

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.

15998
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: ConocoPhillips Company OGRID #: 217817
Address: PO BOX 4289, Farmington, NM 87499
Facility or well name: JICARILLA #17
API Number: 30-039-22427 OCD Permit Number: _____
U/L or Qtr/Qtr B Section 32 Township 26N Range 4W County: Rio Arriba
Center of Proposed Design: Latitude 36.44760 °N Longitude -107.27236 °W NAD: ☐ 1927 ☒ 1983
Surface Owner: ☐ Federal ☐ State ☐ Private ☒ Tribal Trust or Indian Allotment

2.
☐ **Pit:** Subsection F, G or J of 19.15.17.11 NMAC
Temporary: ☐ Drilling ☐ Workover
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A ☐ Multi-Well Fluid Management Low Chloride Drilling Fluid ☐ yes ☐ no
☐ Lined ☐ Unlined Liner type: Thickness _____ mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other _____
☐ String-Reinforced
Liner Seams: ☐ Welded ☐ Factory ☐ Other _____ Volume: _____ bbl Dimensions: L _____ x W _____ x D _____

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

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

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

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6.

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

- ☐ Screen ☐ Netting ☐ Other _____
- ☐ Monthly inspections (If netting or screening is not physically feasible)

7.

Signs: Subsection C of 19.15.17.11 NMAC

- ☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers
- ☐ Signed in compliance with 19.15.16.8 NMAC

8.

Variances and Exceptions:

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

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

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

9.

Siting Criteria (regarding permitting): 19.15.17.10 NMAC

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

General siting

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

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

☐ Yes ☐ No
☒ NA

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

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

☐ Yes ☐ No
☒ NA

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

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

☐ Yes ☐ No

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

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

☐ Yes ☐ No

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

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

☐ Yes ☐ No

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

- FEMA map

☐ Yes ☐ No

Below Grade Tanks

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

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

☐ Yes ☒ No

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

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

☐ Yes ☒ No

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

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

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

☐ Yes ☐ No

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

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

☐ Yes ☐ No

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

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

☐ Yes ☐ No

<p>Within 100 feet of a wetland.</p> <ul style="list-style-type: none"> - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site 	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p><u>Temporary Pit Non-low chloride drilling fluid</u></p>	
<p>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).</p> <ul style="list-style-type: none"> - Topographic map; Visual inspection (certification) of the proposed site 	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.</p> <ul style="list-style-type: none"> - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image 	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>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;</p> <ul style="list-style-type: none"> - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site 	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>Within 300 feet of a wetland.</p> <ul style="list-style-type: none"> - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site 	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p><u>Permanent Pit or Multi-Well Fluid Management Pit</u></p>	
<p>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).</p> <ul style="list-style-type: none"> - Topographic map; Visual inspection (certification) of the proposed site 	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.</p> <ul style="list-style-type: none"> - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image 	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>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.</p> <ul style="list-style-type: none"> - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site 	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>Within 500 feet of a wetland.</p> <ul style="list-style-type: none"> - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site 	<input type="checkbox"/> Yes <input type="checkbox"/> No

10.

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

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

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

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

11.

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

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

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

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

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

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

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Climatological Factors Assessment
- ☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Quality Control/Quality Assurance Construction and Installation Plan
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Nuisance or Hazardous Odors, including H₂S, Prevention Plan
- ☐ Emergency Response Plan
- ☐ Oil Field Waste Stream Characterization
- ☐ Monitoring and Inspection Plan
- ☐ Erosion Control Plan
- ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

13.
Proposed Closure: 19.15.17.13 NMAC

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

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

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

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

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

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

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

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

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

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

☐ Yes ☐ No

Within the area overlying a subsurface mine.

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

☐ Yes ☐ No

Within an unstable area.

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

☐ Yes ☐ No

Within a 100-year floodplain.

- FEMA map

☐ Yes ☐ No

16.

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

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

17.

Operator Application Certification:

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

Name (Print): _____ Title: _____

Signature: _____ Date: _____

e-mail address: _____ Telephone: _____

18.

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

OCD Representative Signature: [Signature] Approval Date: 10/31/2017

Title: Environmental Specialist OCD Permit Number: _____

19.

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

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

☒ Closure Completion Date: 5/2/17

20.

Closure Method:

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

21.

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

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

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

Operator Closure Certification:

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

Name (Print) Christine Brock Title: Regulatory Specialist

Signature: Christine Brock Date: 6/26/17

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

ConocoPhillips Company
San Juan Basin
Below Grade Tank Closure Report

Lease Name: Jicarilla #17

API No.: 30-039-22427

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

General Plan:

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

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

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

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

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

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

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

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

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

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

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

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

A release was determined for the above referenced well.

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

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

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

Notification is attached.

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

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

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

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

11. COPC shall seed the disturbed areas the first favorable growing season following closure of a below-grade tank. Seeding will be accomplished via drilling on the contour whenever practical or by other division-approved methods. BLM stipulated seed mixes will 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)**

From: Walker, Crystal
Sent: Tuesday, April 11, 2017 8:57 AM
To: Alfred Vigil; 'Annette Torivio'; 'Cascindra Willie'; Guillermo DeHerrera (guillermo.deherrera@jicarillaoga.com); Jason Sandoval; Kurt Sandoval - BIA; Marlena Reval (marlena.reval@bia.gov); 'Mike, Deedra'
Cc: Walker, Crystal
Subject: Surface Owner BGT Closure Notification: Jicarilla 17

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

Well Name: Jicarilla 17

API#: 3003922427

Location: B – 32 – 26N – 4W

Footages: 990' FNL & 1850' FEL

Operator: ConocoPhillips Surface Owner: TRIBAL

Estimated Removal Date & Time: Monday, April 17th, 2017 at 9:00AM.

Thank you,
Crystal Walker
Regulatory Coordinator
ConocoPhillips Lower 48

T: 505-326-9837 | M: 505-793-2398 | crystal.walker@cop.com

Visit the new Lower 48 website:
www.conocophillipsuslower48.com

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

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☒ Final Report

Name of Company ConocoPhillips Company	Contact Lisa Hunter
Address 3401 East 30th St, Farmington, NM	Telephone No. (505) 258-1607
Facility Name: Jicarilla 17	Facility Type: Gas Well

Surface Owner Jicarilla	Mineral Owner Jicarilla	API No. 3003922427
--------------------------------	--------------------------------	---------------------------

LOCATION OF RELEASE

Unit Letter B	Section 32	Township 26N	Range 04W	Feet from the 990	North/South Line North	Feet from the 1850	East/West Line East	County Rio Arriba
-------------------------	----------------------	------------------------	---------------------	-----------------------------	----------------------------------	------------------------------	-------------------------------	-----------------------------

Latitude **36.44760** Longitude **-107.27236**

NATURE OF RELEASE

Type of Release Hydrocarbon (Historic)	Volume of Release Unknown	Volume Recovered 375 c/yds
Source of Release BGT (Closure)	Date and Hour of Occurrence Unknown	Date and Hour of Discovery April 17, 2017
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? N/A	
By Whom? N/A	Date and Hour N/A	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. N/A	

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

Describe Cause of Problem and Remedial Action Taken.*

Below-Grade Tank Closure activities with samples taken resulting in constituents exceeded standards outlined by 19.15.17.13 NMAC.


Describe Area Affected and Cleanup Action Taken.*

Historical hydrocarbon impacted soil was found during the BGT closure for the subject well. The excavation was 26' x 26' x 16' in depth and 375 c/yds of soil was transported to IEI land farm. Analytical results were below the regulatory standards – no further action required. The soil sampling report is attached for review.

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

OIL CONSERVATION DIVISION

Signature:



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 19, 2017**

Phone: **(505) 258-1607**

* Attach Additional Sheets If Necessary



May 15, 2017

Lisa Hunter
ConocoPhillips
San Juan Business Unit
(505) 326-9525

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

**RE: Below Grade Tank Closure, Release Assessment, and Final Excavation Report
Jicarilla 17
Rio Arriba County, New Mexico**

Dear Ms. Hunter:

On April 17, 18, and 20, 2017, and May 2, 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) Jicarilla 17, located in Rio Arriba County, New Mexico. BGT closure sampling was conducted on April 17, 2017, and a release assessment was completed on April 18, 2017. Final excavation was completed by COPC contractors while AES was on location on May 2, 2017.

1.0 Site Information

1.1 Location

Location – NW¼ NE¼, Section 32, T26N, R4W, Rio Arriba County, New Mexico
Latitude/Longitude – N36.44760 and W107.27236, respectively
Surface Owner – Jicarilla Apache Nation
Figure 1. Topographic Site Location Map
Figure 2. Aerial Site Map, April 2017

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

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

1.2 JANOGA and NMOCD Action Levels

The Jicarilla 17 release is located on Jicarilla Apache Nation lands, and soil remediation action levels are determined by the Jicarilla Apache Nation Oil and Gas Administration (JANOGA). JANOGA action levels for soil currently follow the New Mexico Oil Conservation Division (NMOCD) *Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993). Per JANOGA, all locations within Jicarilla Apache Nation lands typically receive a ranking score of 20. Action levels are:

- 10 mg/kg benzene and 50 mg/kg total benzene, toluene, ethylbenzene, and xylene (BTEX);
- 100 mg/kg total petroleum hydrocarbons (TPH); and
- 250 mg/kg chloride.

1.3 BGT Closure and Release Assessment

AES was initially contacted by Lisa Hunter of COPC on April 12, 2017. On April 17, 2017, Corwin Lameman and Sam Glasses of AES traveled to the location. Soil sampling consisted of collection of one discrete soil sample (BGT SC-1) from below the former BGT. The sample location is presented on Figure 2.

On April 18, 2017, Corwin Lameman and Sam Glasses completed release assessment field work. The assessment included collection and sampling of 10 soil samples from five borings in and around the release area. Soil borings were terminated between 7 and 12 feet in depth. Based on field sampling results, AES recommended further excavation of the release area. Sample locations are shown on Figure 3.

On April 20 and May 2, 2017, AES returned to the location to collect confirmation soil samples of the excavation. 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 26 feet by 26 feet by 16 feet in depth. Sample locations and final excavation extents are presented on Figure 4.

2.0 Soil Sampling

2.1 Field Screening

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 ppm isobutylene gas.

2.1.2 Total Petroleum Hydrocarbons

Soil samples were also analyzed in the field for 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's *Standard Operating Procedure: Field Analysis Total Petroleum Hydrocarbons per EPA Method 418.1*.

2.2 Laboratory Analyses

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

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

- BTEX per USEPA Method 8021B; and
- TPH as Gasoline Range Organics (GRO), Diesel Range Organics (DRO), and Motor Oil Range Organics (MRO) and per USEPA Method 8015.

BGT SC-1 was also laboratory analyzed for:

- TPH per USEPA Method 418.1; and
- Chlorides per USEPA Method 300.0.

2.3 Field Screening and Laboratory Analytical Results

Field sampling results are summarized in Table 1 and presented on Figures 2 through 4. Laboratory analytical results are summarized in Table 2 and presented on Figures 2 through 4. The AES Field Sampling Reports and the laboratory analytical reports are attached.

Table 1. Soil Field Screening VOC and TPH Results
Jicarilla 17 BGT Closure, Release Assessment and Final Excavation
April and May 2017

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Depth below BGT (ft bgs)</i>	<i>VOCs OVM Reading (ppm)</i>	<i>TPH 418.1 (mg/kg)</i>	<i>Chlorides (mg/kg)</i>
<i>JANOGA and NMOCD Action Levels (NMAC 19.15.17.13)/*</i>			<i>NE/100</i>	<i>100</i>	<i>250</i>
BGT SC-1	4/17/17	7	3,666	284	60
SB-1	4/18/17	10	486	59.2	NA
		12	281	37.1	NA
SB-2	4/18/17	7	0.0	39.0	NA
		12	0.0	40.9	NA
SB-3	4/18/17	7	0.0	39.6	NA
		12	0.0	38.3	NA
SB-4	4/18/17	7	0.0	40.2	NA
		12	0.0	42.8	NA
SB-5	4/18/17	7	0.0	37.1	NA
		12	0.0	38.3	NA
SC-1	4/20/17	0 to 11	0.0	45.9	NA
SC-2	4/20/17	0 to 11	341	62.4	NA
SC-3	4/20/17	0 to 11	16.2	54.2	NA
SC-4	4/20/17	0 to 11	3.8	42.8	NA
SC-5	5/2/17	16	16.0	33.8	NA

NA – Not Analyzed

NE – Not Established

**Action level determined by JANOGA (Ref. NMOCD ranking score of 20 per NMOCD Guidelines for Remediation of Leaks, Spills, and Releases (August 1993)).*

Table 2. Soil Laboratory Analytical Results – Benzene, Total BTEX, TPH, and Chloride
Jicarilla 17 BGT Closure, Release Assessment and Final Excavation
April and May 2017

Sample ID	Date Sampled	Depth (ft)	Benzene (8021) (mg/kg)	Total BTEX (8021) (mg/kg)	TPH – GRO (8015) (mg/kg)	TPH – DRO (8015) (mg/kg)	TPH – MRO (8015) (mg/kg)	TPH (418.1) (mg/kg)	Chlorides (300.0) (mg/kg)
JANOGA/NMOCD Action Levels (NMAC 19.15.17.13)*			0.2/10	50		100		100	250
BGT SC-1	4/17/17	7	<0.016	0.245	<3.2	<9.5	<47	<19	110
SB-1	4/18/17	10	0.15	0.90	6.2	<10	<50	NA	NA
		12	<0.015	0.034	<3.0	<9.2	<46	NA	NA
SC-1	4/20/17	0 to 11	<0.025	<0.224	<5.0	<9.7	<48	NA	NA
SC-2	4/20/17	0 to 11	<0.024	1.42	15	56	<46	NA	NA
SC-3	4/20/17	0 to 11	<0.023	<0.211	<4.7	<9.8	<49	NA	NA
SC-4	4/20/17	0 to 11	<0.023	<0.211	<4.7	<9.8	<49	NA	NA
SC-5	5/2/17	16	<0.015	<0.135	<3.0	<9.4	<47	NA	NA

NA – Not Analyzed

* Action level determined by JANOGA (Ref. NMOCD ranking score of 20 per NMOCD Guidelines for Remediation of Leaks, Spills, and Releases (August 1993)).

3.0 Conclusions and Recommendations

3.1 BGT Closure

On April 17, 2017, AES conducted a BGT closure and release assessment of petroleum contaminated soils associated at the Jicarilla 17 location. NMOCD action levels for BGT closures are specified in NMAC 19.15.17.13. BGT closure sampling results for TPH in April 2017 were above the NMOCD action levels, with BGT SC-1 at 284 mg/kg TPH (via USEPA Method 418.1). Laboratory results for chloride in BGT SC-1 were reported below the NMOCD action level of 250 mg/kg, with a concentration of 60 mg/kg. Based on field sampling results for TPH, along with the presence of stained soils, a release was confirmed at the Jicarilla 17 location.

3.2 Release Assessment and Excavation

On April 18, 2017, AES completed further release assessment at the Jicarilla 17 location. Action levels for releases are determined by JANOGA and on NMAC 19.15.17.13. Initial release assessment field sampling results above the NMOCD action level of 100 ppm

VOCs were reported in SB-1, with the highest VOC concentration reported at 486 ppm. Based on the field sampling results, excavation of contaminated soils was recommended.

On May 2, 2017, final clearance of the excavation area was completed. Field sampling results of the excavation extents showed that field VOC concentrations were below the applicable NMOCD action level of 100 ppm for the final walls and base of the excavation except for SC-2 (southwest wall). Additionally, laboratory analytical results also reported benzene, total BTEX concentrations and TPH concentrations (via USEPA Methods 418.1 and 8015) as below the applicable NMOCD action levels.

Based on final field sampling and laboratory analytical results of the excavation of petroleum contaminated soils at the Jicarilla 17, VOCs, benzene, total BTEX, and TPH concentrations were below applicable JANOGA/NMOCD action levels for each of the sidewalls and base of the excavation. No further work is recommended.

If you have any questions about this report or site conditions, please do not hesitate to contact Corwin Lameman or 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 with BGT Closure Sample Location, April 2017
- Figure 3. Release Assessment Sample Locations and Results, April 2017
- Figure 4. Final Excavation Sample Locations and Results, April and May 2017
- AES Field Sampling Reports 041717, 041817, 042017, 050217
- Hall Laboratory Analytical Reports 1704817, 1704816, 1704A44, 1705138

Figures

LAPIS POINT QUADRANGLE
NEW MEXICO - RIO ARRIBA COUNTY
1963



FIGURE 1

TOPOGRAPHIC SITE LOCATION MAP

ConocoPhillips
JICARILLA 17
NW¼ NE¼, SECTION 32, T26N, R4W
RIO ARRIBA COUNTY, NEW MEXICO
N36.44760, W107.27236



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DRAWN BY:

C. Lameman

DATE DRAWN:

April 26, 2017

REVISIONS BY:

C. Lameman

DATE REVISED:

April 26, 2017

CHECKED BY:

E. McNally

DATE CHECKED:

April 26, 2017

APPROVED BY:




E. McNally

DATE APPROVED:

April 26, 2017

Field Screening Results					
Sample ID	Date	Depth (ft)	PID-OVM (ppm)	TPH (mg/kg)	Chlorides (mg/kg)
JANOGA ACTION LEVEL				100	250
BGT SC-1	4/17/17	7	3,666	284	60

BGT SC-1 IS A 5-POINT COMPOSITE SAMPLE.

LEGEND	
	SAMPLE LOCATIONS
	SECONDARY CONTAINMENT BERM
	FENCE

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)	TPH 418.1 (mg/kg)	Chlorides (mg/kg)
JANOGA ACTION LEVEL			0.2	50	100			100	250
BGT SC-1	4/17/17	7	<0.016	0.245	<3.2	<9.5	<47	<19	110

SAMPLE WAS ANALYZED PER USEPA METHOD 8021B, 8015D, 418.1, AND 300.0.



DRAWN BY:
C. Lameman

DATE DRAWN:
April 26, 2017

REVISIONS BY:
C. Lameman

DATE REVISED:
April 26, 2017

CHECKED BY:
E. McNally

DATE CHECKED:
April 26, 2017

APPROVED BY:
E. McNally

DATE APPROVED:
April 26, 2017

FIGURE 2

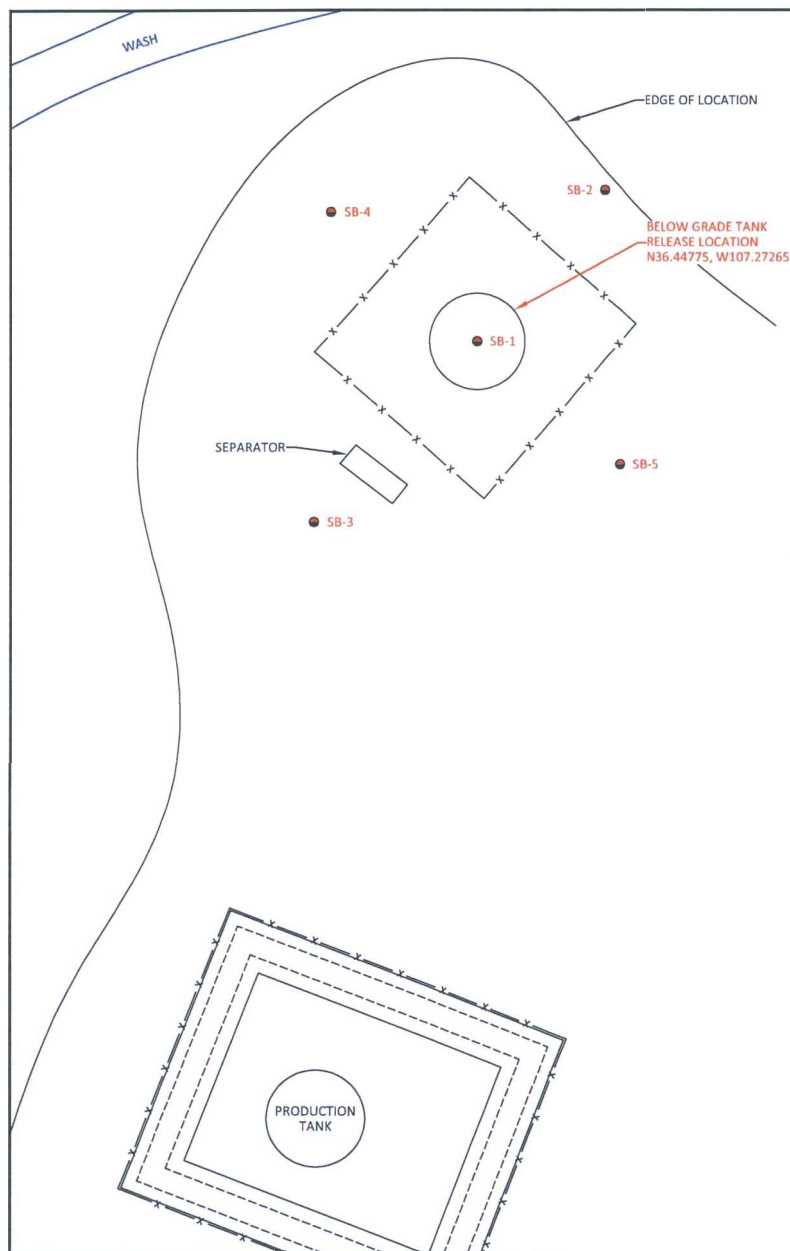
BELOW GRADE TANK CLOSURE APRIL 2017

ConocoPhillips
JICARILLA 17
NW¼ NE¼, SECTION 32, T26N, R4W
RIO ARriba COUNTY, NEW MEXICO
N36.44760, W107.27236



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Field Screening Results				
Sample ID	Date	Depth (ft)	PID-OVM (ppm)	TPH (mg/kg)
		JANOGA ACTION LEVEL		100
SB-1	4/18/17	10	486	59.2
		12	281	37.1
SB-2	4/18/17	7	0.0	39.0
		12	0.0	40.9
SB-3	4/18/17	7	0.0	39.6
		12	0.0	38.3
SB-4	4/18/17	7	0.0	40.2
		12	0.0	42.8
SB-5	4/18/17	7	0.0	37.1
		12	0.0	38.3

Laboratory Analytical Results						
Sample ID	Date	Depth (ft)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH - GRO (mg/kg)	TPH - DRO (mg/kg)
		JANOGA ACTION LEVEL		10	50	100
SB-1	4/18/17	10	0.15	0.90	6.2	<10
		12	<0.015	0.034	<3.0	<9.2

ALL SAMPLES WERE ANALYZED PER USEPA METHOD 8021B AND 8015D.

FIGURE 3

RELEASE ASSESSMENT SAMPLE
LOCATIONS AND RESULTS
APRIL 2017
ConocoPhillips
JICARILLA 17
NW¼ NE¼, SECTION 32, T26N, R4W
RIO ARriba COUNTY, NEW MEXICO
N36.44760, W107.27236



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DRAWN BY:
C. Lameman

DATE DRAWN:
April 19, 2017

REVISIONS BY:
C. Lameman

DATE REVISED:
April 27, 2017

CHECKED BY:
E. McNally

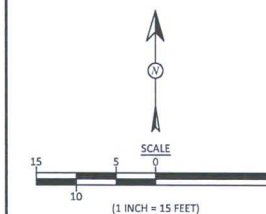
DATE CHECKED:
April 27, 2017

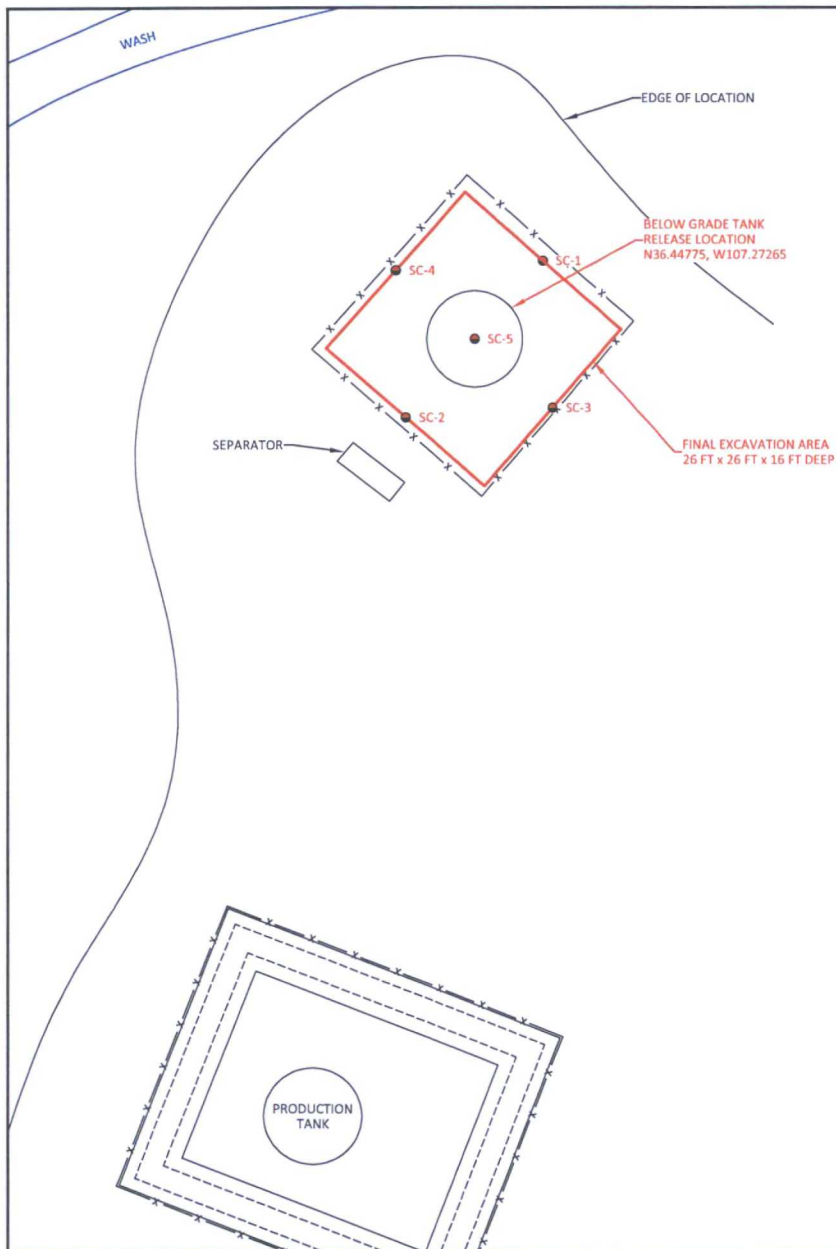
APPROVED BY:
E. McNally

DATE APPROVED:
April 27, 2017

LEGEND

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





Field Screening Results				
Sample ID	Date	Depth (ft)	PID - OVM (ppm)	TPH (mg/kg)
JANOGA ACTION LEVEL			100	100
SC-1	4/20/17	0 to 11	0.0	45.9
SC-2	4/20/17	0 to 11	341	62.4
SC-3	4/20/17	0 to 11	16.2	54.2
SC-4	4/20/17	0 to 11	3.8	42.8
SC-5	5/2/17	16	16.0	33.8

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)
JANOGA ACTION LEVEL			10	50		100	
SC-1	4/20/17	0 to 11	<0.025	<0.224	<5.0	<9.7	<48
SC-2	4/20/17	0 to 11	<0.024	1.42	15	56	<46
SC-3	4/20/17	0 to 11	<0.023	<0.211	<4.7	<9.8	<49
SC-4	4/20/17	0 to 11	<0.023	<0.211	<4.7	<9.8	<49
SC-5	5/2/17	16	<0.015	<0.135	<3.0	<9.4	<47

ALL SAMPLES WERE ANALYZED PER USEPA METHOD 8021B AND 8015D.

FIGURE 4

FINAL EXCAVATION SAMPLE LOCATIONS AND RESULTS APRIL AND MAY 2017
 ConocoPhillips
 JICARILLA 17
 NW¼ NE¼, SECTION 32, T26N, R4W
 RIO ARriba COUNTY, NEW MEXICO
 N36.44760, W107.27236



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DRAWN BY:
C. Lameman

DATE DRAWN:
April 27, 2017

REVISIONS BY:
C. Lameman

DATE REVISED:
May 3, 2017

CHECKED BY:
E. McNally

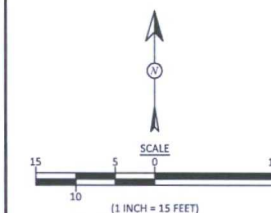
DATE CHECKED:
May 3, 2017

APPROVED BY:
E. McNally

DATE APPROVED:
May 3, 2017

LEGEND

- SAMPLE LOCATIONS
- SECONDARY CONTAINMENT BERM
- x — FENCE



Field Forms

AES BGT Field Report

Client: ConocoPhillips
 Well or Lease Name: Jicorilla #17
 CoP Onsite Supervisor: C. Lamenan
 Site Arrival Time: 1000
 Site Departure Time: 1208

Date: 4-17-16
 AES Personnel: C. Lamenan
S. Glesco
 Beginning mileage: 95315
 Ending Mileage: 95430 (not billed)



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604 W. Pinon Street
 Farmington, NM 87401
 Tel (505) 564-2281
 Fax (505) 324-2022

1911 Main Avenue, Suite 280
 Durango, CO 81301
 Tel (970) 403-3084

Below Grade Tank Information:

BGT (GPS): 36.44775, -107.27265
 Upon Arrival: ☒ Tank Removed / ☐ Tank in Place
 Tank Size: 95 bbls 5' H 12' dia.

Well Head Information:

Well Head (GPS): 36.44760, -107.27230
 Work at Site: ☐ Rework ☐ P&A
 Tank Reset Other: Tank Release

Buck Machine #:	Concentration	Calibration ABS Values
<u>1</u>		
Calibration Date: <u>3/16/17</u>	50 mg/kg	<u>0.136</u>
	100 mg/kg	<u>0.26</u>
	500 mg/kg	

Site Rank: Jicorilla
 Depth to Water: 1
 Land Type: 1
 County: Rio Arriba

Composite Sample Data (S-__):

Sample ID	Collection Date	Time of Sample Collection	Sample Location	OVM (ppm)	OVM Time	Field Chloride (mg/kg)	Field Chloride time	ABS	Field TPH (mg/kg)	Field TPH Analysis Time
BGT SC-1	4-17-17	1033	5-pt Comp.	3,666	1058	60	1100	0.42	284	1054

*Record data as read off instruments/ lab spreadsheets.

Notes:

BGT was removed. No backfill. Black tarp liner at bottom of pit. A puddle of oil or condensate on liner.
 5-pt Composite sample collected @ 1 ft deep. Sand, brown, no staining, strong odor

Field Screening Release Assessment Field Report

Date: 4-18-17

Client: ConocoPhillips
Well or Lease Name: Jicarilla 17
CoP Onsite Supervisor: C. Lamean
Site Arrival Time: 1003
Site Departure Time: 1354

AES Personnel: C. Lamean
Beginning mileage: 95523
Ending Mileage: 95778
Release Source: BGT
Well Head (GPS): 36.44760, -107.27236

Billing Info:
WO #: 22054036
Supervisor: Terry Nelson
USER: KAITLW
Area: 9
Activity Code:
Ordered by: Lisa Hunter

Land Jurisdiction: Jicarilla
County/State: Rio Arriba, New Mexico
Site Rank: JANOGA

Equipment in place: Production tank, Sep., Wt., Meter House

Photos taken: Yes

Buck Machine #			
Concentration	50 mg/kg	100 mg/kg	500 mg/kg
Calibration ABS Values			

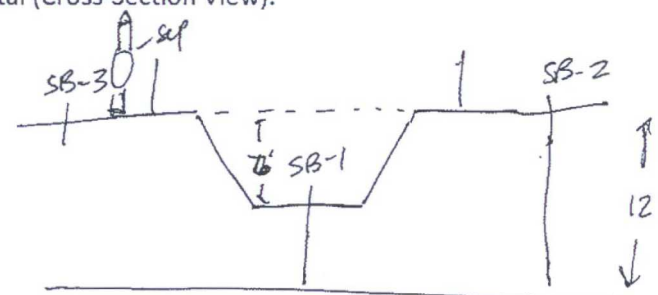
Project Details: BGT had a spill in December 2016. CoPC requested a BGT Closure and spill release assessment

Initial Recommendations: 20 x 20 x 12-15 deep excavation

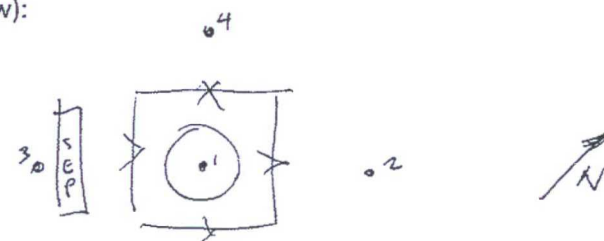
Limitations: Angel maximum depth of 12 ft reached

Site Sketch (DOES NOT REPLACE SITE MAP) and Current Excavation Dimensions:

Horizontal (Cross-Section View):



Vertical (Plan View):



Well or Lease Name: *Aravilla 17*Date: *4-18-17*AES personnel: *CL/SG**SP#7 and 12 Lab 4**3-Day**NO - No Odor**NS - No Staining*

Sample ID	Collection Date	Time of Sample Collection	Sample Location	OVM (ppm)	OVM Time	Field TPH (mg/kg)	Field TPH Analysis Time	ABS	NOTES
SB-1 @ 10'	4-18-17	Center of BGT	1025	486	1056	59.22	1106	0.057	Clayey Sand, Brown, Moist, Odor, NS
@ 12'		1038		281	1057	37.1	1110	0.022	SAA
SB-2 @ 7'		1049	N of BGT 10'	0.0	1112	38.0	1116	0.025	Sand & Clay, Brown, Dry, NO, NS
@ 12'		1058		0.0	1113	40.9	1120	0.028	Sand, Fine, Brown, Dry, NO, NS
SB-3 @ 7'		1123	16' S of BGT 5' Sep.	0.0	1145	39.6	1148	0.026	Clay some Sand, Brown, Moist, NO, NS
@ 12'		1138		0.0	1156	38.3	1158	0.024	Sand w/ Clay, Brown, Moist, NO, NS
SB-4 @ 7'		1203	10' W of BGT	0.0	1219	40.2	1222	0.027	Sand, Fine, Brown, Dry, NO, NS
@ 12'		1213		0.0	1224	42.8	1226	0.031	Sand, V. Fine, Brown, Dry, NO, NS
SB-5 @ 7'		1235	10' E of BGT	0.0	1252	37.1	1254	0.022	Sand & Clay, Brown, Moist, NO, NS
@ 12'		1245		0.0	1256	38.3	1258	0.024	Sand, Coarse, Tan-Brown, Dry, NO, NS

*Include Benzene readings in the notes section initially and transfer to Limitations if Benzene is a problem on the location.

Animas Environmental Services, LLC

604 W Pinon St. Farmington, NM 87401 office # 505-564-2281

1911 N Main, Ste 206, Durango, CO 81301

2 of _____

Release Assessment Field Form 012617.xlsx



36.44738, -107.27174

Google earth

200 ft

Field Screening Release Assessment Field Report

Date: 4-26-17

Client: ConocoPhillips
 Well or Lease Name: Jicarilla 17
 CoP Onsite Supervisor: Tom Stanley
 Site Arrival Time: 1040
 Site Departure Time: 1654
 Land Jurisdiction: Jicarilla 17
 County/State: RA / NM
 Site Rank: 20

AES Personnel: C. Lamenan
 Beginning mileage: 95779
 Ending Mileage: 95999
 Release Source: BGT
 Well Head (GPS): 36.44760, -107.27236
 Release Location (GPS): 36.44775, -107.27245

Billing Info:
 WO #: No Change
 Supervisor: _____
 USER: _____
 Area: _____
 Activity Code: _____
 Ordered by: _____

Equipment in place: PT, Sep, Meter House, WH

Buck Machine #			
Concentration	50 mg/kg	100 mg/kg	500 mg/kg
Calibration ABS Values			

Project Details: Excavation of contaminated area. On arrival excavation dimensions were 15' x 15' x 10' deep. Additional excavation commenced to 26' x 26' x 11' deep.

Initial Recommendations: not continue digging to bottom of contamination.

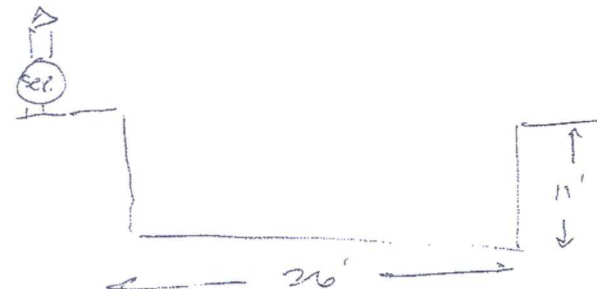
Limitations: Backhoe safety. walls are sheer/vertical and unable to sit on edge. Must use a trackhoe per CF & M.

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 1911 N Main, Ste 280, Durango, CO 81301

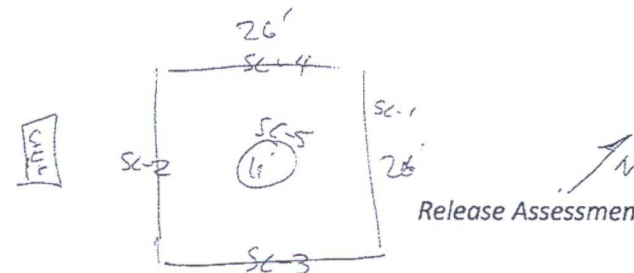
1 of _____

Site Sketch (DOES NOT REPLACE SITE MAP) and Current Excavation Dimensions:

Horizontal (Cross-Section View):



Vertical (Plan View):



Release Assessment Field Form 112114

Gabriel to stay in contact.

Well or Lease Name: Jicavilla 17

Date: 4-20-17

AES personnel: C. Lammon

Well Standard Rush Labs.

26' x 26' x 11' Deep

15' x 15' x 10' deep

Sample ID	Collection Date	Time of Sample Collection	Sample Location	OVM (ppm)	OVM Time	Field TPH (mg/kg)	Field TPH Analysis Time	ABS	NOTES
SC-1	4-20-17	1055	N Wall	3,475	1145	637	1153	0.970	0-10'
SC-2		1100	S Wall	3,579	1146	837	1156	1.285	6-10'
SC-3		1105	E Wall	3,505	1147	357	1159	0.528	0-10'
SC-4		1110	W Wall	3,699	1148	552	1202	0.836	0-10'
SC-5		1115	Base	2,046	1149	1,310	1205	0.171 x 10 D1	10'
SC-2(2)		1450	S Wall	341	1512	42.4	1515	0.062	0-11' (Total extension of Buckline)
SC-4 (2)		1453	W Wall	3.8	1513	42.8	1518	0.031	0-11' (Total extension of Buckline)
SC-1 (2)		1535	N Wall	0.0	1609	15.9	1615	0.036	0-11' "
SC-3(2)		1540	E Wall	16.2	1610	54.2	1618	0.049	0-11' "
SC-5 (2)		1545	Base	3,315	1611	571	1621	0.865	11'

*Include Benzene readings in the notes section initially and transfer to Limitations if Benzene is a problem on the location.

Animas Environmental Services, LLC

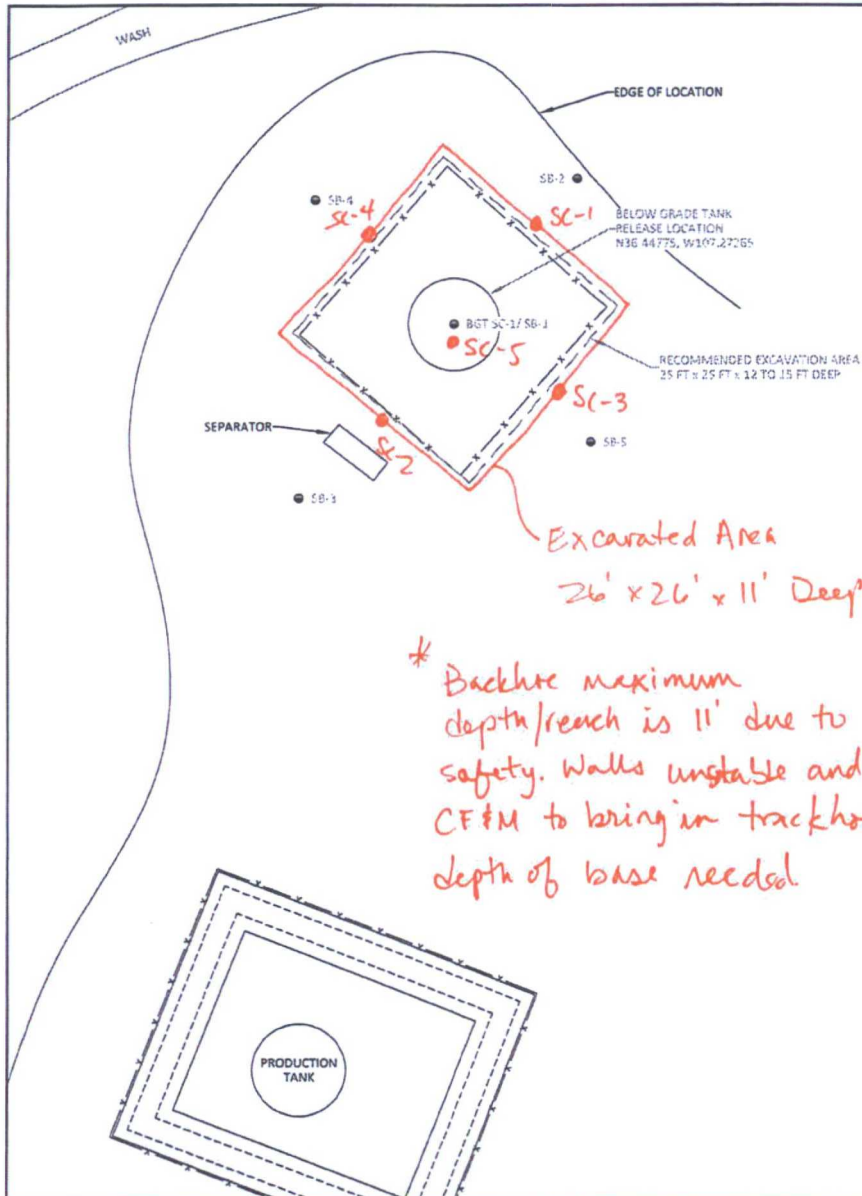
604 W Pinon St. Farmington, NM 87401 office # 505-564-2281

1911 N Main, Ste 280, Durango, CO 81301

2 of ____

Release Assessment Field Form 112114

42017 a



Field Screening Results					
Sample ID	Date	Depth (ft)	OVM-PID (ppm)	TPH (mg/kg)	Chloride (mg/kg)
JANOGA ACTION LEVEL				100	250
BGT SC-1	4/17/17	7	3,666	284	60
SB-1	4/18/17	10	486	59.2	NA
		12	281	37.1	NA
SB-2	4/18/17	7	0.0	39.0	NA
		12	0.0	40.9	NA
SB-3	4/18/17	7	0.0	39.6	NA
		12	0.0	38.3	NA
SB-4	4/18/17	7	0.0	40.2	NA
		12	0.0	42.8	NA
SB-5	4/18/17	7	0.0	37.1	NA
		12	0.0	38.3	NA
NA - NOT ANALYZED					

NOTES AND RECOMMENDATIONS

- JANOGA ACTION LEVEL IS: 100 mg/kg TPH; 50 mg/kg TOTAL BTEX; AND 10 mg/kg BENZENE.
- INITIAL RECOMMENDED EXCAVATED AREA WOULD BE APPROXIMATELY 25 FEET X 25 FEET X 12 TO 15 FEET DEEP.
- REMOVE ALL VISIBLY STAINED SOILS.
- USE OVM-PID ACTION LEVEL OF 100 ppm AND ON SITE FIELD SCREENING TO DETERMINE FINAL EXCAVATION EXTENTS.
- FOLLOWING COMPLETION OF EXCAVATION, COLLECT ADDITIONAL SAMPLES FOR CONFIRMATION.

FIGURE 3

INITIAL ASSESSMENT SAMPLE LOCATIONS, RESULTS AND RECOMMENDATIONS
APRIL 2017
ConocoPhillips
JICARILLA 17
NW¼ NE¼, SECTION 32, T26N, R4W
RIO ARriba COUNTY, NEW MEXICO
N36.44760, W107.27236

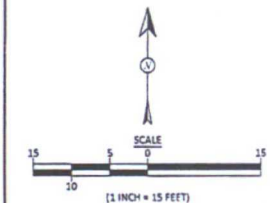


animas
environmental
services
Farmington, NM • Durango, CO
animasenvironmental.com

DRAWN BY: C. Lameman	DATE DRAWN: April 19, 2017
REVISIONS BY: C. Lameman	DATE REVISED: April 19, 2017
CHECKED BY: E. McNally	DATE CHECKED: April 19, 2017
APPROVED BY: E. McNally	DATE APPROVED: April 19, 2017

LEGEND

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



AES personnel: C. Lameman

*Include Benzene readings in the notes section initially and transfer to Limitations if Benzene is a problem on the location.

Analytical Reports



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

April 24, 2017

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

RE: COPC Jicarilla 17

OrderNo.: 1704817

Dear Corwin Lameman:

Hall Environmental Analysis Laboratory received 1 sample(s) on 4/19/2017 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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1704817

Date Reported: 4/24/2017

CLIENT: Animas Environmental

Client Sample ID: BGT SC-1

Project: COPC Jicarilla 17

Collection Date: 4/17/2017 10:33:00 AM

Lab ID: 1704817-001

Matrix: MEOH (SOIL)

Received Date: 4/19/2017 6:46:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: MAB
Petroleum Hydrocarbons, TR	ND	19		mg/Kg	1	4/24/2017	31364
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	110	30		mg/Kg	20	4/19/2017 3:38:03 PM	31315
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/20/2017 5:01:33 PM	31314
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/20/2017 5:01:33 PM	31314
Surr: DNOP	108	70-130		%Rec	1	4/20/2017 5:01:33 PM	31314
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	4/19/2017 7:51:58 PM	31299
Surr: BFB	98.4	54-150		%Rec	1	4/19/2017 7:51:58 PM	31299
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.016		mg/Kg	1	4/19/2017 7:51:58 PM	31299
Toluene	0.085	0.032		mg/Kg	1	4/19/2017 7:51:58 PM	31299
Ethylbenzene	ND	0.032		mg/Kg	1	4/19/2017 7:51:58 PM	31299
Xylenes, Total	0.16	0.065		mg/Kg	1	4/19/2017 7:51:58 PM	31299
Surr: 4-Bromofluorobenzene	113	66.6-132		%Rec	1	4/19/2017 7:51:58 PM	31299

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#: 1704817

24-Apr-17

Client: Animas Environmental

Project: COPC Jicarilla 17

Sample ID	MB-31315	SampType:	mblk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	31315	RunNo:	42222					
Prep Date:	4/19/2017	Analysis Date:	4/19/2017	SeqNo:	1327296	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-31315	SampType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	31315	RunNo:	42222					
Prep Date:	4/19/2017	Analysis Date:	4/19/2017	SeqNo:	1327297	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.1	90	110			

Sample ID	MB-31315	SampType:	mblk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	31315	RunNo:	42250					
Prep Date:	4/19/2017	Analysis Date:	4/20/2017	SeqNo:	1328675	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-31315	SampType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	31315	RunNo:	42250					
Prep Date:	4/19/2017	Analysis Date:	4/20/2017	SeqNo:	1328676	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.9	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1704817

24-Apr-17

Client: Animas Environmental

Project: COPC Jicarilla 17

Sample ID	MB-31364	SampType:	MBLK	TestCode:	EPA Method 418.1: TPH					
Client ID:	PBS	Batch ID:	31364	RunNo:	42318					
Prep Date:	4/21/2017	Analysis Date:	4/24/2017	SeqNo:	1330184	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-31364	SampType:	LCS	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS	Batch ID:	31364	RunNo:	42318					
Prep Date:	4/21/2017	Analysis Date:	4/24/2017	SeqNo:	1330185	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	108	61.7	138			

Sample ID	LCSD-31364	SampType:	LCSD	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS02	Batch ID:	31364	RunNo:	42318					
Prep Date:	4/21/2017	Analysis Date:	4/24/2017	SeqNo:	1330186	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	110	61.7	138	1.17	20	

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1704817

24-Apr-17

Client: Animas Environmental

Project: COPC Jicarilla 17

Sample ID	LCS-31314		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 31314		RunNo: 42241					
Prep Date:	4/19/2017		Analysis Date: 4/20/2017		SeqNo: 1327762		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	96.2	63.8	116			
Surr: DNOP	4.7		5.000		93.6	70	130			

Sample ID	MB-31314	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID: 31314			RunNo: 42241					
Prep Date:	4/19/2017	Analysis Date: 4/20/2017			SeqNo: 1327763		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	10		10.00		103	70	130			

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1704817

24-Apr-17

Client: Animas Environmental

Project: COPC Jicarilla 17

Sample ID	MB-31299	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	31299	RunNo:	42221					
Prep Date:	4/18/2017	Analysis Date:	4/19/2017	SeqNo:	1326923	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	930		1000		93.2	54	150			

Sample ID	LCS-31299	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	31299	RunNo:	42221					
Prep Date:	4/18/2017	Analysis Date:	4/19/2017	SeqNo:	1326924	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	100	76.4	125			
Surr: BFB	1000		1000		102	54	150			

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1704817

24-Apr-17

Client: Animas Environmental

Project: COPC Jicarilla 17

Sample ID	MB-31299		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	31299		RunNo:	42221			
Prep Date:	4/18/2017		Analysis Date:	4/19/2017		SeqNo:	1326955	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	1.1		1.000		111	66.6	132			

Sample ID	LCS-31299		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	31299		RunNo:	42221			
Prep Date:	4/18/2017		Analysis Date:	4/19/2017		SeqNo:	1326956	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	1.0	0.050	1.000	0	100	80	120			
Ethylbenzene	1.0	0.050	1.000	0	100	80	120			
Xylenes, Total	2.8	0.10	3.000	0	92.8	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		115	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 |
| 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
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: 1704817

RcptNo: 1

Received By: Lindsay Mangin 4/19/2017 6:46:00 AM

Completed By: Ashley Gallegos 4/19/2017 8:27:50 AM

Reviewed By: ENM 04/19/17

[Signature]
[Signature]

Chain of Custody

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

Log In

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

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

Special Handling (if applicable)

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

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

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

Chain-of-Custody Record		Turn-Around Time:
Client: <u>Animas Environmental</u>	<input type="checkbox"/> Standard	<input checked="" type="checkbox"/> Rush <u>3-day</u>
<u>Services, LLC</u>	Project Name: <u>COPE Jicarilla #17</u>	
Mailing Address: <u>604 W Pinar St</u>	Project #:	
<u>Farmington NM, 87401</u>	Project Manager: <u>Claneman / E. McNally</u>	
Phone #:	Sampler: <u>CL/SG</u>	
email or Fax #: <u>Claneman@animasenvironmental.com</u>	On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
QA/QC Package:	Sample Temperature: <u>6.1</u>	
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)		
Accreditation		
<input type="checkbox"/> NELAP <input type="checkbox"/> Other _____		
<input type="checkbox"/> EDD (Type)		

☐ Standard

☒ Rush 3-day

COPE Jicarilla #17

Project #:

Project Manager:

Clawerman / E. McNally

Sampler: CLHSG

On Ice: ☒ Yes ☐ No

Sample Temperature: 6.1

[illegible]

Date:	Time:	Relinquished by:
-------	-------	------------------

4/18/17	1633
---------	------

Relinquished by:

Am-hu

Received by:

Chwaet

Date	Time
------	------

4/18/17 1633

Remarks:

W0: 22054036

Supervisor: Terry Nelson

Bill to Condor Phil 11:05 call with guest

UserID: KAITLW

ordered by: Lisa Hunter


Date:	Time:
-------	-------

4	18/17	1820
---	-------	------

Requisitioned by:

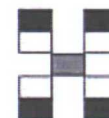
Int 4/12/18

Received by,



Date: _____ Time: _____

19/7/20



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

	X	BTEX + MTBE + TMB's (8021)
		BTEX + MTBE + TPH (Gas only)
	X	TPH 8015B (GRO DRO / MRO)
	X	TPH (Method 418.1)
		EDB (Method 504.1)
		PAH's (8310 or 8270 SIMS)
		RCRA 8 Metals
		Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)
		8081 Pesticides / 8082 PCB's
		8260B (VOA)
		8270 (Semi-VOA)
	X	Chlorides (300.0)
		Air Bubbles (Y or N)

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

April 21, 2017

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

RE: COPC Jicarilla 17

OrderNo.: 1704816

Dear Corwin Lameman:

Hall Environmental Analysis Laboratory received 2 sample(s) on 4/19/2017 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 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,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1704816

Date Reported: 4/21/2017

CLIENT: Animas Environmental

Client Sample ID: SB-1 @ 10'

Project: COPC Jicarilla 17

Collection Date: 4/18/2017 10:25:00 AM

Lab ID: 1704816-001

Matrix: MEOH (SOIL)

Received Date: 4/19/2017 6:46:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/20/2017 3:32:22 PM	31314
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/20/2017 3:32:22 PM	31314
Surr: DNOP	107	70-130		%Rec	1	4/20/2017 3:32:22 PM	31314
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	6.2	2.6		mg/Kg	1	4/19/2017 4:44:50 PM	31299
Surr: BFB	103	54-150		%Rec	1	4/19/2017 4:44:50 PM	31299
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	0.15	0.013		mg/Kg	1	4/19/2017 4:44:50 PM	31299
Toluene	0.38	0.026		mg/Kg	1	4/19/2017 4:44:50 PM	31299
Ethylbenzene	ND	0.026		mg/Kg	1	4/19/2017 4:44:50 PM	31299
Xylenes, Total	0.37	0.052		mg/Kg	1	4/19/2017 4:44:50 PM	31299
Surr: 4-Bromofluorobenzene	118	66.6-132		%Rec	1	4/19/2017 4:44:50 PM	31299

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

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

Hall Environmental Analysis Laboratory, Inc.**Analytical Report**

Lab Order 1704816

Date Reported: 4/21/2017

CLIENT: Animas Environmental**Client Sample ID:** SB-1 @ 12'**Project:** COPC Jicarilla 17**Collection Date:** 4/18/2017 10:38:00 AM**Lab ID:** 1704816-002**Matrix:** MEOH (SOIL)**Received Date:** 4/19/2017 6:46:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	4/20/2017 4:39:20 PM	31314
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/20/2017 4:39:20 PM	31314
Surr: DNOP	109	70-130		%Rec	1	4/20/2017 4:39:20 PM	31314
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.0		mg/Kg	1	4/19/2017 7:05:21 PM	31299
Surr: BFB	97.9	54-150		%Rec	1	4/19/2017 7:05:21 PM	31299
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.015		mg/Kg	1	4/19/2017 7:05:21 PM	31299
Toluene	0.034	0.030		mg/Kg	1	4/19/2017 7:05:21 PM	31299
Ethylbenzene	ND	0.030		mg/Kg	1	4/19/2017 7:05:21 PM	31299
Xylenes, Total	ND	0.059		mg/Kg	1	4/19/2017 7:05:21 PM	31299
Surr: 4-Bromofluorobenzene	116	66.6-132		%Rec	1	4/19/2017 7:05:21 PM	31299

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#: 1704816

21-Apr-17

Client: Animas Environmental

Project: COPC Jicarilla 17

Sample ID	LCS-31314		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 31314		RunNo: 42241					
Prep Date:	4/19/2017		Analysis Date: 4/20/2017		SeqNo: 1327762		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	96.2	63.8	116			
Surr: DNOP	4.7		5.000		93.6	70	130			

Sample ID	MB-31314	SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS	Batch ID:	31314		RunNo:	42241				
Prep Date:	4/19/2017	Analysis Date:	4/20/2017		SeqNo:	1327763	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	10		10.00		103	70	130			

Sample ID	1704816-001AMS		SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	SB-1 @ 10'		Batch ID: 31314		RunNo: 42241					
Prep Date:	4/19/2017		Analysis Date: 4/20/2017		SeqNo: 1327975		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.40	0	99.3	51.6	130			
Surr: DNOP	5.0		5.040		98.9	70	130			

Sample ID	1704816-001AMSD		SampType: MSD		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	SB-1 @ 10'		Batch ID: 31314		RunNo: 42241					
Prep Date:	4/19/2017		Analysis Date: 4/20/2017		SeqNo: 1327976		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	9.9	49.31	0	99.9	51.6	130	1.64	20	
Surr: DNOP	4.9		4.931		98.9	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 |
| 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#: 1704816

21-Apr-17

Client: Animas Environmental

Project: COPC Jicarilla 17

Sample ID	MB-31299	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	31299	RunNo:	42221					
Prep Date:	4/18/2017	Analysis Date:	4/19/2017	SeqNo:	1326923	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	930		1000		93.2	54	150			

Sample ID	LCS-31299	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	31299	RunNo:	42221					
Prep Date:	4/18/2017	Analysis Date:	4/19/2017	SeqNo:	1326924	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	100	76.4	125			
Surr: BFB	1000		1000		102	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 |
| 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#: 1704816

21-Apr-17

Client: Animas Environmental

Project: COPC Jicarilla 17

Sample ID	MB-31299		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	31299		RunNo:	42221			
Prep Date:	4/18/2017		Analysis Date:	4/19/2017		SeqNo:	1326955		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	1.1		1.000		111	66.6	132			

Sample ID	LCS-31299		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	31299		RunNo:	42221			
Prep Date:	4/18/2017		Analysis Date:	4/19/2017		SeqNo:	1326956		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	1.0	0.050	1.000	0	100	80	120			
Ethylbenzene	1.0	0.050	1.000	0	100	80	120			
Xylenes, Total	2.8	0.10	3.000	0	92.8	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		115	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 |
| 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
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: 1704816

RcptNo: 1

Received By: Lindsay Mangin 4/19/2017 6:46:00 AM

Completed By: Ashley Gallegos 4/19/2017 8:20:38 AM

Reviewed By: ENM 04/19/17

[Signature]
[Signature]

Chain of Custody

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

Log In

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

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

Special Handling (if applicable)

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

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

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.1	Good	Yes			

Client: Animas Environmental Services

Mailing Address: 604 W. Pine St
Farmington NM

Phone #: 505-24-2281

email or Fax#: clanona@animalenvironment

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other☐ EDD (Type)

Turn-Around Time:

☐ Standard

Project Name: COPC Ticavilla #17

Project #:

Project Manager:

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: / ,

HEAL No.

1704816

-00

-002

Date:	Time:	Relinquished by:
-------	-------	------------------

4/18/17	1633	Paul
---------	------	------

Date:	Time:	Relinquished by:
-------	-------	------------------

4/18/7	1820	Went back
--------	------	-----------

Received by:

Ph-Wget

Received by:



Date	Time
------	------

4/18/7 1433

Date	Time
------	------

1917 Oct

Remarks:	bill to Conoco Phillips
----------	-------------------------

Watt: 22054036

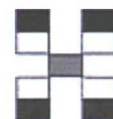
Area: 9

Supervisor: Terry Nelson

WSEX ID: KAITI W

ordered by: Lisa Hunter

Call in Question



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

	X	X	BTEX + MTBE + TMB's (8021)
			BTEX + MTBE + TPH (Gas only)
	X	X	TPH 8015B (GRO / DRO / MRO)
			TPH (Method 418.1)
			EDB (Method 504.1)
			PAH's (8310 or 8270 SIMS)
			RCRA 8 Metals
			Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)
			8081 Pesticides / 8082 PCB's
			8260B (VOA)
			8270 (Semi-VOA)
			Air Bubbles (Y or N)

Air Bubbles (V or N)

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

April 27, 2017

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

RE: COPC Jicarilla 17

OrderNo.: 1704A44

Dear Corwin Lameman:

Hall Environmental Analysis Laboratory received 4 sample(s) on 4/22/2017 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,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1704A44

Date Reported: 4/27/2017

CLIENT: Animas Environmental

Client Sample ID: SC-1

Project: COPC Jicarilla 17

Collection Date: 4/20/2017 3:35:00 PM

Lab ID: 1704A44-001

Matrix: SOIL

Received Date: 4/22/2017 10:00:00 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	4/25/2017 7:40:58 PM	31395
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/25/2017 7:40:58 PM	31395
Surr: DNOP	103	70-130		%Rec	1	4/25/2017 7:40:58 PM	31395
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/25/2017 9:18:48 PM	31392
Surr: BFB	102	54-150		%Rec	1	4/25/2017 9:18:48 PM	31392
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	4/25/2017 9:18:48 PM	31392
Toluene	ND	0.050		mg/Kg	1	4/25/2017 9:18:48 PM	31392
Ethylbenzene	ND	0.050		mg/Kg	1	4/25/2017 9:18:48 PM	31392
Xylenes, Total	ND	0.099		mg/Kg	1	4/25/2017 9:18:48 PM	31392
Surr: 4-Bromofluorobenzene	111	66.6-132		%Rec	1	4/25/2017 9:18:48 PM	31392

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	Page 1 of 7
	D	Sample Diluted Due to Matrix	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1704A44

Date Reported: 4/27/2017

CLIENT: Animas Environmental

Client Sample ID: SC-2

Project: COPC Jicarilla 17

Collection Date: 4/20/2017 2:50:00 PM

Lab ID: 1704A44-002

Matrix: SOIL

Received Date: 4/22/2017 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	56	9.1		mg/Kg	1	4/25/2017 8:02:59 PM	31395
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/25/2017 8:02:59 PM	31395
Surr: DNOP	107	70-130		%Rec	1	4/25/2017 8:02:59 PM	31395
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	15	4.8		mg/Kg	1	4/26/2017 5:53:24 PM	31392
Surr: BFB	132	54-150		%Rec	1	4/26/2017 5:53:24 PM	31392
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	4/26/2017 5:53:24 PM	31392
Toluene	0.12	0.048		mg/Kg	1	4/26/2017 5:53:24 PM	31392
Ethylbenzene	ND	0.048		mg/Kg	1	4/26/2017 5:53:24 PM	31392
Xylenes, Total	1.3	0.096		mg/Kg	1	4/26/2017 5:53:24 PM	31392
Surr: 4-Bromofluorobenzene	111	66.6-132		%Rec	1	4/26/2017 5:53:24 PM	31392

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

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

Hall Environmental Analysis Laboratory, Inc.**Analytical Report**Lab Order **1704A44**Date Reported: **4/27/2017****CLIENT:** Animas Environmental**Client Sample ID:** SC-3**Project:** COPC Jicarilla 17**Collection Date:** 4/20/2017 3:40:00 PM**Lab ID:** 1704A44-003**Matrix:** SOIL**Received Date:** 4/22/2017 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/25/2017 8:24:52 PM	31395
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/25/2017 8:24:52 PM	31395
Surr: DNOP	108	70-130		%Rec	1	4/25/2017 8:24:52 PM	31395
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/25/2017 10:06:50 PM	31392
Surr: BFB	97.8	54-150		%Rec	1	4/25/2017 10:06:50 PM	31392
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	4/25/2017 10:06:50 PM	31392
Toluene	ND	0.047		mg/Kg	1	4/25/2017 10:06:50 PM	31392
Ethylbenzene	ND	0.047		mg/Kg	1	4/25/2017 10:06:50 PM	31392
Xylenes, Total	ND	0.094		mg/Kg	1	4/25/2017 10:06:50 PM	31392
Surr: 4-Bromofluorobenzene	106	66.6-132		%Rec	1	4/25/2017 10:06:50 PM	31392

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

Analytical Report

Lab Order 1704A44

Date Reported: 4/27/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental

Client Sample ID: SC-4

Project: COPC Jicarilla 17

Collection Date: 4/20/2017 2:53:00 PM

Lab ID: 1704A44-004

Matrix: SOIL

Received Date: 4/22/2017 10:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/25/2017 8:46:40 PM	31395
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/25/2017 8:46:40 PM	31395
Surr: DNOP	107	70-130		%Rec	1	4/25/2017 8:46:40 PM	31395
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/25/2017 10:30:56 PM	31392
Surr: BFB	99.4	54-150		%Rec	1	4/25/2017 10:30:56 PM	31392
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.023		mg/Kg	1	4/25/2017 10:30:56 PM	31392
Toluene	ND	0.047		mg/Kg	1	4/25/2017 10:30:56 PM	31392
Ethylbenzene	ND	0.047		mg/Kg	1	4/25/2017 10:30:56 PM	31392
Xylenes, Total	ND	0.094		mg/Kg	1	4/25/2017 10:30:56 PM	31392
Surr: 4-Bromofluorobenzene	107	66.6-132		%Rec	1	4/25/2017 10:30:56 PM	31392

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#: 1704A44

27-Apr-17

Client: Animas Environmental

Project: COPC Jicarilla 17

Sample ID	LCS-31395		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 31395		RunNo: 42335					
Prep Date:	4/24/2017		Analysis Date: 4/25/2017		SeqNo: 1331306		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	96.3	63.8	116			
Surr: DNOP	4.6		5.000		92.8	70	130			

Sample ID	MB-31395	SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS	Batch ID:	31395		RunNo:	42335				
Prep Date:	4/24/2017	Analysis Date:	4/25/2017		SeqNo:	1331307	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	11		10.00		107	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#: 1704A44

27-Apr-17

Client: Animas Environmental

Project: COPC Jicarilla 17

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	G42346	RunNo:	42346					
Prep Date:		Analysis Date:	4/25/2017	SeqNo:	1331528	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		99.7	54	150			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	G42346	RunNo:	42346					
Prep Date:		Analysis Date:	4/25/2017	SeqNo:	1331529	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		114	54	150			

Sample ID	MB-31392	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	31392	RunNo:	42346					
Prep Date:	4/24/2017	Analysis Date:	4/25/2017	SeqNo:	1331541	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		102	54	150			

Sample ID	LCS-31392	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	31392	RunNo:	42346					
Prep Date:	4/24/2017	Analysis Date:	4/25/2017	SeqNo:	1331542	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	101	76.4	125			
Surr: BFB	1100		1000		111	54	150			

Sample ID	MB-31417	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	31417	RunNo:	42378					
Prep Date:	4/25/2017	Analysis Date:	4/26/2017	SeqNo:	1332745	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	920		1000		92.0	54	150			

Sample ID	LCS-31417	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	31417	RunNo:	42378					
Prep Date:	4/25/2017	Analysis Date:	4/26/2017	SeqNo:	1332746	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		100	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 |
| 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#: 1704A44

27-Apr-17

Client: Animas Environmental

Project: COPC Jicarilla 17

Sample ID	MB-31392		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 31392		RunNo: 42346					
Prep Date:	4/24/2017		Analysis Date: 4/25/2017		SeqNo: 1331567		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	1.1		1.000		111	66.6	132			

Sample ID	LCS-31392		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 31392		RunNo: 42346					
Prep Date:	4/24/2017		Analysis Date: 4/25/2017		SeqNo: 1331568		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.025	1.000	0	82.9	80	120			
Toluene	0.85	0.050	1.000	0	84.6	80	120			
Ethylbenzene	0.87	0.050	1.000	0	86.6	80	120			
Xylenes, Total	2.6	0.10	3.000	0	88.1	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		112	66.6	132			

Sample ID	MB-31417		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 31417		RunNo: 42378					
Prep Date:	4/25/2017		Analysis Date: 4/26/2017		SeqNo: 1332767		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		104	66.6	132			

Sample ID	LCS-31417		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 31417		RunNo: 42378					
Prep Date:	4/25/2017		Analysis Date: 4/26/2017		SeqNo: 1332768		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		105	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 |
| 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
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: 1704A44

RcptNo: 1

Received By: Lindsay Mangin 4/22/2017 10:00:00 AM

Completed By: Anne Thorne 4/24/2017 9:33:08 AM

Reviewed By: ERE 04/24/17

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

Special Handling (if applicable)

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

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

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
2	4/22/17 10.	Good	Yes			

UNIT-AROUND TIME:

☒ Standard ☐ Rush

COPC Jicarilla 17

Project #:

Phone #: 505-564-2281

Email or Fax#: clameman@animasenvironmental.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other _____☐ EDD (Type) _____

Project Manager:

C. Lameman/ E. McNally

Sampler: CL

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.2

[illegible]

Date:	Time:	Relinquished by:
-------	-------	------------------

4/21/17	1342	Conklin
---------	------	---------

Date: / /	Time: / /	Relinquished by: _____
-----------	-----------	------------------------

7/21/17	1854	Ernest W. Cobb
---------	------	----------------

Received by:

Christ Walt

Received by:

04/23/17 1000

Date	Time
------	------

4/21/17 1347

Date _____ Time _____

12/17/00

Remarks: Bill to Conoco Phillips

WO # 22054036

Supervisor: Terry nelson

USERID: KAITLW

Area: 9

Ordered by: Lisa Hunter



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request



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

May 04, 2017

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

RE: COPC Jicarilla 17

OrderNo.: 1705138

Dear Corwin Lameman:

Hall Environmental Analysis Laboratory received 1 sample(s) on 5/3/2017 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,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1705138

Date Reported: 5/4/2017

CLIENT: Animas Environmental

Client Sample ID: SC-5

Project: COPC Jicarilla 17

Collection Date: 5/2/2017 11:32:00 AM

Lab ID: 1705138-001

Matrix: MEOH (SOIL)

Received Date: 5/3/2017 7:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	5/3/2017 10:34:33 AM	31540
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	5/3/2017 10:34:33 AM	31540
Surr: DNOP	85.5	70-130		%Rec	1	5/3/2017 10:34:33 AM	31540
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.0		mg/Kg	1	5/3/2017 9:52:14 AM	31528
Surr: BFB	99.8	54-150		%Rec	1	5/3/2017 9:52:14 AM	31528
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.015		mg/Kg	1	5/3/2017 9:52:14 AM	31528
Toluene	ND	0.030		mg/Kg	1	5/3/2017 9:52:14 AM	31528
Ethylbenzene	ND	0.030		mg/Kg	1	5/3/2017 9:52:14 AM	31528
Xylenes, Total	ND	0.060		mg/Kg	1	5/3/2017 9:52:14 AM	31528
Surr: 4-Bromofluorobenzene	117	66.6-132		%Rec	1	5/3/2017 9:52:14 AM	31528

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#: 1705138

04-May-17

Client: Animas Environmental

Project: COPC Jicarilla 17

Sample ID	LCS-31540		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 31540		RunNo: 42506					
Prep Date:	5/3/2017		Analysis Date: 5/3/2017		SeqNo: 1336816		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	94.4	63.8	116			
Surr: DNOP	4.4		5.000		87.9	70	130			

Sample ID	MB-31540	SampType: MBLK			TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID: 31540			RunNo: 42506					
Prep Date:	5/3/2017	Analysis Date: 5/3/2017			SeqNo: 1336817		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		96.3	70	130			

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1705138

04-May-17

Client: Animas Environmental

Project: COPC Jicarilla 17

Sample ID	MB-31528	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	31528	RunNo:	42521					
Prep Date:	5/2/2017	Analysis Date:	5/3/2017	SeqNo:	1337213	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	980		1000		98.0	54	150			

Sample ID	LCS-31528	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	31528	RunNo:	42521					
Prep Date:	5/2/2017	Analysis Date:	5/3/2017	SeqNo:	1337214	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	96.1	76.4	125			
Surr: BFB	1100		1000		110	54	150			

Sample ID	MB-31527	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	31527	RunNo:	42521					
Prep Date:	5/2/2017	Analysis Date:	5/3/2017	SeqNo:	1337221	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	970		1000		96.8	54	150			

Sample ID	LCS-31527	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	31527	RunNo:	42521					
Prep Date:	5/2/2017	Analysis Date:	5/3/2017	SeqNo:	1337222	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		103	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 |
| 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#: 1705138

04-May-17

Client: Animas Environmental

Project: COPC Jicarilla 17

Sample ID	MB-31528		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	31528		RunNo:	42521			
Prep Date:	5/2/2017		Analysis Date:	5/3/2017		SeqNo:	1337245		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		117	66.6	132			

Sample ID	LCS-31528		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	31528		RunNo:	42521			
Prep Date:	5/2/2017		Analysis Date:	5/3/2017		SeqNo:	1337246		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	97.4	80	120			
Toluene	0.98	0.050	1.000	0	97.6	80	120			
Ethylbenzene	0.98	0.050	1.000	0	98.1	80	120			
Xylenes, Total	3.0	0.10	3.000	0	100	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		121	66.6	132			

Sample ID	MB-31527		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	31527		RunNo:	42521			
Prep Date:	5/2/2017		Analysis Date:	5/3/2017		SeqNo:	1337252		Units: %Rec	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		114	66.6	132			

Sample ID	LCS-31527		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	31527		RunNo:	42521			
Prep Date:	5/2/2017		Analysis Date:	5/3/2017		SeqNo:	1337253		Units: %Rec	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		111	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 |
| 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
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: 1705138

RcptNo: 1

Received By: Ashley Gallegos 5/3/2017 7:30:00 AM

Completed By: Ashley Gallegos 5/3/2017 8:02:50 AM

Reviewed By: *aj*

5/3/17

aj

aj

Chain of Custody

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

Log In

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

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.2	Good	Yes			

Client: **Animas Environmental Services, LLC**

☐ Standard ☒ Rush **SAME DAY**

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

Project Name: ~~POC~~ Jicarilla 17

Project #:

Phone #: 505-564-2281

Email or Fax#: clameman@animasenvironmental.com

Project Manager:

C. Lameman/ E. McNally

QA/QC Package:

X Standard

☐ **Level 4 (Full Validation)**

Accreditation:

☐ NELAP


☐ Other☐ EDD (Type)

Sampler: CL

On Ice: ☒ Yes ☐ No (see)

Sample Temperature: 1.745 ± 0.2


[illegible]

Date: 5/2/17	Time: 1737	Relinquished by: 
--------------	------------	--

Received by:	Date	Time
Christine W. Lee	5/2/17	1727

Remarks: Bill to Conoco Phillips
WO # 22054036
Supervisor: Terry nelson
USERID: KAITLW
Area: 9
Ordered by: Lisa Hunter

Date:	Time:	Relinquished by:
5/2/17	1912	Christa Welter

Received by:  Date: 05/03/17 Time: 0730

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.