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.

15993

Pit, Below-Grade Tank, or Proposed Alternative Method Permit or Closure Plan Application

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

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: ATLANTIC 13
API Number: 30-045-23283 OCD Permit Number: *Submit Sperate C-141

OIL CONS. DIV DIST. 3
JUL 28 2017

U/L or Qtr/Qtr O Section 23 Township 31N Range 10W County: San Juan
Center of Proposed Design: Latitude 36.87960 °N Longitude -107.84868 °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
*Closure Notification Not provided
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
*Most Strigent Clousere Standard applied due to Operator NOV Compliant with 19.15.17.13
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_____

55

6.

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

☐ Screen ☐ Netting ☐ Other_____

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

7.

Signs: Subsection C of 19.15.17.11 NMAC

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

☐ Signed in compliance with 19.15.16.8 NMAC

8.

Variances and Exceptions:

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

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

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

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

9.

Siting Criteria (regarding permitting): 19.15.17.10 NMAC

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

General siting	
Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank. - ☐ NM Office of the State Engineer - iWATERS database search; ☐ USGS; ☐ Data obtained from nearby wells	☐ Yes ☐ No ☒ NA
Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit . NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☒ NA
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. **(Does not apply to below grade tanks)** - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within the area overlying a subsurface mine. **(Does not apply to below grade tanks)** - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
Within an unstable area. **(Does not apply to below grade tanks)** - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ☐ No
Within a 100-year floodplain. **(Does not apply to below grade tanks)** - FEMA map	☐ Yes ☐ No
Below Grade Tanks	
Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☒ No
Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☒ No
Temporary Pit using Low Chloride Drilling Fluid (maximum chloride content 15,000 mg/liter)	
Within 100 feet of a continuously flowing watercourse, or any other significant watercourse or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). (Applies to low chloride temporary pits.) - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 200 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 300feet of any other fresh water well or spring, in existence at the time of the initial application. NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No

Within 100 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Temporary Pit Non-low chloride drilling fluid	
Within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 500 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application; - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Permanent Pit or Multi-Well Fluid Management Pit	
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No

10.

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

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

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

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

11.

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

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

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

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

12.
Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC

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

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Climatological Factors Assessment
- ☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Quality Control/Quality Assurance Construction and Installation Plan
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Nuisance or Hazardous Odors, including H_2S, Prevention Plan
- ☐ Emergency Response Plan
- ☐ Oil Field Waste Stream Characterization
- ☐ Monitoring and Inspection Plan
- ☐ Erosion Control Plan
- ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

13.
Proposed Closure: 19.15.17.13 NMAC

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

Type: ☐ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☐ Permanent Pit ☐ Below-grade Tank ☐ Multi-well Fluid Management Pit ☐ Alternative

Proposed Closure Method: ☒ Waste Excavation and Removal
☐ Waste Removal (Closed-loop systems only)
☐ On-site Closure Method (Only for temporary pits and closed-loop systems)
☐ In-place Burial ☐ On-site Trench Burial
☐ Alternative Closure Method

14.
Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) ***Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.***

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

15.
Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC

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

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

adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ☐ No
Within a 100-year floodplain. - FEMA map	☐ Yes ☐ No

16.
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) ***Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.***

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

17.
Operator Application Certification:

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

Name (Print): _____ Title: _____

Signature: _____ Date: _____

e-mail address: _____ Telephone: _____

18.
OCD Approval: ☐ Permit Application (including closure plan) ☐ Closure Plan (only) ☐ OCD Conditions (see attachment)

OCD Representative Signature: _____ **Approval Date:** _____

Title: _____ **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: 6/14/2017**

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) Christine Brock Title: Regulatory Specialist

Signature: Christine Brock Date: 7/26/2017

e-mail address: christine.brock@cop.com Telephone: (505) 326-9775

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

Lease Name: Atlantic 13
API No.: 30-045-23283

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 not attached.

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 was not sent due to BGT clean-up effort.

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 be used on federally regulated lands and division-approved seed mixtures (administratively approved if required) will be utilized on all State or private lands. A uniform vegetative cover has been established that reflects a life-form ratio of plus or minus fifty percent (50%) of pre- disturbance levels and a total percent plant cover of at least seventy percent (70%) of pre-disturbance levels, excluding noxious weeds. If alternate seed mix is required by the state, private owner or tribe, it will be implemented with administrative approval if needed. COPC will repeat seeding or planting will be continued until successful vegetative growth occurs.

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

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

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

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

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 **Burlington Resources, a Wholly Owned Subsidiary of ConocoPhillips Company**	Contact **Lisa Hunter**
Address **3401 East 30th St, Farmington, NM**	Telephone No. **(505) 258-1607**
Facility Name: **Atlantic 13**	Facility Type: **Gas well**

Surface Owner **BLM**	Mineral Owner **Fed**	API No.**3004523283**

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
O	**23**	**31**	**10**	**1020**	**South**	**1680**	**East**	**San Juan**

Latitude 36.87960 Longitude -107.84868

NATURE OF RELEASE

Type of Release **Hydrocarbon**	Volume of Release **Unknown**	Volume Recovered **None**
Source of Release **BGT (Historic)**	Date and Hour of Occurrence **N/A**	Date and Hour of Discovery **11/20/2016**
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom? **N/A**	
By Whom? **N/A**	Date and Hour **N/A**	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. **N/A**	

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

Describe Cause of Problem and Remedial Action Taken.*
Historic contamination was encountered after soil sample was taken on 12-21-2016.

Describe Area Affected and Cleanup Action Taken.*
Delineation of the BGT area on 02-10-17 indicates a 23' x 27' x 12' area that will be excavated to at or below action levels.

Historical hydrocarbon impacted soil was found during the BGT closure for the subject well. The excavation was 23' x 29' x 15' in depth and 300 yds of soil was transported to IEI land farm. Analytical results were below the regulatory standards on the walls, and on 06/16/2017, NMOCD approved (via email) alternative remediation of spraying Potassium Permanganate on the base and backfill with clean soil – 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 Approved by Environmental Specialist:	
Printed Name: Lisa Hunter		
Title: **Field Environmental Specialist**	Approval Date:	Expiration Date:
E-mail Address: **Lisa.Hunter@cop.com**	Conditions of Approval:	Attached ☐
Date: June 22, 2017 Phone: 505-258-1607		

* Attach Additional Sheets If Necessary

June 19, 2017

Lisa Hunter and Robert Spearman
ConocoPhillips
San Juan Business Unit
(505) 326-9786 / (505) 320-3045

Via electronic mail to:
SJBUE-Team@ConocoPhillips.com

RE: Below Grade Tank Closure, Release Assessment and Final Excavation Report
Atlantic 13
San Juan County, New Mexico

Dear Ms. Hunter and Mr. Spearman:

On November 10 and December 21, 2016, and February 10 and June 14, 2017, Animas Environmental Services, LLC (AES) completed below grade tank (BGT) closure sampling, a release assessment, and environmental clearance of the final excavation limits at the ConocoPhillips (COP) Atlantic 13 located in San Juan County, New Mexico. An initial release assessment was completed on February 10, 2017, and the final excavation was completed by COP contractors while AES was on location on June 14, 2017.

1.0 Site Information

1.1 Location

Site Name – Atlantic 13
Legal Description – SW¼ SE¼, Section 23, T31N, R10W, San Juan County, New Mexico
Well Latitude/Longitude – N36.87965 and W107.84867, respectively
BGT Latitude/Longitude – N36.87960 and W107.84868, respectively
Land Jurisdiction – Bureau of Land Management (BLM)
Figure 1. Topographic Site Location Map
Figure 2. Aerial Site Map, 2016 and 2017

604 W. Piñon St.
Farmington, NM 87401
505-564-2281

1911 Main, Ste 206
Durango, CO 81301
970-403-3084

www.animasenvironmental.com

1.2 NMOCD Ranking

Prior to site work, the New Mexico Oil Conservation Division (NMOCD) and New Mexico Office of the State Engineer (NMOSE) databases were reviewed, and a site-specific hydrogeology report dated December 2008 reported the depth to groundwater at 229 feet below ground surface (bgs). However, at the request of the NMOCD, the most stringent sample result criteria were applied to this BGT. Note these criteria normally apply to sites with a depth to groundwater of 0 to 50 feet.

1.3 Assessment

AES was initially contacted by Robert Spearman of COP on November 2, 2016, and on November 10, 2016, Corwin Lameman and Sam Glasses of AES traveled to the location. Soil sampling consisted of collection of one soil sample (BGT S-1) from below the former BGT footprint. Soil sample results for BGT S-1 were above the action levels, and a release was confirmed.

On December 21, 2016, and February 10, 2017, AES personnel returned to the location to complete the release assessment field work. The assessment included collection and field sampling of 20 samples from 10 soil borings (SB-1 through SB-10). Based on field sampling results, AES recommended excavation of the release area. Sample locations are shown on Figure 3.

On June 14, 2017, AES returned to the location to collect confirmation soil samples of the excavation extents. The field sampling activities included collection of five confirmation soil samples (SC-1 through SC-5) from the walls and base of the excavation. The area of the final excavation measured approximately 23 feet by 29 feet by 15 feet in depth. Note that the depth of the excavation was limited due to a confining sandstone unit around 15 feet bgs. Sample locations and final excavation extents are presented on Figure 4.

2.0 Soil Sampling

2.1 Field Sampling

2.1.1 Volatile Organic Compounds

Field screening for volatile organic compound (VOC) vapors was conducted 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 total petroleum hydrocarbons (TPH) per U.S. Environmental Protection Agency (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' *Standard Operating Procedure: Field Analysis Total Petroleum Hydrocarbons per EPA Method 418.1*.

2.1.3 Chlorides

Soil sample BGT S-1 was field screened for chlorides using Chloride Drop Count Titration with silver nitrate. Sampling and analysis methods followed procedures provided by Hach Company.

2.2 Laboratory Analyses

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

- Benzene, toluene, ethylbenzene, and xylene (BTEX) per USEPA Method 8021B;
- TPH per USEPA Method 418.1;
- TPH as gasoline range, diesel range, and motor oil range organics (GRO/DRO/MRO) per USEPA Method 8015; and
- Chlorides per USEPA Method 300.0.

Soil samples SC-1 through SC-5 were laboratory analyzed for:

- BTEX per USEPA Method 8021B; and
- TPH as gasoline range, diesel range, and motor oil range organics (GRO/DRO/MRO) per USEPA Method 8015.

2.3 Field and Laboratory Analytical Results

Field sampling results and laboratory analytical results are summarized in Tables 1 and 2, respectively, and on Figures 3 and 4. The AES Field Sampling Reports and laboratory analytical reports are attached.

Table 1. Soil Field VOCs and TPH Results
Atlantic 13 Release Assessment and Final Excavation
December 2016 through June 2017

Sample ID	*Date Sampled*	*Depth below BGT (ft)*	*VOCs OVM Reading (ppm)*	*Field TPH (418.1) (mg/kg)*
		NMOCD Action Level	*--**	*100**
SB-1	12/21/16	8	0.1	<20.0
		12	0.1	59.3
SB-2	12/21/16	4.25	21.8	<20.0
		8	790	**719**
		11.75	978	**999**
SB-3	12/21/16	8	0.0	<20.0
		12	0.5	**647**
SB-4	12/21/16	8	0.2	**2,000**
		12	0.0	<20.0
SB-5	12/21/16	5	127	**21,400**
		8	1,262	NA
		11	1,702	**21,000**
SB-6	12/21/16	5	0.5	43.9
		8	0.0	43.9
		12	0.0	<20.0
SB-7	2/10/17	8	0.1	28.9
		12	0.0	45.7
SB-8	2/10/17	8	0.1	28.5
SB-9	2/10/17	8.5	0.0	34.2
SB-10	2/10/17	12	0.0	31.3
SC-1	6/14/17	0 to 15	4.7	60.8
SC-2	6/14/17	0 to 15	0.0	40.3
SC-3	6/14/17	0 to 15	0.0	91.0
SC-4	6/14/17	0 to 15	0.0	48.5
SC-5	6/14/17	15	485	**4,480**

NA – not analyzed

*Action level determined by *NMAC 19.15.17.13 Table 1*

Table 2. Soil Laboratory Analytical Results – Benzene, Total BTEX, TPH, and Chlorides
Atlantic 13 BGT Closure and Final Excavation
November 2016 and June 2017

Sample ID	Date Sampled	Sample Depth (ft bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH 418.1	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-MRO (mg/kg)	Chlorides (mg/kg)
	NMOCD Action Level		10*	50*	100*		100*		600*
BGT S-1	11/10/16	8	<0.025	<0.221	**1,700**	**<4.9**	**<99**	**760**	<30
SC-1	6/14/17	0 to 15	<0.017	<0.153	NA	<3.4	<9.6	<48	NA
SC-2	6/14/17	0 to 15	<0.017	<0.149	NA	<3.3	<9.6	<48	NA
SC-3	6/14/17	0 to 15	<0.016	<0.143	NA	<3.2	<9.5	<47	NA
SC-4	6/14/17	0 to 15	<0.018	<0.158	NA	<3.5	<9.7	<48	NA
SC-5	6/14/17	15	<0.093	0.38	NA	**<19**	**84**	**1,900**	NA

NA – not analyzed
*Action level determined by *NMAC 19.15.17.13 Table 1*

3.0 Conclusions and Recommendations

3.1 BGT Closure

On November 10, 2016, AES conducted BGT closure sampling at the location. NMOCD action levels for BGT closures are specified in New Mexico Administrative Code (NMAC) 19.15.17.13 Table 1, and for this location the most stringent action levels were utilized per NMOCD. BGT closure sampling laboratory analytical results were below the NMOCD action levels of 10 mg/kg for benzene and 50 mg/kg for total BTEX. In contrast, results exceeded the NMOCD action level of 100 mg/kg for TPH, with BGT S-1 reporting laboratory concentrations of 1,700 mg/kg TPH (418.1) and 760 mg/kg TPH (as GRO/DRO/MRO). Chloride concentrations in BGT S-1 were reported below the NMOCD action level of 600 mg/kg, with less than 30 mg/kg. Based on lab concentrations, a release was confirmed at the former BGT at the Atlantic 13 location.

3.2 Release Assessment and Excavation Clearance

On December 21, 2016, and February 10, 2017, AES completed a release assessment at the location. Release assessment field sampling results above the NMOCD action level of 100 mg/kg TPH were reported in SB-2 through SB-5. The highest field TPH

concentration was reported in SB-5, with a concentration of 21,400 mg/kg TPH. Excavation of the release area was recommended.

On June 14, 2017, final clearance of the excavation area was completed. Field sampling results of the excavation extents showed field TPH concentrations exceeded the applicable NMOCD action level of 100 mg/kg in SC-5 (base), with a concentration of 4,480 mg/kg TPH. Additionally, laboratory analytical results also reported TPH concentrations (as GRO/DRO/MRO) in SC-5 (base) as also above NMOCD action levels, with 1,984 mg/kg TPH. Note that the MRO concentration in SC-5 made up a significant portion of the total TPH concentration, and MRO is generally considered to be significantly less mobile in the subsurface than GRO and DRO. Combined GRO/DRO concentrations for SC-5 slightly exceeded 100 mg/kg (<19 mg/kg GRO, 84 mg/kg DRO). Laboratory analytical results reported benzene and total BTEX concentrations in all samples as below NMOCD action levels.

Based on the final field sampling and laboratory analytical results of the excavation of petroleum contaminated soils at the Atlantic 13, benzene and total BTEX were below the applicable NMOCD action levels for the final base and sidewalls. TPH concentrations for the excavation side walls were also below NMOCD action levels. However, TPH exceeded the NMOCD action level for the base (SC-5) which was terminated on sandstone. However, NMOCD granted approval to spray the excavation with a potassium permanganate solution and backfill the excavation, and no further work is recommended.

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

Sincerely,

David J. Reese
Environmental Scientist

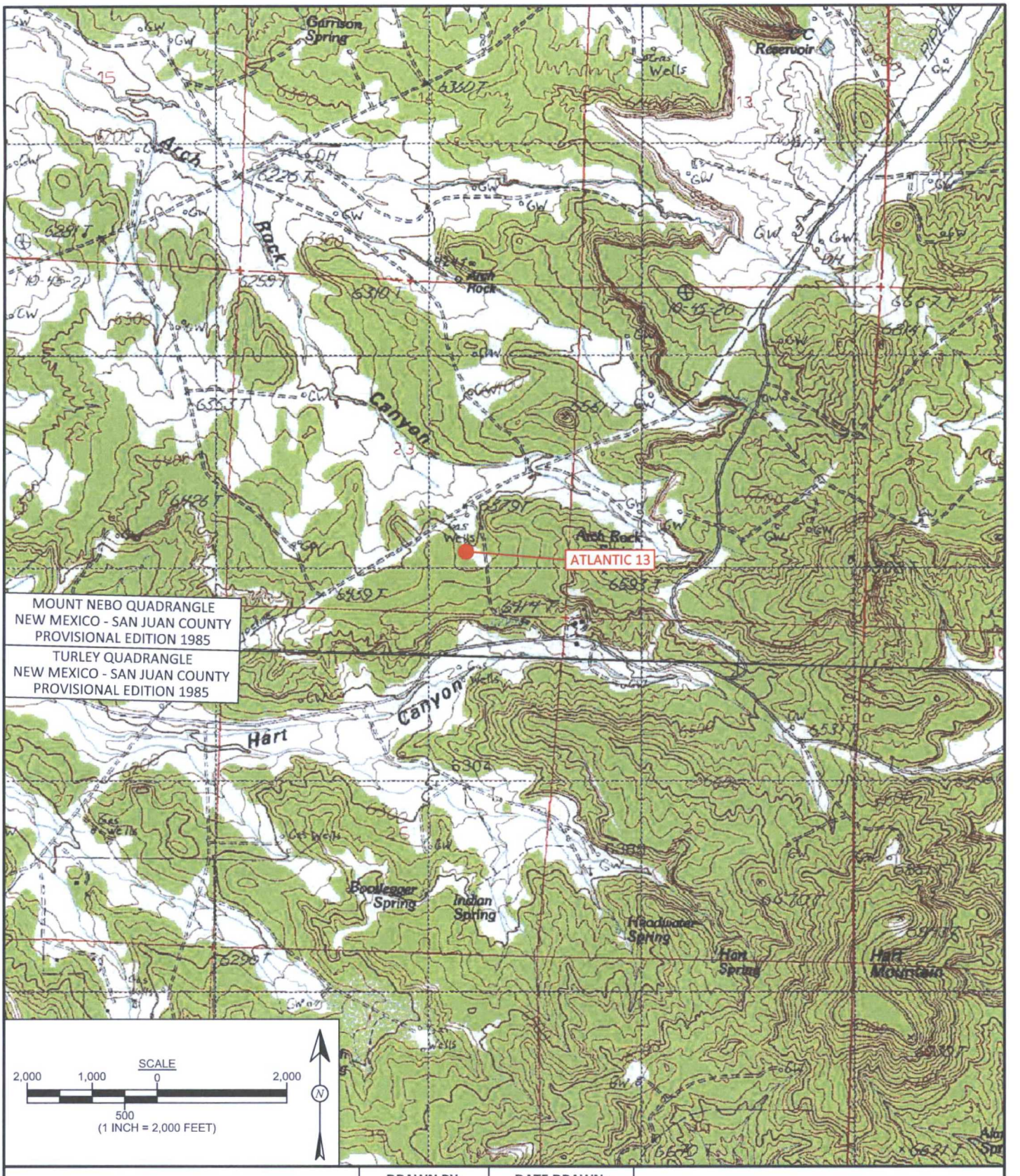
Elizabeth McNally, P.E.

Attachments:

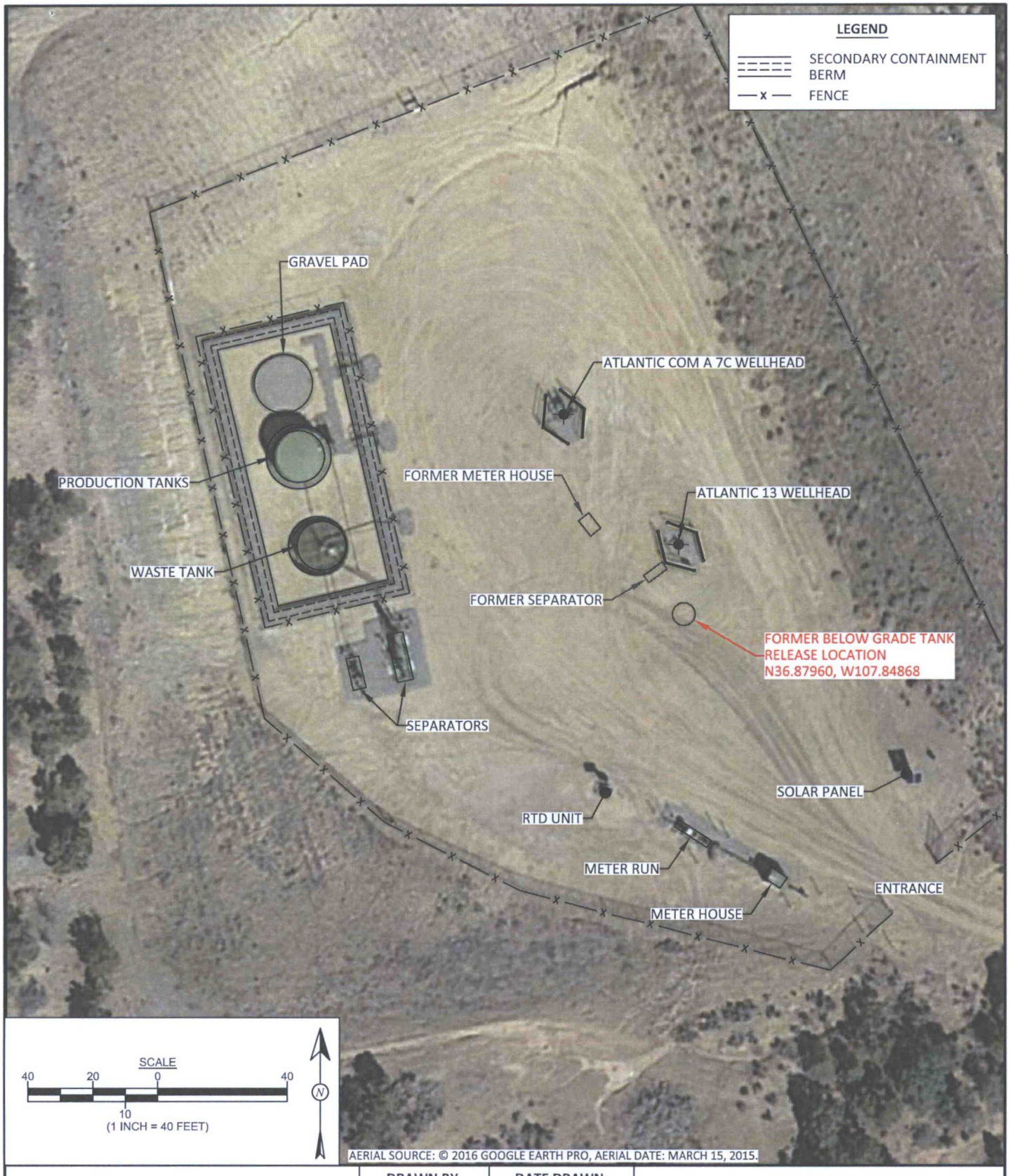
Figure 1. Topographic Site Location Map
Figure 2. Aerial Site Map, 2016 and 2017
Figure 3. BGT Closure and Release Assessment Sample Locations and Results, November 2016 Through February 2017
Figure 4. Final Excavation Sample Locations and Results, June 2017
AES Field Sampling Report 122116 021017
AES Field Sampling Report 061417
Hall Laboratory Analytical Report 1611629
Hall Laboratory Analytical Report 1706836
Hall Laboratory Analytical Report 1706838

C:\Users\emcnally\Dropbox (Animas Environmental)\0000 aes server client projects dropbox\2017 Client Projects\ConocoPhillips\Atlantic 13\Atlantic 13 BGT Closure, Release, and Excavation Report 061917.docx

Figures



animas environmental services Farmington, NM • Durango, CO animasenvironmental.com	**DRAWN BY:** C. Lameman	**DATE DRAWN:** June 15, 2017	**FIGURE 1**
	REVISIONS BY: C. Lameman	**DATE REVISED:** June 15, 2017	**TOPOGRAPHIC SITE LOCATION MAP** ConocoPhillips ATLANTIC 13 SW¼ SE¼, SECTION 23, T31N, R10W SAN JUAN COUNTY, NEW MEXICO N36.87965, W107.84867
	CHECKED BY: E. McNally	**DATE CHECKED:** June 15, 2017	
	APPROVED BY: E. McNally	**DATE APPROVED:** June 15, 2017	

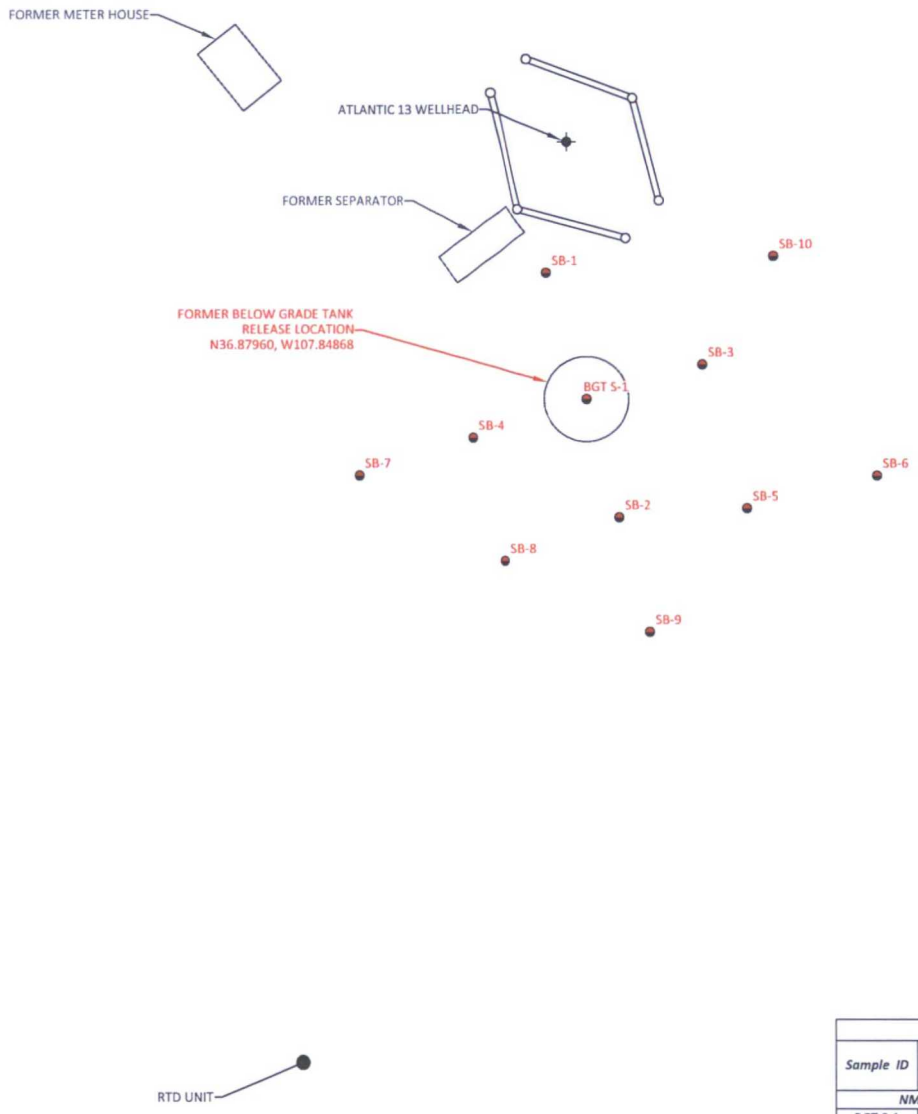


animas environmental services
Farmington, NM • Durango, CO
animasenvironmental.com

DRAWN BY: C. Lameman	**DATE DRAWN:** June 15, 2017
REVISIONS BY: C. Lameman	**DATE REVISED:** June 15, 2017
CHECKED BY: E. McNally	**DATE CHECKED:** June 15, 2017
APPROVED BY: E. McNally	**DATE APPROVED:** June 15, 2017

FIGURE 2

AERIAL SITE MAP
2016 AND 2017
ConocoPhillips
ATLANTIC 13
SW¼ SE¼, SECTION 23, T31N, R10W
SAN JUAN COUNTY, NEW MEXICO
N36.87965, W107.84867



Field Sampling Results				
Sample ID	Date	Depth (ft)	PID-OVM (ppm)	TPH (mg/kg)
NMOCD ACTION LEVEL			--	100
SB-1	12/21/16	8	0.1	<20.0
		12	0.1	59.3
SB-2	12/21/16	4.25	21.8	<20.0
		8	790	**719**
		11.75	978	**999**
SB-3	12/21/16	8	0.0	<20.0
		12	0.5	**647**
SB-4	12/21/16	8	0.2	**2,000**
		12	0.0	<20.0
SB-5	12/21/16	5	127	**21,400**
		8	1,262	*NA*
		11	1,702	**21,000**
SB-6	12/21/16	5	0.5	43.9
		8	0.0	43.9
		12	0.0	<20.0
SB-7	2/10/17	8	0.1	28.9
		12	0.0	45.7
SB-8	2/10/17	8	0.1	28.5
SB-9	2/10/17	8.5	0.0	34.2
SB-10	2/10/17	12	0.0	31.3
NA - NOT ANALYZED				

Laboratory Analytical Results										
Sample ID	Date	Depth (ft)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH 418.1 (mg/kg)	TPH - GRO (mg/kg)	TPH - DRO (mg/kg)	TPH - MRO (mg/kg)	Chlorides (mg/kg)
NMOCD ACTION LEVEL			10	50	100		100		600
BGT S-1	11/10/16	8	<0.025	<0.221	**1,700**	**<4.9**	**<99**	**760**	<30
SAMPLE WAS ANALYZED PER USEPA METHOD 8021B, 418.1, 8015D AND 300.0									

FIGURE 3

BGT CLOSURE AND RELEASE ASSESSMENT SAMPLE LOCATIONS AND RESULTS NOVEMBER 2016 THROUGH FEBRUARY 2017

ConocoPhillips
ATLANTIC 13
SW¼ SE¼, SECTION 23, T31N, R10W
SAN JUAN COUNTY, NEW MEXICO
N36.87965, W107.84867

animas environmental services
Farmington, NM • Durango, CO
animasenvironmental.com

DRAWN BY:	DATE DRAWN:
C. Lameman	February 10, 2017
REVISIONS BY:	**DATE REVISED:**
C. Lameman	June 15, 2017
CHECKED BY:	**DATE CHECKED:**
E. McNally	June 15, 2017
APPROVED BY:	**DATE APPROVED:**
E. McNally	June 15, 2017

LEGEND

- SOIL BORING LOCATIONS
- SECONDARY CONTAINMENT BERM
- —x— FENCE

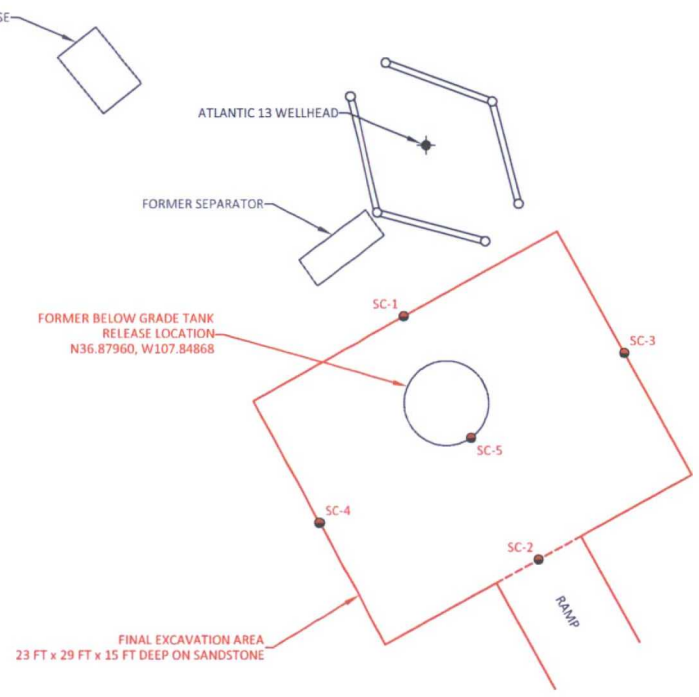
N

SCALE
10 6 0 10
2
(1 INCH = 10 FEET)

FIGURE 4

FINAL EXCAVATION SAMPLE LOCATIONS AND RESULTS JUNE 2017

ConocoPhillips
ATLANTIC 13
SW¼ SE¼, SECTION 23, T31N, R10W
SAN JUAN COUNTY, NEW MEXICO
N36.87965, W107.84867



Field Sampling Results

Sample ID	Date	Depth (ft)	PID-OVM (ppm)	TPH (mg/kg)
NMOCD ACTION LEVEL			--	100
SC-1	6/14/17	0 to 15	4.7	60.8
SC-2	6/14/17	0 to 15	0.0	40.3
SC-3	6/14/17	0 to 15	0.0	91.0
SC-4	6/14/17	0 to 15	0.0	48.5
SC-5	6/14/17	15	485	4,480
ALL SAMPLES WERE SOIL COMPOSITE SAMPLES.				

Laboratory Analytical Results

Sample ID	Date	Depth (ft)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH - GRO (mg/kg)	TPH - DRO (mg/kg)	TPH - MRO (mg/kg)
NMOCD ACTION LEVEL			10	50		100	
SC-1	6/14/17	0 to 15	<0.017	<0.153	<3.4	<9.6	<48
SC-2	6/14/17	0 to 15	<0.017	<0.149	<3.3	<9.6	<48
SC-3	6/14/17	0 to 15	<0.016	<0.143	<3.2	<9.5	<47
SC-4	6/14/17	0 to 15	<0.018	<0.158	<3.5	<9.7	<48
SC-5	6/14/17	15	<0.093	0.38	**<19**	**84**	**1,900**
ALL SAMPLES WERE ANALYZED PER USEPA METHOD 8021B AND 8015.							

NOTES

1. NMOCD APPROVED APPLICATION OF POTASSIUM PERMANGANATE SOLUTION AND BACKFILL OF EXCAVATION.

animas environmental services
Farmington, NM • Durango, CO
animasenvironmental.com

DRAWN BY:	DATE DRAWN:
C. Lameman	June 15, 2017
REVISIONS BY:	**DATE REVISED:**
C. Lameman	June 15, 2017
CHECKED BY:	**DATE CHECKED:**
E. McNally	June 15, 2017
APPROVED BY:	**DATE APPROVED:**
E. McNally	June 15, 2017

LEGEND

- SAMPLE LOCATIONS
- SECONDARY CONTAINMENT BERM
- —x— FENCE

N

SCALE
10 6 0 10
2
(1 INCH = 10 FEET)

Sampling Reports

AES Field Sampling Report

Animas Environmental Services, LLC

Client: ConocoPhillips

Project Location: Atlantic 13

Date: 12/21/2016 and 2/10/2017

Matrix: Soil

Sample ID	Collection Date	Collection Time	OVM (ppm)	Field TPH* (mg/kg)	Field TPH Analysis Time	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SB-1 @ 8'	12/21/2016	10:57	0.1	<20.0	11:26	20.0	1	CL
SB-1 @ 12'	12/21/2016	11:13	0.1	59.3	11:30	20.0	1	CL
SB-2 @ 4.25'	12/21/2016	12:26	21.8	<20.0	12:56	20.0	1	CL
SB-2 @ 8'	12/21/2016	12:34	790	719	13:01	20.0	1	CL
SB-2 @ 11.75	12/21/2016	12:45	978	999	13:09	20.0	1	CL
SB-3 @ 8'	12/21/2016	10:05	0.0	<20.0	11:04	20.0	1	CL
SB-3 @ 12'	12/21/2016	10:21	0.5	647	11:07	20.0	1	CL
SB-4 @ 8'	12/21/2016	11:35	0.2	2,000	12:08	200	10	CL
SB-4 @ 12'	12/21/2016	11:53	0.0	<20.0	12:12	20.0	1	CL
SB-5 @ 5'	12/21/2016	13:15	127	21,400	13:53	200	10	CL
SB-5 @ 8'	12/21/2016	13:22	1,262	*Not Analyzed for TPH*				
SB-5 @ 11'	12/21/2016	13:30	1,702	21,000	14:05	200	10	CL
SB-6 @ 5'	12/21/2016	14:00	0.5	43.9	14:27	20.0	1	CL

Report Finalized: 2/10/17

Sample ID	Collection Date	Collection Time	OVM (ppm)	Field TPH* (mg/kg)	Field TPH Analysis Time	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SB-6 @ 8'	12/21/2016	14:16	0.0	43.9	14:30	20.0	1	CL
SB-6 @ 12'	12/21/2016	14:29	0.0	<20.0	14:45	20.0	1	CL
SB-7 @ 8'	2/10/2017	9:55	0.1	28.9	10:24	20.0	1	CL
SB-7 @ 12'	2/10/2017	10:00	0.0	45.7	10:26	20.0	1	CL
SB-8 @ 8'	2/10/2017	10:13	0.1	28.5	10:39	20.0	1	CL
SB-9 @ 8.5'	2/10/2017	10:27	0.0	34.2	10:43	20.0	1	CL
SB-10 @ 12'	2/10/2017	11:00	0.0	31.3	11:16	20.0	1	CL

DF Dilution Factor
NA Not Analyzed
PQL Practical Quantitation Limit
**Field TPH concentrations recorded may be below PQL.*

Total Petroleum Hydrocarbons - USEPA 418.1

Analyst: 

AES Field Sampling Report

Animas Environmental Services, LLC

Client: ConocoPhillips

Project Location: Atlantic 13

Date: 6/14/2017

Matrix: Soil

Sample ID	Collection Date	Collection Time	Sample Location	OVM (ppm)	Field TPH* (mg/kg)	Field TPH Analysis Time	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SC-1	6/14/2017	9:15	North Wall	4.7	60.8	11:09	20.0	1	CL
SC-2	6/14/2017	9:30	South Wall	0.0	40.3	11:12	20.0	1	CL
SC-3	6/14/2017	9:45	East Wall	0.0	91.0	11:12	20.0	1	CL
SC-4	6/14/2017	10:00	West Wall	0.0	48.5	11:26	20.0	1	CL
SC-5	6/14/2017	10:12	Base	485	4,480	11:36	200	10	CL

DF Dilution Factor
NA Not Analyzed
PQL Practical Quantitation Limit
**TPH concentrations recorded may be below PQL.*

Total Petroleum Hydrocarbons - USEPA 418.1

Analyst:

Report Finalized: 6/14/17

Analytical Reports

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

November 17, 2016

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

RE: COPC Atlantic 13 OrderNo.: 1611629

Dear Emilee Skyles:

Hall Environmental Analysis Laboratory received 1 sample(s) on 11/11/2016 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1611629**
Date Reported: **11/17/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental
Project: COPC Atlantic 13
Lab ID: 1611629-001 **Matrix:** SOIL

Client Sample ID: BGT S-1
Collection Date: 11/10/2016 11:22:00 AM
Received Date: 11/11/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH						Analyst: **MAB**	
Petroleum Hydrocarbons, TR	1700	200		mg/Kg	10	11/16/2016 12:00:00 PM	28668
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	11/16/2016 11:53:37 AM	28702
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **JME**	
Diesel Range Organics (DRO)	ND	99	D	mg/Kg	10	11/15/2016 9:01:00 PM	28641
Motor Oil Range Organics (MRO)	760	490	D	mg/Kg	10	11/15/2016 9:01:00 PM	28641
Surr: DNOP	0	70-130	SD	%Rec	10	11/15/2016 9:01:00 PM	28641
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/15/2016 12:10:42 PM	28620
Surr: BFB	88.2	68.3-144		%Rec	1	11/15/2016 12:10:42 PM	28620
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	11/15/2016 12:10:42 PM	28620
Toluene	ND	0.049		mg/Kg	1	11/15/2016 12:10:42 PM	28620
Ethylbenzene	ND	0.049		mg/Kg	1	11/15/2016 12:10:42 PM	28620
Xylenes, Total	ND	0.098		mg/Kg	1	11/15/2016 12:10:42 PM	28620
Surr: 4-Bromofluorobenzene	92.8	80-120		%Rec	1	11/15/2016 12:10:42 PM	28620

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1611629**

17-Nov-16

Client: Animas Environmental

Project: COPC Atlantic 13

Sample ID	**MB-28702**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**28702**	RunNo:	**38771**					
Prep Date:	**11/16/2016**	Analysis Date:	**11/16/2016**	SeqNo:	**1211314**	Units:	**mg/Kg**			

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

Sample ID	**LCS-28702**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**28702**	RunNo:	**38771**					
Prep Date:	**11/16/2016**	Analysis Date:	**11/16/2016**	SeqNo:	**1211315**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.0	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1611629**

17-Nov-16

Client: Animas Environmental

Project: COPC Atlantic 13

Sample ID **MB-28668**	SampType: **MBLK**	TestCode: **EPA Method 418.1: TPH**
Client ID: **PBS**	Batch ID: **28668**	RunNo: **38752**
Prep Date: **11/15/2016**	Analysis Date: **11/16/2016**	SeqNo: **1210600** 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-28668**	SampType: **LCS**	TestCode: **EPA Method 418.1: TPH**
Client ID: **LCSS**	Batch ID: **28668**	RunNo: **38752**
Prep Date: **11/15/2016**	Analysis Date: **11/16/2016**	SeqNo: **1210601** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	110	20	100.0	0	113	80.7	121			

Sample ID **LCSD-28668**	SampType: **LCSD**	TestCode: **EPA Method 418.1: TPH**
Client ID: **LCSS02**	Batch ID: **28668**	RunNo: **38752**
Prep Date: **11/15/2016**	Analysis Date: **11/16/2016**	SeqNo: **1210602** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	110	20	100.0	0	111	80.7	121	1.18	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	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1611629**

17-Nov-16

Client: Animas Environmental

Project: COPC Atlantic 13

Sample ID **MB-28641**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **28641**	RunNo: **38704**
Prep Date: **11/14/2016**	Analysis Date: **11/15/2016**	SeqNo: **1209527** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	7.8		10.00		78.4	70	130			

Sample ID **LCS-28641**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **28641**	RunNo: **38704**
Prep Date: **11/14/2016**	Analysis Date: **11/15/2016**	SeqNo: **1209529** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	10	50.00	0	82.4	62.6	124			
Surr: DNOP	4.1		5.000		81.2	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1611629**

17-Nov-16

Client: Animas Environmental

Project: COPC Atlantic 13

Sample ID **MB-28620**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **28620**	RunNo: **38684**
Prep Date: **11/11/2016**	Analysis Date: **11/14/2016**	SeqNo: **1208386** 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	860		1000		86.3	68.3	144			

Sample ID **LCS-28620**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **28620**	RunNo: **38684**
Prep Date: **11/11/2016**	Analysis Date: **11/14/2016**	SeqNo: **1208395** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.5	74.6	123			
Surr: BFB	930		1000		93.3	68.3	144			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1611629**

17-Nov-16

Client: Animas Environmental

Project: COPC Atlantic 13

Sample ID **MB-28620**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **28620**	RunNo: **38684**
Prep Date: **11/11/2016**	Analysis Date: **11/14/2016**	SeqNo: **1208454** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.99		1.000		99.4	80	120			

Sample ID **LCS-28620**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **28620**	RunNo: **38684**
Prep Date: **11/11/2016**	Analysis Date: **11/14/2016**	SeqNo: **1208455** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	1.000	0	93.7	75.2	115			
Toluene	1.0	0.050	1.000	0	100	80.7	112			
Ethylbenzene	1.0	0.050	1.000	0	102	78.9	117			
Xylenes, Total	3.1	0.10	3.000	0	102	79.2	115			
Surr: 4-Bromofluorobenzene	1.1		1.000		111	80	120			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Animas Environmental Work Order Number: 1611629 RcptNo: 1

Received by/date: AS 11/11/16

Logged By: Lindsay Mangin 11/11/2016 8:00:00 AM

Completed By: Lindsay Mangin 11/11/2016 10:08:24 AM

Reviewed By: JC 11/11/16

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____ Date _____

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

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	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#: clameman@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 ATLANTIC 13

Project #:

Project Manager:
C. Lameman/E. Skyles

Sampler: CL/SG

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.6°C

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. 1611629	Analysis Request: BTEX - 8021B	TPH - EPA 418.1	TPH - 8015	Chlorides - 300.0	Air Bubbles (Y or N)
11/10/16	11:22	SOIL	BGT S-1	1 - 4 oz.	cool	-001	X	X	X	X	

Date:	Time:	Relinquished by:	Received by:	Date	Time
11/10/16	1950			11/10/16	1950
11/10/16	2050			11/11/16	0800

Remarks: Bill to Conoco Phillips
WO # 21773149
Supervisor: Chris Neuenschwander
USERID: BRADLRY
Area: 3
Ordered by: Bobby Spearman

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

June 19, 2017

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

RE: COPC ATLANTIC 13 OrderNo.: 1706836

Dear Corwin Lameman:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/15/2017 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 **1706836**
Date Reported: **6/19/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental
Project: COPC ATLANTIC 13
Lab ID: 1706836-001 **Matrix:** SOIL

Client Sample ID: SC-3
Collection Date: 6/14/2017 9:45:00 AM
Received Date: 6/15/2017

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	6/16/2017 9:46:57 AM	32326
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/16/2017 9:46:57 AM	32326
Surr: DNOP	95.0	70-130		%Rec	1	6/16/2017 9:46:57 AM	32326
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	6/16/2017 9:53:41 AM	32311
Surr: BFB	98.2	54-150		%Rec	1	6/16/2017 9:53:41 AM	32311
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.016		mg/Kg	1	6/16/2017 9:53:41 AM	32311
Toluene	ND	0.032		mg/Kg	1	6/16/2017 9:53:41 AM	32311
Ethylbenzene	ND	0.032		mg/Kg	1	6/16/2017 9:53:41 AM	32311
Xylenes, Total	ND	0.063		mg/Kg	1	6/16/2017 9:53:41 AM	32311
Surr: 4-Bromofluorobenzene	125	66.6-132		%Rec	1	6/16/2017 9:53:41 AM	32311

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
PQL	Practical Quanitative Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	% Recovery outside of range due to dilution or matrix

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental
Project: COPC ATLANTIC 13
Lab ID: 1706836-002 **Matrix:** SOIL

Client Sample ID: SC-5
Collection Date: 6/14/2017 10:12:00 AM
Received Date: 6/15/2017

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	84	37		mg/Kg	4	6/15/2017 3:29:33 PM	32302
Motor Oil Range Organics (MRO)	1900	180		mg/Kg	4	6/15/2017 3:29:33 PM	32302
Surr: DNOP	89.8	70-130		%Rec	4	6/15/2017 3:29:33 PM	32302
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	19		mg/Kg	5	6/15/2017 11:15:36 AM	32286
Surr: BFB	115	54-150		%Rec	5	6/15/2017 11:15:36 AM	32286
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.093		mg/Kg	5	6/15/2017 11:15:36 AM	32286
Toluene	ND	0.19		mg/Kg	5	6/15/2017 11:15:36 AM	32286
Ethylbenzene	ND	0.19		mg/Kg	5	6/15/2017 11:15:36 AM	32286
Xylenes, Total	0.38	0.37		mg/Kg	5	6/15/2017 11:15:36 AM	32286
Surr: 4-Bromofluorobenzene	120	66.6-132		%Rec	5	6/15/2017 11:15:36 AM	32286

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
PQL	Practical Quanitative Limit	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#: **1706836**

19-Jun-17

Client: Animas Environmental
Project: COPC ATLANTIC 13

Sample ID **LCS-32302**	SampType: **LCS**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID: **LCSS**	Batch ID: **32302**			RunNo: **43528**					
Prep Date: **6/15/2017**	Analysis Date: **6/15/2017**			SeqNo: **1371104**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	95.7	73.2	114			
Surr: DNOP	4.7		5.000		94.7	70	130			

Sample ID **MB-32302**	SampType: **MBLK**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID: **PBS**	Batch ID: **32302**			RunNo: **43528**					
Prep Date: **6/15/2017**	Analysis Date: **6/15/2017**			SeqNo: **1371105**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.5		10.00		95.4	70	130			

Sample ID **LCS-32292**	SampType: **LCS**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID: **LCSS**	Batch ID: **32292**			RunNo: **43528**					
Prep Date: **6/14/2017**	Analysis Date: **6/15/2017**			SeqNo: **1372096**		Units: **%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.1		5.000		81.4	70	130			

Sample ID **MB-32292**	SampType: **MBLK**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID: **PBS**	Batch ID: **32292**			RunNo: **43528**					
Prep Date: **6/14/2017**	Analysis Date: **6/15/2017**			SeqNo: **1372097**		Units: **%Rec**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.7		10.00		87.4	70	130			

Sample ID **LCS-32326**	SampType: **LCS**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID: **LCSS**	Batch ID: **32326**			RunNo: **43559**					
Prep Date: **6/16/2017**	Analysis Date: **6/16/2017**			SeqNo: **1372144**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	95.1	73.2	114			
Surr: DNOP	4.7		5.000		93.8	70	130			

Sample ID **MB-32326**	SampType: **MBLK**			TestCode: **EPA Method 8015M/D: Diesel Range Organics**					
Client ID: **PBS**	Batch ID: **32326**			RunNo: **43559**					
Prep Date: **6/16/2017**	Analysis Date: **6/16/2017**			SeqNo: **1372145**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								

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
PQL	Practical Quanitative Limit	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#: **1706836**

19-Jun-17

Client: Animas Environmental
Project: COPC ATLANTIC 13

Sample ID **MB-32326**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **32326**	RunNo: **43559**
Prep Date: **6/16/2017**	Analysis Date: **6/16/2017**	SeqNo: **1372145** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		99.7	70	130			

Sample ID **1706836-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SC-3**	Batch ID: **32326**	RunNo: **43560**
Prep Date: **6/16/2017**	Analysis Date: **6/16/2017**	SeqNo: **1372527** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	9.9	49.36	0	105	55.8	122			
Surr: DNOP	3.7		4.936		75.5	70	130			

Sample ID **1706836-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SC-3**	Batch ID: **32326**	RunNo: **43560**
Prep Date: **6/16/2017**	Analysis Date: **6/16/2017**	SeqNo: **1372528** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	9.3	46.47	0	107	55.8	122	3.94	20	
Surr: DNOP	3.5		4.647		75.1	70	130	0	0	

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
PQL	Practical Quanitative Limit	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#: **1706836**

19-Jun-17

Client: Animas Environmental
Project: COPC ATLANTIC 13

Sample ID **MB-32286**	SampType: **MBLK**			TestCode: **EPA Method 8015D: Gasoline Range**					
Client ID: **PBS**	Batch ID: **32286**			RunNo: **43526**					
Prep Date: **6/14/2017**	Analysis Date: **6/15/2017**			SeqNo: **1371437**		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	960		1000		96.5	54	150			

Sample ID **LCS-32286**	SampType: **LCS**			TestCode: **EPA Method 8015D: Gasoline Range**					
Client ID: **LCSS**	Batch ID: **32286**			RunNo: **43526**					
Prep Date: **6/14/2017**	Analysis Date: **6/15/2017**			SeqNo: **1371438**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.7	76.4	125			
Surr: BFB	1100		1000		107	54	150			

Sample ID **MB-32311**	SampType: **MBLK**			TestCode: **EPA Method 8015D: Gasoline Range**					
Client ID: **PBS**	Batch ID: **32311**			RunNo: **43568**					
Prep Date: **6/15/2017**	Analysis Date: **6/16/2017**			SeqNo: **1373048**		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	970		1000		96.9	54	150			

Sample ID **LCS-32311**	SampType: **LCS**			TestCode: **EPA Method 8015D: Gasoline Range**					
Client ID: **LCSS**	Batch ID: **32311**			RunNo: **43568**					
Prep Date: **6/15/2017**	Analysis Date: **6/16/2017**			SeqNo: **1373049**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	102	76.4	125			
Surr: BFB	1100		1000		108	54	150			

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
PQL	Practical Quanitative Limit	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#: **1706836**

19-Jun-17

Client: Animas Environmental
Project: COPC ATLANTIC 13

Sample ID **MB-32286**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **32286**	RunNo: **43526**
Prep Date: **6/14/2017**	Analysis Date: **6/15/2017**	SeqNo: **1371467** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.2		1.000		122	66.6	132			

Sample ID **LCS-32286**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **32286**	RunNo: **43526**
Prep Date: **6/14/2017**	Analysis Date: **6/15/2017**	SeqNo: **1371469** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	107	80	120			
Toluene	1.1	0.050	1.000	0	109	80	120			
Ethylbenzene	1.1	0.050	1.000	0	109	80	120			
Xylenes, Total	3.3	0.10	3.000	0	111	80	120			
Surr: 4-Bromofluorobenzene	1.3		1.000		126	66.6	132			

Sample ID **MB-32311**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **32311**	RunNo: **43568**
Prep Date: **6/15/2017**	Analysis Date: **6/16/2017**	SeqNo: **1373066** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.2		1.000		124	66.6	132			

Sample ID **LCS-32311**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **32311**	RunNo: **43568**
Prep Date: **6/15/2017**	Analysis Date: **6/16/2017**	SeqNo: **1373067** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	107	80	120			
Toluene	1.1	0.050	1.000	0	108	80	120			
Ethylbenzene	1.1	0.050	1.000	0	109	80	120			
Xylenes, Total	3.3	0.10	3.000	0	110	80	120			
Surr: 4-Bromofluorobenzene	1.3		1.000		126	66.6	132			

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
PQL	Practical Quanitative Limit	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: 1706836 RcptNo: 1

Received By: Anne Thorne 6/15/2017 9:00:00 AM Anne Thorne
Completed By: Anne Thorne 6/15/2017 9:37:38 AM Anne Thorne
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° 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: 06/15/17 Did not receive SC-3. CW Shipping SC-3 for 06/16/17 delivery / At 06/15/17

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.3	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#: clameman@animasenvironmental.com

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

Accreditation:
☐ NELAP ☐ Other_____
☐ EDD (Type) _____

Turn-Around Time:
☐ Standard X Rush___SAME DAY___

Project Name:
COPC ATLANTIC 13

Project #:

Project Manager:
C. Lameman/E. McNally

Sampler: CL/SJ
On Ice: X Yes ☐ No
Sample Temperature: 2.3

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1706836	BTEX - 8021B	TPH (GRO/DRO/MRO) - 8015.	Air Bubbles (Y or N)
6/14/17	9:45	SOIL	SC-3	1 - MeOH Kit 1 - 4 oz.	MeOH cool	201	X	X	
6/14/17	10:12	SOIL	SC-5	1 - MeOH Kit 1 - 4 oz.	MeOH cool	202	X	X	

Date:	Time:	Relinquished by:	Received by:	Date	Time
6/14/17	1603			6/14/17	1603
Date:	Time:	Relinquished by:	Received by:	Date	Time
6/14/17	1910			06/15/17	0900

Remarks: Bill to Conoco Phillips
WO # 10401200
Supervisor: Chris Nuenschwander
USERID: BRADLRY
Area: 3
Ordered by: Lisa Hunter

SC-3 received on 6/16/17 SO

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

June 19, 2017

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

RE: COPC ATLANTIC 13 OrderNo.: 1706838

Dear Corwin Lameman:

Hall Environmental Analysis Laboratory received 3 sample(s) on 6/15/2017 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 **1706838**
Date Reported: **6/19/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental
Client Sample ID: SC-1
Project: COPC ATLANTIC 13
Collection Date: 6/14/2017 9:15:00 AM
Lab ID: 1706838-001 **Matrix:** SOIL **Received Date:** 6/15/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/16/2017 2:32:07 PM	32315
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/16/2017 2:32:07 PM	32315
Surr: DNOP	119	70-130		%Rec	1	6/16/2017 2:32:07 PM	32315
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	6/16/2017 2:18:26 PM	32311
Surr: BFB	96.8	54-150		%Rec	1	6/16/2017 2:18:26 PM	32311
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.017		mg/Kg	1	6/16/2017 2:18:26 PM	32311
Toluene	ND	0.034		mg/Kg	1	6/16/2017 2:18:26 PM	32311
Ethylbenzene	ND	0.034		mg/Kg	1	6/16/2017 2:18:26 PM	32311
Xylenes, Total	ND	0.068		mg/Kg	1	6/16/2017 2:18:26 PM	32311
Surr: 4-Bromofluorobenzene	124	66.6-132		%Rec	1	6/16/2017 2:18:26 PM	32311

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
PQL	Practical Quanitative Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	% Recovery outside of range due to dilution or matrix

Analytical Report
Lab Order **1706838**
Date Reported: **6/19/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental
Client Sample ID: SC-2
Project: COPC ATLANTIC 13
Collection Date: 6/14/2017 9:30:00 AM
Lab ID: 1706838-002 **Matrix:** SOIL **Received Date:** 6/15/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/16/2017 3:39:03 PM	32315
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/16/2017 3:39:03 PM	32315
Surr: DNOP	105	70-130		%Rec	1	6/16/2017 3:39:03 PM	32315
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	6/16/2017 5:57:03 PM	32311
Surr: BFB	96.9	54-150		%Rec	1	6/16/2017 5:57:03 PM	32311
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.017		mg/Kg	1	6/16/2017 5:57:03 PM	32311
Toluene	ND	0.033		mg/Kg	1	6/16/2017 5:57:03 PM	32311
Ethylbenzene	ND	0.033		mg/Kg	1	6/16/2017 5:57:03 PM	32311
Xylenes, Total	ND	0.066		mg/Kg	1	6/16/2017 5:57:03 PM	32311
Surr: 4-Bromofluorobenzene	119	66.6-132		%Rec	1	6/16/2017 5:57:03 PM	32311

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
PQL	Practical Quanitative Limit	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	% Recovery outside of range due to dilution or matrix

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental
Client Sample ID: SC-4
Project: COPC ATLANTIC 13
Collection Date: 6/14/2017 10:00:00 AM
Lab ID: 1706838-003 **Matrix:** SOIL **Received Date:** 6/15/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/16/2017 4:01:14 PM	32315
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/16/2017 4:01:14 PM	32315
Surr: DNOP	98.7	70-130		%Rec	1	6/16/2017 4:01:14 PM	32315
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	6/16/2017 6:21:28 PM	32311
Surr: BFB	98.2	54-150		%Rec	1	6/16/2017 6:21:28 PM	32311
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.018		mg/Kg	1	6/16/2017 6:21:28 PM	32311
Toluene	ND	0.035		mg/Kg	1	6/16/2017 6:21:28 PM	32311
Ethylbenzene	ND	0.035		mg/Kg	1	6/16/2017 6:21:28 PM	32311
Xylenes, Total	ND	0.070		mg/Kg	1	6/16/2017 6:21:28 PM	32311
Surr: 4-Bromofluorobenzene	122	66.6-132		%Rec	1	6/16/2017 6:21:28 PM	32311

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
PQL	Practical Quanitative Limit	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#: **1706838**

19-Jun-17

Client: Animas Environmental
Project: COPC ATLANTIC 13

Sample ID **MB-32315**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **32315**	RunNo: **43560**
Prep Date: **6/15/2017**	Analysis Date: **6/16/2017**	SeqNo: **1372149** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.6		10.00		96.0	70	130			

Sample ID **LCS-32315**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **32315**	RunNo: **43560**
Prep Date: **6/15/2017**	Analysis Date: **6/16/2017**	SeqNo: **1372317** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	99.8	73.2	114			
Surr: DNOP	4.8		5.000		95.6	70	130			

Sample ID **1706838-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SC-1**	Batch ID: **32315**	RunNo: **43559**
Prep Date: **6/15/2017**	Analysis Date: **6/16/2017**	SeqNo: **1373034** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	9.4	46.90	0	87.9	55.8	122			
Surr: DNOP	4.8		4.690		103	70	130			

Sample ID **1706838-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SC-1**	Batch ID: **32315**	RunNo: **43559**
Prep Date: **6/15/2017**	Analysis Date: **6/16/2017**	SeqNo: **1373035** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	49.80	0	91.4	55.8	122	9.89	20	
Surr: DNOP	5.2		4.980		105	70	130	0	0	

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
PQL	Practical Quanitative Limit	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#: **1706838**

19-Jun-17

Client: Animas Environmental
Project: COPC ATLANTIC 13

Sample ID **MB-32311**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **32311**	RunNo: **43568**
Prep Date: **6/15/2017**	Analysis Date: **6/16/2017**	SeqNo: **1373048** 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	970		1000		96.9	54	150			

Sample ID **LCS-32311**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **32311**	RunNo: **43568**
Prep Date: **6/15/2017**	Analysis Date: **6/16/2017**	SeqNo: **1373049** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	102	76.4	125			
Surr: BFB	1100		1000		108	54	150			

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
PQL	Practical Quanitative Limit	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#: **1706838**

19-Jun-17

Client: Animas Environmental
Project: COPC ATLANTIC 13

Sample ID **MB-32311**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **32311**	RunNo: **43568**
Prep Date: **6/15/2017**	Analysis Date: **6/16/2017**	SeqNo: **1373066** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.2		1.000		124	66.6	132			

Sample ID **LCS-32311**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **32311**	RunNo: **43568**
Prep Date: **6/15/2017**	Analysis Date: **6/16/2017**	SeqNo: **1373067** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	107	80	120			
Toluene	1.1	0.050	1.000	0	108	80	120			
Ethylbenzene	1.1	0.050	1.000	0	109	80	120			
Xylenes, Total	3.3	0.10	3.000	0	110	80	120			
Surr: 4-Bromofluorobenzene	1.3		1.000		126	66.6	132			

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
PQL	Practical Quanitative Limit	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: 1706838 RcptNo: 1

Received By: Anne Thorne 6/15/2017 9:00:00 AM Anne Thorne
Completed By: Anne Thorne 6/15/2017 9:48:57 AM Anne Thorne
Reviewed By: ENM 06/15/17

Chain of Custody

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

Log In

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

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

Special Handling (if applicable)

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

Person Notified: _____ Date _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.3	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#: clameman@animasenvironmental.com

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

Accreditation:
☐ NELAP ☐ Other_____
☐ EDD (Type) _____

Turn-Around Time:
☐ Standard X Rush___3 DAY TAT___

Project Name:
COPC ATLANTIC 13

Project #:

Project Manager:
C. Lameman/E. McNally

Sampler: CL/SJ
On Ice: X Yes ☐ No
Sample Temperature: 2.3

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1706838	BTEX - 8021B	TPH (GRO/DRO/MRO) - 8015.	Air Bubbles (Y or N)
6/14/17	9:15	SOIL	SC-1	1 - MeOH Kit 1 - 4 oz.	MeOH cool	-001	X	X	
6/14/17	9:30	SOIL	SC-2	1 - MeOH Kit 1 - 4 oz.	MeOH cool	-002	X	X	
6/14/17	10:00	SOIL	SC-4	1 - MeOH Kit 1 - 4 oz.	MeOH cool	-003	X	X	

Date:	Time:	Relinquished by:	Received by:	Date	Time
6/14/17	1600			6/14/17	1603
Date:	Time:	Relinquished by:	Received by:	Date	Time
6/14/17	1910			06/15/17	0900

Remarks: Bill to Conoco Phillips
WO # 10401200
Supervisor: Chris Nuenschwander
USERID: BRADLRY
Area: 3
Ordered by: Lisa Hunter

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


BURLINGTON
RESOURCES
ATLANTIC #13
1020' FSL 1680' FEL
UNIT O SEC 23 T31N R10W
LEASE # NM-013688
API # 30-045-23283 ELEV. 6401'
CA # NMNM-76006
LATITUDE 36° 52 MIN. 47 SEC. N (NAD 83)
LONGITUDE 107° 50 MIN. 56 SEC. W (NAD 83)
SAN JUAN COUNTY, NEW MEXICO
EMERGENCY CONTACT: 1-505-324-5170