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

13651

OIL CONS. DIV DIST. 3

DEC 04 2015

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

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

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

1.
Operator: Burlington Resources OGRID #: 14538
Address: PO BOX 4289, Farmington, NM 87499
Facility or well name: San Juan 30-6 CTB 3
API Number: N/A OCD Permit Number:
U/L or Qtr/Qtr M (SWSW) Section 22 Township 30N Range 6W County: Rio Arriba
Center of Proposed Design: Latitude 36.794222°N Longitude 107.456167°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: Max 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



30 elw

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.**<br>- ☐ NM Office of the State Engineer - iWATERS database search; ☐ USGS; ☐ Data obtained from nearby wells | ☐ Yes ☐ No<br>☒ NA |
| **Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit .**<br>NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells | ☐ Yes ☐ No<br>☒ 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)**<br>- 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)**<br>- 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)**<br>- 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)**<br>- 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).<br>- 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;.<br>- 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.)<br>- 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.<br>- 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.<br>NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |

| | |
|---|---|
| Within 100 feet of a wetland.<br>- 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).<br>- 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.<br>- 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;<br>- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |
| Within 300 feet of a wetland.<br>- 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).<br>- 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.<br>- 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.<br>- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |
| Within 500 feet of a wetland.<br>- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site | ☐ Yes ☐ No |

10.

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

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

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

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

11.

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

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

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

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

12.
**Permanent Pits Permit Application Checklist:** Subsection B of 19.15.17.9 NMAC
***Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.***

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

13.
**Proposed Closure:** 19.15.17.13 NMAC
***Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.***

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

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

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

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

15.
**Siting Criteria (regarding on-site closure methods only):** 19.15.17.10 NMAC
***Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. Please refer to 19.15.17.10 NMAC for guidance.***

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

| | |
|---|---|
| adopted pursuant to NMSA 1978, Section 3-27-3, as amended.<br>- Written confirmation or verification from the municipality; Written approval obtained from the municipality | ☐ Yes ☐ No |
| Within the area overlying a subsurface mine.<br>- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division | ☐ Yes ☐ No |
| Within an unstable area.<br>- 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.<br>- 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:** 12/17/2015

**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:** 8/17/15

20.
**Closure Method:**

☒ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-loop systems only)

☐ If different from approved plan, please explain.

21.
**Closure Report Attachment Checklist:** ***Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.***

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

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

22.

**Operator Closure Certification:**

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

Name (Print): Dollie L. Busse Title: Staff Regulatory Technician

Signature: Dollie L Busse Date: 12/3/15

e-mail address: dollie.l.busse@cop.com Telephone: (505) 324-6104

**Burlington Resources Oil & Gas Company**
**San Juan Basin: New Mexico Assets**
Below Grade Tank Closure Report

**Lease Name:** San Juan 30-6 CTB 3
**API No.:** N/A

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 Requirements:**

1. Prior to initiating any BGT closure, except in the case of an emergency, BR will notify the surface owner of the intent to close the BGT by certified mail no later than 72 hours or one week before closure and a copy of this notification will be included in the closure report. In the case of an emergency, the surface owner will be notified as soon as practical.

   **The surface owner was notified by email of the closure process and the notification is attached.**

2. Notice of closure will be given to the District Division office between 72 hours and one week of the scheduled closure via email or phone. The notification of closure will include the following:
   a. Operators Name
   b. Well Name and API Number
   c. Location

   **Notification is attached.**

3. All liquids will be removed from the BGT following cessation of operation. Produced water will be disposed of at one of COP's approved Salt Water Disposal facilities or at a District Division approved facility.

   **All recovered liquids were disposed of at an approved SWD facility or an approved District Division facility within 60 days of cessation of operation.**

4. Solids and sludge's will be shoveled and/or vacuumed out for disposal at one of the District Division approved facilities, depending on the proximity of the BGT site: Envirotech Land Farm (Permit #NM-01-011), JFJ Land Farm % Industrial Ecosystems Inc. (Permit #NM-01-0010B), and Basin Disposal (Permit #NM-01-005).

   **Any sludge or soil required to be removed to facilitate closure was transported to Envirotech Land Farm (Permit # NM-01-011) and/or JFJ Landfarm % IEI (Permit# NM-01-0010B).**

5. BR will obtain prior approval from District Division to dispose, recycle, reuse, or reclaim the BGT and provide documentation of the disposition of the BGT in the closure report. Steel materials will be recycled or reused as approved by the District Division. Fiberglass tanks will be empty, cut up or shredded, and EPA cleaned for disposal as solid waste. Liner materials will be cleaned without soils or contaminated material for disposal as solid waste. Fiberglass tanks and liner materials will meet the conditions of 19.15.35 NMAC. Disposal will be at a licensed disposal facility, presently San Juan County Landfill operated by Waste Management under NMED Permit SWM-052426.

   **The below-grade tank was disposed of in a division-approved manner. The liner was cleaned per 19.15.35.8.C(1)(m) NMAC and disposed of at the San Juan County Regional Landfill located on CR 3100.**

6. Any equipment associated with the BGT that is no longer required for some other purpose, following the closure, will be removed.

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

7. Following removal of the tank and any liner material, BR will test the soils beneath the BGT as follows:
   a. At a minimum, a five-point composite sample will be taken to include any obvious stained or wet soils or any other evidence of contamination.
   b. The laboratory sample shall be analyzed for the constituents listed in Table I of 19.15.17.13.

   **A five point composite sample was taken of the below-grade tank using sampling tools and all samples tested per Table I of 19.15.17.13 and the results are attached.**

8. If the District Division and/or BR determine there is a release, BR will comply with 19.15.17.13.C.3b.

   **A release was not determined for the above referenced well.**

9. Upon completion of the tank removal, pursuant to 19.15.17.13.C.3c, if all contaminant concentrations are less than or equal to the parameters listed in Table I of 19.15.17.13 NMAC, the excavation will be backfilled with non-waste earthen material compacted and covered with a minimum of one foot top soil or background thickness whichever is greater and to existing grade. The surface will be re-contoured to match the native grade and to prevent ponding.

   **The tank removal area passed all requirements of Table I of 19.15.17.13 NMAC and was backfilled with compacted, non-waste containing, earthen material which included at least one foot of suitable material to establish vegetation at the site.**

10. For those portions of the former BGT area no longer required for production activities, BR will seed the disturbed area the first favorable growing season after the BGT is covered. Seeding will be accomplished via drilling on the contour whenever practical, or by other District Division-approved methods. BR will notify the District Division when reclamation and re-vegetation is complete.

    Reclamation of the BGT shall be considered complete when:
    - Vegetative cover reflects a life form ratio of +/- 50% of pre disturbance levels.
    - Total percent plant cover of at least 70% of pre-disturbance levels (Excluding noxious weeds) OR
    - Pursuant to 19.15.17.13.H.5d BR will comply with obligations imposed by other applicable federal or tribal agencies in which there re-vegetation and reclamation requirements provide equal or better protection of fresh water, human health and the environment.

    **Provision 10 will be accomplished pursuant to 19.15.17.H.5d and notification will be submitted upon completion.**

11. For those portions of the former BGT area required for production activities, reseeding will be done at well abandonment, and following the procedure noted above.

    **The former BGT area is not required for production activities and reseeding was completed on 11/30/2015 per the procedure noted above.**

**Closure Report:**
All closure activities will include proper documentation and will be submitted to OCD within 60 days of the BGT closure on a Closure Report using District Division Form C-144. The Report will include the following:

- Proof of Closure Notice (surface owner and District Division) **(Attached)**
- Backfilling & cover installation **(See Report)**
- Confirmation Sampling Analytical Results **(Attached)**
- Application Rate & Seeding techniques **(See Report)**
- Photo Documentation of Reclamation **(Attached)**

## White, Arleen R

**From:** White, Arleen R
**Sent:** Friday, August 14, 2015 8:01 AM
**To:** Cory Smith; Brandon Powell; 'Mark Kelly'
**Cc:** SJBU E-Team; GRP:SJBU Regulatory; Smith, Randall O
**Subject:** SAN JUAN 30-6 CTB - NO API# - BGT CLOSURE 72 HOUR NOTIFICATION

**Anticipated Start Date:** **8/17/15 @ approximately 10:00 am**

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

**Well Name:** San Juan 30-6 CTB 3

**API#:** N/A

**Location:** UL M, Sec. 22, T30N, R06W

**Footages:** N/A

**Operator:** BR **Surface Owner: BLM**

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ConocoPhillips

Arleen White
Staff Regulatory Technician
San Juan Business Unit
Ph: (505)326-9517
Cell: (505) 215-3985
arleen.r.white@conocophillips.com
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OIL CONS. DIV DIST. 3

OCT 16 2015

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

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

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

# Release Notification and Corrective Action

## OPERATOR

☐ Initial Report ☒ Final Report

| | |
|---|---|
| Name of Company **ConocoPhillips Company** | Contact **Lisa Hunter** |
| Address **3401 East 30th St, Farmington, NM** | Telephone No. **(505) 326-9786** |
| Facility Name: **San Juan 30-6 CTB 3** | Facility Type: **Central Tank Battery** |

| | | |
|---|---|---|
| Surface Owner **Federal** | Mineral Owner **Federal** | API No. **N/A** |

## LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
|---|---|---|---|---|---|---|---|---|
| **M** | **22** | **30N** | **06W** | | | | | **Rio Arriba** |

**Latitude ____ Longitude ____**

## NATURE OF RELEASE

| | | |
|---|---|---|
| Type of Release **Produced Water/Hydrocarbon** | Volume of Release **Unknown** | Volume Recovered **Unknown** |
| Source of Release **Below Grade Tank (BGT)** | Date and Hour of Occurrence **Unknown** | Date and Hour of Discovery **08/17/15** |
| Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required | If YES, To Whom? **N/A** | |
| By Whom? **N/A** | Date and Hour **N/A** | |
| Was a Watercourse Reached? ☐ Yes ☒ No | If YES, Volume Impacting the Watercourse. **N/A** | |

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

Describe Cause of Problem and Remedial Action Taken.*

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

Describe Area Affected and Cleanup Action Taken.*

**NMOCD action levels for releases are specified in NMOCD's Guidelines for Leaks, Spills and Releases and the release was assigned a ranking score of 20. Samples were collected and analytical results are below applicable NMOCD action levels. No further work will be performed. The final report is attached for review.**

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

| | | |
|---|---|---|
| Signature: | OIL CONSERVATION DIVISION<br>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: **October 14, 2015** Phone: **(505) 326-9525** | | |

* Attach Additional Sheets If Necessary

September 28, 2015

Lisa Hunter
ConocoPhillips
San Juan Business Unit
(505) 326-9786

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

**RE: Below Grade Tank Closure Report**
**San Juan 30-6 CTB3**
**Rio Arriba County, New Mexico**

Dear Ms. Hunter:

Animas Environmental Services, LLC (AES) is pleased to provide the final report associated with the below grade tank (BGT) closure at ConocoPhillips (COPC) San Juan 30-6 CTB3, located in Rio Arriba County, New Mexico. Tank removal was completed by COPC contractors while AES was on site.

## 1.0 Site Information

### *1.1 Location*

Site Name – San Juan 30-6 CTB3
Legal Description – SW¼ SW¼, Section 22, T30N, R6W, Rio Arriba County, New Mexico
BGT Latitude/Longitude – N36.79419 and W107.45610, respectively
Land Jurisdiction – Bureau of Land Management (BLM)
Figure 1. Topographic Site Location Map
Figure 2. Aerial Site Map, August 2015

### *1.2 Depth to Groundwater Determination (NMAC 19.15.17.13 Table 1)*

Prior to site work, the New Mexico Oil Conservation Division (NMOCD) database was reviewed and a cathodic report dated May 1991 for the San Juan 30-6 #473, approximately 80 feet south-southeast of the location, reported depth to groundwater at 90 feet below ground surface (bgs) . However, based on a site closure plan variance dated January 28, 2015, for the San Juan 30-6 CTB3, the

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

1911 Main, Ste 280
Durango, CO 81301
970-403-3084

www.animasenvironmental.com

most stringent closure action levels (less than 50 feet to groundwater) were applied as a result of not registering the below grade tank at the time of installation (prior to 2008).

### *1.3 BGT Closure Assessment*

AES was initially contacted by Lisa Hunter of COPC on August 13, 2015, and on August 17, 2015, Emilee Skyles of AES mobilized to the location. AES personnel collected one 5-point soil sample composited from the perimeter of the BGT liner and one 7-point soil sample from below the BGT liner. Johnathan Kelly, of the NMOCD, was onsite for observation and oversight.

## 2.0 Soil Sampling

On August 17, 2015, AES personnel conducted field sampling and collected one 7-point composite (SC-1) from below the BGT and one 5-point composite (SC-2) from the BGT perimeter. Soil was collected from approximately 0.5 feet below the former BGT. Soil sample SC-1 was field screened for volatile organic compounds (VOCs), total petroleum hydrocarbon (TPH), and chloride, and was submitted for confirmation laboratory analysis. Soil sample locations are included on Figure 2.

### *2.1 Field Sampling*

#### 2.1.1 Volatile Organic Compounds

A portion of SC-1 was utilized for field screening of VOC vapors with a photo-ionization detector (PID) organic vapor meter (OVM). Before beginning field screening, the PID-OVM was first calibrated with 100 parts per million (ppm) isobutylene gas.

#### 2.1.2 Total Petroleum Hydrocarbons

Soil sample SC-1 was 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*.

#### 2.1.3 Chlorides

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

## 2.2 Laboratory Analyses

The composite soil sample SC-1 collected for laboratory analysis was placed into a new, clean, laboratory-supplied container, which was then labeled, placed on ice, and logged onto a sample chain of custody record. The sample was maintained on ice until delivery to the analytical laboratory, Hall Environmental Analysis Laboratory (Hall), in Albuquerque, New Mexico. Soil sample SC-1 was laboratory analyzed for:

- Benzene, toluene, ethylbenzene, and xylene (BTEX) per USEPA Method 8021B;
- TPH per USEPA Method 418.1; and
- Chloride per USEPA Method 300.0.

## 2.3 Field and Laboratory Analytical Results

Field screening readings for VOCs via OVM were measured at 7.6 ppm in SC-1 and 0.4 ppm in SC-2. Field TPH concentrations were reported at 96.8 mg/kg and 1,990 mg/kg in SC-1 and SC-2, respectively. The field chloride concentration in SC-1 was 120 mg/kg. Field sampling results are summarized in Table 1 and presented on Figure 2. The AES Field Sampling Report is attached.

Table 1. Soil Field VOCs, TPH, and Chloride Results
San Juan 30-6 CTB3 BGT Closure, August 2015

| Sample ID | Date Sampled | Depth below BGT (ft) | VOCs OVM Reading (ppm) | Field TPH* (mg/kg) | Field Chlorides (mg/kg) |
|---|---|---|---|---|---|
| | *NMOCD Action Level (NMAC 19.15.17.13E Table 1)* | | -- | *100* | *600* |
| SC-1 | 8/17/15 | 0.5 | 7.6 | 96.8 | 120 |
| SC-2 | 8/17/15 | 0.5 | 0.4 | **1,990** | NA |

*Analyzed per USEPA Method 418.1.
NA – Not Analyzed

Laboratory analytical results reported benzene in SC-1 and SC-2 as less than 0.046 mg/kg and 0.050 mg/kg, respectively. Total BTEX was measured at less than 0.230 mg/kg and 0.249 mg/kg, respectively. TPH concentrations were reported at 24 mg/kg in SC-1 and 84 mg/kg in SC-2. The laboratory chloride concentrations in SC-1 and SC-2 were reported below the laboratory detection limit of 30 mg/kg. Laboratory analytical results are summarized in Table 2 and included on Figure 2. The laboratory analytical report is attached.

Table 2. Soil Laboratory Analytical Results
San Juan 30-6 CTB #3 BGT Closure, August 2015

| Sample ID | Date Sampled | Depth below BGT (ft) | Benzene (mg/kg) | Total BTEX (mg/kg) | Total TPH (mg/kg) | Chlorides (mg/kg) |
|---|---|---|---|---|---|---|
| NMOCD Action Level (NMAC 19.15.17.13E Table 1) | | | 10 | 50 | 100 | 600 |
| SC-1 | 8/17/15 | 0.5 | <0.046 | <0.230 | 24 | <30 |
| SC-2 | 8/17/15 | 0.5 | <0.050 | <0.249 | 84 | <30 |

## 3.0 Conclusions and Recommendations

NMOCD action levels for BGT closures are specified in New Mexico Administrative Code (NMAC) 19.15.17.13 Table 1. Field TPH concentrations in SC-1 were below the NMOCD action level of 100 mg/kg, with a concentration reported at 96.8 mg/kg, while SC-2 was above the NMOCD action level with 1,990 mg/kg. However, laboratory analytical results in SC-1 and SC-2 for total TPH were reported below the NMOCD action level of 100 mg/kg. Benzene and total BTEX concentrations were below the NMOCD action levels of 10 mg/kg and 50 mg/kg, respectively. Chloride concentrations in SC-1 and SC-2 were below the NMOCD action level of 600 mg/kg. Based on field sampling and laboratory analytical results for benzene, total BTEX, TPH, and chlorides, no further work is recommended at San Juan 30-6 CTB3.

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

Sincerely,

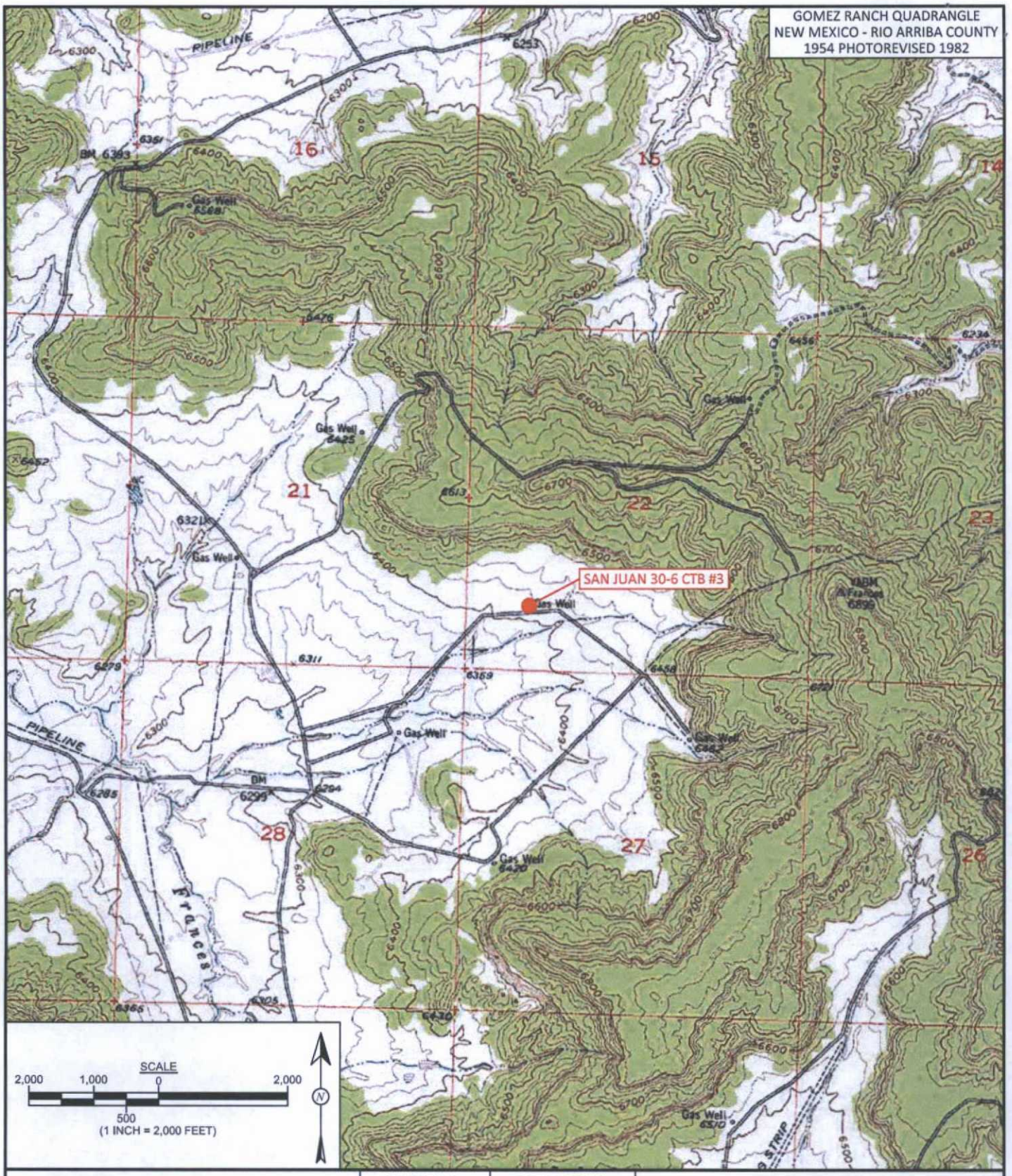
David J. Reese
Environmental Scientist

Elizabeth McNally, P.E.

Attachments:

Figure 1. Topographic Site Location Map
Figure 2. Aerial Site Map, August 2015
AES Field Sampling Report 081715
Hall Analytical Report 1508948

R:\Animas 2000\Dropbox (Animas Environmental)\0000 Animas Server Dropbox EM\2015 Projects\ConocoPhillips\SJ 30-6 CTB3\BGT Closure\San Juan 30-6 CTB #3 BGT Closure Report 092815.docx

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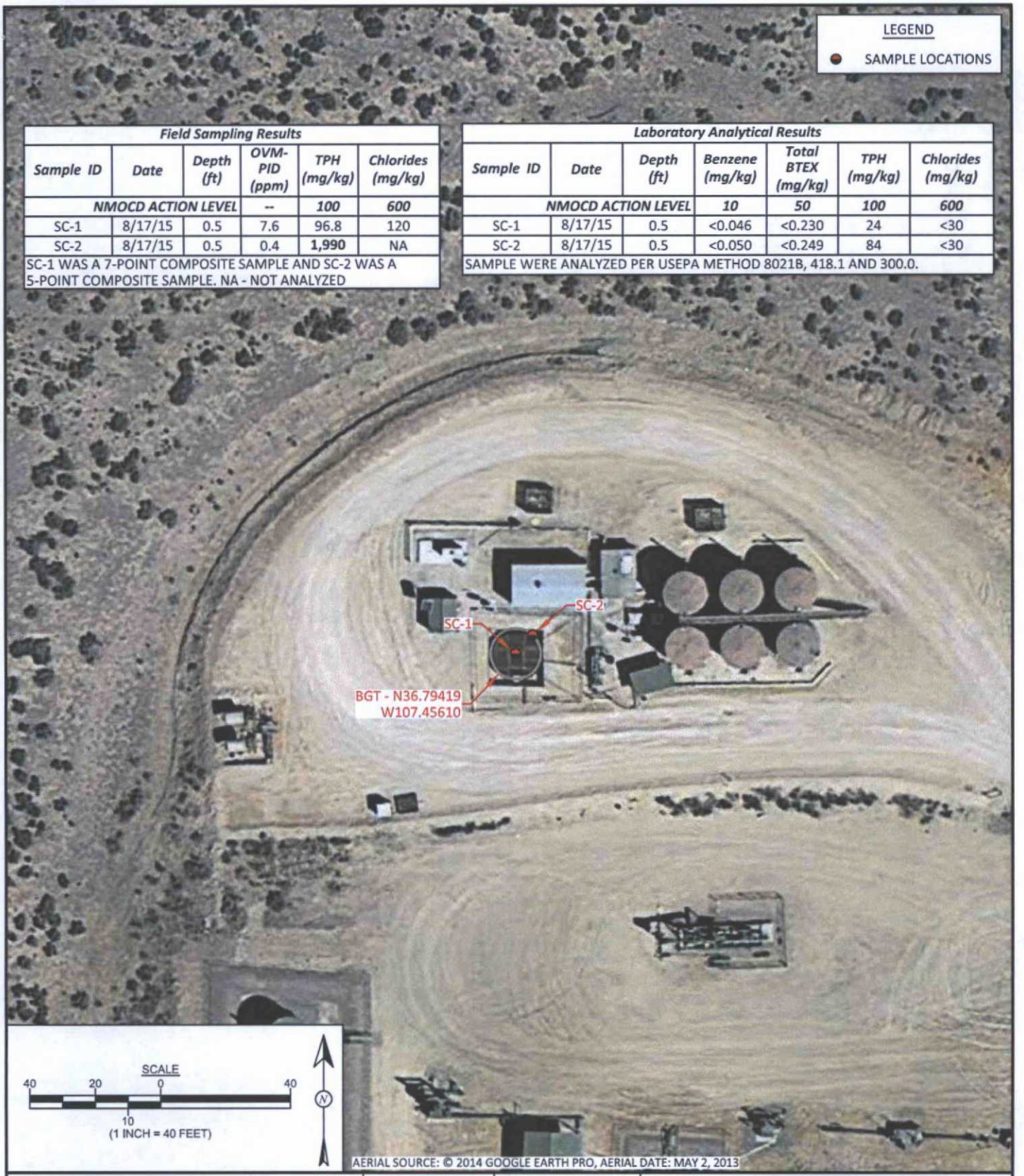
| | |
|---|---|
| DRAWN BY: D. Dougi | DATE DRAWN: August 18, 2015 |
| REVISIONS BY: D. Dougi | DATE REVISED: September 21, 2015 |
| CHECKED BY: E. Skyles | DATE CHECKED: September 21, 2015 |
| APPROVED BY: E. McNally | DATE APPROVED: September 21, 2015 |

# FIGURE 1

## TOPOGRAPHIC SITE LOCATION MAP

ConocoPhillips
SAN JUAN 30-6 CTB3
SW¼ SW¼, SECTION 22, T30N, R6W
RIO ARRIBA COUNTY, NEW MEXICO
N36.79419, W107.45610




**Field Sampling Results**

| Sample ID | Date | Depth (ft) | OVM-PID (ppm) | TPH (mg/kg) | Chlorides (mg/kg) |
|---|---|---|---|---|---|
| NMOCD ACTION LEVEL | | | -- | 100 | 600 |
| SC-1 | 8/17/15 | 0.5 | 7.6 | 96.8 | 120 |
| SC-2 | 8/17/15 | 0.5 | 0.4 | **1,990** | NA |

SC-1 WAS A 7-POINT COMPOSITE SAMPLE AND SC-2 WAS A 5-POINT COMPOSITE SAMPLE. NA - NOT ANALYZED

**Laboratory Analytical Results**

| Sample ID | Date | Depth (ft) | Benzene (mg/kg) | Total BTEX (mg/kg) | TPH (mg/kg) | Chlorides (mg/kg) |
|---|---|---|---|---|---|---|
| NMOCD ACTION LEVEL | | | 10 | 50 | 100 | 600 |
| SC-1 | 8/17/15 | 0.5 | <0.046 | <0.230 | 24 | <30 |
| SC-2 | 8/17/15 | 0.5 | <0.050 | <0.249 | 84 | <30 |

SAMPLE WERE ANALYZED PER USEPA METHOD 8021B, 418.1 AND 300.0.

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

| | |
|---|---|
| **DRAWN BY:** D. Dougi | **DATE DRAWN:** August 28, 2015 |
| **REVISIONS BY:** D. Dougi | **DATE REVISED:** September 21, 2015 |
| **CHECKED BY:** E. Skyles | **DATE CHECKED:** September 21, 2015 |
| **APPROVED BY:** E. McNally | **DATE APPROVED:** September 21, 2015 |

# FIGURE 2

**AERIAL SITE MAP**
**BELOW GRADE TANK CLOSURE**
**AUGUST 2015**
ConocoPhillips
SAN JUAN 30-6 CTB3
SW¼ SW¼, SECTION 22, T30N, R6W
RIO ARRIBA COUNTY, NEW MEXICO
N36.79419, W107.45610

# AES Field Sampling Report

Animas Environmental Services, LLC

Client: ConocoPhillips

Project Location: San Juan 30-6 CTB3

Date: 8/17/2015

Matrix: Soil

| Sample ID | Collection Date | Collection Time | Sample Location | OVM (ppm) | Field Chloride (mg/kg) | Field TPH* (mg/kg) | Field TPH Analysis Time | TPH PQL (mg/kg) | DF | TPH Analysts Initials |
|---|---|---|---|---|---|---|---|---|---|---|
| SC-1 | 8/17/2015 | 16:42 | Composite | 7.6 | 120 | 96.8 | 17:23 | 20.0 | 1 | EMS |
| SC-2 | 8/17/2015 | 16:55 | Composite | 0.4 | NA | 1,990 | 17:25 | 20.0 | 1 | EMS |

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

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

Analyst: Emily Sy


Report Finalized: 8/17/15

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

August 26, 2015

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

RE: COPC SJ 30-6 CTB3 OrderNo.: 1508948

Dear Emilee Skyles:

Hall Environmental Analysis Laboratory received 2 sample(s) on 8/19/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental
**Project:** COPC SJ 30-6 CTB3
**Lab ID:** 1508948-001 **Matrix:** SOIL

**Client Sample ID:** SC-1
**Collection Date:** 8/17/2015 4:42:00 PM
**Received Date:** 8/19/2015 7:45:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 418.1: TPH** | | | | | | Analyst: **KJH** | |
| Petroleum Hydrocarbons, TR | 24 | 19 | | mg/Kg | 1 | 8/21/2015 | 20878 |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 8/26/2015 1:05:41 AM | 20972 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.046 | | mg/Kg | 1 | 8/22/2015 3:37:25 AM | 20899 |
| Toluene | ND | 0.046 | | mg/Kg | 1 | 8/22/2015 3:37:25 AM | 20899 |
| Ethylbenzene | ND | 0.046 | | mg/Kg | 1 | 8/22/2015 3:37:25 AM | 20899 |
| Xylenes, Total | ND | 0.092 | | mg/Kg | 1 | 8/22/2015 3:37:25 AM | 20899 |
| Surr: 4-Bromofluorobenzene | 97.9 | 80-120 | | %REC | 1 | 8/22/2015 3:37:25 AM | 20899 |

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 | | |

# Chain-of-Custody Record

Client: Animas Environmental Services, LLC

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

Phone #: 505-564-2281

Email or Fax#: eskyles@animasenvironmental.com

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

Accreditation:
☐ NELAP ☐ Other
☐ EDD (Type)

Turn-Around Time:
X Standard ☐ Rush

Project Name: COPC SJ 30-6 CTB3

Project #:

Project Manager: E. Skyles

Sampler: E. Skyles
On Ice: X Yes ☐ No
Sample Temperature: 1.0


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


Analysis Request

| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | HEAL No. 1508948 | BTEX - 8021B | TPH - EPA 418.1 | Chlorides - 300.0 | Air Bubbles (Y or N) |
|---|---|---|---|---|---|---|---|---|---|---|
| 8/17/15 | 16:42 | Soil | SC-1 | 1 - 4 oz. | cool | -001 | X | X | X | |
| 8/17/15 | 16:55 | Soil | SC-2 | 1 - 4 oz. | cool | -002 | X | X | X | |

| Date: | Time: | Relinquished by: | Received by: | Date | Time |
|---|---|---|---|---|---|
| 8/18/15 | 1145 | | | 8/18/15 | 1145 |
| 8-18-15 | 1930 | | | 08/19/15 | 0745 |

Remarks: BILL TO CONOCO PHILLIPS
WO#: 10381020
USERID: MCINNSK
Capital Projects: RANDALL SMITH
Area: 5
Supervisor: MIKE MURPHY
Ordered By: Lisa Hunter

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

# Sample Log-In Check List

Client Name: **Animas Environmental** Work Order Number: **1508948** RcptNo: **1**

Received by/date: AG 08/19/15

Logged By: **Ashley Gallegos** 8/19/2015 7:45:00 AM AG

Completed By: **Ashley Gallegos** 8/19/2015 6:19:16 PM AG

Reviewed By: JA 08/20/15

## Chain of Custody

| | | | |
|---|---|---|---|
| 1. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 2. Is Chain of Custody complete? | Yes ☑ | No ☐ | Not Present ☐ |
| 3. How was the sample delivered? | 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° 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 ☑ | # of preserved bottles checked for pH: (<2 or >12 unless noted) |
| 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 ☐ | Adjusted? |
| 14. Is it clear what analyses were requested? | Yes ☑ | No ☐ | |
| 15. Were all holding times able to be met? (If no, notify customer for authorization.) | Yes ☑ | No ☐ | Checked by: |

## Special Handling (if applicable)

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

Person Notified: _____ Date _____

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

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | 1.0 | Good | Yes | | | |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1508948**

*26-Aug-15*

**Client:** Animas Environmental
**Project:** COPC SJ 30-6 CTB3

| Sample ID **5ML RB** | SampType: **MBLK** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **a28415** | RunNo: **28415** |
| Prep Date: | Analysis Date: **8/24/2015** | SeqNo: **858545** Units: **%REC** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: 4-Bromofluorobenzene | 0.98 | | 1.000 | | 98.4 | 80 | 120 | | | |

| Sample ID **100NG BTEX LCS** | SampType: **LCS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **a28415** | RunNo: **28415** |
| Prep Date: | Analysis Date: **8/24/2015** | SeqNo: **858549** Units: **%REC** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: 4-Bromofluorobenzene | 1.1 | | 1.000 | | 110 | 80 | 120 | | | |

**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#: **1508948**

*26-Aug-15*

**Client:** Animas Environmental
**Project:** COPC SJ 30-6 CTB3

| Sample ID **MB-20878** | SampType: **MBLK** | TestCode: **EPA Method 418.1: TPH** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **PBS** | Batch ID: **20878** | RunNo: **28369** | | | | | | | |
| Prep Date: **8/19/2015** | Analysis Date: **8/21/2015** | SeqNo: **856921** | 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-20878** | SampType: **LCS** | TestCode: **EPA Method 418.1: TPH** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **LCSS** | Batch ID: **20878** | RunNo: **28369** | | | | | | | |
| Prep Date: **8/19/2015** | Analysis Date: **8/21/2015** | SeqNo: **856922** | Units: **mg/Kg** | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Petroleum Hydrocarbons, TR | 93 | 20 | 100.0 | 0 | 92.9 | 83.6 | 116 | | | |

| Sample ID **LCSD-20878** | SampType: **LCSD** | TestCode: **EPA Method 418.1: TPH** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **LCSS02** | Batch ID: **20878** | RunNo: **28369** | | | | | | | |
| Prep Date: **8/19/2015** | Analysis Date: **8/21/2015** | SeqNo: **856923** | 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 | 107 | 83.6 | 116 | 14.1 | 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#: **1508948**

*26-Aug-15*

**Client:** Animas Environmental
**Project:** COPC SJ 30-6 CTB3

| Sample ID **MB-20899** | SampType: **MBLK** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **20899** | RunNo: **28388** |
| Prep Date: **8/20/2015** | Analysis Date: **8/21/2015** | SeqNo: **857443** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | 0.050 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 0.94 | | 1.000 | | 93.8 | 80 | 120 | | | |

| Sample ID **LCS-20899** | SampType: **LCS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **20899** | RunNo: **28388** |
| Prep Date: **8/20/2015** | Analysis Date: **8/21/2015** | SeqNo: **857444** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.97 | 0.050 | 1.000 | 0 | 97.1 | 76.6 | 128 | | | |
| Toluene | 0.98 | 0.050 | 1.000 | 0 | 98.2 | 75 | 124 | | | |
| Ethylbenzene | 1.0 | 0.050 | 1.000 | 0 | 100 | 79.5 | 126 | | | |
| Xylenes, Total | 3.0 | 0.10 | 3.000 | 0 | 98.8 | 78.8 | 124 | | | |
| Surr: 4-Bromofluorobenzene | 1.1 | | 1.000 | | 107 | 80 | 120 | | | |

| Sample ID **1508948-001AMS** | SampType: **MS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **SC-1** | Batch ID: **20899** | RunNo: **28388** |
| Prep Date: **8/20/2015** | Analysis Date: **8/21/2015** | SeqNo: **857449** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 1.0 | 0.049 | 0.9881 | 0 | 103 | 69.6 | 136 | | | |
| Toluene | 1.0 | 0.049 | 0.9881 | 0 | 106 | 76.2 | 134 | | | |
| Ethylbenzene | 1.1 | 0.049 | 0.9881 | 0 | 109 | 75.8 | 137 | | | |
| Xylenes, Total | 3.1 | 0.099 | 2.964 | 0 | 105 | 78.9 | 133 | | | |
| Surr: 4-Bromofluorobenzene | 1.0 | | 0.9881 | | 103 | 80 | 120 | | | |

| Sample ID **1508948-001AMSD** | SampType: **MSD** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **SC-1** | Batch ID: **20899** | RunNo: **28388** |
| Prep Date: **8/20/2015** | Analysis Date: **8/21/2015** | SeqNo: **857450** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.98 | 0.049 | 0.9881 | 0 | 98.8 | 69.6 | 136 | 4.44 | 20 | |
| Toluene | 0.98 | 0.049 | 0.9881 | 0 | 99.1 | 76.2 | 134 | 6.31 | 20 | |
| Ethylbenzene | 1.0 | 0.049 | 0.9881 | 0 | 103 | 75.8 | 137 | 5.56 | 20 | |
| Xylenes, Total | 2.9 | 0.099 | 2.964 | 0 | 98.0 | 78.9 | 133 | 7.15 | 20 | |
| Surr: 4-Bromofluorobenzene | 1.0 | | 0.9881 | | 102 | 80 | 120 | 0 | 0 | |

**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#: **1508948**

*26-Aug-15*

**Client:** Animas Environmental
**Project:** COPC SJ 30-6 CTB3

| Sample ID | MB-20972 | SampType: | MBLK | | TestCode: | EPA Method 300.0: Anions | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBS | Batch ID: | 20972 | | RunNo: | 28462 | | | | |
| Prep Date: | 8/25/2015 | Analysis Date: | 8/25/2015 | | SeqNo: | 860209 | Units: | mg/Kg | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| Sample ID | LCS-20972 | SampType: | LCS | | TestCode: | EPA Method 300.0: Anions | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSS | Batch ID: | 20972 | | RunNo: | 28462 | | | | |
| Prep Date: | 8/25/2015 | Analysis Date: | 8/25/2015 | | SeqNo: | 860210 | Units: | mg/Kg | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 | 15.00 | 0 | 94.4 | 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

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental
**Project:** COPC SJ 30-6 CTB3
**Lab ID:** 1508948-002 **Matrix:** SOIL

**Client Sample ID:** SC-2
**Collection Date:** 8/17/2015 4:55:00 PM
**Received Date:** 8/19/2015 7:45:00 AM

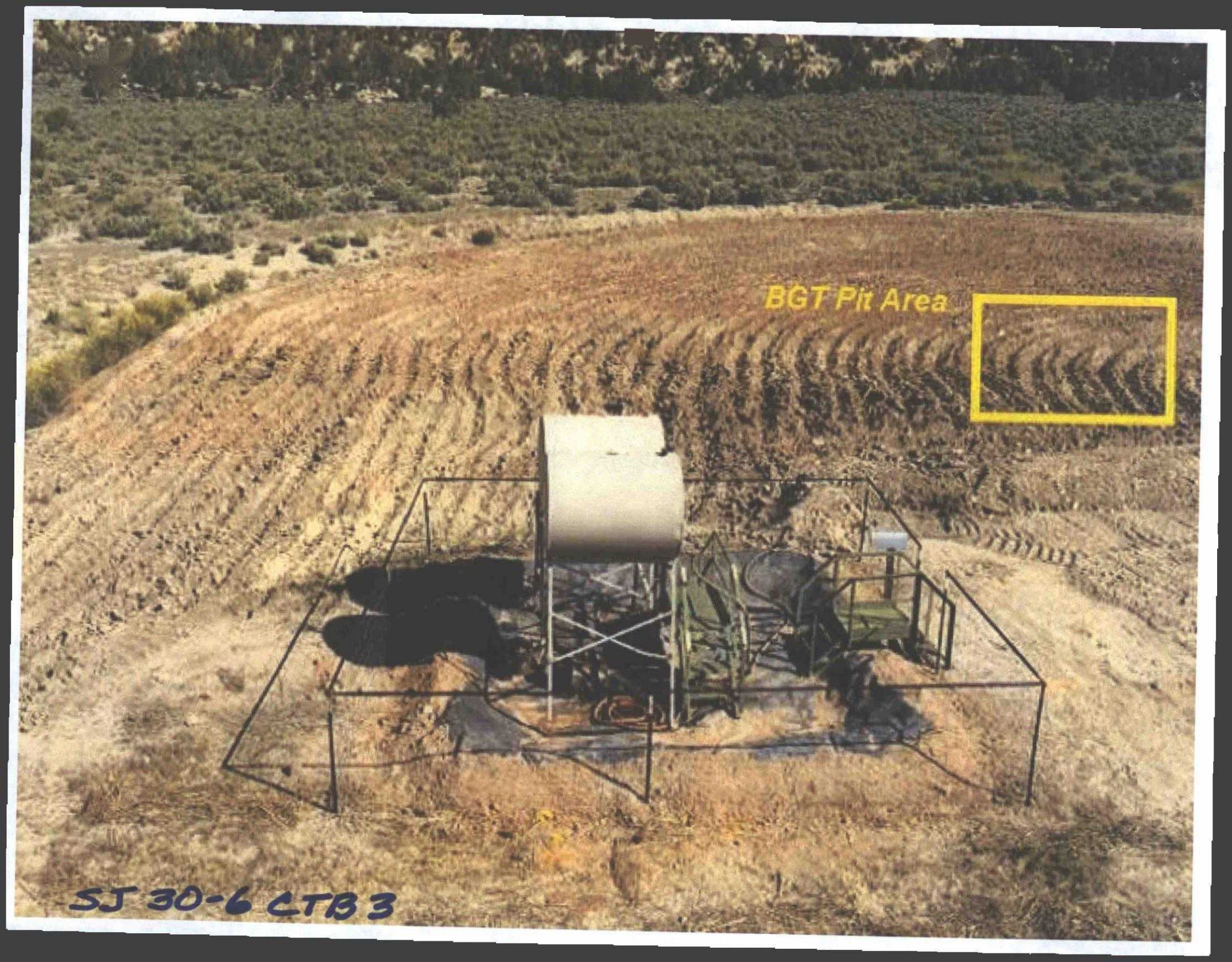
| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 418.1: TPH** | | | | | | Analyst: **KJH** | |
| Petroleum Hydrocarbons, TR | 84 | 19 | | mg/Kg | 1 | 8/21/2015 | 20878 |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 8/26/2015 1:18:04 AM | 20972 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.050 | | mg/Kg | 1 | 8/24/2015 10:34:52 AM | 20899 |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 8/24/2015 10:34:52 AM | 20899 |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 8/24/2015 10:34:52 AM | 20899 |
| Xylenes, Total | ND | 0.099 | | mg/Kg | 1 | 8/24/2015 10:34:52 AM | 20899 |
| Surr: 4-Bromofluorobenzene | 101 | 80-120 | | %REC | 1 | 8/24/2015 10:34:52 AM | 20899 |

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 | | |


BURLINGTON
RESOURCES
ConocoPhillips
CENTRAL TANK BATTERY #3 SWD
FORMATION FRC
LATITUDE N 36° 47.6
LONGITUDE W 107° 27.3
1140' FSL 960' FEL
SEC. 22 T030N R006W
LEASE NO. USA SF-080712-A ELEV. 6410
API NO. 30-039-24476
RIO ARRIBA COUNTY, NEW MEXICO


BGT Pit Area
SJ 30-6 CTB 3