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

13647

OIL CONS. DIV DIST. 3

DEC 04 2015

45-06750

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: Burlington Resources Oil & Gas Company, LP OGRID #: 14538
Address: PO BOX 4289, Farmington, NM 87499
Facility or well name: **FRONTIER B #2**
API Number: 30-045-06750 OCD Permit Number: _____
U/L or Qtr/Qtr D (NWNW) Section 09 Township 27N Range 11W County: SAN JUAN
Center of Proposed Design: Latitude 36.594944 °N Longitude -108.0155 °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 45 mil ☐ HDPE ☐ PVC ☒ Other LLDPE

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. ☐ Yes ☐ No ☒ NA
- ☐ NM Office of the State Engineer - iWATERS database search; ☐ USGS; ☐ Data obtained from nearby wells

Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit . ☐ Yes ☐ No ☒ NA
NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

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)** ☐ Yes ☐ No
- Written confirmation or verification from the municipality; Written approval obtained from the municipality

Within the area overlying a subsurface mine. **(Does not apply to below grade tanks)** ☐ Yes ☐ No
- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

Within an unstable area. **(Does not apply to below grade tanks)** ☐ Yes ☐ No
- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map

Within a 100-year floodplain. **(Does not apply to below grade tanks)** ☐ Yes ☐ No
- FEMA map

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). ☐ Yes ☒ No
- Topographic map; Visual inspection (certification) of the proposed site

Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;. ☐ Yes ☒ No
- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

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.) ☐ Yes ☐ No
- Topographic map; Visual inspection (certification) of the proposed site

Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial application. ☐ Yes ☐ No
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

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. ☐ Yes ☐ No
NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

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:** 12/23/2015

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: February 19, 2012**

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: 12/3/15

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

Burlington Resources Oil & Gas Company, LP
San Juan Basin
Below Grade Tank Closure Report

Lease Name: Frontier B 2
API No.: 30-045-06750

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. BR 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, BR 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. BR 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. BR 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 BR 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. BR will test the soils beneath the below-grade tank to determine whether a release has occurred. BR 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 BR or the division determines that a release has occurred, then BR 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 BR 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 missing.

9. The surface owner shall be notified of BR'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 cannot be found.

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

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

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

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

13. All closure activities will include proper documentation and be available for review upon request and will be submitted to OCD within 60 days of closure of the below-grade tank. Closure report will be filed on C-144 and incorporate the following:
    - Soil Backfilling and Cover Installation **(See Report)**
    - Re-vegetation application rates and seeding techniques **(See Report)**
    - Photo documentation of the site reclamation **(Included as an attachment)**
    - Confirmation Sampling Results **(Included as an attachment)**
    - Proof of closure notice **(Included as an attachment)**

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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 in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company **Burlington Resources, a Wholly Owned Subsidiary of ConocoPhillips Company**	Contact **Shelly Cook-Cowden**
Address **3401 E. 30th St., Farmington, NM 87402**	Telephone No. **505-324-5140**
Facility Name: Frontier B #2	Facility Type: Gas Well

Surface Owner: Tribal - Navajo	Mineral Owner: Federal	API No. 3004506750

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County – San Juan
D	9	27N	11W	790'	North	790'	West	

Latitude 36.59474 ° N Longitude -108.01488 ° W

NATURE OF RELEASE

Type of Release – Unknown	Volume of Release – Unknown	Volume Recovered
Source of Release – Below Grade Tank	Date and Hour of Occurrence – Unknown	Date and Hour of Discovery
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☐ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* Below Grade Tank Closure Activities

Describe Area Affected and Cleanup Action Taken.*
The below grade tank sample results were above regulatory standard by USEPA method 418.1 for TPH @ 535 ppm, confirming a release; however, the regulatory standard for closure at this site was determined to be 5,000 ppm. Additionally, the sample was then transported to the lab and analytical results for BTEX and Chlorides were below the regulatory standards set forth in the NMOCD Guidelines for Remediation of Leaks, Spills and Release; therefore no further action is required.

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: Shelly Cook-Cowden	OIL CONSERVATION DIVISION	
Printed Name: **Shelly Cook-Cowden**	Approved by Environmental Specialist:	
Title: **Field Environmental Specialist**	Approval Date:	Expiration Date:
E-mail Address: **Shelly.g.Cook-Cowden@ConocoPhillips.com**	Conditions of Approval:	Attached ☐
Date: March 28, 2012 Phone: **505-324-5140**		

* Attach Additional Sheets If Necessary

Animas Environmental Services, LLC
www.animasenvironmental.com
624 E. Comanche
Farmington, NM 87401
505-564-2281
Durango, Colorado
970-403-3274

March 9, 2012

Ashley Maxwell
ConocoPhillips
San Juan Business Unit
Office 216-2
5525 Hwy 64
Farmington, NM 87401

RE: Frontier B#2 Below Grade Tank Closure and Release Report
San Juan County, New Mexico

Dear Ms. Maxwell:

Animas Environmental Services, LLC (AES) is pleased to provide the final report associated with the below grade tank (BGT) closure at ConocoPhillips (CoP) Frontier B#2, located in San Juan County, New Mexico. Tank removal had been completed by CoP contractors prior to AES' arrival at the location.

1.0 Site Information

1.1 Location

Site Name - Frontier B #2
Legal Description - NW¼ NW¼, Section 9, T27N, R11W, San Juan County, New Mexico
Well Latitude/Longitude - N36.59474° and W108.01488°, respectively
BGT Latitude/Longitude - N36.59494° and W108.0155°, respectively
Land Jurisdiction - Navajo Nation
Figure 1 - Topographic Site Location Map
Figure 2 - General Site Plan, January 2012

1.2 NMOCD Ranking

Prior to site work, the New Mexico Oil Conservation Division (NMOCD) database was reviewed, and no prior ranking information was located. Additionally, the New Mexico Office of the State Engineer (NMOSE) database was reviewed, and no water wells were reported within 1,000 feet of the subject site. Once on site, AES personnel assessed the ranking using topographical interpretation, Global Positioning System (GPS) elevation readings, and visual reconnaissance. AES personnel concluded that depth to groundwater at the site was greater than 100 feet below ground surface (bgs), and the distance to the nearest surface water was greater than 1,000 feet. The Frontier B#2 is

located adjacent to an agricultural field for Navajo Agricultural Products Industry (NAPI). The site location was assigned a NMOCD ranking of zero.

1.3 BGT Closure Activities

AES was initially contacted by Mike McConkie, CoP representative, on January 17, 2012, and on January 18, 2012, Tami Ross and Corwin Lameman of AES mobilized to the location.

Prior to arrival at the location, Mike McConkie contacted Tami Ross and rescheduled the soil sampling due to difficulties removing the BGT from the location. On January 19, 2012, Debbie Watson and Tom Long of AES met Mike McConkie at the location.

AES personnel collected five soil samples from the below the BGT liner. Four samples were collected from the perimeter of the BGT footprint, and one sample was collected from the center of the BGT footprint.

2.0 Soil Sampling

On January 19, 2012, AES personnel conducted field screening and collected five soil samples (S-1 through S-5) from below the BGT. Soils samples were collected from approximately 6 inches below the former BGT for field screening of volatile organic compounds (VOCs), total petroleum hydrocarbon (TPH), and chlorides. Soil sample locations are included on Figure 2.

2.1 Soil Field Screening

2.1.1 Volatile Organic Compounds

A portion of each sample was utilized for field screening of VOC vapors with a photo-ionization detector (PID) organic vapor meter (OVM). Before beginning field screening, the PID-OVM was first calibrated with 100 parts per million (ppm) isobutylene gas.

2.1.2 Total Petroleum Hydrocarbons

Soil samples were also analyzed in the field for TPH per USEPA Method 418.1 using a Buck Scientific Model HC-404 Total Hydrocarbon Analyzer Infrared Spectrometer (Buck). A 3-point calibration was completed prior to conducting soil analyses. Field analytical protocol followed AES's *Standard Operating Procedure: Field Analysis Total Petroleum Hydrocarbons per EPA Method 418.1*.

2.1.3 Chlorides

Soil samples were field screened for chlorides using Chloride Drop Count Titration with silver nitrate. Sampling and analysis methods followed procedures provided by Hach Company.

2.2 Soil Laboratory Analyses

The five soil samples collected for laboratory analysis (S-1 through S-5) were placed into new, clean, laboratory-supplied containers, which were then labeled, placed on ice, and logged onto a sample chain of custody record. Samples were maintained on ice until delivery to the analytical laboratory, Hall Environmental Analysis Laboratory (Hall), in Albuquerque, New Mexico. The soil samples were laboratory analyzed for:

- Chlorides per EPA Method 300.0

2.3 Soil Field and Laboratory Analytical Results

Field screening results for VOCs showed concentrations of 0.0 ppm in each sample. TPH concentrations ranged from 97.3 mg/kg in S-2 up to 535 mg/kg in S-5. All field analyses of chloride were reported at or below 60 mg/kg, except for S-4 at 80 mg/kg. Field screening VOC, TPH, and chloride concentrations are presented in Table 1 and on Figure 2. The AES field screening report is attached.

Laboratory confirmation analyses for chloride showed all concentrations were below the laboratory detection limit of 30 mg/kg. Laboratory analytical results are included in Table 1 and on Figure 2. Laboratory analytical reports are attached.

Table 1. Soil OVM, TPH, and Chlorides Field Screening and Laboratory Analytical Results
Frontier B#2 BGT Closure, January 2012

Sample ID	Date Sampled	Depth below BGT (ft)	VOCs OVM Reading (ppm)	Field TPH (mg/kg)	Field Chlorides (mg/kg)	Laboratory Confirmation Chlorides (mg/kg)
NMOCD Action Level			*--*	*100/5,000**	*250*	*250*
S-1	01/19/12	0.5	0.0	**151**	60	<30
S-2	01/19/12	0.5	0.0	97.3	60	<30
S-3	01/19/12	0.5	0.0	**240**	60	<30
S-4	01/19/12	0.5	0.0	**293**	80	<30
S-5	01/19/12	0.5	0.0	**535**	60	<30

* Action level determined by the NMOCD ranking score per *NMOCD Guidelines for Leaks, Spills, and Releases* (August 1993)

3.0 Conclusions

3.1 BGT Closure

NMOCD action levels for BGT closures are specified in New Mexico Administrative Code (NMAC) 19.15.17.13E. TPH concentrations for the five soil samples were above the applicable NMOCD action level of 100 mg/kg in S-1, S-3, S-4, and S-5, with the highest TPH concentration noted in S-5 (535 mg/kg). Chloride concentrations for the five confirmation laboratory samples were below the applicable NMOCD action level. Field analytical results for TPH confirmed a release at the BGT location.

3.2 Release Confirmation

NMOCD action levels for releases are specified NMOCD's *Guidelines for Leaks, Spills, and Releases* (August 1993). Based on field screening TPH results, TPH concentrations range from 97.3 mg/kg in S-2 up to 535 mg/kg in S-5. All TPH concentrations are below the NMOCD TPH release threshold of 5,000 mg/kg (based on a NMOCD ranking of zero).

If you have any questions about this report or site conditions, please do not hesitate to contact me or Elizabeth McNally at (505) 564-2281.

Sincerely,

Tami Ross

Tami Ross, CHMM
Project Manager

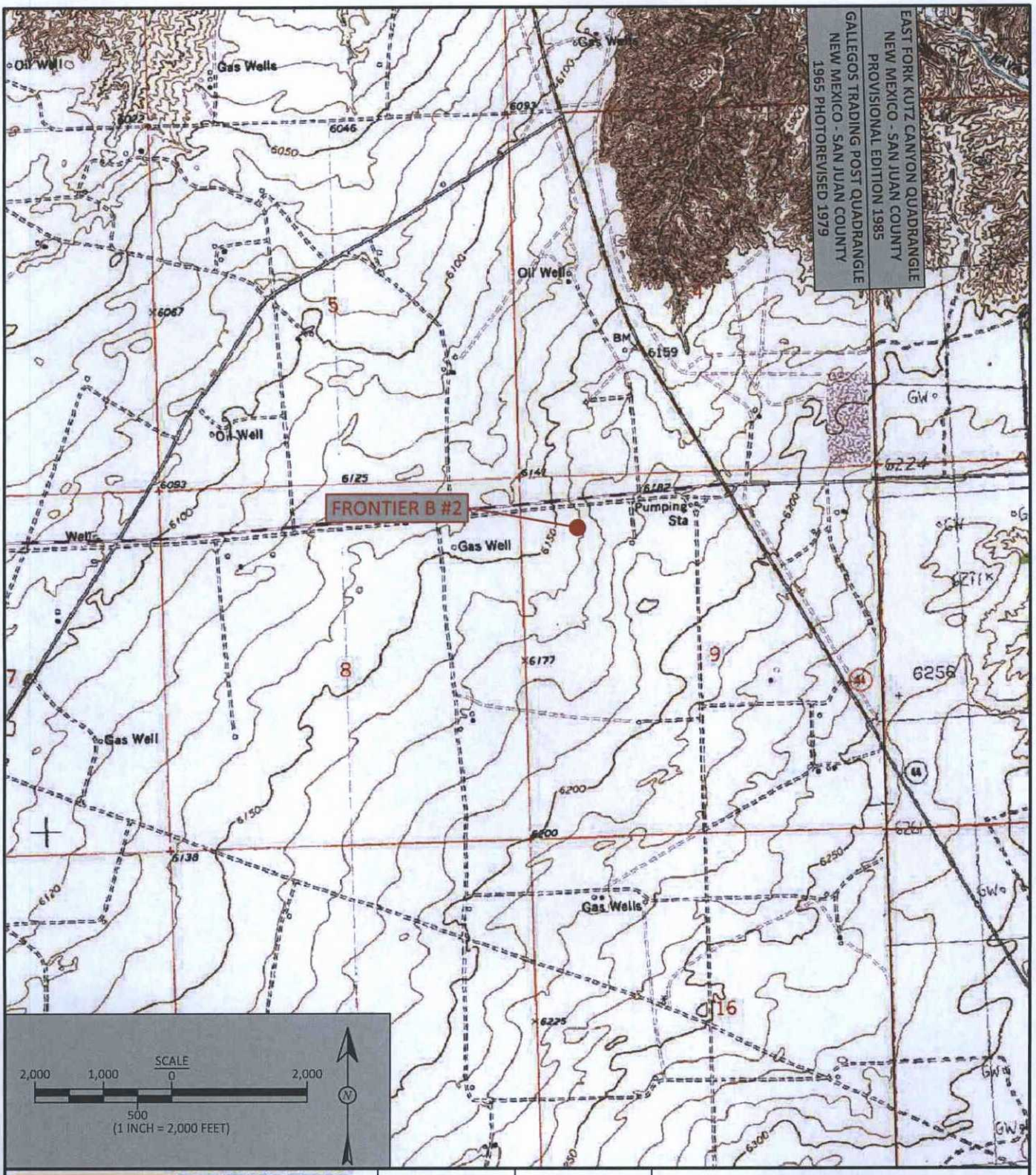
Elizabeth McNally

Elizabeth McNally, P.E.

Attachments:

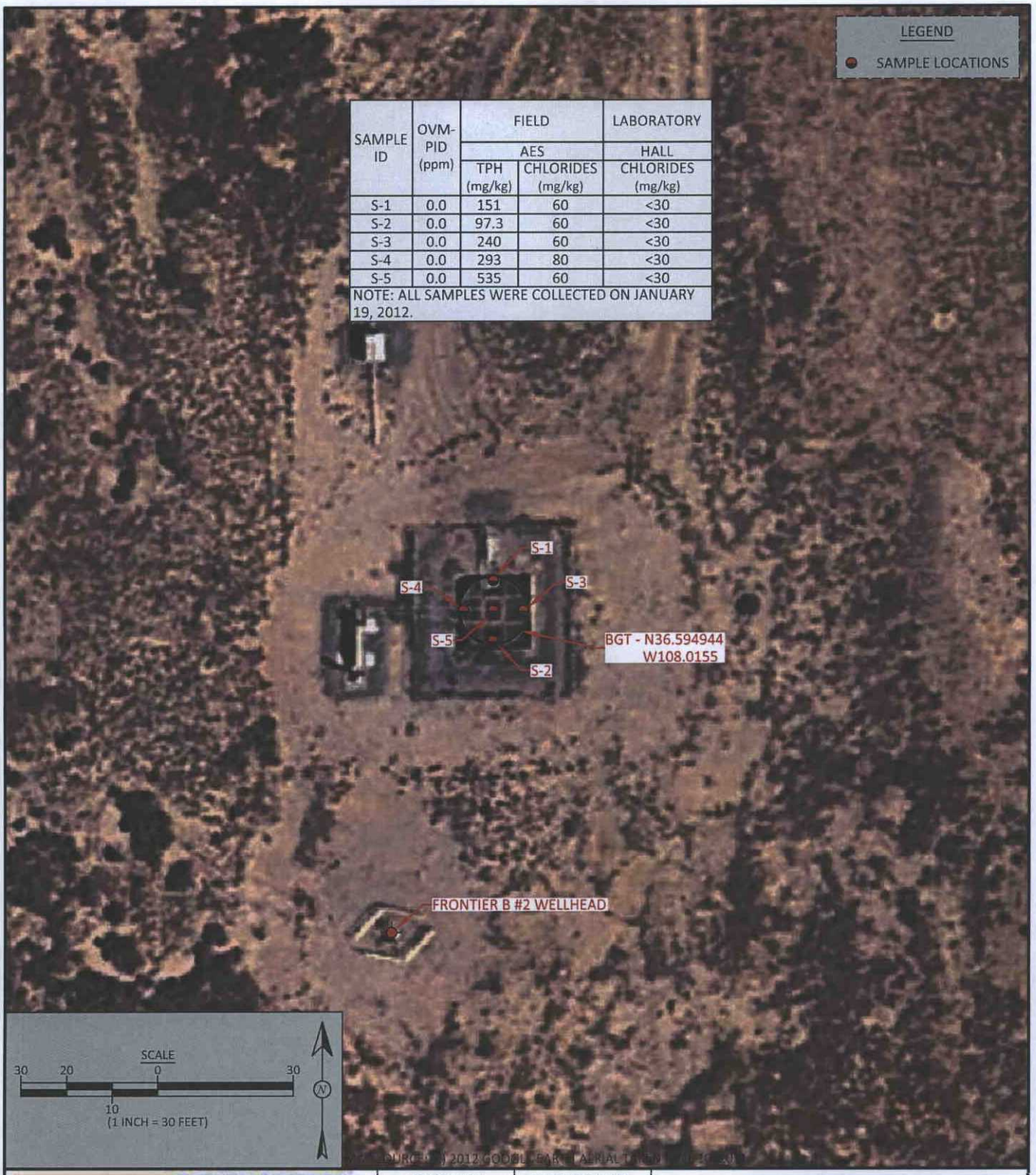
Figure 1. Topographic Site Location Map
Figure 2. General Site Plan, January 2012
AES Field Screening Report 011912
Hall Analytical Report 1201588

S:\Animas 2000\2012 Projects\Conoco Phillips\Frontier B#2\Reports\Frontier B#2 BGT Closure and Release Report 030912.docx



DRAWN BY: C. Lameman	**DATE DRAWN:** January 20, 2012	**FIGURE 1**
REVISIONS BY: C. Lameman	**DATE REVISED:** January 20, 2012	**TOPOGRAPHIC SITE LOCATION MAP**
CHECKED BY: T. Ross	**DATE CHECKED:** January 20, 2012	ConocoPhillips FRONTIER B#2 SAN JUAN COUNTY, NEW MEXICO NW¼, NW¼, SECTION 9, T27N, R11W N36.59474°, W108.01488°
APPROVED BY: E. McNally	**DATE APPROVED:** February 7, 2012	

Animas Environmental Services, LLC



SAMPLE ID	OVM-PID (ppm)	FIELD		LABORATORY
		AES		HALL
		TPH (mg/kg)	CHLORIDES (mg/kg)	CHLORIDES (mg/kg)
S-1	0.0	151	60	<30
S-2	0.0	97.3	60	<30
S-3	0.0	240	60	<30
S-4	0.0	293	80	<30
S-5	0.0	535	60	<30

NOTE: ALL SAMPLES WERE COLLECTED ON JANUARY 19, 2012.

Animas Environmental Services, LLC

DRAWN BY: C. Lameman	**DATE DRAWN:** January 20, 2012
REVISIONS BY: C. Lameman	**DATE REVISED:** January 20, 2012
CHECKED BY: T. Ross	**DATE CHECKED:** January 20, 2012
APPROVED BY: E. McNally	**DATE APPROVED:** February 7, 2012

FIGURE 2

GENERAL SITE PLAN
BELOW GRADE TANK CLOSURE
JANUARY 2012
ConocoPhillips
FRONTIER B#2
SAN JUAN COUNTY, NEW MEXICO
NW¼, NW¼, SECTION 9, T27N, R11W
N36.59474°, W108.01488°

AES Field Screening Report

Animas Environmental Services, LLC
www.animasenvironmental.com
624 E. Comanche
Farmington, NM 87401
505-564-2281
Durango, Colorado
970-403-3274

Client: ConocoPhillips

Project Location: Frontier B #2

Date: 1/19/2012

Matrix: Soil

Sample ID	Collection Date	Time of Sample Collection	Sample Location	OVM (ppm)	Field Chloride (mg/kg)	Field TPH Analysis Time	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
S-1	1/19/2012	8:41	North	0.0	60	10:07	151	20.0	1	DAW
S-2	1/19/2012	8:44	South	0.0	60	10:14	97.3	20.0	1	DAW
S-3	1/19/2012	8:46	East	0.0	60	9:41	240	20.0	1	DAW
S-4	1/19/2012	8:48	West	0.0	80	10:11	293	20.0	1	DAW
S-5	1/19/2012	8:50	Center	0.0	60	9:45	535	20.0	1	DAW

PQL Practical Quantitation Limit
ND Not Detected at the Reporting Limit
DF Dilution Factor
**Field TPH concentrations recorded may be below PQL.*

Field Chloride - Quantab Chloride Titrators or Drop Count Titration with Silver Nitrate
Total Petroleum Hydrocarbons - USEPA 418.1

Analyst: Deborah Watson

Report Finalized: 1/20/12

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

January 23, 2012

Ross Kennemer
Animas Environmental Services
624 East Comanche
Farmington, NM 87401
TEL: (505) 564-2281
FAX (505) 324-2022

RE: Co P Frontier B #2 OrderNo.: 1201588

Dear Ross Kennemer:

Hall Environmental Analysis Laboratory received 5 sample(s) on 1/20/2012 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative. Analytical results designated with a "J" qualifier are estimated and represent a detection above the Method Detection Limit (MDL) and less than the Reporting Limit (PQL). These analytes are not reviewed nor narrated as to whether they are laboratory artifacts.

Quality control data is within laboratory defined or method specified acceptance limits except if noted.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order: **1201588**
Date Reported: **1/23/2012**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Project: Co P Frontier B #2
Lab Order: 1201588

Lab ID: 1201588-001 **Collection Date:** 1/19/2012 8:41:00 AM
Client Sample ID: S-1 **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **BRM**
Chloride	ND	30		mg/Kg	20	1/20/2012 2:09:30 PM

Lab ID: 1201588-002 **Collection Date:** 1/19/2012 8:44:00 AM
Client Sample ID: S-2 **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **BRM**
Chloride	ND	30		mg/Kg	20	1/20/2012 3:01:44 PM

Lab ID: 1201588-003 **Collection Date:** 1/19/2012 8:46:00 AM
Client Sample ID: S-3 **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **BRM**
Chloride	ND	30		mg/Kg	20	1/20/2012 3:19:08 PM

Lab ID: 1201588-004 **Collection Date:** 1/19/2012 8:48:00 AM
Client Sample ID: S-4 **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **BRM**
Chloride	ND	30		mg/Kg	20	1/20/2012 3:36:32 PM

Lab ID: 1201588-005 **Collection Date:** 1/19/2012 8:50:00 AM
Client Sample ID: S-5 **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **BRM**
Chloride	ND	30		mg/Kg	20	1/20/2012 3:53:57 PM

Qualifiers:

*/X	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
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#: **1201588**

23-Jan-12

Client: Animas Environmental Services

Project: Co P Frontier B #2

Sample ID	**MB-369**	SampType: **MBLK**			TestCode: **EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID: **369**			RunNo: **516**					
Prep Date:	**1/20/2012**	Analysis Date: **1/20/2012**			SeqNo: **14624**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-369**	SampType: **LCS**			TestCode: **EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID: **369**			RunNo: **516**					
Prep Date:	**1/20/2012**	Analysis Date: **1/20/2012**			SeqNo: **14625**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.7	90	110			

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD 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
- RL Reporting Detection Limit

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:	Animas Environmental	Work Order Number: 1201588	
Logged by:	**Michelle Garcia**	1/20/2012 9:00:00 AM	Michelle Garcia
Completed By:	**Michelle Garcia**	1/20/2012 9:33:58 AM	Michelle Garcia
Reviewed By:	JO 1/20/2012		

Chain of Custody

1. Were seals intact?	Yes ☐	No ☐	Not Present ☑
2. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3. How was the sample delivered?	FedEx		

Log In

4. Coolers are present? (see 19. for cooler specific information)	Yes ☑	No ☐	NA ☐
5. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
7. Sample(s) in proper container(s)?	Yes ☑	No ☐	
8. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
9. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
10. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm?	Yes ☐	No ☐	No VOA Vials ☑
12. Were any sample containers received broken?	Yes ☐	No ☑	
13. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
14. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
15. Is it clear what analyses were requested?	Yes ☑	No ☐	
16. 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)

17. 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: _____

18. Additional remarks:

19. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Not Present			

Chain-of-Custody Record

Client: Animas Environmental Services LLC

Mailing Address: 624 E Comanche Farmington NM 87401

Phone #: 505-564-2281

email or Fax#:

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

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush same day

Project Name: CoP Frontier B #2

Project #:

Project Manager: R. Kennemer

Sampler: D Watson

On Ice: ☐ Yes ☐ No

Sample Temperature:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1201588	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (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)	300.0 Chlorides				Air Bubbles (Y or N)
1-19-12	0841	soil	S-1	4-oz glass	—	1												X				
	0844	"	S-2	"	"	2												X				
	0846	"	S-3	"	"	3												X				
	0848	"	S-4	"	"	4												X				
	0850	"	S-5	"	"	5												X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
1/19/12	1540	Debrah Watson	Christine Walker	1/19/12	1540
1/19/12	1602	Christine Walker	Michelle Gonzales	1/20/12	900

Remarks: Direct Bill to ConocoPhillips
workorder#: 10308928 User ID: Benale
cict code: P110 workordered by: Montoya
supervisor: Montoya

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

November 30, 2015

Emilee Skyles
Animas Environmental
604 Pinon Street
Farmington, NM 87401
TEL: (505) 564-2281
FAX

RE: COPC Frontier B 2 OrderNo.: 1511847

Dear Emilee Skyles:

Hall Environmental Analysis Laboratory received 1 sample(s) on 11/19/2015 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 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 **1511847**
Date Reported: **11/30/2015**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental
Project: COPC Frontier B 2
Lab ID: 1511847-001 **Matrix:** SOIL

Client Sample ID: BGT S-1
Collection Date: 11/18/2015 3:12:00 PM
Received Date: 11/19/2015 7:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH						Analyst: **TOM**	
Petroleum Hydrocarbons, TR	810	20		mg/Kg	1	11/24/2015	22425
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	11/24/2015 6:42:58 PM	22509
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	260	95		mg/Kg	10	11/24/2015 9:22:05 AM	22442
Surr: DNOP	0	70-130	S	%REC	10	11/24/2015 9:22:05 AM	22442
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/20/2015 4:12:51 PM	22419
Surr: BFB	83.0	75.4-113		%REC	1	11/20/2015 4:12:51 PM	22419
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.047		mg/Kg	1	11/20/2015 4:12:51 PM	22419
Toluene	ND	0.047		mg/Kg	1	11/20/2015 4:12:51 PM	22419
Ethylbenzene	ND	0.047		mg/Kg	1	11/20/2015 4:12:51 PM	22419
Xylenes, Total	ND	0.094		mg/Kg	1	11/20/2015 4:12:51 PM	22419
Surr: 4-Bromofluorobenzene	106	80-120		%REC	1	11/20/2015 4:12:51 PM	22419

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		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1511847**

30-Nov-15

Client: Animas Environmental
Project: COPC Frontier B 2

Sample ID	**MB-22509**	SampType: **MBLK**			TestCode: **EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID: **22509**			RunNo: **30484**					
Prep Date:	**11/24/2015**	Analysis Date: **11/24/2015**			SeqNo: **930523**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-22509**	SampType: **LCS**			TestCode: **EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID: **22509**			RunNo: **30484**					
Prep Date:	**11/24/2015**	Analysis Date: **11/24/2015**			SeqNo: **930524**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.1	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1511847**

30-Nov-15

Client: Animas Environmental
Project: COPC Frontier B 2

Sample ID **MB-22425**	SampType: **MBLK**	TestCode: **EPA Method 418.1: TPH**							
Client ID: **PBS**	Batch ID: **22425**	RunNo: **30453**							
Prep Date: **11/19/2015**	Analysis Date: **11/24/2015**	SeqNo: **929502**	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-22425**	SampType: **LCS**	TestCode: **EPA Method 418.1: TPH**							
Client ID: **LCSS**	Batch ID: **22425**	RunNo: **30453**							
Prep Date: **11/19/2015**	Analysis Date: **11/24/2015**	SeqNo: **929503**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	120	20	100.0	0	116	83.6	116			

Sample ID **LCSD-22425**	SampType: **LCSD**	TestCode: **EPA Method 418.1: TPH**							
Client ID: **LCSS02**	Batch ID: **22425**	RunNo: **30453**							
Prep Date: **11/19/2015**	Analysis Date: **11/24/2015**	SeqNo: **929504**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	120	20	100.0	0	116	83.6	116	0	20	

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		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1511847**

30-Nov-15

Client: Animas Environmental
Project: COPC Frontier B 2

Sample ID **MB-22442**	SampType: **MBLK**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID: **PBS**	Batch ID: **22442**			RunNo: **30413**					
Prep Date: **11/20/2015**	Analysis Date: **11/23/2015**			SeqNo: **928213**		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	11		10.00		110	70	130			

Sample ID **LCS-22442**	SampType: **LCS**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID: **LCSS**	Batch ID: **22442**			RunNo: **30413**					
Prep Date: **11/20/2015**	Analysis Date: **11/23/2015**			SeqNo: **928361**		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	101	57.4	139			
Surr: DNOP	5.5		5.000		110	70	130			

Qualifiers:

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- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1511847**

30-Nov-15

Client: Animas Environmental
Project: COPC Frontier B 2

Sample ID	MB-22392	SampType:	MBLK		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	PBS	Batch ID:	22392		RunNo:	30395				
Prep Date:	11/18/2015	Analysis Date:	11/20/2015		SeqNo:	927442	Units:	%REC		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	810		1000		80.7	75.4	113			

Sample ID	LCS-22392	SampType:	LCS		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	LCSS	Batch ID:	22392		RunNo:	30395				
Prep Date:	11/18/2015	Analysis Date:	11/20/2015		SeqNo:	927443	Units:	%REC		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	990		1000		99.4	75.4	113			

Sample ID	MB-22419	SampType:	MBLK		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	PBS	Batch ID:	22419		RunNo:	30395				
Prep Date:	11/19/2015	Analysis Date:	11/20/2015		SeqNo:	927446	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	810		1000		80.6	75.4	113			

Sample ID	LCS-22419	SampType:	LCS		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	LCSS	Batch ID:	22419		RunNo:	30395				
Prep Date:	11/19/2015	Analysis Date:	11/20/2015		SeqNo:	927447	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	91.2	79.6	122			
Surr: BFB	1100		1000		106	75.4	113			

Sample ID	1511847-001AMS	SampType:	MS		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	BGT S-1	Batch ID:	22419		RunNo:	30395				
Prep Date:	11/19/2015	Analysis Date:	11/20/2015		SeqNo:	927450	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.8	24.20	0	101	62.5	151			
Surr: BFB	1000		968.1		105	75.4	113			

Sample ID	1511847-001AMSD	SampType:	MSD		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	BGT S-1	Batch ID:	22419		RunNo:	30395				
Prep Date:	11/19/2015	Analysis Date:	11/20/2015		SeqNo:	927451	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.7	23.39	0	95.4	62.5	151	9.36	22.1	
Surr: BFB	940		935.5		100	75.4	113	0	0	

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		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1511847**

30-Nov-15

Client: Animas Environmental
Project: COPC Frontier B 2

Sample ID	**MB-22392**	SampType: **MBLK**			TestCode: **EPA Method 8021B: Volatiles**					
Client ID:	**PBS**	Batch ID: **22392**			RunNo: **30395**					
Prep Date:	**11/18/2015**	Analysis Date: **11/20/2015**			SeqNo: **927458**		Units: **%REC**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene		1.0		1.000		102	80	120			

Sample ID	**LCS-22392**	SampType: **LCS**			TestCode: **EPA Method 8021B: Volatiles**					
Client ID:	**LCSS**	Batch ID: **22392**			RunNo: **30395**					
Prep Date:	**11/18/2015**	Analysis Date: **11/20/2015**			SeqNo: **927459**		Units: **%REC**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene		1.3		1.000		127	80	120			S

Sample ID	**MB-22419**	SampType: **MBLK**			TestCode: **EPA Method 8021B: Volatiles**					
Client ID:	**PBS**	Batch ID: **22419**			RunNo: **30395**					
Prep Date:	**11/19/2015**	Analysis Date: **11/20/2015**			SeqNo: **927494**		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		1.0		1.000		104	80	120			

Sample ID	**LCS-22419**	SampType: **LCS**			TestCode: **EPA Method 8021B: Volatiles**					
Client ID:	**LCSS**	Batch ID: **22419**			RunNo: **30395**					
Prep Date:	**11/19/2015**	Analysis Date: **11/20/2015**			SeqNo: **927495**		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	103	80	120			
Toluene		0.97	0.050	1.000	0	96.6	80	120			
Ethylbenzene		1.0	0.050	1.000	0	101	80	120			
Xylenes, Total		3.0	0.10	3.000	0	98.6	80	120			
Surr: 4-Bromofluorobenzene		1.3		1.000		127	80	120			S

Qualifiers:

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- D Sample Diluted Due to Matrix
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- ND Not Detected at the Reporting Limit
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- R RPD outside accepted recovery limits
- RL Reporting Detection Limit
- S % Recovery outside of range due to dilution or matrix

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: **Animas Environmental** Work Order Number: **1511847** RcptNo: **1**

Received by/date: 11/19/15

Logged By: **Lindsay Mangin** **11/19/2015 7:30:00 AM**

Completed By: **Lindsay Mangin** **11/19/2015 9:10:05 AM**

Reviewed By: 11/19/15

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	2.2	Good	Yes			

Chain-of-Custody Record

Client: Animas Environmental Services, LLC

Mailing Address: 604 W Pinon St.
Farmington, NM 87401

Phone #: 505-564-2281

Email or Fax#: eskyles@animasenvironmental.com

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

Accreditation:
☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time:
X Standard ☐ Rush

Project Name: COPC Frontier B 2

Project #:

Project Manager: E. Skyles

Sampler: B. Glasses
On Ice: X Yes ☐ No
Sample Temperature: 3.2 Corr - 2.2

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. 1511847	BTEX - 8021B	TPH - EPA 418.1	Chlorides - 300.0	TPH - EPA 80150 (GRO/DRO)	Air Bubbles (Y or N)
11-18-15	1512	SOIL	BGT S-1	2 - 4 oz.	cool	-001	X	X	X	X	

Date:	Time:	Relinquished by:	Received by:	Date	Time
11/18/15	1749			11/18/15	1749
Date:	Time:	Relinquished by:	Received by:	Date	Time
11/18/15	1847			11/19/15	0720

Remarks: Bill to Conoco Phillips
WO #
Supervisor: Jack Birchfield
USERID:
Area: 6
Ordered by: Bobby Spearman