

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

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

Form C-144
Revised June 6, 2013

For temporary pits, below-grade tanks, and multi-well fluid management pits, submit to the appropriate NMOCD District Office.
For permanent pits submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

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

OIL CONS. DIV DIST. 3

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

DEC 04 2015

Instructions: Please submit one application (Form C-144) per individual pit, below-grade tank or alternative request

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.

Operator: ConocoPhillips Company OGRID #: 217817

Address: PO BOX 4289, Farmington, NM 87499

Facility or well name: Clay 1

API Number: 30-045-22011 OCD Permit Number: _____

U/L or Qtr/Qtr O (SWSE) Section 12 Township 26N Range 12W County: San Juan

Center of Proposed Design: Latitude 36.49750900 °N Longitude -108.05892000 °W NAD: ☐ 1927 ☒ 1983

Surface Owner: ☐ Federal ☐ State ☐ Private ☒ Tribal Trust or Indian Allotment

2.

☐ **Pit:** Subsection F, G or J of 19.15.17.11 NMAC

Temporary: ☐ Drilling ☐ Workover

☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A ☐ Multi-Well Fluid Management Low Chloride Drilling Fluid ☐ yes ☐ no

☐ Lined ☐ Unlined Liner type: Thickness _____ mil ☒ LLDPE ☐ HDPE ☐ PVC ☐ Other _____

☐ String-Reinforced

Liner Seams: ☐ Welded ☐ Factory ☐ Other _____ Volume: _____ bbl Dimensions: L _____ x W _____ x D _____

3.

☒ **Below-grade tank:** Subsection I of 19.15.17.11 NMAC

Volume: 120 bbl Type of fluid: Produced Water

Tank Construction material: Metal

☐ Secondary containment with leak detection ☒ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off

☐ Visible sidewalls and liner ☐ Visible sidewalls only ☐ Other _____

Liner type: Thickness 45 mil ☐ HDPE ☐ PVC ☒ Other LLDPE

4.

☐ **Alternative Method:**

Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

5.

Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tanks)

☐ Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residence, school, hospital, institution or church)

☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet

☐ Alternate. Please specify _____

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

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

7. **Signs:** Subsection C of 19.15.17.11 NMAC

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

8. **Variances and Exceptions:**

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

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

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

9. **Siting Criteria (regarding permitting):** 19.15.17.10 NMAC

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

General siting

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

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

☐ Yes ☐ No
☒ NA

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

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

☐ Yes ☐ No
☒ NA

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

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

☐ Yes ☐ No

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

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

☐ Yes ☐ No

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

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

☐ Yes ☐ No

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

- FEMA map

☐ Yes ☐ No

Below Grade Tanks

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

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

☐ Yes ☒ No

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

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

☐ Yes ☒ No

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

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

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

☐ Yes ☐ No

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

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

☐ Yes ☐ No

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

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

☐ Yes ☐ No

Within 100 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Temporary Pit Non-low chloride drilling fluid

Within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).

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

☐ Yes ☐ No

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

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

☐ Yes ☐ No

Within 500 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application;

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

☐ Yes ☐ No

Within 300 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Permanent Pit or Multi-Well Fluid Management Pit

Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).

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

☐ Yes ☐ No

Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.

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

☐ Yes ☐ No

Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application.

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

☐ Yes ☐ No

Within 500 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

10.

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

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

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

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

11.

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

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

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

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

12.

Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC

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

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

13.

Proposed Closure: 19.15.17.13 NMAC

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

- Type: ☐ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☐ Permanent Pit ☐ Below-grade Tank ☐ Multi-well Fluid Management Pit
☐ Alternative
- Proposed Closure Method: ☒ Waste Excavation and Removal
☐ Waste Removal (Closed-loop systems only)
☐ On-site Closure Method (Only for temporary pits and closed-loop systems)
 ☐ In-place Burial ☐ On-site Trench Burial
☐ Alternative Closure Method

14.

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

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

15.

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

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

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

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

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

☐ Yes ☐ No

Within the area overlying a subsurface mine.

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

☐ Yes ☐ No

Within an unstable area.

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

☐ Yes ☐ No

Within a 100-year floodplain.

- FEMA map

☐ Yes ☐ No

16.

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

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

17.

Operator Application Certification:

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

Name (Print): _____ Title: _____

Signature: _____ Date: _____

e-mail address: _____ Telephone: _____

18.

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

OCD Representative Signature: _____ Approval Date: 12/18/2015

Title: Environmental Specialist _____ OCD Permit Number: _____

19.

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

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

☒ Closure Completion Date: 09/30/2011

20.

Closure Method:

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

21.

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

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

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

Operator Closure Certification:

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

Name (Print): Crystal Walker Title: Regulatory Coordinator

Signature:  Date: 12/3/15

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

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

**Lease Name: Clay 1
API No.: 30-045-22011**

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 not 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 missing.

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 not completed. Notification is missing.

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 placed 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 (**Missing**)

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

| | |
|---|-------------------------------------|
| Name of Company ConocoPhillips Company | Contact Crystal Walker |
| Address 3401 East 30th St, Farmington, NM | Telephone No. (505) 326-9837 |
| Facility Name: Clay 1 | Facility Type: Gas Well |

| | | |
|-----------------------------|-----------------------------|-----------------------------|
| Surface Owner Tribal | Mineral Owner Tribal | API No. 30-045-22011 |
|-----------------------------|-----------------------------|-----------------------------|

LOCATION OF RELEASE

| | | | | | | | | |
|-------------------------|----------------------|------------------------|---------------------|-----------------------------|----------------------------------|------------------------------|-------------------------------|---------------------------|
| Unit Letter O | Section 12 | Township 26N | Range 12W | Feet from the 790 | North/South Line South | Feet from the 1600 | East/West Line East | County San Juan |
|-------------------------|----------------------|------------------------|---------------------|-----------------------------|----------------------------------|------------------------------|-------------------------------|---------------------------|

Latitude **36.49750900** Longitude **-108.05892000**

NATURE OF RELEASE

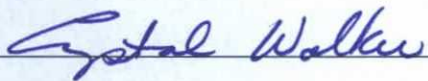
| | | |
|--|---|----------------------------|
| Type of Release | Volume of Release | Volume Recovered |
| Source of Release | Date and Hour of Occurrence | Date and Hour of Discovery |
| Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required | If YES, To Whom? | |
| By Whom? | Date and Hour | |
| Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | If YES, Volume Impacting the Watercourse. | |

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

Describe Cause of Problem and Remedial Action Taken.*
No release was encountered during the BGT Closure.

Describe Area Affected and Cleanup Action Taken.*
N/A

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

| | | | |
|--|---------------------------------------|------------------|-----------------------------------|
| Signature:  | OIL CONSERVATION DIVISION | | |
| Printed Name: Crystal Walker | Approved by Environmental Specialist: | | |
| Title: Regulatory Technician | Approval Date: | Expiration Date: | |
| E-mail Address: crystal.walker@cop.com | Conditions of Approval: | | Attached <input type="checkbox"/> |
| Date: 12/3/15 Phone: (505) 326-9837 | | | |

* Attach Additional Sheets If Necessary



November 28, 2011

Project Number 96052-2038

Ms Shelly Cook-Cowden
ConocoPhillips
3401 East 30th Street
Farmington, New Mexico 87401

Phone: (505) 599-3403

RE: BELOW-GRADE TANK CLOSURE DOCUMENTATION FOR THE CLAY #1 WELL SITE, SAN JUAN COUNTY, NEW MEXICO

Dear Ms. Cook-Cowden,

Enclosed please find the field notes and analytical results for below-grade tank (BGT) closure activities conducted at the Clay #1 well site located in Section 12, Township 26 North, Range 12 West, San Juan County, New Mexico. Upon Envirotech personnel's arrival on September 30, 2011, one (1) five (5)-point composite sample was collected from directly beneath the former BGT; see attached *Field Notes*. The sample was analyzed in the field for total petroleum hydrocarbons (TPH) using USEPA Method 418.1 and for organic vapors using a photoionization detector. Additionally, the sample was placed into a four (4)-ounce glass jar, capped headspace free, and transported on ice, under chain of custody, to Envirotech's Analytical Laboratory to be analyzed for benzene and BTEX using USEPA Method 8021 and for total chlorides using USEPA Method 4500. The sample returned results below the regulatory limits for all constituents analyzed, confirming a release had not occurred; see attached *Analytical Results*. Envirotech, Inc. recommends no further action in regards to this incident.

We appreciate the opportunity to be of service. If you have any questions or require additional information, please contact our office at (505) 632-0615.

Respectfully submitted,
ENVIROTECH, INC.


John Rollins
Environmental Field Technician
jrollins@envirotech-inc.com

Enclosures: Field Notes
Analytical Results

Cc: Client File 96052

PAGE NO: 1 OF 1
 DATE STARTED: 9/20/11
 DATE FINISHED: 9/30/11


envirotech
 (505) 632-0615 (800) 262-1879
 3796 U.S. Hwy 84, Farmington, NM 87401

ENVIRONMENTAL SPECIALIST: SK
 LAT: 36.49757184
 LONG: -108.0595409

FIELD REPORT: BGT / PIT CLOSURE VERIFICATION

| | | | |
|--|------------------|---------------------------------|-------------------------------|
| LOCATION: NAME: <u>CLAY</u> | WELL #: <u>1</u> | TEMP PIT: <u>PERMANENT PIT:</u> | BGT: <u>X</u> |
| LEGAL ADD: UNIT: <u>0</u> | SEC: <u>12</u> | TWP: <u>26N</u> | RNG: <u>12W</u> PM: <u>NM</u> |
| QTR/FOOTAGE: <u>790 FCL + 1600 FEL</u> | | CNTY: <u>San Juan</u> | ST: <u>NM</u> |

| | | | | |
|-------------------------------------|-------------|---|----------------|-------------------------|
| EXCAVATION APPROX: _____ | FT. X _____ | FT. X _____ | FT. DEEP _____ | CUBIC YARDAGE: _____ |
| DISPOSAL FACILITY: _____ | | REMEDICATION METHOD: _____ | | |
| LAND OWNER: _____ | | API: <u>300 482 2611</u> | | BGT / PIT VOLUME: _____ |
| CONSTRUCTION MATERIAL: <u>Steel</u> | | DOUBLE-WALLED, WITH LEAK DETECTION: _____ | | |

LOCATION APPROXIMATELY: 15 FT. North FROM WELLHEAD

DEPTH TO GROUNDWATER: >100 FT

☐ TEMPORARY PIT - GROUNDWATER 50-100 FEET DEEP
 BENZENE ≤ 0.2 mg/kg, BTEX ≤ 50 mg/kg, GRO & DRO FRACTION (8015) ≤ 500 mg/kg, TPH (418.1) ≤ 2500 mg/kg, CHLORIDES ≤ 500 mg/kg

☐ TEMPORARY PIT - GROUNDWATER ≥100 FEET DEEP
 BENZENE ≤ 0.2 mg/kg, BTEX ≤ 50 mg/kg, GRO & DRO FRACTION (8015) ≤ 500 mg/kg, TPH (418.1) ≤ 2500 mg/kg, CHLORIDES ≤ 1000 mg/kg

☒ PERMANENT PIT OR BGT
 BENZENE ≤ 0.2 mg/kg, BTEX ≤ 50 mg/kg, TPH (418.1) ≤ 100 mg/kg, CHLORIDES ≤ 250 mg/kg

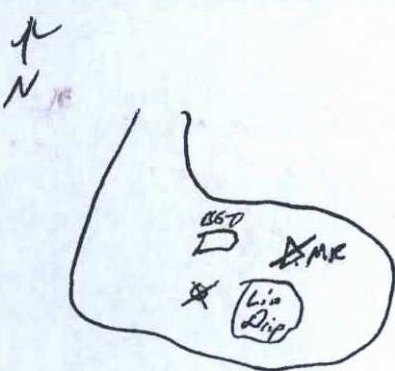
FIELD 418.1 ANALYSIS

| TIME | SAMPLE I.D. | LAB NO. | WEIGHT (g) | mL FREON | DILUTION | READING | CALC. (mg/kg) |
|-------|-------------|---------|------------|----------|----------|---------|---------------|
| 10:36 | STD | — | — | — | — | 203 | |
| BGT | 10:44 | 1 | 2 | 20 | 1 | 17 | 68 |
| | | 2 | | | | | |
| | | 3 | | | | | |
| | | 4 | | | | | |
| | | 5 | | | | | |
| | | 6 | | | | | |

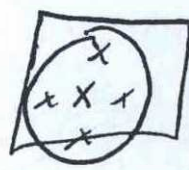
PERIMETER

FIELD CHLORIDES RESULTS

PROFILE



| SAMPLE ID | READING | CALC. (mg/kg) |
|-----------|-----------|---------------|
| <u>NS</u> | <u>NS</u> | <u>NS</u> |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |



PID RESULTS

| SAMPLE ID | RESULTS (mg/kg) |
|------------|-----------------|
| <u>BGT</u> | <u>ND</u> |
| | |
| | |
| | |
| | |
| | |

LAB SAMPLES

| SAMPLE ID | ANALYSIS | RESULTS |
|-----------|-----------|---------|
| | BENZENE | |
| | BTEX | |
| | GRO & DRO | |
| | CHLORIDES | |
| | | |
| | | |

NOTES: 70 FT to SW

Ranking: _____

WORKORDER # _____ WHO ORDERED _____



**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client: ConocoPhillips
Sample No.: 1
Sample ID: BGT
Sample Matrix: Soil
Preservative: Cool
Condition: Cool and Intact

Project #: 96052-2038
Date Reported: 10/28/2011
Date Sampled: 9/30/2011
Date Analyzed: 9/30/2011
Analysis Needed: TPH-418.1

| Parameter | Concentration (mg/kg) | Det. Limit (mg/kg) |
|-----------|--------------------------|--------------------------|
|-----------|--------------------------|--------------------------|

| | | |
|------------------------------|----|-----|
| Total Petroleum Hydrocarbons | 68 | 5.0 |
|------------------------------|----|-----|

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Clay #1**

Instrument calibrated to 200 ppm standard. Zeroed before each sample



Analyst

John Rollins
Printed



Review

Torie Thompson
Printed



CONTINUOUS CALIBRATION
EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Cal. Date: 30-Sep-11

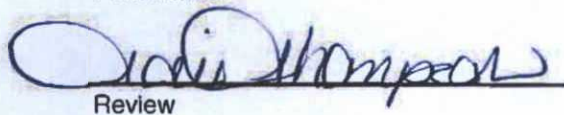
| Parameter | Standard Concentration mg/L | Concentration Reading mg/L |
|-----------|-----------------------------------|----------------------------------|
| TPH | 100 | 203 |
| | 200 | |
| | 500 | |
| | 1000 | |

The accepted percent relative deviation (%RSD) of the calibration factor is less than 20% over the working range.


Analyst

10/28/2011
Date

John Rollins
Print Name


Review

10/28/2011
Date

Torie Thompson
Print Name



envirotech
Analytical Laboratory

Chloride

| | | | |
|----------------|----------------|-------------------|------------|
| Client: | ConocoPhillips | Project #: | 96052-2038 |
| Sample ID: | BGT | Date Reported: | 10-03-11 |
| Lab ID#: | 59816 | Date Sampled: | 09-30-11 |
| Sample Matrix: | Soil | Date Received: | 09-30-11 |
| Preservative: | Cool | Date Analyzed: | 10-03-11 |
| Condition: | Intact | Chain of Custody: | 12673 |

| Parameter | Concentration (mg/Kg) |
|----------------|-----------------------|
| Total Chloride | 10 |

Reference:

U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments:

Clay #1

Analyst

Review

KRUSH

CHAIN OF CUSTODY RECORD

12673

| Client: <i>C. 0000</i> | | | Project Name / Location: <i>Clay #1</i> | | | ANALYSIS / PARAMETERS | | | | | | | | | | | | | |
|--|----------------|--------------|--|------------------------|--------------------------|--|--------------------|-------------------|---------------|------------------------|----------------------|------------------|-----|-------------|----------|----------|-------------|---------------|--|
| Client Address: | | | Sampler Name: <i>John R</i> | | | TPH (Method 8015) | BTEX (Method 8021) | VOC (Method 8260) | RCRA 8 Metals | Cation / Anion | RCI | TCLP with TPH Hg | PAH | TPH (418.1) | CHLORIDE | Total Hg | Sample Cool | Sample Intact | |
| Client Phone No.: | | | Client No.: <i>96052-2038</i> | | | | | | | | | | | | | | | | |
| Sample No./ Identification | Sample Date | Sample Time | Lab No. | Sample Matrix | No./Volume of Containers | Preservative H ₂ O ₂ HCl F ₂ | | | | | | | | | | | | | |
| <i>BGT</i> | <i>9/30/11</i> | <i>10:45</i> | <i>59816</i> | <i>Soil</i> Solid | <i>4</i> Aqueous | | | | | | | | | | | | | | |
| <i>Line Drip</i> | <i>9/30/11</i> | <i>13:20</i> | <i>59817</i> | <i>Soil</i> Solid | <i>4</i> Aqueous | | | | | | | | | | | | | | |
| | | | | Soil Solid | Sludge Aqueous | | | | | | | | | | | | | | |
| | | | | Soil Solid | Sludge Aqueous | | | | | | | | | | | | | | |
| | | | | Soil Solid | Sludge Aqueous | | | | | | | | | | | | | | |
| | | | | Soil Solid | Sludge Aqueous | | | | | | | | | | | | | | |
| | | | | Soil Solid | Sludge Aqueous | | | | | | | | | | | | | | |
| | | | | Soil Solid | Sludge Aqueous | | | | | | | | | | | | | | |
| | | | | Soil Solid | Sludge Aqueous | | | | | | | | | | | | | | |
| | | | | Soil Solid | Sludge Aqueous | | | | | | | | | | | | | | |
| | | | | Soil Solid | Sludge Aqueous | | | | | | | | | | | | | | |
| | | | | Soil Solid | Sludge Aqueous | | | | | | | | | | | | | | |
| Relinquished by: (Signature) <i>[Signature]</i> | | | | Date <i>9/30/11</i> | Time <i>16:00</i> | Received by: (Signature) <i>John R</i> | | | | Date <i>9-30-11</i> | Time <i>16:00</i> | | | | | | | | |
| Relinquished by: (Signature) | | | | | | Received by: (Signature) | | | | | | | | | | | | | |
| Relinquished by: (Signature) | | | | | | Received by: (Signature) | | | | | | | | | | | | | |

KRUSH



envirotech
Analytical Laboratory

5796 US Highway 64 • Farmington, NM 87401 • 505-632-0615 • lab@envirotech-inc.com



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

November 30, 2015

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

RE: COPC Clay #1

OrderNo.: 1511849

Dear Emilee Skyles:

Hall Environmental Analysis Laboratory received 1 sample(s) on 11/19/2015 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data 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.

CLIENT: Animas Environmental

Client Sample ID: BGT S-1

Project: COPC Clay #1

Collection Date: 11/18/2015 2:32:00 PM

Lab ID: 1511849-001

Matrix: SOIL

Received Date: 11/19/2015 7:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|----------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 418.1: TPH | | | | | | | Analyst: TOM |
| Petroleum Hydrocarbons, TR | ND | 20 | | mg/Kg | 1 | 11/24/2015 | 22425 |
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: LGT |
| Chloride | ND | 30 | | mg/Kg | 20 | 11/24/2015 6:55:23 PM | 22509 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: KJH |
| Diesel Range Organics (DRO) | ND | 9.6 | | mg/Kg | 1 | 11/23/2015 1:41:46 PM | 22442 |
| Surr: DNOP | 99.1 | 70-130 | | %REC | 1 | 11/23/2015 1:41:46 PM | 22442 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 11/20/2015 5:26:21 PM | 22419 |
| Surr: BFB | 76.7 | 75.4-113 | | %REC | 1 | 11/20/2015 5:26:21 PM | 22419 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.049 | | mg/Kg | 1 | 11/20/2015 5:26:21 PM | 22419 |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 11/20/2015 5:26:21 PM | 22419 |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 11/20/2015 5:26:21 PM | 22419 |
| Xylenes, Total | ND | 0.098 | | mg/Kg | 1 | 11/20/2015 5:26:21 PM | 22419 |
| Surr: 4-Bromofluorobenzene | 95.7 | 80-120 | | %REC | 1 | 11/20/2015 5:26:21 PM | 22419 |

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1511849

30-Nov-15

Client: Animas Environmental

Project: COPC Clay #1

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

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

Qualifiers:

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

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1511849

30-Nov-15

Client: Animas Environmental

Project: COPC Clay #1

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

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

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

Qualifiers:

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

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1511849

30-Nov-15

Client: Animas Environmental

Project: COPC Clay #1

| | | | | | | | | | | |
|-----------------------------|------------|-----|---------------------------|-------------|---|----------|--------------|------|----------|------|
| Sample ID | MB-22442 | | SampType: MBLK | | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | |
| Client ID: | PBS | | Batch ID: 22442 | | RunNo: 30413 | | | | | |
| Prep Date: | 11/20/2015 | | Analysis Date: 11/23/2015 | | SeqNo: 928213 | | Units: mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Surr: DNOP | 11 | | 10.00 | | 110 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|------------|-----|---------------------------|-------------|---|----------|--------------|------|----------|------|
| Sample ID | LCS-22442 | | SampType: LCS | | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | |
| Client ID: | LCSS | | Batch ID: 22442 | | RunNo: 30413 | | | | | |
| Prep Date: | 11/20/2015 | | Analysis Date: 11/23/2015 | | SeqNo: 928361 | | Units: mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 51 | 10 | 50.00 | 0 | 101 | 57.4 | 139 | | | |
| Surr: DNOP | 5.5 | | 5.000 | | 110 | 70 | 130 | | | |

Qualifiers:

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

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1511849

30-Nov-15

Client: Animas Environmental

Project: COPC Clay #1

| | | | | | | | | | | | |
|-------------------------------|------------|-----|----------------|-------------|------|-----------|----------------------------------|------|--------------|------|--|
| Sample ID | MB-22419 | | SampType: | MBLK | | TestCode: | EPA Method 8015D: Gasoline Range | | | | |
| Client ID: | PBS | | Batch ID: | 22419 | | RunNo: | 30395 | | | | |
| Prep Date: | 11/19/2015 | | Analysis Date: | 11/20/2015 | | SeqNo: | 927446 | | Units: mg/Kg | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | | |
| Surr: BFB | 810 | | 1000 | | 80.6 | 75.4 | 113 | | | | |

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

Qualifiers:

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

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1511849

30-Nov-15

Client: Animas Environmental

Project: COPC Clay #1

| | | | | | | | | | | |
|----------------------------|-------------------|-------|----------------|-------------------|------|-----------|------------------------------------|------|---------------------|------|
| Sample ID | MB-22419 | | SampType: | MBLK | | TestCode: | EPA Method 8021B: Volatiles | | | |
| Client ID: | PBS | | Batch ID: | 22419 | | RunNo: | 30395 | | | |
| Prep Date: | 11/19/2015 | | Analysis Date: | 11/20/2015 | | SeqNo: | 927494 | | Units: mg/Kg | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 0.050 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 1.0 | | 1.000 | | 104 | 80 | 120 | | | |

| | | | | | | | | | | |
|----------------------------|-------------------|-------|----------------|-------------------|------|-----------|------------------------------------|------|---------------------|------|
| Sample ID | LCS-22419 | | SampType: | LCS | | TestCode: | EPA Method 8021B: Volatiles | | | |
| Client ID: | LCSS | | Batch ID: | 22419 | | RunNo: | 30395 | | | |
| Prep Date: | 11/19/2015 | | Analysis Date: | 11/20/2015 | | SeqNo: | 927495 | | Units: mg/Kg | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 1.0 | 0.050 | 1.000 | 0 | 103 | 80 | 120 | | | |
| Toluene | 0.97 | 0.050 | 1.000 | 0 | 96.6 | 80 | 120 | | | |
| Ethylbenzene | 1.0 | 0.050 | 1.000 | 0 | 101 | 80 | 120 | | | |
| Xylenes, Total | 3.0 | 0.10 | 3.000 | 0 | 98.6 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 1.3 | | 1.000 | | 127 | 80 | 120 | | | S |

Qualifiers:

* 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



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: 1511849

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

11/19/2015 7:30:00 AM

Completed By: Lindsay Mangin

11/19/2015 9:16:18 AM

Reviewed By:

Chain of Custody

1. Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

2. Is Chain of Custody complete?

Yes ☒

No ☐

Not Present ☐

3. How was the sample delivered?

Courier

Log In

4. Was an attempt made to cool the samples?

Yes ☒

No ☐

NA ☐

5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C

Yes ☒

No ☐

NA ☐

6. Sample(s) in proper container(s)?

Yes ☒

No ☐

7. Sufficient sample volume for indicated test(s)?

Yes ☒

No ☐

8. Are samples (except VOA and ONG) properly preserved?

Yes ☒

No ☐

9. Was preservative added to bottles?

Yes ☐

No ☒

NA ☐

10. VOA vials have zero headspace?

Yes ☐

No ☐

No VOA Vials ☒

11. Were any sample containers received broken?

Yes ☐

No ☒

12. Does paperwork match bottle labels?

Yes ☒

No ☐

(Note discrepancies on chain of custody)

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?

Yes ☒

No ☐

(If no, notify customer for authorization.)

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 | | | |

