

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

13263 Proposed Alternative Method Permit or Closure Plan Application

OIL CONS. DIV DIST. 3

- Type of action: ☐ Below grade tank registration
☐ Permit of a pit or proposed alternative method
39-22288 ☒ 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

NOV 13 2015

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: AXI Apache N 13A
API Number: 30-039-22288 OCD Permit Number: _____
U/L or Qtr/Qtr I (NESE) Section 2 Township 25N Range 4W County: Rio Arriba
Center of Proposed Design: Latitude 36.425251°N Longitude -107.21582°W NAD: ☐ 1927 ☒ 1983
Surface Owner: ☐ Federal ☐ State ☐ Private ☒ Tribal Trust or Indian Allotment

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 _____

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 H₂S, 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	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Within 100 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 300 horizontal feet of a private, domestic fresh water well or spring used for domestic or stock watering purposes, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input type="checkbox"/> No
Written confirmation or verification from the municipality; Written approval obtained from the municipality	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 300 feet of a wetland. US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance	

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

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

☐ Yes ☐ No

Within the area overlying a subsurface mine.

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

☐ Yes ☐ No

Within an unstable area.

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

☐ Yes ☐ No

Within a 100-year floodplain.

- FEMA map

☐ Yes ☐ No

16.

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

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

17.

Operator Application Certification:

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

Name (Print): _____ Title: _____

Signature: _____ Date: _____

e-mail address: _____ Telephone: _____

18.

OCD Approval: ☐ Permit Application (including closure plan) ☒ Closure Plan (only) ☐ OCD Conditions (see attachment)

OCD Representative Signature: Vanessa Approval Date: 12/9/2015

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: 6/8/2015

20.

Closure Method:

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

21.

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


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

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

Operator Closure Certification:

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

Name (Print): Crystal Walker Title: Regulatory Coordinator

Signature:  Date: 11/11/2015

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

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

**Lease Name: AXI Apache N 13A
API No.: 30-039-22288**

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.

11/10/2015

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:
- Operator's name
 - Location by Unit Letter, Section, Township, and Range. Well name and API number.

Notification is attached.

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

The closure process notification to the landowner was sent via 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 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 11 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: Journey, Denise D
Sent: Thursday, June 04, 2015 8:12 AM
To: 'Smith, Cory, EMNRD'; Powell, Brandon, EMNRD
Cc: Heinen, Bobby B; 'Kelly, Mark'
Subject: FW: AXI APACHE N 13A - 30-039-22288 - 72 HOUR NOTICE BGT CLOSURE

PLEASE DISREGARD THE PREVIOUS 72 HOUR NOTIFICATION FOR THE AXI APACHE N 13 – IT SHOULD BE FOR THE AXI APACHE N 13A. MY APOLOGIES.

Subject: AXI APACHE N 13A

Anticipated Start Date: Monday, June 8, 2015 @ approximately 8:30 am

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: AXI APACHE N 13A

API#: 30-039-22288

Location: UL I, SEC. 2, T25N, R4W

Footages: 1520' FSL & 1050' FEL

Operator: ConocoPhillips

Surface Owner: BLM

Please forward this message as necessary to anyone I may have missed.

Denise Journey
Staff Regulatory Technician
ConocoPhillips Company
505-326-9556
505-215-1750
Denise.Journey@conocophillips.com

From: Journey, Denise D
Sent: Thursday, June 04, 2015 7:09 AM
To: 'Smith, Cory, EMNRD'; Powell, Brandon, EMNRD
Cc: Heinen, Bobby B; GRP:SJBU Regulatory; 'Kelly, Mark'
Subject: FW: AXI APACHE N 13 - 30-039-21428 - 72 HOUR NOTICE BGT CLOSURE

Please note correction in subject line for the API#.

Denise Journey
Staff Regulatory Technician
505-326-9556

From: Journey, Denise D
Sent: Thursday, June 04, 2015 7:07 AM

To: Smith, Cory, EMNRD; Powell, Brandon, EMNRD
Cc: Heinen, Bobby B; GRP:SJBU Regulatory; Kelly, Mark
Subject: AXI APACHE N 13 - 30-209-21428 - 72 HOUR NOTICE BGT CLOSURE

Subject: 72 Hour Notice of BGT Closure

Anticipated Start Date: Monday, June 8, 2015 @ approximately 8:30 am

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: AXI APACHE N 13

API#: 30-039-21428

Location: UL G; SEC. 2, T25N, R4W

Footages: 1850' FNL & 1850' FEL

Operator: ConocoPhillips Company

Surface Owner: BLM

Please forward this message as necessary to anyone I may have missed.

Denise Journey
Staff Regulatory Technician
ConocoPhillips Company
505-326-9556
505-215-1750
Denise.Journey@conocophillips.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

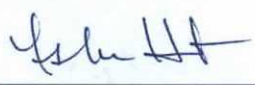
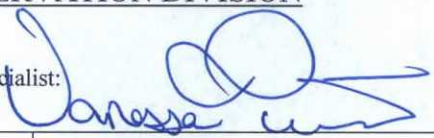
Name of Company ConocoPhillips Company	Contact Lisa Hunter	
Address 3401 East 30th St, Farmington, NM	Telephone No. (505) 326-9786	
Facility Name: AXI Apache N #13A	Facility Type: Gas Well	
Surface Owner Jicarilla	Mineral Owner Jicarilla	API No. 3003922288

LOCATION OF RELEASE

Unit Letter I	Section 02	Township 25N	Range 04W	Feet from the 1520	North/South Line South	Feet from the 1050	East/West Line East	County Rio Arriba
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Latitude **36.42506** Longitude **-107.21638**

NATURE OF RELEASE

Type of Release Hydrocarbon	Volume of Release Unknown	Volume Recovered 2 cubic yds soil
Source of Release BGT	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 05/21/15 @ 12:00 PM
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? N/A	
By Whom? N/A	Date and Hour N/A	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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.* Historical hydrocarbon impacted soil was found during the BGT closure for the subject well. The excavation was 6' x 4' x 1.5' in depth and 2 yds of soil was transported to IEI land farm and 2 yds of clean soil was transported from Jicarilla approved source and placed in the excavation site. Analytical results were below the regulatory standards – no further action required. The soil sampling 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	
Printed Name: Lisa Hunter	Approved by Environmental Specialist: 	
Title: Field Environmental Specialist	Approval Date: 12/9/2015	Expiration Date:
E-mail Address: Lisa.Hunter@cop.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: September 23, 2015	Phone: (505) 326-9786	

* Attach Additional Sheets If Necessary

Rule Engineering, LLC

Solutions to Regulations for Industry

September 22, 2015

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

**Re: Axi Apache N #13A
Below Grade Tank Closure Sampling and Release Report**

Dear Ms. Hunter:

This report summarizes below grade tank (BGT) closure sampling and remedial activities conducted at the ConocoPhillips Axi Apache N #13A, located in Unit Letter I, Section 2, Township 25N, Range 4W in Rio Arriba County, New Mexico on the Jicarilla Apache Nation. Site activities included collection and analysis of a five-point composite soil closure sample from beneath the BGT, excavation of hydrocarbon impacted soils, and collection and analysis of an excavation confirmation sample. A topographic map of the location is included as Figure 1 and an aerial site map is included as Figure 2.

BGT/Release Summary

Site Name – Axi Apache N #13A

Location – Unit Letter I, Section 2, Township 25N, Range 4W

API Number – 30-039-22288

Wellhead Latitude/Longitude – N36.42523 and W107.21638

BGT Latitude/Longitude – N36.42506 and W107.21672

Land Jurisdiction – Jicarilla Apache Nation

Size of BGT – 45 barrels

Source of Release – historic (beneath the BGT east side)

Release Contents – unknown

Release Volume – unknown

Site Ranking – 20

Date of BGT Closure Soil Sampling – June 8, 2015

Date(s) of Rule Engineering, LLC (Rule) Field Work – June 8 and 12, 2015

Subcontractor(s) – CF&M

Amount of Contaminated Soil Excavated/Disposed – estimated 2 cubic yards

BGT Closure Standards

As outlined in 19.15.17.13 New Mexico Administrative Code (NMAC), BGT closure standards for the Axi Apache N #13A are as follows: 0.2 milligrams per kilogram (mg/kg) benzene, 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX), and 100 mg/kg total petroleum hydrocarbons (TPH).

Site Ranking

The Axi Apache N #13A is located on the Jicarilla Apache Nation and follows recommendations from Jicarilla Apache Nation Environmental Protection Office (EPO). In accordance with EPO and New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills, and Releases (August 1993), this site was assigned a ranking score of 20 (Table 1). Based on the ranking score of 20, action levels for remediated soils at the site are as follows: 10 mg/kg benzene, 50 mg/kg total BTEX, and 100 mg/kg TPH.

Depth to groundwater at the site was estimated to be 286 feet below ground surface (bgs) based on the elevation differential (286 feet) between the BGT location and the wash in Ojitos Canyon.

A review was completed of the New Mexico Office of the State Engineer online New Mexico Water Rights Reporting System and no water wells were identified within a 1,000 feet radius of the location.

The nearest surface water, an unnamed wash which drains to the Ojitos Canyon is located approximately 80 feet west of the BGT.

Field Activities

On June 8, 2015, Rule personnel conducted a visual inspection for surface/subsurface indications of a release. Soil discoloration and hydrocarbon odor was observed below the BGT along the eastern edge. No corrosion holes were visible in the BGT and the impacted soils were located 4 inches bgs, indicating that a historic release had occurred. Rule personnel then collected five soil samples (S-1 through S-5) from 0.5 feet beneath the BGT. The field work summary sheet is attached.

On the June 12, 2015, CF&M excavated the petroleum impacted materials from below the BGT. On June 12, 2015, Rule personnel collected one confirmation sample made up of samples from the sidewalls and base of the excavation. Approximately 2 cubic yards of impacted soils were removed from an area of excavation measuring approximately 6 feet x 4 feet x 1.5 (to 2.0) feet in depth. Figure 3 provides the locations and results of the soil sample collected during the excavation clearance.

BGT Soil Sampling

The five soil samples (S-1 through S-5) collected from below the BGT liner were combined to create soil confirmation sample SC-1 BGT. A portion of SC-1 BGT was field screened for volatile organic compounds (VOCs) and chlorides, and field analyzed for TPH per U.S. Environmental Protection Agency (USEPA) Method 418.1.

The portion of SC-1 BGT 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 418.1, and chlorides per USEPA Method 300.0.

Field sampling results for closure sample SC-1 BGT reported VOCs at 293 parts per million (ppm) and TPH concentrations at 1,070 mg/kg. Field chloride concentrations were reported at 80 mg/kg. Laboratory analytical results for sample SC-1 BGT reported benzene and total BTEX concentrations as less than 0.050 mg/kg and 0.2 mg/kg, respectively. Laboratory analytical results for SC-1 BGT reported concentrations of 480 mg/kg TPH and 170 mg/kg chloride. Field and laboratory results for SC-1 BGT are summarized in Table 2, and the analytical laboratory report is attached.

Excavation Soil Sampling

From the excavation, Rule collected one five-point composite sample (Excavation Composite) from the sidewalls and base. A portion of the composite soil sample was field screened for VOCs and field analyzed for TPH per USEPA Method 418.1.

The Excavation Composite 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 and TPH for gasoline range organics (GRO) and diesel range organics (DRO) per USEPA Method 8015D.

Field results for soil confirmation sample reported VOC and TPH concentrations below the NMOCD action levels of with 5.2 ppm and 99.9 mg/kg, respectively. Laboratory analytical results for soil confirmation Excavation Composite reported benzene, total BTEX, and TPH (GRO+DRO) concentrations below the applicable NMOCD action levels. Field sampling and laboratory analytical results are summarized in Table 3 and presented on Figure 3. The analytical laboratory report is attached.

Conclusions

On June 8, 2015, BGT closure sampling activities were conducted at the ConocoPhillips Axi Apache N 13A. Field and laboratory results for sample SC-1 BGT were reported below the BGT closure standards for benzene, total BTEX, and chlorides as outlined in 19.15.17.13.NMAC, but exceeded the BGT closure standard of 100 mg/kg for TPH. Based on field screening results a historic release was noted along the eastern portion of the BGT location.

On June 12, 2015, approximately 2 cubic yards of hydrocarbon contaminated soils were removed from within the impacted area. The final excavation measured 6

feet x 4 feet x 1.5 (to 2.0) feet in depth. On June 12, 2015, one confirmation soil sample was collected from the sidewalls and base of the final excavation.

Laboratory analytical results for soil confirmation sample, Excavation Composite, reported benzene and total BTEX concentrations below the NMOCD action levels of 10 mg/kg and 50 mg/kg, respectively. The field and laboratory TPH concentrations were both reported below the NMOCD action level of 100 mg/kg. Based on the field screening results, Hobson Sandoval, EPO representative, approved backfilling of the excavation on June 12, 2015. Based on laboratory analytical results, no further work is recommended.

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

Sincerely,
Rule Engineering, LLC



Heather M. Woods, P.G.

Attachments:

- Table 1. NMOCD Site Ranking Determination
- Table 2. BGT Soil Sampling Results
- Table 3. Excavation Soil Sampling Results
- Figure 1. Topographic Map
- Figure 2. Aerial Site Map
- Figure 3. Excavation Clearance Soil Analytical Map
- BGT Field Work Summary Sheet
- Analytical Laboratory Reports (#1506962 and #1506818)

Table 1. NMOCD Site Ranking Determination

Axi Apache N #13A

Rio Arriba County, New Mexico

ConocoPhillips

Ranking Criteria	Ranking Score	Site-Based Ranking Score	Basis for Determination	Data Sources
Depth to Groundwater				
<50 feet	20	0	Elevation differential between location and wash in Ojitos Canyon south of the location is 286 feet.	NMOCD Online database, Schmitz Ranch 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 feet radius of location.	NMOSE NMWRRS, Schmitz Ranch Quadrangle, Google Earth, and Visual Inspection
	0 (No)			
Distance to Surface Water Body				
<200 horizontal feet	20	20	An unnamed wash which drains to wash in Ojitos Canyon is located approximately 80 feet west of the BGT.	Schmitz Ranch Quadrangle, Google Earth, and Visual Inspection
200 to 1,000 horizontal feet	10			
>1,000 horizontal feet	0			
Site Based Total Ranking Score		20		

Table 2. BGT Soil Sampling Results
Axi Apache N #13A
Rio Arriba County, New Mexico
ConocoPhillips

Sample ID	Date	Sample Type	Sample Depth (ft below BGT)	Field Sampling Results			Laboratory Analytical Results			
				VOCs (PID) (ppm)	TPH (mg/kg)	Chloride (mg/kg)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
BGT Closure Standards*				----	100	250	0.2	50	100	250
SC-1 BGT	Jun 08, 15	composite	0.5	293	1,070	80	<0.050	0.17	480	170

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

Table 3. Excavation Soil Sampling Results
Axi Apache N #13A
Rio Arriba County, New Mexico
ConocoPhillips

Sample ID	Date	Sample Depth (ft below BGT)	VOCs* (PID) (ppm)	TPH* (418.1) (mg/kg)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH-GRO	TPH-DRO
							(mg/kg)	
EPO/NMOCD Action Levels**			100	100	10	50	100	
Excavation Composite	Jun 12, 15	1.5 to 2	5.2	99.9	<0.049	<0.245	<4.9	50

Notes:

* field results

VOCs - volatile organic compounds

PID - photo-ionization detector

ppm - parts per million

mg/kg - milligrams/kilograms

TPH-total petroleum hydrocarbons

BTEX - benzene, toluene, ethylbenzene, and xylenes

TPH-GRO - total petroleum hydrocarbons-gasoline range organics

TPH-DRO - total petroleum hydrocarbons-diesel range organics

**Based on NMOCD Guidelines for Remediation of Leaks, Spills, and Releases (1993), site rank of 20.



ConocoPhillips

0 0.125 0.25 0.5 0.75 1
Miles

Rule Engineering, LLC
Solutions to Regulations for Industry

9/22/2015



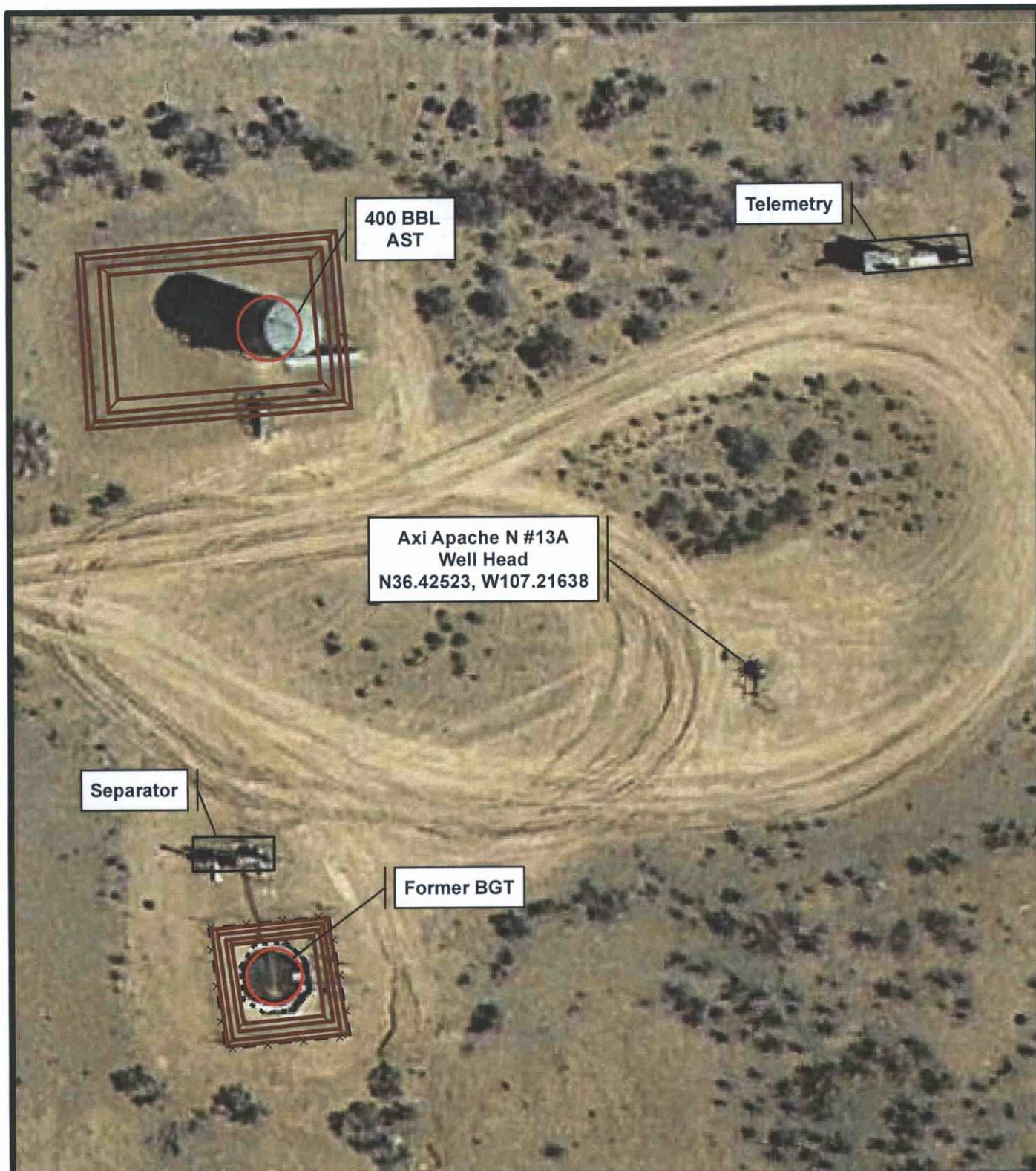
1:24,000

Topographic Site Map

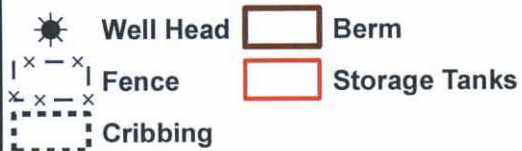
ConocoPhillips
Axi Apache N #13A
API: 30-039-22288

Figure 1

I-2-T25N-R04W
N36.42523, W107.21638
Schmitz Ranch Quadrangle
Rio Arriba County, New Mexico



Legend



9/22/2015

1:412

ConocoPhillips

0 10 20 40 60 80 Feet

Rule Engineering, LLC
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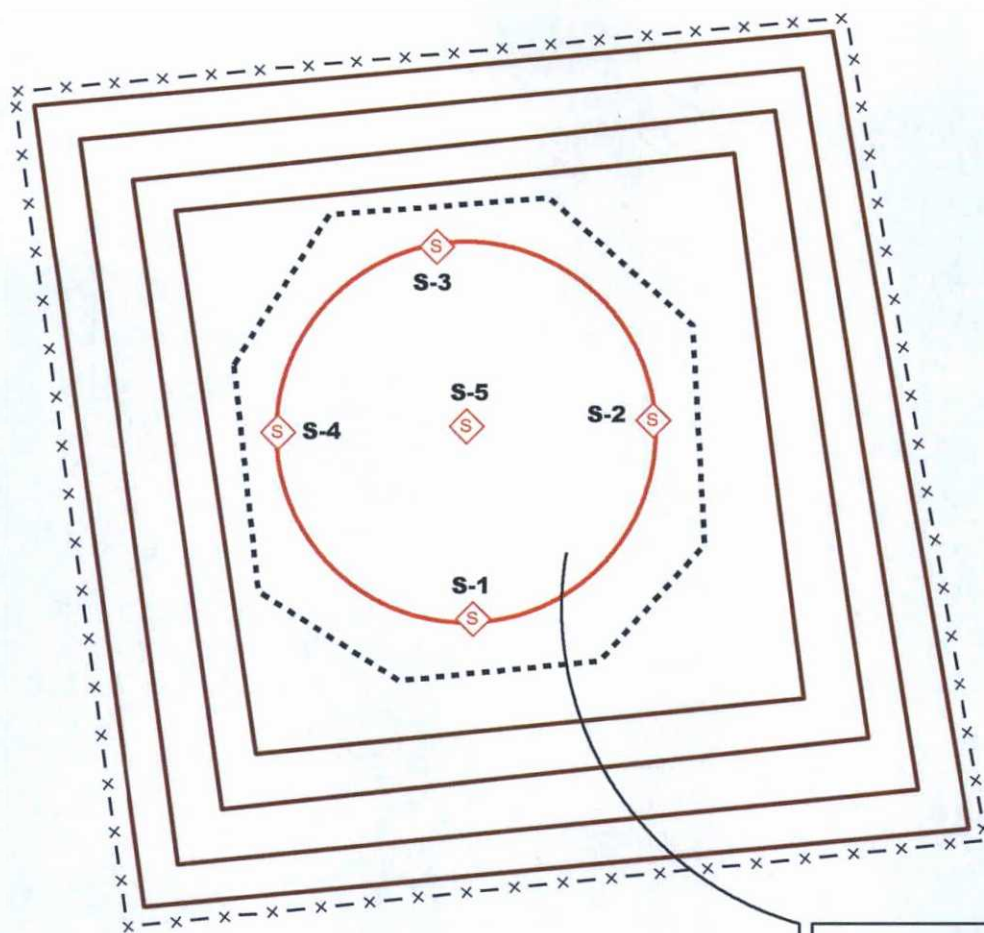


Aerial Site Map

ConocoPhillips
Axi Apache N #13A
API: 30-039-22288

Figure 2

I-2-T25N-R04W
N36.42523, W107.21638
Rio Arriba County, New Mexico



SC-1
 6/8/2015
 Benzene <0.005 mg/kg
 Total BTEX 0.17 mg/kg
 Chloride 170 mg/kg
 TPH 480 mg/kg

NOTES: SC-1 is a five part composite comprised of aliquots taken from S-1 through S-5
 BTEX= benzene, toluene, ethylbenzene, and xylenes
 TPH= total petroleum hydrocarbons

Legend

Soil Sample **Berm**
Fence **UST**
Cribbing

9/22/2015

1:81

ConocoPhillips

0 2 4 8 12 16
 Feet

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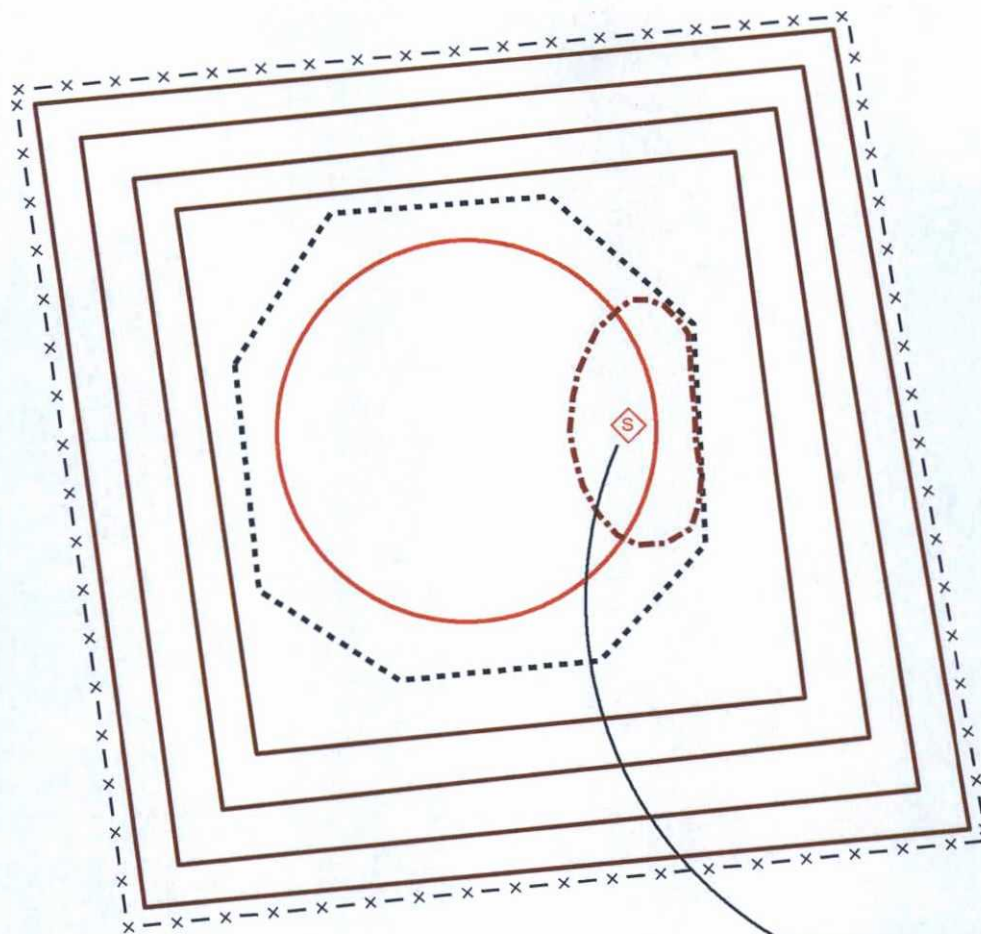


BGT Soil Analytical Map

ConocoPhillips
 Axi Apache N #13A
 API: 30-039-22288

Figure 3

I-2-T25N-R04W
 N36.42523, W107.21638
 Rio Arriba County, New Mexico

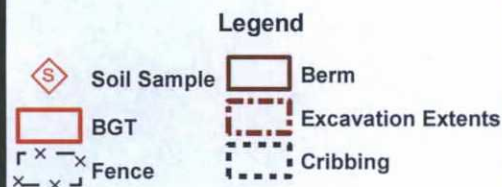


Excavation Composite

7/12/2015

Benzene <0.049 mg/kg
Total BTEX <0.245 mg/kg
TPH-GRO <4.9 mg/kg
TPH-DRO 50 mg/kg

NOTES: Excavation composite is a five point composite
BTEX= benzene, toluene, ethylbenzene, and xylenes
TPH= total petroleum hydrocarbons
GRO= gasoline range organics
DRO= diesel range organics



9/22/2015

1:81

ConocoPhillips



Rule Engineering, LLC
Solutions to Regulations for Industry



Excavation Soil Analytical Map

ConocoPhillips
Axi Apache N #13A
API: 30-039-22288

Figure 4

I-2-T25N-R04W
N36.42523, W107.21638
Rio Arriba County, New Mexico

Rule Engineering Field Work Summary Sheet

Company: ConocoPhillips

Location: Axi Apache N #13A

API: 30-039-22288

Legals: I-S02-T25N-R4W

County: Rio Arriba

Land Jurisdiction: Jicarilla Apache Nation

Date: 8-Jun-15

Staff: Debbie Watson

Wellhead GPS: 36.42523, -107.21638

BGT GPS: 36.42506, -107.21672

Siting Information based on BGT Location:

Groundwater: Elevation differential (>100 ft)

Surface Water: Unnamed wash located 80 ft W of BGT

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

Site Rank **20**

Objective: Closure sampling for BGT

Tank Size: Tank removed

Liner: No liner

Observations: Staining observed along east portion of BGT. Stained soil included in sample.

Notes: Following BGT sampling, excavation of impacted soils along east side.

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
SC-1	Composite	9:50	See below	293	10:00	1,070	10:23	80	10:18

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

Sample SC-1 was laboratory analyzed for TPH (418.1), 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.



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

June 24, 2015

Deborah Watson
Rule Engineering LLC
501 Airport Dr., Ste 205
Farmington, NM 87401
TEL: (505) 860-2712
FAX

RE: Axi Apache N 13A

OrderNo.: 1506962

Dear Deborah Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 6/16/2015 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 qualifiers 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 1506962

Date Reported: 6/24/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Client Sample ID: SC-1

Project: Axi Apache N 13A

Collection Date: 6/8/2015 9:50:00 AM

Lab ID: 1506962-001

Matrix: SOIL

Received Date: 6/16/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: TOM
Petroleum Hydrocarbons, TR	480	20		mg/Kg	1	6/19/2015	19823
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	170	7.5		mg/Kg	5	6/22/2015 11:30:10 AM	19854
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	6/22/2015 11:49:21 AM	19822
Toluene	ND	0.050		mg/Kg	1	6/22/2015 11:49:21 AM	19822
Ethylbenzene	ND	0.050		mg/Kg	1	6/22/2015 11:49:21 AM	19822
Xylenes, Total	0.17	0.099		mg/Kg	1	6/22/2015 11:49:21 AM	19822
Surr: 4-Bromofluorobenzene	113	80-120		%REC	1	6/22/2015 11:49:21 AM	19822

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	Page 1 of 4
	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	
	O	RSD is greater than RSDlimit	P	Sample pH Not In Range	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1506962

24-Jun-15

Client: Rule Engineering LLC

Project: Axi Apache N 13A

Sample ID	MB-19854	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	19854	RunNo:	27009					
Prep Date:	6/22/2015	Analysis Date:	6/22/2015	SeqNo:	806753	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-19854	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	19854	RunNo:	27009					
Prep Date:	6/22/2015	Analysis Date:	6/22/2015	SeqNo:	806754	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			

Sample ID	1506962-001AMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	SC-1	Batch ID:	19854	RunNo:	27009					
Prep Date:	6/22/2015	Analysis Date:	6/22/2015	SeqNo:	806756	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	190	7.5	15.00	173.7	99.8	64.2	131			

Sample ID	1506962-001AMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	SC-1	Batch ID:	19854	RunNo:	27009					
Prep Date:	6/22/2015	Analysis Date:	6/22/2015	SeqNo:	806757	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	190	7.5	15.00	173.7	115	64.2	131	1.21	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1506962

24-Jun-15

Client: Rule Engineering LLC

Project: Axi Apache N 13A

Sample ID	MB-19823	SampType:	MBLK	TestCode:	EPA Method 418.1: TPH					
Client ID:	PBS	Batch ID:	19823	RunNo:	26959					
Prep Date:	6/19/2015	Analysis Date:	6/19/2015	SeqNo:	805089	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID	LCS-19823	SampType:	LCS	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS	Batch ID:	19823	RunNo:	26959					
Prep Date:	6/19/2015	Analysis Date:	6/19/2015	SeqNo:	805090	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	100	20	100.0	0	99.8	86.7	126			

Sample ID	LCSD-19823	SampType:	LCSD	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS02	Batch ID:	19823	RunNo:	26959					
Prep Date:	6/19/2015	Analysis Date:	6/19/2015	SeqNo:	805091	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	100	20	100.0	0	99.8	86.7	126	0	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1506962

24-Jun-15

Client: Rule Engineering LLC

Project: Axi Apache N 13A

Sample ID	MB-19822		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	19822		RunNo:	27003			
Prep Date:	6/19/2015		Analysis Date:	6/22/2015		SeqNo:	806550		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	0.91		1.000		90.7	80	120			

Sample ID	LCS-19822		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	19822		RunNo:	27003			
Prep Date:	6/19/2015		Analysis Date:	6/22/2015		SeqNo:	806551		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	104	76.6	128			
Toluene	0.99	0.050	1.000	0	99.0	75	124			
Ethylbenzene	1.0	0.050	1.000	0	103	79.5	126			
Xylenes, Total	3.1	0.10	3.000	0	102	78.8	124			
Surr: 4-Bromofluorobenzene	0.96		1.000		96.2	80	120			

Sample ID	1506962-001AMS		SampType:	MS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	SC-1		Batch ID:	19822		RunNo:	27003			
Prep Date:	6/19/2015		Analysis Date:	6/22/2015		SeqNo:	806553		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.050	0.9901	0	96.0	69.2	126			
Toluene	0.94	0.050	0.9901	0.04471	90.5	65.6	128			
Ethylbenzene	1.1	0.050	0.9901	0.1842	89.8	65.5	138			
Xylenes, Total	3.1	0.099	2.970	0.2219	98.4	63	139			
Surr: 4-Bromofluorobenzene	1.2		0.9901		117	80	120			

Sample ID	1506962-001AMSD		SampType:	MSD		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	SC-1		Batch ID:	19822		RunNo:	27003			
Prep Date:	6/19/2015		Analysis Date:	6/22/2015		SeqNo:	806554		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.049	0.9891	0	96.3	69.2	126	0.248	18.5	
Toluene	0.94	0.049	0.9891	0.04471	90.5	65.6	128	0.0548	20.6	
Ethylbenzene	1.1	0.049	0.9891	0.1842	91.6	65.5	138	1.50	20.1	
Xylenes, Total	3.2	0.099	2.967	0.2219	99.6	63	139	1.02	21.1	
Surr: 4-Bromofluorobenzene	1.2		0.9891		118	80	120	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit



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: 1506962

RcptNo: 1

Received by/date: AT/LM 06/16/15

Logged By: Anne Thorne 6/16/2015 7:30:00 AM

Completed By: Anne Thorne 6/19/2015

Reviewed By: [Signature]

[Signature]
[Signature]

Chain of Custody

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

Log In

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

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No.	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes			



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

June 23, 2015

Deborah Watson
Rule Engineering LLC
501 Airport Dr., Ste 205
Farmington, NM 87401
TEL: (505) 860-2712
FAX

RE: Axi Apache N 13A

OrderNo.: 1506818

Dear Deborah Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 6/16/2015 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 qualifiers 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 1506818

Date Reported: 6/23/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Client Sample ID: Excavation Comp

Project: Axi Apache N 13A

Collection Date: 6/12/2015 11:15:00 AM

Lab ID: 1506818-001

Matrix: SOIL

Received Date: 6/16/2015 7:20:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	50	9.8		mg/Kg	1	6/19/2015 2:28:11 PM	19771
Surr: DNOP	103	57.9-140		%REC	1	6/19/2015 2:28:11 PM	19771
EPA METHOD 8015D: GASOLINE RANGE							Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/19/2015 5:32:28 PM	19798
Surr: BFB	85.5	75.4-113		%REC	1	6/19/2015 5:32:28 PM	19798
EPA METHOD 8021B: VOLATILES							Analyst: RAA
Benzene	ND	0.049		mg/Kg	1	6/19/2015 5:32:28 PM	19798
Toluene	ND	0.049		mg/Kg	1	6/19/2015 5:32:28 PM	19798
Ethylbenzene	ND	0.049		mg/Kg	1	6/19/2015 5:32:28 PM	19798
Xylenes, Total	ND	0.098		mg/Kg	1	6/19/2015 5:32:28 PM	19798
Surr: 4-Bromofluorobenzene	87.2	80-120		%REC	1	6/19/2015 5:32:28 PM	19798

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	Page 1 of 4
	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	
	O	RSD is greater than RSDlimit	P	Sample pH Not In Range	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1506818

23-Jun-15

Client: Rule Engineering LLC

Project: Axi Apache N 13A

Sample ID	MB-19771	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	19771	RunNo:	26936					
Prep Date:	6/17/2015	Analysis Date:	6/19/2015	SeqNo:	804485	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	9.1		10.00		90.8	57.9	140			

Sample ID	LCS-19771	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	19771	RunNo:	26936					
Prep Date:	6/17/2015	Analysis Date:	6/19/2015	SeqNo:	804486	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	102	67.8	130			
Surr: DNOP	4.8		5.000		95.3	57.9	140			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1506818

23-Jun-15

Client: Rule Engineering LLC

Project: Axi Apache N 13A

Sample ID	1506818-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	Excavation Comp	Batch ID:	19798	RunNo:	26956					
Prep Date:	6/18/2015	Analysis Date:	6/19/2015	SeqNo:	805452	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	4.9	24.51	0	119	47.9	144			
Surr: BFB	930		980.4		95.2	75.4	113			

Sample ID	1506818-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	Excavation Comp	Batch ID:	19798	RunNo:	26956					
Prep Date:	6/18/2015	Analysis Date:	6/19/2015	SeqNo:	805453	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	30	4.9	24.56	0	123	47.9	144	4.13	29.9	
Surr: BFB	950		982.3		96.6	75.4	113	0	0	

Sample ID	LCS-19798	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	19798	RunNo:	26956					
Prep Date:	6/18/2015	Analysis Date:	6/19/2015	SeqNo:	805455	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	64	130			
Surr: BFB	940		1000		94.4	75.4	113			

Sample ID	MB-19798	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	19798	RunNo:	26956					
Prep Date:	6/18/2015	Analysis Date:	6/19/2015	SeqNo:	805456	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	890		1000		88.8	75.4	113			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1506818

23-Jun-15

Client: Rule Engineering LLC

Project: Axi Apache N 13A

Sample ID	LCS-19798		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	19798		RunNo:	26956			
Prep Date:	6/18/2015		Analysis Date:	6/19/2015		SeqNo:	805465		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	102	76.6	128			
Toluene	0.99	0.050	1.000	0	99.0	75	124			
Ethylbenzene	1.0	0.050	1.000	0	102	79.5	126			
Xylenes, Total	3.0	0.10	3.000	0	100	78.8	124			
Surr: 4-Bromofluorobenzene	0.97		1.000		96.7	80	120			

Sample ID	MB-19798		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	19798		RunNo:	26956			
Prep Date:	6/18/2015		Analysis Date:	6/19/2015		SeqNo:	805466		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	0.89		1.000		89.5	80	120			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| 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 |
| O RSD is greater than RSDlimit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |



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: 1508818

RcptNo: 1

Received by/date:

Logged By: Ashley Gallegos

6/16/2015 7:20:00 AM

Completed By: Ashley Gallegos

6/17/2015 12:48:49 PM

Reviewed By:

Chain of Custody

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

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐
- # of preserved bottles checked for pH:
(<2 or >12 unless noted)
Adjusted?
Checked by:

Special Handling (if applicable)

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

Person Notified:

Date

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes			

Client: Rule Engineering LLC

Mailing Address: 501 Airport Drive, Suite 205

Farmington, NM 87401

Phone #: 505-860-2712

email or Fax#: dwatson@ruleengineering.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other☐ EDD (Type)

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

Axi Apache N 13A

Project #:

Project Manager:

D. Watson

Sampler: D Watson

On Ice: ☒ Yes ☐ No

Sample Temperature: -8

Date:	Time:	Relinquished by:	Received by:	Date	Time
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6/15/15	1659	Deborah Watson
---------	------	----------------

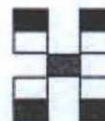
Received by:	Date	Time
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Christhe Waeter 4/15/15 1659

Date:	Time:	Relinquished by:
6/15/15	1804	Christine Walens

Received by:	Date	Time
--------------	------	------

06/16/15 2320



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

BBTEX + MTBE + MTBE + MTBE (8021)
BBTEX + MTBE + MTBE + TPH (Gas only)
TPH Method 8015B (Gas Diesel)
TPH (Method 418.1)
EEDB (Method 504.1)
8310 (PNA or PAH)
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)

Remarks:
Ball to Conzo Phillips

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.

