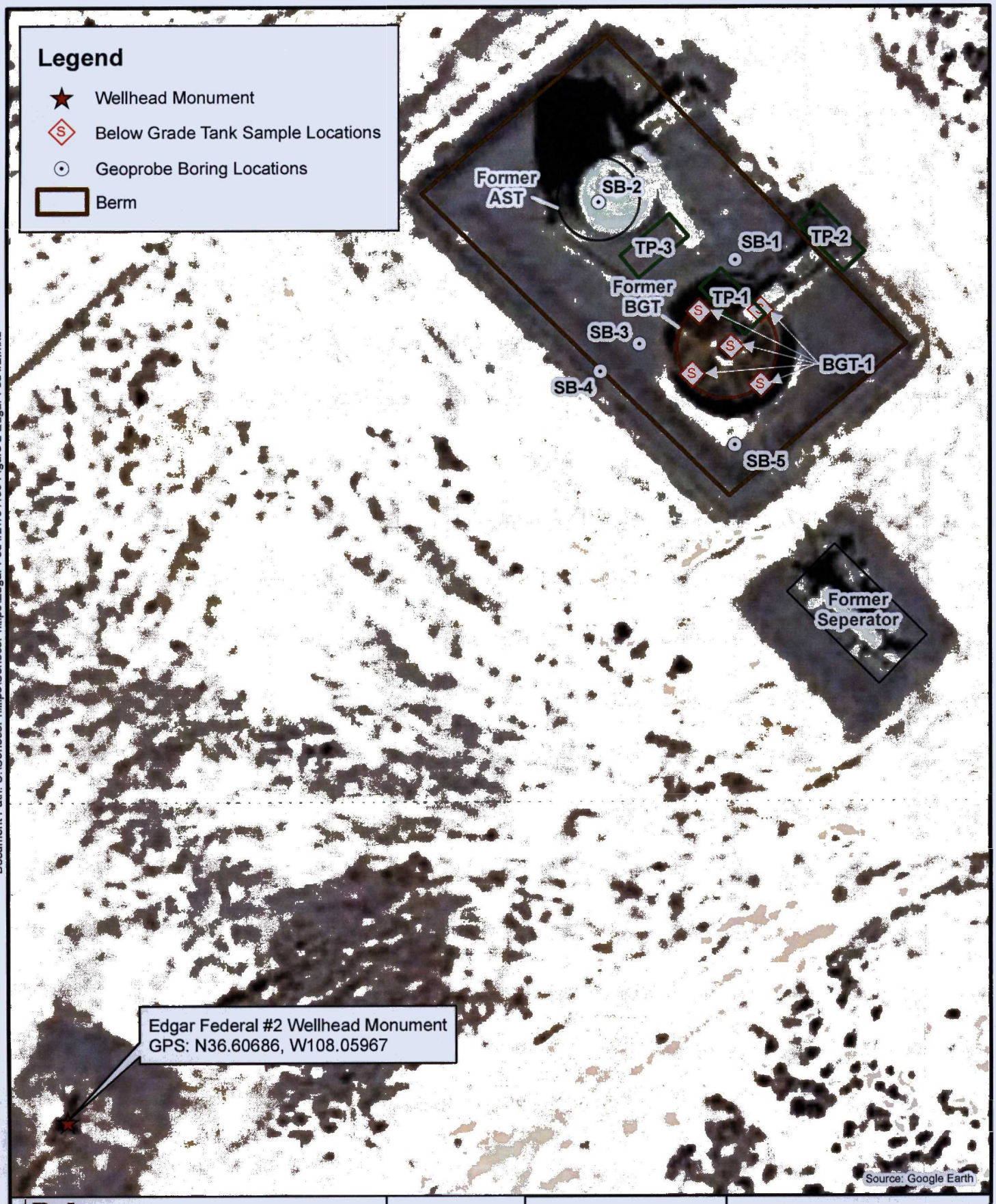
0 0.2 0.4 0.8 Miles

Gallegos Trading Post Quadrangle
1:24,000

ConocoPhillips

G-S1-T27N-R12W
N36.60686, W108.05967
San Juan County, NM
API: 30-045-06893

Figure 1
Topographic Map
Edgar Federal #2



Document Path: U:\ConocoPhillips\ConocoPhilips\Edgar Fed #2\161109 Figure 2 Edgar Fed #2.mxd

Rule Engineering, LLC
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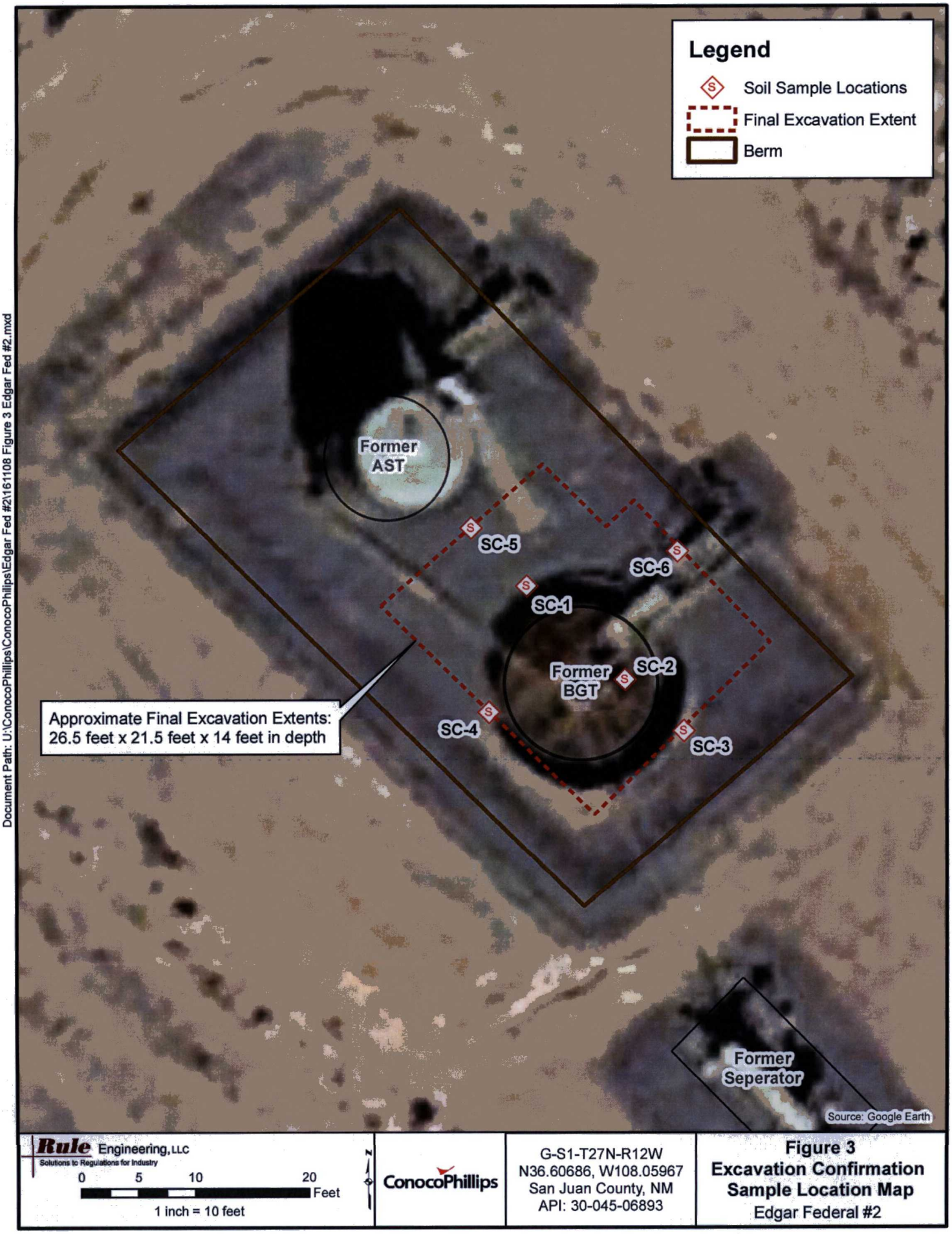
0 10 20 40 Feet

1 inch = 17 feet

ConocoPhillips

G-S1-T27N-R12W
N36.60686, W108.05967
San Juan County, NM
API: 30-045-06893

Figure 2
Aerial Site Map
Edgar Federal #2



Document Path: U:\ConocoPhillips\ConocoPhillips\Edgar Fed #2\161108 Figure 3 Edgar Fed #2.mxd

Rule Engineering, LLC
Solutions to Regulations for Industry

0 5 10 20 Feet

1 inch = 10 feet

ConocoPhillips

G-S1-T27N-R12W
N36.60686, W108.05967
San Juan County, NM
API: 30-045-06893

Figure 3
Excavation Confirmation Sample Location Map
Edgar Federal #2

Appendix A

BGT Field Work Summary Sheet

Rule Engineering Field Work Summary Sheet

Date:	2/17/16
Staff:	Heather Woods

Company:	ConocoPhillips
Location:	Edgar Federal #2
API:	30-045-06893
Legals:	G-S1-T27N-R12W
County:	San Juan
Land Jurisdiction:	Navajo Nation

Wellhead GPS: 36.60686, -108.05967

BGT GPS: 36.60714 -108.05936

Siting Information based on BGT Location: Site Rank 10

Groundwater: Estimated to be greater than 100 feet below grade surface, based on elevation diffential between the location and nearby major washes.

Surface Water: An unnamed ephemeral wash is located approximately 660 feet southwest of the BGT.

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

Objective:	Closure sampling for BGT
Tank Size:	120 barrels, removed during closure activities
Liner:	Liner present, removed during closure activities

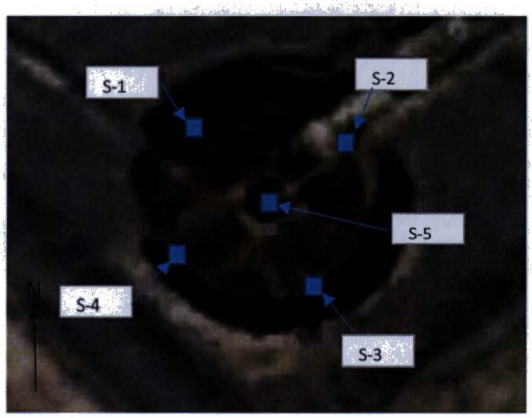
Observations: No staining or excess moisture was observed below the tank.

Notes: Ms. Vanessa Fields, OCD representative, was present during sample collection activities. Staining and odor was observed in the western portion of the BGT excavation.

Field Sampling Information

Name	Type of Sample	Collection Time	Collection Location	VOCs[1] (ppm)	VOCs time	TPH[2] mg/kg	TPH Time	Chloride[3] mg/kg	Chloride Time
BGT-1	Composite	9:45	See below	934	9:52	>2,500	10:15	80	10:20

BGT-1 is a 5-point composite of S-1 through S-5, collected 0.5 ft below BGT.
Sample BGT-1 was laboratory analyzed for TPH (8015), BTEX (8021) and chlorides (300.0).



Field Sampling Notes:

[1] 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.

[2] 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.

[3] 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.

Rule Engineering, LLC
Solutions to Regulations for Industry

Appendix B

Analytical Laboratory Reports

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

February 29, 2016

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

RE: CoP Edgar Federal #2 OrderNo.: 1602807

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 1 sample(s) on 2/18/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1602807**
Date Reported: **2/29/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC
Project: CoP Edgar Federal #2
Lab ID: 1602807-001 **Matrix:** SOIL

Client Sample ID: BGT-1
Collection Date: 2/17/2016 9:45:00 AM
Received Date: 2/18/2016 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	59	1.5		mg/Kg	1	2/24/2016 10:02:46 PM	23934
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	300	95		mg/Kg	10	2/23/2016 8:28:27 PM	23859
Surr: DNOP	0	70-130	S	%Rec	10	2/23/2016 8:28:27 PM	23859
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	19	4.7		mg/Kg	1	2/24/2016 3:13:49 AM	23867
Surr: BFB	275	66.2-112	S	%Rec	1	2/24/2016 3:13:49 AM	23867
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.047		mg/Kg	1	2/24/2016 3:13:49 AM	23867
Toluene	ND	0.047		mg/Kg	1	2/24/2016 3:13:49 AM	23867
Ethylbenzene	ND	0.047		mg/Kg	1	2/24/2016 3:13:49 AM	23867
Xylenes, Total	0.14	0.095		mg/Kg	1	2/24/2016 3:13:49 AM	23867
Surr: 4-Bromofluorobenzene	129	80-120	S	%Rec	1	2/24/2016 3:13:49 AM	23867

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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#: **1602807**

29-Feb-16

Client: Rule Engineering LLC

Project: CoP Edgar Federal #2

Sample ID	**MB-23934**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**23934**	RunNo:	**32385**					
Prep Date:	**2/24/2016**	Analysis Date:	**2/24/2016**	SeqNo:	**990234**	Units:	**mg/Kg**			

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

Sample ID	**LCS-23934**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**23934**	RunNo:	**32385**					
Prep Date:	**2/24/2016**	Analysis Date:	**2/24/2016**	SeqNo:	**990235**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.9	90	110			

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#: **1602807**

29-Feb-16

Client: Rule Engineering LLC
Project: CoP Edgar Federal #2

Sample ID **LCS-23859**	SampType: **LCS**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID: **LCSS**	Batch ID: **23859**			RunNo: **32327**					
Prep Date: **2/22/2016**	Analysis Date: **2/23/2016**			SeqNo: **988166**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.00	0	86.5	65.8	136			
Surr: DNOP	4.8		5.000		95.8	70	130			

Sample ID **LCS-23860**	SampType: **LCS**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID: **LCSS**	Batch ID: **23860**			RunNo: **32327**					
Prep Date: **2/22/2016**	Analysis Date: **2/23/2016**			SeqNo: **988167**		Units: **%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.0		5.000		99.1	70	130			

Sample ID **MB-23859**	SampType: **MBLK**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID: **PBS**	Batch ID: **23859**			RunNo: **32327**					
Prep Date: **2/22/2016**	Analysis Date: **2/23/2016**			SeqNo: **988168**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	8.7		10.00		87.0	70	130			

Sample ID **MB-23860**	SampType: **MBLK**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID: **PBS**	Batch ID: **23860**			RunNo: **32327**					
Prep Date: **2/22/2016**	Analysis Date: **2/23/2016**			SeqNo: **988169**		Units: **%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.1		10.00		90.6	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#: **1602807**

29-Feb-16

Client: Rule Engineering LLC
Project: CoP Edgar Federal #2

Sample ID **MB-23867**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **23867**	RunNo: **32332**
Prep Date: **2/22/2016**	Analysis Date: **2/23/2016**	SeqNo: **988918** 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	920		1000		91.8	66.2	112			

Sample ID **LCS-23867**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **23867**	RunNo: **32332**
Prep Date: **2/22/2016**	Analysis Date: **2/23/2016**	SeqNo: **988919** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	105	79.6	122			
Surr: BFB	990		1000		99.2	66.2	112			

Sample ID **1602807-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BGT-1**	Batch ID: **23867**	RunNo: **32332**
Prep Date: **2/22/2016**	Analysis Date: **2/23/2016**	SeqNo: **988922** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	55	4.7	23.72	19.25	150	59.3	143			S
Surr: BFB	3100		948.8		331	66.2	112			S

Sample ID **1602807-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BGT-1**	Batch ID: **23867**	RunNo: **32332**
Prep Date: **2/22/2016**	Analysis Date: **2/23/2016**	SeqNo: **988923** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	48	4.7	23.74	19.25	123	59.3	143	12.6	20	
Surr: BFB	2700		949.7		287	66.2	112	0	0	S

Sample ID **MB-23866**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **23866**	RunNo: **32332**
Prep Date: **2/22/2016**	Analysis Date: **2/23/2016**	SeqNo: **988952** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	950		1000		95.4	66.2	112			

Sample ID **LCS-23866**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **23866**	RunNo: **32332**
Prep Date: **2/22/2016**	Analysis Date: **2/23/2016**	SeqNo: **988963** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		113	66.2	112			S

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#: **1602807**

29-Feb-16

Client: Rule Engineering LLC
Project: CoP Edgar Federal #2

Sample ID **MB-23867**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **23867**	RunNo: **32332**
Prep Date: **2/22/2016**	Analysis Date: **2/23/2016**	SeqNo: **989011** 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		110	80	120			

Sample ID **LCS-23867**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **23867**	RunNo: **32332**
Prep Date: **2/22/2016**	Analysis Date: **2/23/2016**	SeqNo: **989012** 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	106	80	120			
Toluene	1.1	0.050	1.000	0	112	80	120			
Ethylbenzene	1.1	0.050	1.000	0	111	80	120			
Xylenes, Total	3.4	0.10	3.000	0	112	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		120	80	120			S

Sample ID **MB-23866**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **23866**	RunNo: **32332**
Prep Date: **2/22/2016**	Analysis Date: **2/23/2016**	SeqNo: **989021** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		113	80	120			

Sample ID **LCS-23866**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **23866**	RunNo: **32332**
Prep Date: **2/22/2016**	Analysis Date: **2/23/2016**	SeqNo: **989022** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		115	80	120			

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **RULE ENGINEERING LL** Work Order Number: **1602807** RcptNo: **1**

Received by/date: 02/18/16

Logged By: **Lindsay Mangin** **2/18/2016 7:00:00 AM**

Completed By: **Lindsay Mangin** **2/19/2016 9:34:21 AM**

Reviewed By: 02/22/16

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° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
9. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
11. Were any sample containers received broken?	Yes ☐	No ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
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 ☐	Checked by:

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Yes			

Chain-of-Custody Record

Client: Rule Engineering, LLC

Mailing Address: 501 Airport Dr, Suite 205
Farmington, NM 87401

Phone #: (505) 716-2787

Email or Fax#: hwoods@ruleengineering.com

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

Accreditation
NELAP ☐ Other _____

EDD (Type) _____

Turn-Around Time:
☑ Standard ☐ Rush _____

Project Name: CoP Edgar Federal #2

Project #:

Project Manager: Heather Woods

Sampler: Heather Woods / Justin Valdez

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.3

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1602807	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F^-, Cl^-, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
2/1/16	0945	Soil	BGT-1	(1) 4oz Glass	Cold	-001	X		X					X								

NES AW

Date:	Time:	Relinquished by:	Received by:	Date	Time
2/1/16	1650	Heather M. Woods	Christine Walters	2/1/16	1650
2/1/16	1850	Christine Walters		02/18/16	0700

Remarks: Direct bill to ConocoPhillips
WO: 10381633
Activity: T110
User ID: KGARCIA
Lead: Shawn Fincher
ordered by: Lisa Hunter

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.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

July 25, 2016

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

RE: Edgar Fed 2 OrderNo.: 1607860

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 6 sample(s) on 7/19/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1607860**
Date Reported: **7/25/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC
Client Sample ID: SC-1
Project: Edgar Fed 2
Collection Date: 7/18/2016 2:30:00 PM
Lab ID: 1607860-001
Matrix: SOIL
Received Date: 7/19/2016 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	240	96		mg/Kg	10	7/20/2016 9:42:05 AM	26499
Surr: DNOP	0	70-130	S	%Rec	10	7/20/2016 9:42:05 AM	26499
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	29	5.0		mg/Kg	1	7/20/2016 1:30:49 PM	26468
Surr: BFB	347	80-120	S	%Rec	1	7/20/2016 1:30:49 PM	26468
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	7/20/2016 1:30:49 PM	26468
Toluene	ND	0.050		mg/Kg	1	7/20/2016 1:30:49 PM	26468
Ethylbenzene	0.055	0.050		mg/Kg	1	7/20/2016 1:30:49 PM	26468
Xylenes, Total	0.12	0.10		mg/Kg	1	7/20/2016 1:30:49 PM	26468
Surr: 4-Bromofluorobenzene	111	80-120		%Rec	1	7/20/2016 1:30:49 PM	26468

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

Qualifiers:

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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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC
Client Sample ID: SC-3
Project: Edgar Fed 2
Collection Date: 7/18/2016 2:40:00 PM
Lab ID: 1607860-002
Matrix: SOIL
Received Date: 7/19/2016 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	650	100		mg/Kg	10	7/21/2016 4:32:12 PM	26500
Surr: DNOP	0	70-130	S	%Rec	10	7/21/2016 4:32:12 PM	26500
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	63	4.9		mg/Kg	1	7/20/2016 8:58:20 PM	26468
Surr: BFB	631	80-120	S	%Rec	1	7/20/2016 8:58:20 PM	26468
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	7/20/2016 8:58:20 PM	26468
Toluene	ND	0.049		mg/Kg	1	7/20/2016 8:58:20 PM	26468
Ethylbenzene	0.15	0.049		mg/Kg	1	7/20/2016 8:58:20 PM	26468
Xylenes, Total	0.93	0.098		mg/Kg	1	7/20/2016 8:58:20 PM	26468
Surr: 4-Bromofluorobenzene	127	80-120	S	%Rec	1	7/20/2016 8:58:20 PM	26468

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC
Client Sample ID: SC-4
Project: Edgar Fed 2
Collection Date: 7/18/2016 2:45:00 PM
Lab ID: 1607860-003 **Matrix:** SOIL **Received Date:** 7/19/2016 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	20	9.8		mg/Kg	1	7/21/2016 4:53:57 PM	26500
Surr: DNOP	108	70-130		%Rec	1	7/21/2016 4:53:57 PM	26500
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	7/20/2016 9:45:14 PM	26468
Surr: BFB	102	80-120		%Rec	1	7/20/2016 9:45:14 PM	26468
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	7/20/2016 9:45:14 PM	26468
Toluene	ND	0.050		mg/Kg	1	7/20/2016 9:45:14 PM	26468
Ethylbenzene	ND	0.050		mg/Kg	1	7/20/2016 9:45:14 PM	26468
Xylenes, Total	ND	0.099		mg/Kg	1	7/20/2016 9:45:14 PM	26468
Surr: 4-Bromofluorobenzene	96.0	80-120		%Rec	1	7/20/2016 9:45:14 PM	26468

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC
Client Sample ID: SC-5
Project: Edgar Fed 2
Collection Date: 7/18/2016 2:50:00 PM
Lab ID: 1607860-004
Matrix: SOIL
Received Date: 7/19/2016 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	22	9.2		mg/Kg	1	7/21/2016 5:16:10 PM	26500
Surr: DNOP	110	70-130		%Rec	1	7/21/2016 5:16:10 PM	26500
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	7/20/2016 10:08:43 PM	26468
Surr: BFB	108	80-120		%Rec	1	7/20/2016 10:08:43 PM	26468
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	7/20/2016 10:08:43 PM	26468
Toluene	ND	0.046		mg/Kg	1	7/20/2016 10:08:43 PM	26468
Ethylbenzene	ND	0.046		mg/Kg	1	7/20/2016 10:08:43 PM	26468
Xylenes, Total	ND	0.092		mg/Kg	1	7/20/2016 10:08:43 PM	26468
Surr: 4-Bromofluorobenzene	93.6	80-120		%Rec	1	7/20/2016 10:08:43 PM	26468

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC
Client Sample ID: SC-6
Project: Edgar Fed 2
Collection Date: 7/18/2016 2:55:00 PM
Lab ID: 1607860-005
Matrix: SOIL
Received Date: 7/19/2016 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	7/21/2016 5:37:45 PM	26500
Surr: DNOP	115	70-130		%Rec	1	7/21/2016 5:37:45 PM	26500
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/20/2016 10:32:17 PM	26468
Surr: BFB	99.2	80-120		%Rec	1	7/20/2016 10:32:17 PM	26468
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	7/20/2016 10:32:17 PM	26468
Toluene	ND	0.047		mg/Kg	1	7/20/2016 10:32:17 PM	26468
Ethylbenzene	ND	0.047		mg/Kg	1	7/20/2016 10:32:17 PM	26468
Xylenes, Total	ND	0.094		mg/Kg	1	7/20/2016 10:32:17 PM	26468
Surr: 4-Bromofluorobenzene	94.3	80-120		%Rec	1	7/20/2016 10:32:17 PM	26468

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC
Client Sample ID: SC-2
Project: Edgar Fed 2
Collection Date: 7/18/2016 4:30:00 PM
Lab ID: 1607860-006
Matrix: SOIL
Received Date: 7/19/2016 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	99	9.7		mg/Kg	1	7/21/2016 5:59:36 PM	26500
Surr: DNOP	117	70-130		%Rec	1	7/21/2016 5:59:36 PM	26500
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/20/2016 10:55:42 PM	26468
Surr: BFB	135	80-120	S	%Rec	1	7/20/2016 10:55:42 PM	26468
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	7/20/2016 10:55:42 PM	26468
Toluene	ND	0.049		mg/Kg	1	7/20/2016 10:55:42 PM	26468
Ethylbenzene	ND	0.049		mg/Kg	1	7/20/2016 10:55:42 PM	26468
Xylenes, Total	ND	0.097		mg/Kg	1	7/20/2016 10:55:42 PM	26468
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	7/20/2016 10:55:42 PM	26468

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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#: **1607860**

25-Jul-16

Client: Rule Engineering LLC

Project: Edgar Fed 2

Sample ID **LCS-26499**	SampType: **LCS**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID: **LCSS**	Batch ID: **26499**			RunNo: **35794**					
Prep Date: **7/20/2016**	Analysis Date: **7/20/2016**			SeqNo: **1108852**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	97.0	62.6	124			
Surr: DNOP	4.9		5.000		97.7	70	130			

Sample ID **MB-26499**	SampType: **MBLK**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID: **PBS**	Batch ID: **26499**			RunNo: **35794**					
Prep Date: **7/20/2016**	Analysis Date: **7/20/2016**			SeqNo: **1108854**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	10		10.00		102	70	130			

Sample ID **MB-26465**	SampType: **MBLK**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID: **PBS**	Batch ID: **26465**			RunNo: **35794**					
Prep Date: **7/19/2016**	Analysis Date: **7/20/2016**			SeqNo: **1110143**		Units: **%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		101	70	130			

Sample ID **LCS-26500**	SampType: **LCS**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID: **LCSS**	Batch ID: **26500**			RunNo: **35868**					
Prep Date: **7/20/2016**	Analysis Date: **7/21/2016**			SeqNo: **1111810**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	98.1	62.6	124			
Surr: DNOP	5.3		5.000		106	70	130			

Sample ID **MB-26500**	SampType: **MBLK**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID: **PBS**	Batch ID: **26500**			RunNo: **35868**					
Prep Date: **7/20/2016**	Analysis Date: **7/21/2016**			SeqNo: **1111811**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	9.5		10.00		94.8	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#: **1607860**

25-Jul-16

Client: Rule Engineering LLC

Project: Edgar Fed 2

Sample ID **MB-26468**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **26468**	RunNo: **35833**
Prep Date: **7/19/2016**	Analysis Date: **7/20/2016**	SeqNo: **1109484** 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	1000		1000		102	80	120			

Sample ID **LCS-26468**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **26468**	RunNo: **35833**
Prep Date: **7/19/2016**	Analysis Date: **7/20/2016**	SeqNo: **1109485** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	106	80	120			
Surr: BFB	1100		1000		115	80	120			

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#: **1607860**

25-Jul-16

Client: Rule Engineering LLC

Project: Edgar Fed 2

Sample ID **MB-26468**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **26468**	RunNo: **35833**
Prep Date: **7/19/2016**	Analysis Date: **7/20/2016**	SeqNo: **1109545** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		100	80	120			

Sample ID **LCS-26468**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **26468**	RunNo: **35833**
Prep Date: **7/19/2016**	Analysis Date: **7/20/2016**	SeqNo: **1109546** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.025	1.000	0	98.7	75.3	123			
Toluene	0.97	0.050	1.000	0	96.6	80	124			
Ethylbenzene	0.99	0.050	1.000	0	99.1	82.8	121			
Xylenes, Total	2.9	0.10	3.000	0	96.9	83.9	122			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: RULE ENGINEERING LL Work Order Number: 1607660 RcptNo: 1

Received by/date: [signature] 07/19/16

Logged By: Lindsay Mangin 7/19/2016 8:45:00 AM [signature]

Completed By: Lindsay Mangin 7/19/2016 9:02:00 AM [signature]

Reviewed By: [signature] 07/19/16

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

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.1	Good	Yes			

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Client: Rule Engineering LLC
Mailing Address: 501 Airport Dr. Suite 201 Farmington, NM 87401
Phone #: 505 793 9486
Email or Fax#: jvalder@ruleengineering.com
QA/QC Package: Standard ☐ Level 4 (Full Validation)
Accreditation: NELAP ☐ Other
EDD (Type)

Turn-Around Time: ☑ Standard ☐ Rush
Project Name: Edgar Fed #2
Project #:
Project Manager: Heather Woods
Sampler: Justin Valder
On Ice: ☑ Yes ☐ No
Sample Temperature: 4.1

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1607860	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / [redacted])	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
8/16	14:30	Soil	SC-1	4oz glass	Cold	-001	X		X									
8/16	14:40		SC-3			-002	X		X									
8/16	14:45		SC-4			-003	X		X									
8/16	14:50		SC-5			-004	X		X									
8/16	1455		SC-6			-005	X		X									
8/16	1630		SC-2			-006	X		X									

Date	Time	Relinquished by:	Received by:	Date	Time
8/16	5:30		Ernest White	7/18/16	1730
8/16	1821	Ernest White		07/19/16	0845

Remarks:

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.