

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 NMOC District Office.  
For permanent pits submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOC District Office.

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

RECEIVED  
By kcollins at 8:36 am, Apr 05, 2016

14684

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

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

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

1.  
Operator: Burlington Resources Oil & Gas Company, LP OGRID #: 14538

Address: PO BOX 4289, Farmington, NM 87499

Facility or well name: Huerfano 206

API Number: 30-045-20626

OCD Permit Number: \_\_\_\_\_

U/L or Qtr/Qtr J Section 26 Township 26 N Range 9 W County: San Juan

Center of Proposed Design: Latitude 36.456771 °N Longitude -107.755837 °W NAD: ☐ 1927 ☒ 1983

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

Constituents Exceed Standards outline  
by 19.15.17.13 NMAC. Please submit a  
separate C-141 under 19.15.29 NMAC

BGT CLOSED  
PRIOR TO  
CLOSURE PLAN  
APPROVAL

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 H<sub>2</sub>S, Prevention Plan  
☐ Emergency Response Plan  
☐ Oil Field Waste Stream Characterization  
☐ Monitoring and Inspection Plan  
☐ Erosion Control Plan  
☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

13.

**Proposed Closure:** 19.15.17.13 NMAC

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

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

14.

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

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

15.

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

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

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



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

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

☐ Yes ☐ No

Within the area overlying a subsurface mine.

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

☐ Yes ☐ No

Within an unstable area.

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

☐ Yes ☐ No

Within a 100-year floodplain.

- FEMA map

☐ Yes ☐ No

16.

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

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

17.

**Operator Application Certification:**

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

Name (Print): \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

e-mail address: \_\_\_\_\_ Telephone: \_\_\_\_\_

18.

**OCD Approval:** ☐ Permit Application (including closure plan) ☒ Closure ~~Plan (only)~~ ☒ OCD Conditions (see attachment) **See Front Page**

OCD Representative Signature: Jonathan D. Kelly Approval Date: 7/12/2016

Title: Compliance Officer OCD Permit Number: \_\_\_\_\_

19.

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

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

☒ Closure Completion Date: 6/14/13

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): Larissa Farrell \_\_\_\_\_ Title: Regulatory Technician

Signature: Larissa Farrell \_\_\_\_\_ Date: 4/1/16

e-mail address: Larissa.L.Farrell@cop.com Telephone: (505) 326-9504



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

**Lease Name: Huerfano 206**

**API No.: 30-045-20626**

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

General Plan:

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

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

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

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

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

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

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

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

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

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

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

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

**A release was determined for the above referenced well.**

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

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

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

**Notification was not found.**

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

**The closure process notification to the landowner was not found.**

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

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

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



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

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

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

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

District I  
1625 N. French Dr., Hobbs, NM 88240  
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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 in  
accordance with 19.15.29 NMAC.

### Release Notification and Corrective Action

#### OPERATOR

☐ Initial Report ☒ Final Report

Name of Company <b>Burlington Resources, a Wholly Owned Subsidiary of ConocoPhillips Company</b>	Contact <b>Lisa Hunter</b>	
Address <b>3401 E. 30<sup>th</sup> St., Farmington, NM 87402</b>	Telephone No. <b>505-326-9786</b>	
Facility Name <b>Huerfano Unit 206</b>	Facility Type <b>Natural Gas Well</b>	
Surface Owner <b>Federal</b>	Mineral Owner <b>Federal</b>	API No. <b>30045206260000</b> <b>SF-078103-B</b>

#### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
<b>J</b>	<b>26</b>	<b>26N</b>	<b>09W</b>	<b>1850'</b>	<b>South</b>	<b>1750'</b>	<b>East</b>	<b>San Juan</b>

Latitude 36.45686 Longitude -107.75525

#### NATURE OF RELEASE

Type of Release <b>Unknown</b>	Volume of Release <b>Unknown</b>	Volume Recovered <b>267 yds</b>
Source of Release <b>Below Grade Tank</b>	Date and Hour of Occurrence <b>Unknown</b>	Date and Hour of Discovery <b>06-14-2013</b>
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? <b>N/A</b>	
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.* <b>N/A</b>		
Describe Cause of Problem and Remedial Action Taken.* <b>Below Grade Tank Closure Activities.</b>		
Describe Area Affected and Cleanup Action Taken.* <b>Historical impacted soil was found during the BGT closure for the subject well. The excavation was 24' x 25' x 12' in depth and 267 yds of contaminated soil was transported to IEI land farm and 267 yds of clean soil was backfilled in the excavation site. Analytical results were below the regulatory standards – no further action required. The soil sampling report is attached for review.</b>		
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: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: <b>Lisa M. Hunter</b>	Approved by Environmental Specialist:	
Title: <b>Field Environmental Specialist</b>	Approval Date:	Expiration Date:
E-mail Address: <b>Lisa.Hunter@cop.com</b>	Conditions of Approval:	Attached <input type="checkbox"/>
Date: <b>08-05-13</b> Phone: <b>505-326-9786</b>		

\* Attach Additional Sheets If Necessary





Animas Environmental Services, LLC

[www.animasenvironmental.com](http://www.animasenvironmental.com)

July 26, 2013

Lisa Hunter  
ConocoPhillips  
San Juan Business Unit  
Office 214-4  
5525 Hwy 64  
Farmington, New Mexico 87401

624 E. Comanche  
Farmington, NM 87401  
505-564-2281

Durango, Colorado  
970-403-3084

Via electronic mail to: [SJBUE-Team@ConocoPhillips.com](mailto:SJBUE-Team@ConocoPhillips.com)

**RE: Below Grade Tank Closure and Final Excavation Report  
Huerfano #206  
San Juan County, New Mexico**

Dear Ms. Hunter:

On June 14, 2013, Animas Environmental Services, LLC (AES) completed below grade tank (BGT) closure sampling and environmental clearance of the final excavation limits at the ConocoPhillips (CoP) Huerfano #206, located in San Juan County, New Mexico. The historical release was discovered during BGT closure sampling at the location.

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## 1.0 Site Information

### 1.1 Location

Site Name – Huerfano #206

Legal Description - NW¼ SE¼, Section 26, T26N, R9W, San Juan County, New Mexico

Well Latitude/Longitude – N36.45700 and W107.75587, respectively

BGT/Release Latitude/Longitude - N36.45675 and W107.75579, respectively

Land Jurisdiction - Bureau of Land Management (BLM)

Figure 1 - Topographic Site Location Map

Figure 2 - Aerial Site Map, June 2013

### 1.2 NMOCD Ranking

Prior to site work, the New Mexico Oil Conservation Division (NMOCD) database was reviewed, and no records were found to assist in determining depth to groundwater. The New Mexico Office of the State Engineer (NMOSE) database was reviewed, and wells SJ00063 and SJ00064 were located approximately 725 feet east-southeast and 850 feet northeast of the location. Because these are shallow domestic wells and are

greater than 200 feet from the location, they did not affect the site ranking. However, measurements from these wells were used to help determine depth to groundwater at the site, and depth to groundwater was reported to be 234 feet below ground surface (bgs) in well SJ00063 and 215 feet bgs in well SJ00064. Additionally, Google Earth and the New Mexico Tech Petroleum Recovery Research Center online mapping tool (<http://ford.nmt.edu/react/project.html>) were accessed to aid in the identification of downgradient surface water.

Once on site, AES personnel further assessed the ranking using topographical interpretation, Global Positioning System (GPS) elevation readings, and visual reconnaissance. AES personnel concluded that depth to groundwater at the site was greater than 100 feet bgs. An ephemeral wash which drains to Blanco Wash is located approximately 800 feet southeast of the location. Based on this information, the location was assessed a ranking score of 10 per the NMOCD *Guidelines for Leaks, Spills, and Releases* (1993).

### 1.3 Assessments

AES was initially contacted by Freddie Martinez, CoP representative, on June 13, 2013, and on June 14, 2013, Deborah Watson and Stephanie Lynn of AES mobilized to the location. AES personnel initially collected six soil samples from below the BGT liner. Four samples were collected from the perimeter of the BGT footprint, one sample was collected from the center of the BGT footprint, and one sample was composited from the four perimeter samples and one center sample. Five additional composite samples were collected from the walls and base of an excavation initiated and completed while AES was onsite. The final excavation measured 24 feet by 25 feet by 10 to 12 feet in depth. Sample locations are presented on Figures 2 and 3.

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## 2.0 Soil Sampling

On June 14, 2013, during BGT closure sampling, AES personnel conducted field screening and collected five soil samples (S-1 through S-5) and one 5-point composite (SC-1) from below the BGT. Soil samples were collected from approximately 0.5 feet below the former BGT for field screening of volatile organic compounds (VOCs) and total petroleum hydrocarbon (TPH). Soil sample SC-1 was field screened for VOCs and chloride and was submitted for confirmation laboratory analysis. Based on field TPH results, CoP contractors began excavating while AES was onsite, and five additional composite samples (SC-2 through SC-6) were collected from the walls and base of the final excavation. All soil samples were field screened for VOCs and TPH. Two composite samples (SC-1 and SC-6) were submitted for confirmation laboratory analysis.



## 2.1 Soil Field Screening

### 2.1.1 Volatile Organic Compounds

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

### 2.1.2 Total Petroleum Hydrocarbons

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

### 2.1.3 Chlorides

Soil 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 soil samples (SC-1 and SC-6) collected for laboratory analysis were placed into new, clean, laboratory-supplied containers, which were then labeled, placed on ice, and logged onto sample chain of custody records. The samples were maintained on ice until delivery to the analytical laboratory, Hall Environmental Analysis Laboratory (Hall), in Albuquerque, New Mexico. Soil samples were laboratory analyzed for:

- TPH for gasoline range organics (GRO) and diesel range organics (DRO) per U.S. Environmental Protection Agency (USEPA) Method 8015D.

Soil sample (SC-1) was also analyzed for:

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

## 2.3 Soil Field and Laboratory Analytical Results

On June 14, 2013, BGT closure field screening readings for VOCs via OVM ranged from 0.6 ppm in S-1 to 622 ppm in S-4. Field TPH concentrations ranged from 123 mg/kg in S-1 to 23,500 mg/kg in S-5. The field chloride concentration in SC-1 was reported at 80 mg/kg.

Final excavation field screening results for VOCs via OVM ranged from 2.7 ppm in SC-6 up to 29.1 ppm in SC-4. Field TPH concentrations ranged from 64.5 mg/kg in SC-2 to 1,510 mg/kg in SC-6. Field screening VOC and TPH results are summarized in Table 1 and on Figures 2 and 3. The AES field screening reports are attached.

Table 1. Soil Field Screening VOCs, TPH, and Chloride Results  
Huerfano #206 BGT Closure and Final Excavation Report  
June 2013

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Sample Depth (ft)</i>	<i>VOCs OVM Reading (ppm)</i>	<i>Field TPH (mg/kg)</i>	<i>Chloride (mg/kg)</i>
<b>NMOCD Action Level</b>			<b>--*/ 100**</b>	<b>100*/ 1,000**</b>	<b>250*</b>
S-1	6/14/13	0.5	0.6	123	NA
S-2	6/14/13	0.5	0.7	151	NA
S-3	6/14/13	0.5	1.2	>2,500	NA
S-4	6/14/13	0.5	622	>2,500	NA
S-5	6/14/13	0.5	49.8	23,500	NA
SC-1	6/14/13	0.5	19.2	NA	80
SC-2	6/14/13	1 to 10	4.4	64.5	NA
SC-3	6/14/13	1 to 12	24.8	700	NA
SC-4	6/14/13	1 to 12	29.1	114	NA
SC-5	6/14/13	1 to 10	4.2	245	NA
SC-6	6/14/13	10 to 12	2.7	1,510	NA

NA – not analyzed

\*Action levels determined by NMAC 19.15.17.13E

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

Laboratory analytical results for SC-1 (from below the former BGT) showed that benzene and total BTEX concentrations in SC-1 were less than 0.048 mg/kg and less than 0.24 mg/kg, respectively. The TPH concentration was less than 4.8 mg/kg GRO and 1,800 mg/kg DRO. The laboratory chloride concentration was reported at 150 mg/kg.

Laboratory analytical results for SC-6 (from the base of the final excavation) had TPH concentrations of less than 50 mg/kg GRO and 370 mg/kg DRO. Laboratory analytical results are summarized in Table 2 and included on Figures 2 and 3. Laboratory analytical reports are attached.



Table 2. Laboratory Analytical Results – Benzene, Total BTEX, TPH, and Chlorides  
Huerfano #206 BGT Closure and Final Excavation Report  
June 2013

<i>Sample ID</i>	<i>Date</i>	<i>Depth (ft)</i>	<i>Benzene (mg/kg)</i>	<i>Total BTEX (mg/kg)</i>	<i>TPH- GRO (mg/kg)</i>	<i>TPH- DRO (mg/kg)</i>	<i>Chlorides (mg/kg)</i>
<b>NMOCD Action Level</b>			<b>0.2*/ 10**</b>	<b>50</b>	<b>100*/1,000**</b>		<b>250*</b>
SC-1	6/14/13	0.5	<0.048	<0.24	<4.8	1,800	150
SC-6	6/14/13	10 to 12	NA	NA	<50	370	NA

NA – not analyzed

\*Action levels determined by NMAC 19.15.17.13E

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

### 3.0 Conclusions and Recommendations

NMOCD action levels for BGT closures are specified in New Mexico Administrative Code (NMAC) 19.15.17.13E. Field TPH concentrations exceeded the NMOCD action level of 100 mg/kg in each sample. Laboratory analytical results for TPH (as GRO/DRO) in SC-1 were reported above the NMOCD action level of 100 mg/kg with 1,800 mg/kg DRO. However, benzene and total BTEX concentrations in SC-1 were below the NMOCD action levels of 0.2 mg/kg and 50 mg/kg, respectively. Chloride concentrations were reported below the NMOCD action level of 250 mg/kg. Based on field and laboratory analytical results, a release was confirmed at the location.

On June 14, 2013, final clearance of the excavation area was completed. Field screening results of the excavation showed that concentrations of VOCs and TPH were below NMOCD action levels for each of the final four walls of the excavation (SC-2 through SC-5). The base of the excavation (SC-6) exceeded NMOCD action levels for field TPH with 1,510 mg/kg; however, laboratory analytical results for SC-6 showed TPH concentrations as GRO/DRO below the NMOCD action level of 1,000 mg/kg with 370 mg/kg DRO.

Based on excavation of petroleum hydrocarbon impacted soils, field screening, and laboratory analytical results for VOCs, benzene, total BTEX, TPH, and chlorides, no further work is recommended for the Huerfano #206.

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

Sincerely,



Landrea Cupps  
Environmental Scientist



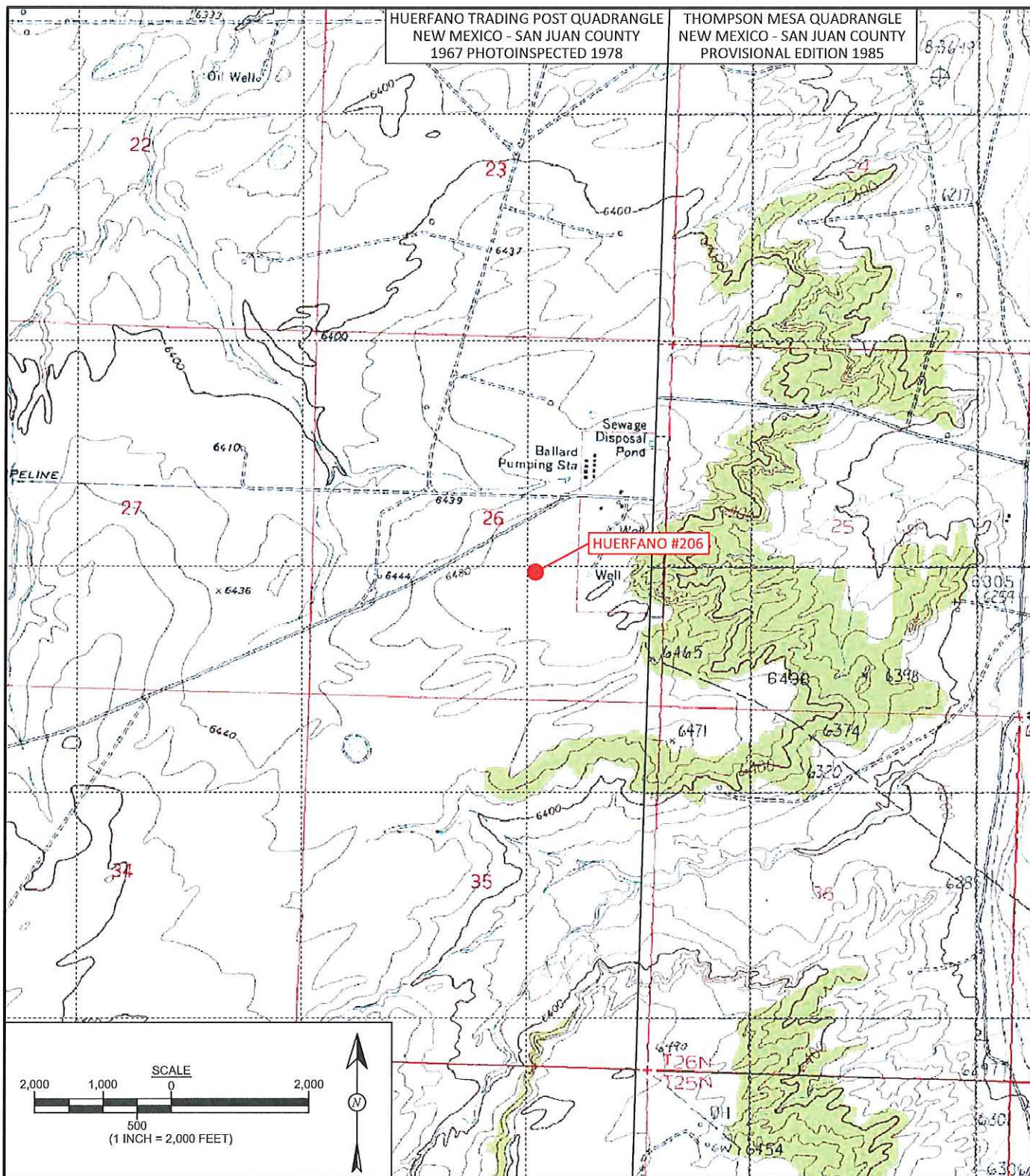
Elizabeth McNally, P.E.

Attachments:

- Figure 1. Topographic Site Location Map
- Figure 2. Aerial Site Map, June 2013
- Figure 3. Final Excavation Sample Locations and Results, June 2013
- AES Field Screening Report 061413
- Hall Analytical Reports (1306634 and 1306636)

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**FIGURE 1**

**TOPOGRAPHIC SITE LOCATION MAP**  
 ConocoPhillips  
 HUERFANO #206  
 NW¼ SE¼, SECTION 26, T26N, R9W  
 SAN JUAN COUNTY, NEW MEXICO  
 N36.45700, W107.75587



<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> June 17, 2013
<b>REVISIONS BY:</b> C. Lameman	<b>DATE REVISED:</b> June 17, 2013
<b>CHECKED BY:</b> D. Watson	<b>DATE CHECKED:</b> June 17, 2013
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> June 17, 2013



LEGEND

SAMPLE LOCATIONS

Field Screening Results				
Sample ID	Date	OVM-PID (ppm)	TPH (mg/kg)	Chlorides (mg/kg)
NMOCD ACTION LEVEL		--	100	250
S-1	6/14/13	0.6	123	NA
S-2	6/14/13	0.7	151	NA
S-3	6/14/13	1.2	>2,500	NA
S-4	6/14/13	622	>2,500	NA
S-5	6/14/13	49.8	23,500	NA
SC-1	6/14/13	19.2	NA	80
SC-1 IS A 5-POINT COMPOSITE SAMPLE OF S-1 THROUGH S-5. NA - NOT ANALYZED				

Laboratory Analytical Results						
Sample ID	Date	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH - GRO (mg/kg)	TPH - DRO (mg/kg)	Chlorides (mg/kg)
NMOCD ACTION LEVEL		0.2	50	100		250
SC-1	6/14/13	<0.048	<0.24	<4.8	1,800	150
SAMPLE WAS ANALYZED PER EPA METHOD 8021B, 8015D AND 300.0.						



AERIAL SOURCE: © 2012 PICTOMETRY INTERNATIONAL CORP. ONLINE, AERIAL DATE: FEBRUARY 20, 2009

AES

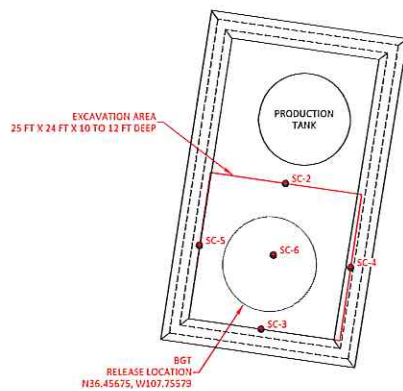
Animas Environmental Services, LLC

DRAWN BY: C. Lameman	DATE DRAWN: June 17, 2013	<b>FIGURE 2</b>  <b>AERIAL SITE MAP</b> <b>BELOW GRADE TANK CLOSURE</b> <b>JUNE 2013</b> ConocoPhillips HUERFANO #206 NW¼ SE¼, SECTION 26, T26N, R9W SAN JUAN COUNTY, NEW MEXICO N36.45700, W107.75587
REVISIONS BY: C. Lameman	DATE REVISED: June 17, 2013	
CHECKED BY: D. Watson	DATE CHECKED: June 17, 2013	
APPROVED BY: E. McNally	DATE APPROVED: June 17, 2013	



HUERFANO #206 WELL MONUMENT

METER  
HOUSE



Field Screening Results				
Sample ID	Date	Depth (ft)	OVM- PID (ppm)	TPH (mg/kg)
NMOCD ACTION LEVEL			100	1,000
SC-2	6/14/13	1 to 10	4.4	64.5
SC-3	6/14/13	1 to 12	24.8	700
SC-4	6/14/13	1 to 12	29.1	114
SC-5	6/14/13	1 to 10	4.2	245
SC-6	6/14/13	10 to 12	2.7	1,510

Laboratory Analytical Results				
Sample ID	Date	Depth (ft)	TPH - GRO (mg/kg)	TPH - DRO (mg/kg)
NMOCD ACTION LEVEL			1,000	
SC-6	6/14/13	10 to 12	<50	370

SAMPLE WAS ANALYZED PER EPA METHOD 8015D.

FIGURE 3

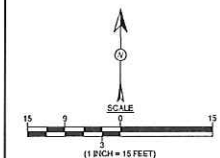
FINAL EXCAVATION SAMPLE  
LOCATIONS AND RESULTS  
JUNE 2013  
ConocoPhillips  
HUERFANO #206  
NW¼, SE¼, SECTION 26, T26N, R9W  
SAN JUAN COUNTY, NEW MEXICO  
N36.45700, W107.75587



Animas Environmental Services, LLC

DRAWN BY: C. Lammeman	DATE DRAWN: June 17, 2013
REVISIONS BY: C. Lammeman	DATE REVISED: June 17, 2013
CHECKED BY: D. Watson	DATE CHECKED: June 17, 2013
APPROVED BY: E. McNally	DATE APPROVED: June 17, 2013

LEGEND	
●	SAMPLE LOCATIONS
=====	SECONDARY CONTAINMENT BERM



## AES Field Screening Report



Animas Environmental Services, LLC

[www.animasenvironmental.com](http://www.animasenvironmental.com)

624 E. Comanche  
Farmington, NM 87401  
505-564-2281

Durango, Colorado  
970-403-3084

Client: ConocoPhillips

Project Location: Huerfano #206

Date: 6/14/2013

Matrix: Soil

Sample ID	Collection Date	Time of Sample Collection	Sample Location	OVM (ppm)	Field Chloride (mg/kg)	Field TPH Analysis Time	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
S-1	6/14/2013	7:45	North	0.6	NA	8:55	123	20.0	1	DAW
S-2	6/14/2013	7:48	South	0.7	NA	9:00	151	20.0	1	DAW
S-3	6/14/2013	7:50	East	1.2	NA	8:50	>2,500	20.0	1	DAW
S-4	6/14/2013	7:53	West	622	NA	8:41	>2,500	20.0	1	DAW
S-5	6/14/2013	7:55	Center	49.8	NA	8:49	23,500	200	10	DAW
SC-1	6/14/2013	8:00	Composite	19.2	80	Not Analyzed for TPH.				
SC-2	6/14/2013	12:34	North Wall	4.4	NA	12:50	64.5	20.0	1	DAW
SC-3	6/14/2013	11:20	South Wall	24.8	NA	11:34	700	20.0	1	DAW
SC-4	6/14/2013	11:21	East Wall	29.1	NA	11:37	114	20.0	1	DAW

CoP Huerfano #206

Page 1

Report Finalized: 06/14/13



Sample ID	Collection Date	Time of Sample Collection	Sample Location	OVM (ppm)	Field Chloride (mg/kg)	Field TPH Analysis Time	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SC-5	6/14/2013	11:40	West Wall	4.2	NA	11:54	245	20.0	1	DAW
SC-6	6/14/2013	12:40	Base	2.7	NA	12:54	1,510	20.0	1	DAW

PQL Practical Quantitation Limit  
 ND Not Detected at the Reporting Limit  
 NA Not Analyzed  
 DF Dilution Factor

*\*Field TPH concentrations recorded may be below PQL.*

Field Chloride - Quantab Chloride Titrators or Drop Count Titration with Silver Nitrate

Total Petroleum Hydrocarbons - USEPA 418.1

Analyst:

*Debrah Wata*



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

June 19, 2013

Debbie Watson  
Animas Environmental  
624 East Comanche  
Farmington, NM 87401  
TEL: (505) 486-4071  
FAX

RE: CoP Huerfano 206

OrderNo.: 1306634

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 6/15/2013 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](http://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.

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental

**Client Sample ID:** SC-6

**Project:** CoP Huerfano 206

**Collection Date:** 6/14/2013 12:40:00 PM

**Lab ID:** 1306634-001

**Matrix:** MEOH (SOIL)

**Received Date:** 6/15/2013 11:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	370	10		mg/Kg	1	6/17/2013 9:30:09 AM	7941
Surr: DNOP	81.3	63-147		%REC	1	6/17/2013 9:30:09 AM	7941
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	50		mg/Kg	10	6/17/2013 11:23:56 AM	R11338
Surr: BFB	94.8	80-120		%REC	10	6/17/2013 11:23:56 AM	R11338

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

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1306634

19-Jun-13

Client: Animas Environmental

Project: CoP Huerfano 206

Sample ID	MB-7941	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	7941	RunNo:	11331					
Prep Date:	6/17/2013	Analysis Date:	6/17/2013	SeqNo:	320251	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	9.0		10.00		89.7	63	147			

Sample ID	LCS-7941	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	7941	RunNo:	11331					
Prep Date:	6/17/2013	Analysis Date:	6/17/2013	SeqNo:	320252	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	10	50.00	0	79.1	77.1	128			
Surr: DNOP	4.3		5.000		85.5	63	147			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pII greater than 2 for VOA and TOC only.  
RL Reporting Detection Limit



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1306634

19-Jun-13

Client: Animas Environmental

Project: CoP Huerfano 206

Sample ID	MB-7932	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	R11338	RunNo:	11338					
Prep Date:	6/14/2013	Analysis Date:	6/17/2013	SeqNo:	320861	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	950		1000		94.7	80	120			

Sample ID	LCS-7932	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	R11338	RunNo:	11338					
Prep Date:	6/14/2013	Analysis Date:	6/17/2013	SeqNo:	320862	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	102	62.6	136			
Surr: BFB	1000		1000		103	80	120			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2 for VOA and TOC only.  
RL Reporting Detection Limit

## Sample Log-In Check List

Client Name: Animas Environmental

Work Order Number: 1306634

RcptNo: 1

Received by/date:

*AT*

*06/15/13*

Logged By: Lindsay Mangin

6/15/2013 11:40:00 AM

*[Signature]*

Completed By: Lindsay Mangin

6/17/2013 5:20:38 AM

*[Signature]*

Reviewed By:

*[Signature]*

*06/17/13*

### Chain of Custody

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

### Log In

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

# of preserved  
bottles checked  
for pH:

(<2 or >12 unless noted)

Adjusted? \_\_\_\_\_

Checked by: \_\_\_\_\_

### Special Handling (if applicable)

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

Person Notified:

Date:

By Whom:

Via:

☐ eMail

☐ Phone

☐ Fax

☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

### 18. Cooler Information

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



# Chain-of-Custody Record

Client: Animas Environmental Services LLC

Mailing Address: 624 E. Comanche

Farmington, NM 87401

Phone #: 505 564 2281

email or Fax#:

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other

☐ EDD (Type)

Date Time Matrix Sample Request ID

6/14/13 1240 Sc-6

Turn-Around Time:

☐ Standard ☒ Rush same day

Project Name:

CoP Huertano 206

Project #:

Project Manager:

D Watson

Sampler: S. Lynn

On Ice ☒ Yes ☐ No

Sample Temperature: 10

Container Type and #

1-4oz

Preservative Type

none

HEAL No.

130124

-001

Analysis Request

BTEX + MTBE + TMBs (8021)

BTEX + MTBE + TPH (Gas only)

TPH 8015B (GRO/DRO/MFO)

TPH (Method 418.1)

EDB (Method 504.1)

PAH's (8310 or 8270 SIMS)

RCRA 8 Metals

Anions (F, Cl, NO<sub>3</sub>, NO<sub>2</sub>, PO<sub>4</sub>, SO<sub>4</sub>)

8081 Pesticides / 8082 PCB's

8260B (VOA)

8270 (Semi-VOA)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Remarks: Ball to Concord Phillips

WD: 10 34528

Supervisor: Carlos Rey

User ID: Bencile

Activity code: C200

Work Order by: Freddy Martinez

Area: 21



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

June 28, 2013

Debbie Watson

Animas Environmental  
624 East Comanche  
Farmington, NM 87401  
TEL: (505) 486-4071  
FAX

RE: CoP Huerfano #206

OrderNo.: 1306636

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 6/15/2013 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued June 24, 2013.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. 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. All samples are reported as received unless otherwise indicated.

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1306636

Date Reported: 6/28/2013

CLIENT: Animas Environmental

Client Sample ID: SC-1

Project: CoP Huerfano #206

Collection Date: 6/14/2013 8:00:00 AM

Lab ID: 1306636-001

Matrix: SOIL

Received Date: 6/15/2013 11:40:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015D: DIESEL RANGE ORGANICS</b>							Analyst: JME
Diesel Range Organics (DRO)	1800	100		mg/Kg	10	6/20/2013 3:53:45 AM	7941
Surr: DNOP	0	63-147	S	%REC	10	6/20/2013 3:53:45 AM	7941
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/19/2013 2:15:52 AM	7950
Surr: BFB	122	80-120	S	%REC	1	6/19/2013 2:15:52 AM	7950
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	6/19/2013 2:15:52 AM	7950
Toluene	ND	0.048		mg/Kg	1	6/19/2013 2:15:52 AM	7950
Ethylbenzene	ND	0.048		mg/Kg	1	6/19/2013 2:15:52 AM	7950
Xylenes, Total	ND	0.097		mg/Kg	1	6/19/2013 2:15:52 AM	7950
Surr: 4-Bromofluorobenzene	106	80-120		%REC	1	6/19/2013 2:15:52 AM	7950
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JRR
Chloride	150	7.5		mg/Kg	5	6/18/2013 10:03:28 PM	7979

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
	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
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1306636

28-Jun-13

Client: Animas Environmental

Project: CoP Huerfano #206

Sample ID	MB-7979	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	7979	RunNo:	11394					
Prep Date:	6/18/2013	Analysis Date:	6/18/2013	SeqNo:	322091	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-7979	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	7979	RunNo:	11394					
Prep Date:	6/18/2013	Analysis Date:	6/18/2013	SeqNo:	322092	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.0	90	110			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2 for VOA and TOC only.  
RL Reporting Detection Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1306636

28-Jun-13

Client: Animas Environmental

Project: CoP Huerfano #206

Sample ID	MB-7941	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	7941	RunNo:	11331					
Prep Date:	6/17/2013	Analysis Date:	6/17/2013	SeqNo:	320251	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	9.0		10.00		89.7	63	147			

Sample ID	LCS-7941	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	7941	RunNo:	11331					
Prep Date:	6/17/2013	Analysis Date:	6/17/2013	SeqNo:	320252	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	10	50.00	0	79.1	77.1	128			
Surr: DNOP	4.3		5.000		85.5	63	147			

Sample ID	1306606-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	BatchQC	Batch ID:	7941	RunNo:	11393					
Prep Date:	6/17/2013	Analysis Date:	6/20/2013	SeqNo:	322846	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	28	10	50.00	0	55.7	61.3	138			S
Surr: DNOP	1.8		5.000		36.3	63	147			S

Sample ID	1306606-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	BatchQC	Batch ID:	7941	RunNo:	11393					
Prep Date:	6/17/2013	Analysis Date:	6/20/2013	SeqNo:	322848	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.15	0	85.7	61.3	138	42.6	20	R
Surr: DNOP	1.5		5.015		30.6	63	147	0	0	S

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
E Value above quantitation range  
J Analyte detected below quantitation limits  
O RSD is greater than RSDlimit  
R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
P Sample pH greater than 2 for VOA and TOC only.  
RL Reporting Detection Limit



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1306636

28-Jun-13

Client: Animas Environmental

Project: CoP Huerfano #206

Sample ID	MB-7950	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	7950	RunNo:	11374					
Prep Date:	6/17/2013	Analysis Date:	6/18/2013	SeqNo:	321775	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	960		1000		95.8	80	120			

Sample ID	LCS-7950	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	7950	RunNo:	11374					
Prep Date:	6/17/2013	Analysis Date:	6/18/2013	SeqNo:	321782	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	103	62.6	136			
Surr: BFB	1000		1000		103	80	120			

Sample ID	1306528-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	BatchQC	Batch ID:	7950	RunNo:	11374					
Prep Date:	6/17/2013	Analysis Date:	6/18/2013	SeqNo:	321786	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	4.8	24.11	0	114	76	156			
Surr: BFB	1000		964.3		106	80	120			

Sample ID	1306528-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	BatchQC	Batch ID:	7950	RunNo:	11374					
Prep Date:	6/17/2013	Analysis Date:	6/18/2013	SeqNo:	321787	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	4.8	24.11	0	121	76	156	6.13	17.7	
Surr: BFB	1000		964.3		107	80	120	0	0	

### Qualifiers:

- |  |  |
|--|--|
| * Value exceeds Maximum Contaminant Level.   | B Analyte detected in the associated Method Blank    |
| E Value above quantitation range             | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit               |
| O RSD is greater than RSDlimit               | P Sample pH greater than 2 for VOA and TOC only.     |
| R RPD outside accepted recovery limits       | RL Reporting Detection Limit                         |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1306636

28-Jun-13

Client: Animas Environmental

Project: CoP Huerfano #206

Sample ID	MB-7950		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	7950		RunNo:	11374			
Prep Date:	6/17/2013		Analysis Date:	6/18/2013		SeqNo:	321840		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		102	80	120			

Sample ID	LCS-7950		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	7950		RunNo:	11374			
Prep Date:	6/17/2013		Analysis Date:	6/18/2013		SeqNo:	321844		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	109	80	120			
Toluene	1.1	0.050	1.000	0	108	80	120			
Ethylbenzene	1.1	0.050	1.000	0	107	80	120			
Xylenes, Total	3.3	0.10	3.000	0	109	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Sample ID	1306605-001AMS		SampType:	MS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	BatchQC		Batch ID:	7950		RunNo:	11425			
Prep Date:	6/17/2013		Analysis Date:	6/19/2013		SeqNo:	323060		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.24	0.9407	0.07302	110	67.3	145			
Toluene	3.2	0.24	0.9407	1.422	188	66.8	144			S
Ethylbenzene	3.9	0.24	0.9407	1.982	209	61.9	153			S
Xylenes, Total	14	0.47	2.822	7.154	228	65.8	149			S
Surr: 4-Bromofluorobenzene	5.5		4.704		117	80	120			

Sample ID	1306605-001AMSD		SampType:	MSD		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	BatchQC		Batch ID:	7950		RunNo:	11425			
Prep Date:	6/17/2013		Analysis Date:	6/19/2013		SeqNo:	323061		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.23	0.9398	0.07302	106	67.3	145	3.75	20	
Toluene	3.2	0.23	0.9398	1.422	185	66.8	144	0.958	20	S
Ethylbenzene	4.0	0.23	0.9398	1.982	216	61.9	153	1.75	20	S
Xylenes, Total	14	0.47	2.820	7.154	238	65.8	149	2.02	20	S
Surr: 4-Bromofluorobenzene	5.7		4.699		120	80	120	0	0	S

### Qualifiers:

- |  |  |
|--|--|
| * Value exceeds Maximum Contaminant Level.   | B Analyte detected in the associated Method Blank    |
| E Value above quantitation range             | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit               |
| O RSD is greater than RSDlimit               | P Sample pH greater than 2 for VOA and TOC only.     |
| R RPD outside accepted recovery limits       | RL Reporting Detection Limit                         |

## Sample Log-In Check List

Client Name: Animas Environmental

Work Order Number: 1306636

RcptNo: 1

Received by/date:

Logged By:

Lindsay Mangin

6/15/2013 11:40:00 AM

Completed By:

Lindsay Mangin

6/17/2013 5:42:51 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° 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 °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			



# Chain-of-Custody Record

Client: Armas Environmental Services

Mailing Address: 624 E Comanche

Farmington, NM 87401

Phone #: 505-564-2281

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other

☐ EDD (Type)

Date Time Matrix Sample Request ID

6/14/13 800 soil SC-1

Container Type and #

1-402

Preservative Type

non

Sampler: Stephanie Lynn

On-site: ☒ Yes ☐ No

Sample Temperature: 10

HEAT No.

1206626

-061

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

Cop Guerrero #206

Project #:

Project Manager:

Debbie Watson

## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

### Analysis Request

BTEX + MTBE + TMBs (8021)

BTEX + MTBE + TPH (Gas only)

TPH 8015B (GRO/DRO/MTBE)

TPH (Method 418.1)

EDB (Method 504.1)

PAHs (8310 or 8270 SIMS)

RCRA 8 Metals 300.10

Anions (F, Cl, NO<sub>3</sub>, NO<sub>2</sub>, PO<sub>4</sub>, SO<sub>4</sub>)

8081 Pesticides / 8082 PCBs

8260B (VOA)

8270 (Semi-VOA)

Air Bubbles (Y or N)

Received by: Stephanie Lynn Date: 6/14/13 Time: 1545

Relinquished by: Stephanie Lynn Date: 6/14/13 Time: 1700

Remarks: 511 to Conoco Phillips

W0: 10342528

Activity code: C200

User ID: Banale

Work Order by: Freddy Martinez

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.

