

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.

16001  
Pit, Below-Grade Tank, or  
Proposed Alternative Method Permit or Closure Plan Application

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

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

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

1.  
Operator: Burlington Resources Oil & Gas Company, LP OGRID #: 14538  
Address: PO BOX 4289, Farmington, NM 87499  
Facility or well name: SAN JUAN 28-6 UNIT 127N  
API Number: 30-039-30774 OCD Permit Number: \_\_\_\_\_  
U/L or Qtr/Qtr J Section 20 Township 28N Range 6w County: Rio Arriba  
Center of Proposed Design: Latitude 36.64395 °N Longitude -107.48693 °W NAD: ☐ 1927 ☒ 1983  
Surface Owner: ☒ Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment

OIL CONS. DIV DIST. 3

JUN 30 2017

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 \_\_\_\_\_

107W

6.

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

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

7.

**Signs:** Subsection C of 19.15.17.11 NMAC

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

8.

**Variances and Exceptions:**

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

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

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

9.

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

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

**General siting**

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

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

☐ Yes ☐ No  
☒ NA

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

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

☐ Yes ☐ No  
☒ NA

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

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

☐ Yes ☐ No

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

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

☐ Yes ☐ No

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

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

☐ Yes ☐ No

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

- FEMA map

☐ Yes ☐ No

**Below Grade Tanks**

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

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

☐ Yes ☒ No

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

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

☐ Yes ☒ No

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

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

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

☐ Yes ☐ No

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

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

☐ Yes ☐ No

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

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

☐ Yes ☐ No



<p>Within 100 feet of a wetland.</p> <ul style="list-style-type: none"> <li>- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p><b><u>Temporary Pit Non-low chloride drilling fluid</u></b></p>	
<p>Within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).</p> <ul style="list-style-type: none"> <li>- Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.</p> <ul style="list-style-type: none"> <li>- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>Within 500 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application;</p> <ul style="list-style-type: none"> <li>- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site</li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>Within 300 feet of a wetland.</p> <ul style="list-style-type: none"> <li>- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p><b><u>Permanent Pit or Multi-Well Fluid Management Pit</u></b></p>	
<p>Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).</p> <ul style="list-style-type: none"> <li>- Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.</p> <ul style="list-style-type: none"> <li>- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application.</p> <ul style="list-style-type: none"> <li>- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site</li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<p>Within 500 feet of a wetland.</p> <ul style="list-style-type: none"> <li>- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No

10.

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

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

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

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

11.

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

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

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

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



12.

**Permanent Pits Permit Application Checklist:** Subsection B of 19.15.17.9 NMAC

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

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC  
☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC  
☐ Climatological Factors Assessment  
☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Quality Control/Quality Assurance Construction and Installation Plan  
☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC  
☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Nuisance or Hazardous Odors, including 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	<input type="checkbox"/> Yes <input type="checkbox"/> No



adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within a 100-year floodplain. - FEMA map	<input type="checkbox"/> Yes <input type="checkbox"/> 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: David [Signature] Approval Date: 10/4/2017  
 Title: Environmental Specialist OCD Permit Number: \_\_\_\_\_

19.  
**Closure Report (required within 60 days of closure completion):** 19.15.17.13 NMAC  
*Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.*

☒ Closure Completion Date: 4/11/2017

20.  
**Closure Method:**  
☒ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-loop systems only)  
☐ If different from approved plan, please explain.

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

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

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

**Operator Closure Certification:**

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

Name (Print) Christine Brock Title: Regulatory Specialist

Signature: Christine Brock Date: 6/26/2017

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



## Fields, Vanessa, EMNRD

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**From:** Fields, Vanessa, EMNRD  
**Sent:** Wednesday, April 26, 2017 7:51 AM  
**To:** 'Hunter, Lisa'; whitney thomas (l1thomas@blm.gov)  
**Subject:** RE: Request to backfill - San Juan 28-6 Unit 127N

Good morning Lisa,

The OCD grants your request to backfill the San Juan 28-6 #127N.

Thank you,

Vanessa Fields  
Environmental Specialist  
Oil Conservation Division  
Energy, Minerals, & Natural Resources  
1000 Rio Brazos, Aztec, NM 87410  
(505)334-6178 ext 119  
Cell: (505) 419-0463  
[vanessa.fields@state.nm.us](mailto:vanessa.fields@state.nm.us)

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**From:** Hunter, Lisa [mailto:Lisa.Hunter@conocophillips.com]  
**Sent:** Friday, April 21, 2017 2:37 PM  
**To:** Fields, Vanessa, EMNRD <Vanessa.Fields@state.nm.us>; whitney thomas (l1thomas@blm.gov) <l1thomas@blm.gov>  
**Subject:** Request to backfill - San Juan 28-6 Unit 127N  
**Importance:** High

<< File: Lab Result 4.11.17.pdf >> << File: Lab Results 3.29.17 SC-2.pdf >> << File: Lab Results 3.29.17 SC5 6 8 & 9.pdf >> << File: Figure 4 SJ 28-6 Unit 127N Excavation Map.pdf >> << File: Lab Results SC1 & 10 3.17.17.pdf >> << File: Lab Results SC2 to SC11 3.22.17.pdf >>

Attached please find the lab reports (5) for the **San Juan 28-6 Unit 127N**. Excavation completed at approximately 71ft x 84ft x 2-4.5ft deep. As the attached reports and the table below shows all the walls on the excavation cleared except one – SC-6 (East Wall, South half) with TPH 158 and BTEX 2.12 (Benzene .015). Risk Rank: 100ppm.

With the excavation terminating at hard sandstone, and a very low BTEX on all results, COPC believes the residual contaminates do not pose a present or foreseeable threat or an environmental risk to water, humans or animals, and therefore requests a variance and approval to backfill the excavation with clean soil.

Sample ID	Sample Location	Date	Benzene (mg/kg)	BTEX (mg/kg)	TPH -GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-MRO (mg/kg)
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**Burlington Resources Oil & Gas Company**  
**San Juan Basin: New Mexico Assets**  
Below Grade Tank Closure Report

**Lease Name:** San Juan 28-6 Unit 127N

**API No.:** 30-039-30774

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 notification was not provided due to BGT clean-up effort.**

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 not 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

Revised 10/14/2015



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 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 will be completed 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)**



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 <b>Burlington Resources, a Wholly Owned Subsidiary of ConocoPhillips Company</b>	Contact <b>Lisa Hunter</b>
Address <b>3401 East 30<sup>th</sup> St, Farmington, NM</b>	Telephone No. <b>(505) 258-1607</b>
Facility Name: <b>San Juan 28-6 127N</b>	Facility Type: <b>Gas well</b>

Surface Owner <b>BLM</b>	Mineral Owner <b>FED</b>	API No. <b>3003930774</b>
--------------------------	--------------------------	---------------------------

#### LOCATION OF RELEASE

Unit Letter <b>J</b>	Section <b>20</b>	Township <b>28</b>	Range <b>6</b>	Feet from the <b>1532</b>	North/South Line <b>South</b>	Feet from the <b>1797</b>	East/West Line <b>East</b>	County <b>Rio Arriba</b>
-------------------------	----------------------	-----------------------	-------------------	------------------------------	----------------------------------	------------------------------	-------------------------------	-----------------------------

**Latitude 36.64395 Longitude -10748693**

#### NATURE OF RELEASE

Type of Release <b>Hydrocarbon</b>	Volume of Release <b>Unknown</b>	Volume Recovered <b>620 c/yds</b>
Source of Release <b>BGT</b>	Date and Hour of Occurrence <b>N/A</b>	Date and Hour of Discovery <b>12-12-2016</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? <b>N/A</b>	Date and Hour <b>N/A</b>	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. <b>N/A</b>	
If a Watercourse was Impacted, Describe Fully.* <b>N/A</b>		
Describe Cause of Problem and Remedial Action Taken.* Historic contamination was encountered after soil sample was taken on 11-14-16 during a BGT Resample Project.		
Describe Area Affected and Cleanup Action Taken.* Delineation of the BGT area on 12-12-16 indicates a 20'x35'x 5' area that will be excavated to at or below action levels.		
<b>Historical hydrocarbon impacted soil was found during the BGT closure for the subject well. The excavation was 71' x 84' x 2-4.5' in depth and 620 c/yds of soil was transported to IEI land farm. Analytical results were below the regulatory standards, except for one well (130ppm TPH). OCD approved COPC request to backfill. No further action required. The closure report and laboratory analysis are 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.

#### OIL CONSERVATION DIVISION

Signature:



Printed Name: Lisa Hunter

Approved by Environmental Specialist:

Title: **Field Environmental Specialist**

Approval Date:

Expiration Date:

E-mail Address: **Lisa.Hunter@cop.com**

Conditions of Approval:

Attached ☐

Date: 06-14-17 Phone: 505-258-1607

\* Attach Additional Sheets If Necessary



June 7, 2017

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

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

**RE: Below Grade Tank Closure, Release Assessment, and Final Excavation Report  
San Juan 28-6 Unit 127N  
Rio Arriba County, New Mexico**

Dear Ms. Hunter and Mr. Spearman:

On November 14 and December 12, 2016; and March 17 to April 11, 2017, Animas Environmental Services, LLC (AES) completed below grade tank (BGT) closure sampling, a release assessment, and environmental clearance of the final excavation limits at the ConocoPhillips (COPC) San Juan 28-6 Unit 127N located in Rio Arriba County, New Mexico.

At the request of the New Mexico Oil Conservation Division (NMOCD), resampling of the location below the former BGT was required in order to meet all required closure criteria listed in New Mexico Administrative Code (NMAC) 19.15.17.13E. After the below grade tank sampling, an initial release assessment was completed on December 12, 2016, and the final excavation was completed by COPC contractors prior to AES' arrival on location on April 11, 2017.

---

## 1.0 Site Information

### 1.1 Location

Site Name – San Juan 28-6 Unit 127N  
Legal Description – NW¼ SE¼, Section 20, T28N, R6W, Rio Arriba  
County, New Mexico  
Well Latitude/Longitude – N36.64374 and W107.48761  
BGT Latitude/Longitude – N36.64395 and W107.48693  
Land Jurisdiction – Bureau of Land Management (BLM)

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

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



Figure 1. Topographic Site Location Map  
Figure 2. Aerial Site Map, 2016 and 2017

### **1.2 NMOCD Ranking**

Prior to site work, NMOCD and New Mexico Office of the State Engineer (NMOSE) databases were reviewed, and a cathodic protection report dated July 1980 for the San Juan 28-6 Unit 44A, found adjacent to the location, reported the depth to groundwater at greater than 100 feet below ground surface (bgs).

However, at the request of the NMOCD, the most stringent sample result criteria were applied to this BGT. Note these criteria normally apply to sites with a depth to groundwater of 0 to 50 feet.

### **1.3 Assessment**

AES was initially contacted by Robert Spearman, COPC representative, on November 2, 2016, and on November 14, 2016, Corwin Lameman of AES traveled to the location. Soil sampling consisted of collection of one soil sample (BGT S-1) from the center of the former BGT footprint at a depth of 3.5 feet. Soil sample results were above the action levels, and a release was confirmed.

On December 12, 2016, AES personnel returned to the location to complete the release assessment field work. The assessment included collection and field sampling of 17 soil samples from 12 soil borings (SB-1 through SB-12). Based on field sampling results, AES recommended excavation of the release area. Sample locations are shown on Figure 3.

On March 17, 22 and 29, and April 11, 2017, AES returned to the location to collect confirmation soil samples of the excavation extents. The field sampling activities included collection of 15 confirmation soil samples (SC-1 through SC-13, T-1 and T-2) from the walls and base of the excavation and an assessment trench. The area of the final excavation measured approximately 71 feet by 84 feet by 2 to 4.5 feet in depth, and the assessment trench was approximately 69 feet by 3 feet by 3 feet in depth. Note that the depths of the excavation and trench were limited due to a confining sandstone unit around 2 to 4.5 feet bgs. Sample locations and final excavation extents are presented on Figure 4.

---

## **2.0 Soil Sampling**

A total of 17 soil samples (SB-1 through SB-12) and 15 composite samples (SC-1 through SC-13, T-1 and T-2) were collected during the assessment and excavation clearance. All samples were field screened for volatile organic compounds (VOCs),



and selected samples were analyzed for total petroleum hydrocarbons (TPH). All composite samples collected during the excavation clearance were submitted for confirmation laboratory analysis.

## **2.1 Field Sampling**

### **2.1.1 Volatile Organic Compounds**

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

### **2.1.2 Total Petroleum Hydrocarbons**

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

## **2.2 Laboratory Analyses**

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

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

In addition, soil samples BGT S-1, SB-3 and SB-5 were laboratory analyzed for:

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

## **2.3 Field and Laboratory Analytical Results**

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

Table 1. Soil Field VOCs and TPH Results  
San Juan 28-6 Unit 127N Release Assessment and Final Excavation  
December 2016 through April 2017

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Depth below BGT (ft)</i>	<i>VOCs OVM Reading (ppm)</i>	<i>Field TPH (418.1) (mg/kg)</i>
		<i>NMOCD Action Level</i>	<i>--*</i>	<i>100*</i>
SB-1	12/12/16	3.5	0.0	<20.0
SB-2	12/12/16	1.5	437	39.9
		2.5	1,947	<b>1,760</b>
SB-3	12/12/16	1.25	219	20.7
SB-4	12/12/16	1.5	0.2	NA
SB-5	12/12/16	2.75	325	73.3
SB-6	12/12/16	1.5	1,148	<b>182</b>
		2.5	2,923	<b>642</b>
SB-7	12/12/16	2	1,201	NA
		3	2,505	<b>1,450</b>
SB-8	12/12/16	3	0.0	<20.0
SB-9	12/12/16	2	73.6	NA
		2.75	32.3	<20.0
SB-10	12/12/16	1.25	3,453	NA
		2.75	2,748	<b>1,800</b>
SB-11	12/12/16	3.5	1.2	<20.0
SB-12	12/12/16	3	0.9	<20.0
SC-1	3/17/17	0 to 3.25	113	<20.0
SC-2	3/29/17	0 to 4.5	0.8	<20.0
SC-3	3/22/17	0 to 2	6.8	<20.0
SC-4	3/17/17	0 to 3.25	9.2	<20.0
SC-5	3/29/17	3.25	2,337	44.9
SC-6	4/11/17	0 to 4.5	2,276	70.0
SC-7	3/22/17	0 to 4.5	19.1	<20.0
SC-8	3/29/17	4.5	1,953	47.4



<i>Sample ID</i>	<i>Date Sampled</i>	<i>Depth below BGT (ft)</i>	<i>VOCs OVM Reading (ppm)</i>	<i>Field TPH (418.1) (mg/kg)</i>
<i>NMOCD Action Level</i>			<i>--*</i>	<i>100*</i>
SC-9	4/11/17	0 to 2	7.7	<20.0
SC-10	3/22/17	0 to 2	185	<20.0
SC-11	3/22/17	2	2,851	80.1
SC-12	4/11/17	0 to 4	1,381	26.4
SC-13	4/11/17	2 to 4	2,510	21.3
T-1	3/29/17	0 to 3	2.1	<20.0
T-2	3/29/17	0 to 3	3,640	<b>140</b>

NA – not analyzed

\*Action level determined by NMAC 19.15.17.13 Table 1.

Table 2. Soil Laboratory Analytical Results – Benzene, Total BTEX, TPH, and Chlorides  
San Juan 28-6 Unit 127N BGT Closure, Release Assessment and Final Excavation  
November 2016 through April 2017

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Sample Depth (ft bgs)</i>	<i>Benzene (mg/kg)</i>	<i>Total BTEX (mg/kg)</i>	<i>TPH 418.1 (mg/kg)</i>	<i>TPH-GRO 8015 (mg/kg)</i>	<i>TPH-DRO 8015 (mg/kg)</i>	<i>TPH-MRO 8015 (mg/kg)</i>	<i>Chlorides (mg/kg)</i>
<i>NMOCD Action Level</i>			<i>10*</i>	<i>50*</i>	<i>100*</i>		<i>100*</i>		<i>600*</i>
BGT S-1	11/14/16	3.5	<0.49	<b>51</b>	<b>3,900</b>	<b>2,100</b>	<b>1,300</b>	<b>620</b>	<30
SB-3	12/12/16	1.25	<0.024	0.52	25	7.1	28	<46	46
SB-5	12/12/16	2.75	<0.025	<0.222	78	<4.9	62	<49	<30
SC-1	3/17/17	0 to 3.25	<0.014	<0.126	NA	<2.8	<9.9	<49	NA
SC-2	3/29/17	0 to 4.5	<0.015	<0.139	NA	<3.1	<9.9	<49	NA
SC-3	3/22/17	0 to 2	<0.015	<0.134	NA	<3.0	<9.5	<48	NA
SC-4	3/17/17	0 to 3.25	<0.015	<0.135	NA	<3.0	11	<46	NA
SC-5	4/11/17	3.25	<0.016	<0.147	NA	<b>&lt;3.3</b>	<b>63</b>	<b>49</b>	NA
SC-6	4/11/17	0 to 4.5	0.015	2.12	NA	<b>130</b>	<b>28</b>	<b>&lt;46</b>	NA
SC-7	3/22/17	0 to 4.5	<0.016	0.24	NA	<3.2	<9.5	<47	NA
SC-8	3/29/17	4.5	<0.017	1.67	NA	36	19	<50	NA

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Sample Depth (ft bgs)</i>	<i>Benzene (mg/kg)</i>	<i>Total BTEX (mg/kg)</i>	<i>TPH 418.1 (mg/kg)</i>	<i>TPH-GRO 8015 (mg/kg)</i>	<i>TPH-DRO 8015 (mg/kg)</i>	<i>TPH-MRO 8015 (mg/kg)</i>	<i>Chlorides (mg/kg)</i>
<i>NMOCD Action Level</i>			<i>10*</i>	<i>50*</i>	<i>100*</i>		<i>100*</i>		<i>600*</i>
SC-9	4/11/17	0 to 2	<0.014	<0.123	NA	<2.7	<9.5	<47	NA
SC-10	3/22/17	0 to 2	<0.015	<0.132	NA	7.0	12	<49	NA
SC-11	3/22/17	2	<0.030	0.79	NA	49	41	<48	NA
SC-12	4/11/17	0 to 4	<0.015	1.6	NA	49	18	<46	NA
SC-13	4/11/17	2 to 4	<0.016	0.13	NA	6.3	16	<49	NA

NA – not analyzed

\*Action level determined by NMAC 19.15.17.13 Table 1.

### 3.0 Conclusions and Recommendations

#### 3.1 BGT Closure

On November 14, 2016, AES conducted BGT closure sampling at the location. NMOCD action levels for BGT closures are specified in New Mexico Administrative Code (NMAC) 19.15.17.13 Table 1, and for this location the most stringent action levels were utilized per NMOCD. BGT closure sampling results were above the NMOCD action levels of 50 mg/kg for total BTEX and 100 mg/kg for TPH, with BGT S-1 reporting laboratory concentrations of 51 mg/kg total BTEX, 3,900 mg/kg TPH (418.1), and 4,020 mg/kg TPH (as GRO/DRO/MRO), respectively. Chloride concentrations in BGT S-1 were reported below the NMOCD action level of 600 mg/kg, with less than 30 mg/kg. Based on laboratory concentrations, a release was confirmed at the San Juan 28-6 Unit 127N.

#### 3.2 Release Assessment

On December 12, 2016, AES completed a release assessment at the location. Release assessment field sampling results above the NMOCD action level of 100 mg/kg TPH were reported in SB-2, SB-6, SB-7 and SB-10. The highest field TPH concentration was reported in SB-10, with a concentration of 1,800 mg/kg TPH. Excavation of the release area was recommended.

#### 3.3 Excavation Clearance

On April 11, 2017, final clearance of the excavation area was completed. Field sampling results of the excavation extents showed field TPH concentrations were below the applicable NMOCD action level of 100 mg/kg for all samples, except T-2. Laboratory analytical results reported benzene and total BTEX concentrations in all samples as



below NMOCD action levels. In contrast, TPH concentrations (as GRO/DRO/MRO) exceeded NMOCD action levels in two samples, SC-5 (center base) and SC-6 (southeast wall). Note that SC-5 had concentrations of GRO (<3.3 mg/kg) and DRO (63 mg/kg), while MRO, which is less mobile in the subsurface, was reported at 49 mg/kg. SC-6 was located in close proximity to the former separators.

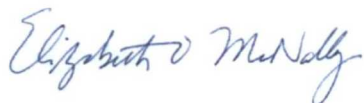
Based on the final field sampling and laboratory analytical results of the excavation of petroleum contaminated soils at the San Juan 28-6 Unit 127N, benzene, total BTEX, and TPH concentrations were below the applicable NMOCD action levels for the final sidewalls and base of the excavation, except for TPH at SC-5 and SC-6. However, NMOCD granted approval to spray with a potassium permanganate solution and then backfill the excavation. No further work is recommended.

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

Sincerely,



David J. Reese  
Environmental Scientist



Elizabeth McNally, P.E.

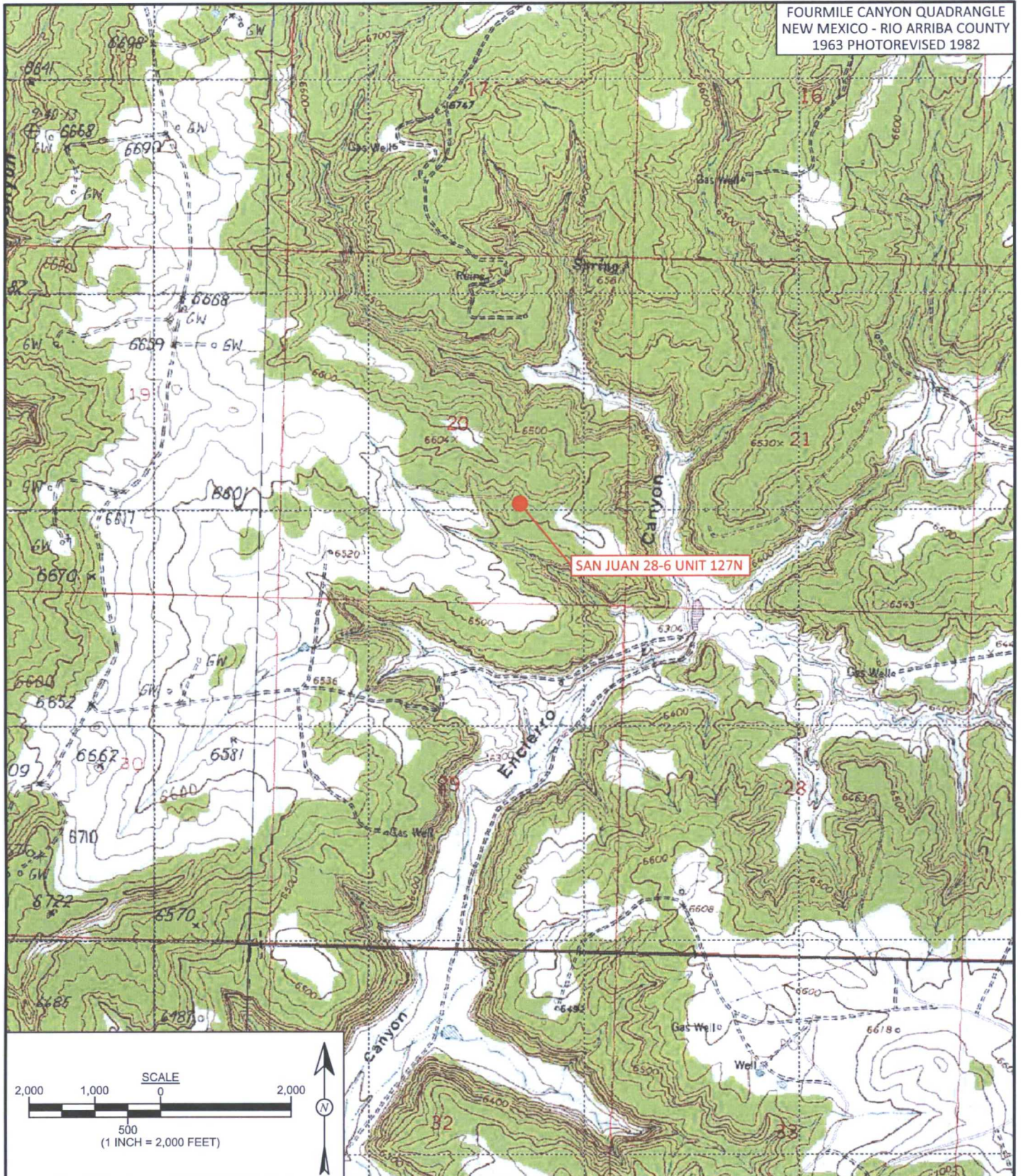
Attachments:

- Figure 1. Topographic Site Location Map
- Figure 2. Aerial Site Map, November and December 2016
- Figure 3. BGT Closure and Release Assessment Sample Locations and Results, November and December 2016
- Figure 4. Final Excavation Sample Locations and Results, March and April 2017  
AES Field Sampling Reports 121216, 031717, 032217, 032917, 041117  
Hall Laboratory Analytical Reports 1611721, 1612945, 1703B58, 1703B61, 1703E72, 1703E90, 1704455

## Figures



FOURMILE CANYON QUADRANGLE  
NEW MEXICO - RIO ARriba COUNTY  
1963 PHOTOREVISED 1982



**FIGURE 1**

**TOPOGRAPHIC SITE LOCATION MAP**

ConocoPhillips  
SAN JUAN 28-6 UNIT 127N  
NW¼ SE¼, SECTION 20, T28N, R6W  
RIO ARriba COUNTY, NEW MEXICO  
N36.64374, W107.48761



**animas  
environmental  
services**

Farmington, NM • Durango, CO  
animasenvironmental.com

**DRAWN BY:**

C. Lameman

**DATE DRAWN:**

December 16, 2016

**REVISIONS BY:**

C. Lameman

**DATE REVISED:**

December 16, 2016

**CHECKED BY:**

D. Reese

**DATE CHECKED:**

December 16, 2016

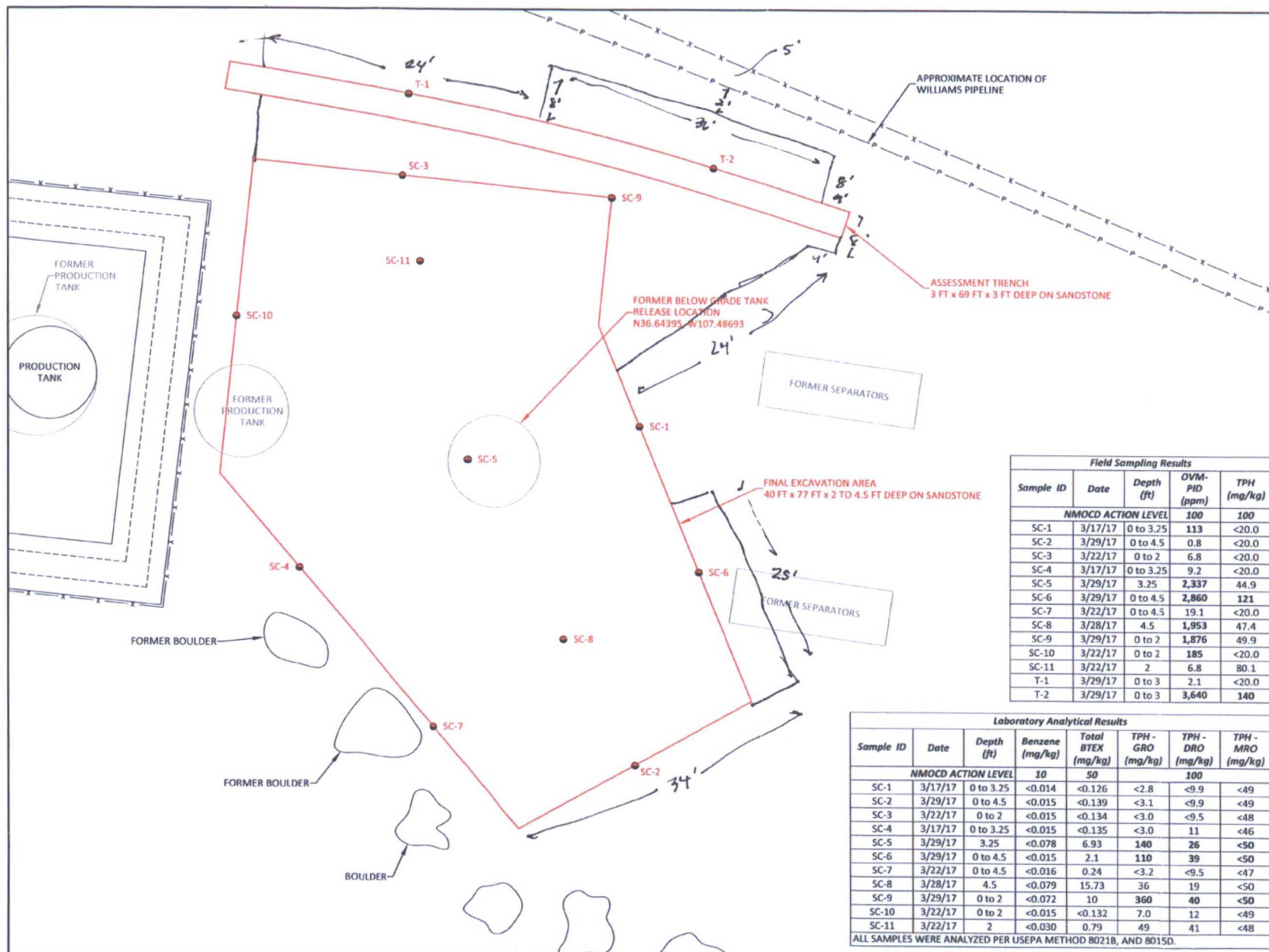
**APPROVED BY:**

E. McNally

**DATE APPROVED:**

December 16, 2016





**FIGURE 4**

**FIELD EXCAVATION SAMPLE LOCATIONS AND RESULTS MARCH 2017**  
 ConocoPhillips  
 SAN JUAN 28-6 UNIT 127N  
 NW¼ SE¼, SECTION 20, T28N, R6W  
 RIO ARRIBA COUNTY, NEW MEXICO  
 N36.64374, W107.48761

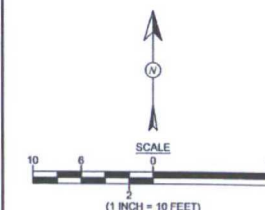


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 animasenvironmental.com

**DRAWN BY:** C. Lameman  
**DATE DRAWN:** March 22, 2017  
**REVISIONS BY:** C. Lameman  
**DATE REVISED:** March 31, 2017  
**CHECKED BY:** C. Lameman  
**DATE CHECKED:** March 31, 2017  
**APPROVED BY:** E. McNally  
**DATE APPROVED:** March 31, 2017

**LEGEND**

- SAMPLE LOCATIONS
- SECONDARY CONTAINMENT BERM
- FENCE







## FIGURE 2

### AERIAL SITE MAP 2016 AND 2017

ConocoPhillips  
SAN JUAN 28-6 UNIT 127N  
NW¼ SE¼, SECTION 20, T28N, R6W  
RIO ARriba COUNTY, NEW MEXICO  
N36.64374, W107.48761



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animasenvironmental.com

#### DRAWN BY:

C. Lameman

#### DATE DRAWN:

December 16, 2016

#### REVISIONS BY:

C. Lameman

#### DATE REVISED:

June 1, 2017

#### CHECKED BY:

D. Reese

#### DATE CHECKED:

June 1, 2017

#### APPROVED BY:

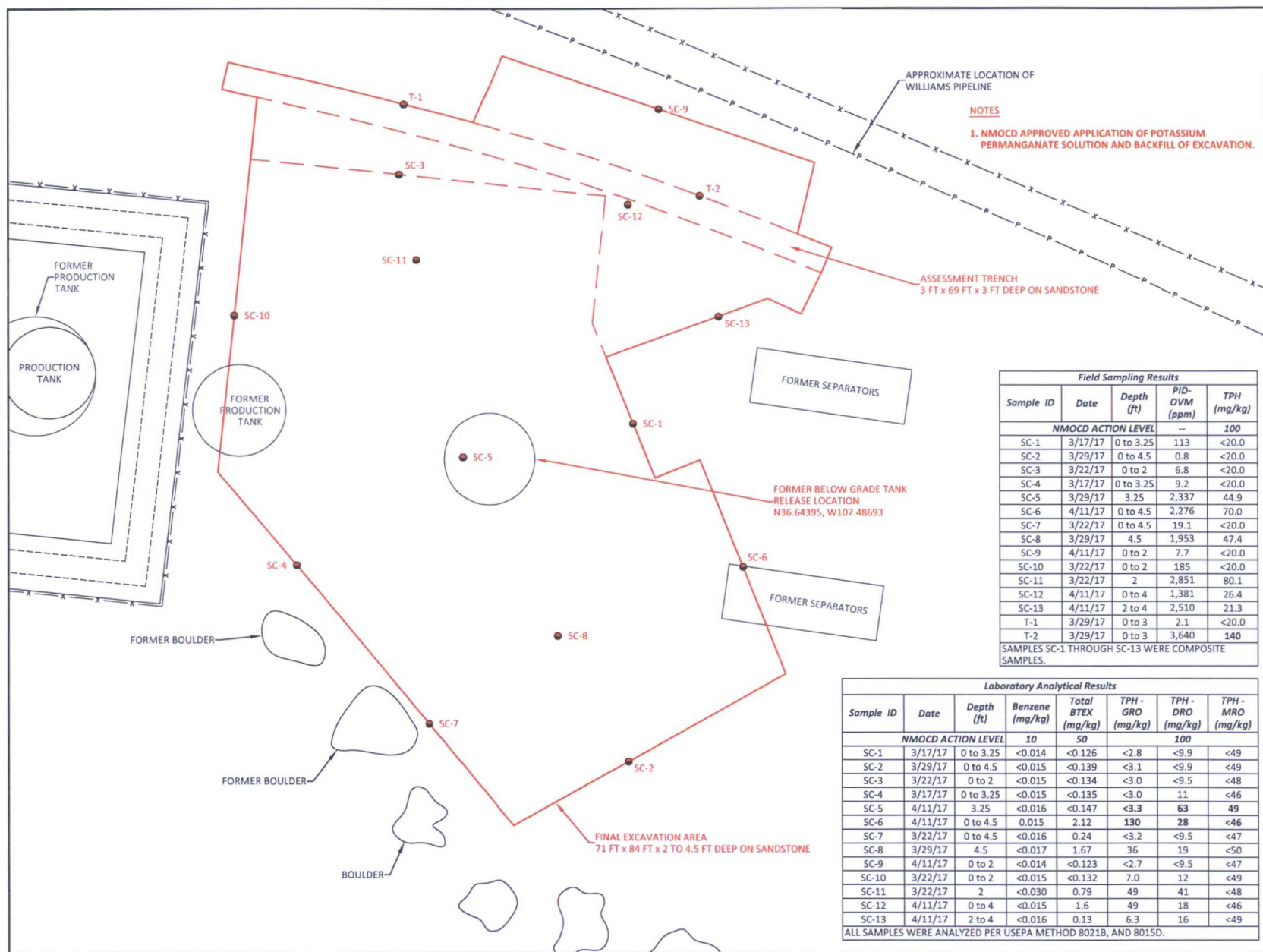
E. McNally

#### DATE APPROVED:

June 1, 2017







**FIGURE 4**

**FINAL EXCAVATION SAMPLE LOCATIONS AND RESULTS MARCH AND APRIL 2017**

ConocoPhillips  
SAN JUAN 28-6 UNIT 127N  
NW¼, SE¼, SECTION 20, T28N, R6W  
RIO ARriba COUNTY, NEW MEXICO  
N36.64374, W107.48761

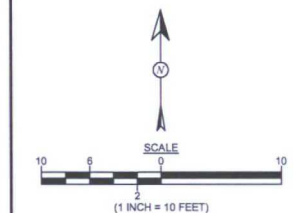


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animasenvironmental.com

<b>DRAWN BY:</b> C. Lameman	<b>DATE DRAWN:</b> March 22, 2017
<b>REVISIONS BY:</b> S. Glasses	<b>DATE REVISION:</b> April 20, 2017
<b>CHECKED BY:</b> D. Reese	<b>DATE CHECKED:</b> April 20, 2017
<b>APPROVED BY:</b> E. McNally	<b>DATE APPROVED:</b> April 20, 2017

**LEGEND**

- SAMPLE LOCATIONS
- SECONDARY CONTAINMENT BERM
- X — FENCE





## Field Notes

# Field Screening Release Assessment Field Report

Date: 12-12-16

Client: Cinco Phillips  
 Well or Lease Name: San Juan 28-L Unit 127N  
 CoP Onsite Supervisor: C. Lamernan  
 Site Arrival Time: 1045  
 Site Departure Time: 1415  
 Land Jurisdiction: BLM  
 County/State: Bio Arriba / NM  
 Site Rank: 10

AES Personnel: S. Blasquez  
 Beginning mileage: 5210  
 Ending Mileage: 53020  
 Release Source: Historic BBT  
 Well Head (GPS): 36.64374, -107.48761  
 Release Location (GPS): 36.64395, -107.48693

Billing Info:  
 WO #:  
 Supervisor:  
 USER:  
 Area:  
 Activity Code:  
 Ordered by:

Equipment in place: 2 Production Tanks, 1 BBT, 3 Separators  
3 Meter Runs, 3 WH  
 Photos taken:

Buck Machine #			
Concentration	50 mg/kg	100 mg/kg	500 mg/kg
Calibration ABS Values	0.076	0.134	0.639

Project Details: BBT Regulatory Sampling were above BBT Closure levels.  
Release Assessment Required.

Initial Recommendations:

Limitations: Sandstone Ranging 1.25 to 3.5 BbS

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

Horizontal (Cross-Section View):

*See Attached Field Sketch*

Vertical (Plan View):

Well or Lease Name: San Juan 28-7 Unit 127N

Date: 12-12-16

AES personnel: S. Glesses, C. Lammeman

Sample ID	Collection Date	Time of Sample Collection	Sample Location	OVM (ppm)	OVM Time	Field TPH (mg/kg)	Field TPH Analysis Time	ABS	NOTES
SB-1 @ 3.5'	12-12-16	1135	N of BGT S-1	0.0	1208	<20.0	1215	0.010	Sand & Gravel, Tan, Dry, No Odor & Staining
SB-2 @ 1.5'		1147	S of BGT S-1	937	1209	39.86	1226	0.036	Sand, LG, Sl. Gray, Sl. odor
@ 2.5'		1155		1947	1210	1,757.13	1229	1.114	Sand, LG, Sl. Gray, V. Strg odor. on SS
SB-3 @ 1.25'		1216	Sl. SB-2	219	1235	20.74	1238	0.024	Sand, LG, Tan, V. Sl. Odor. on SS
SB-4 @ 1.5'		1236	E of BGT S-1	0.2	1254	-	-	-	Sand & Clay, Gray Purple, No Odor & Staining <sup>Auger Refused to accept</sup>
SB-5 @ 2.75'		1245	W of BGT S-1	325	1305	73.31	1303	0.057	Sand, Blk Rts, Sl. Odor, Sl. Gray, on SS
SB-6 @ 1.5'		1318	W of SB-2	1148	1332	181.64	1329	0.125	Sand & Clay, Gray Purple, Sl. Odor,
@ 2.5'		1325		2923	1340	642.02	1332	0.414	Sand, Sl. Gray, V. Strg odor. on SS
SB-7 @ 2'		1340	SW of SB-6	1201	1356	-	-	-	Sand & Clay, Gray Purple, Strg Odor
@ 3'		1347		2505	1407	1451.27	1403	0.922	Sand, LG, Gray, V. Strg odor, on SS
SB-8 @ 3'		1400	SW of SB-7	0.0	1417	<20.0	1413	0.008	Sand, LG, Tan, No Odor & Staining on SS
SB-9 @ 2'		1410	W of SB-6	73.6	1430	-	-	-	Sand & Clay, Blk Gray, Staining, V. Strg Odor
@ 2.75'		1420		32.3	1431	<20.0	1436	0.013	Sand, LG, Blk Gray, V. Strg odor on SS
SB-10 @ 1.25'		1430	E of SB-8	3453	1510	-	-	-	Clay & Sand, Brown, No Staining, V. Strg odor
@ 2.75'		1436		2748	1511	1,775.36	1516	1.138	Sand, LG, Gray Tan, V. Strg odor, on SS
SB-11 @ 3.5'		1525		1.2	1539	<20.0	1542	0.020	Sand, LG, Tan, No Odor & Staining on SS
SB-12 @ 3'		1534		0.9	1543	<20.0	1547	0.010	Sand, Gray Purple, No Odor & Staining on SS

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

Animas Environmental Services, LLC

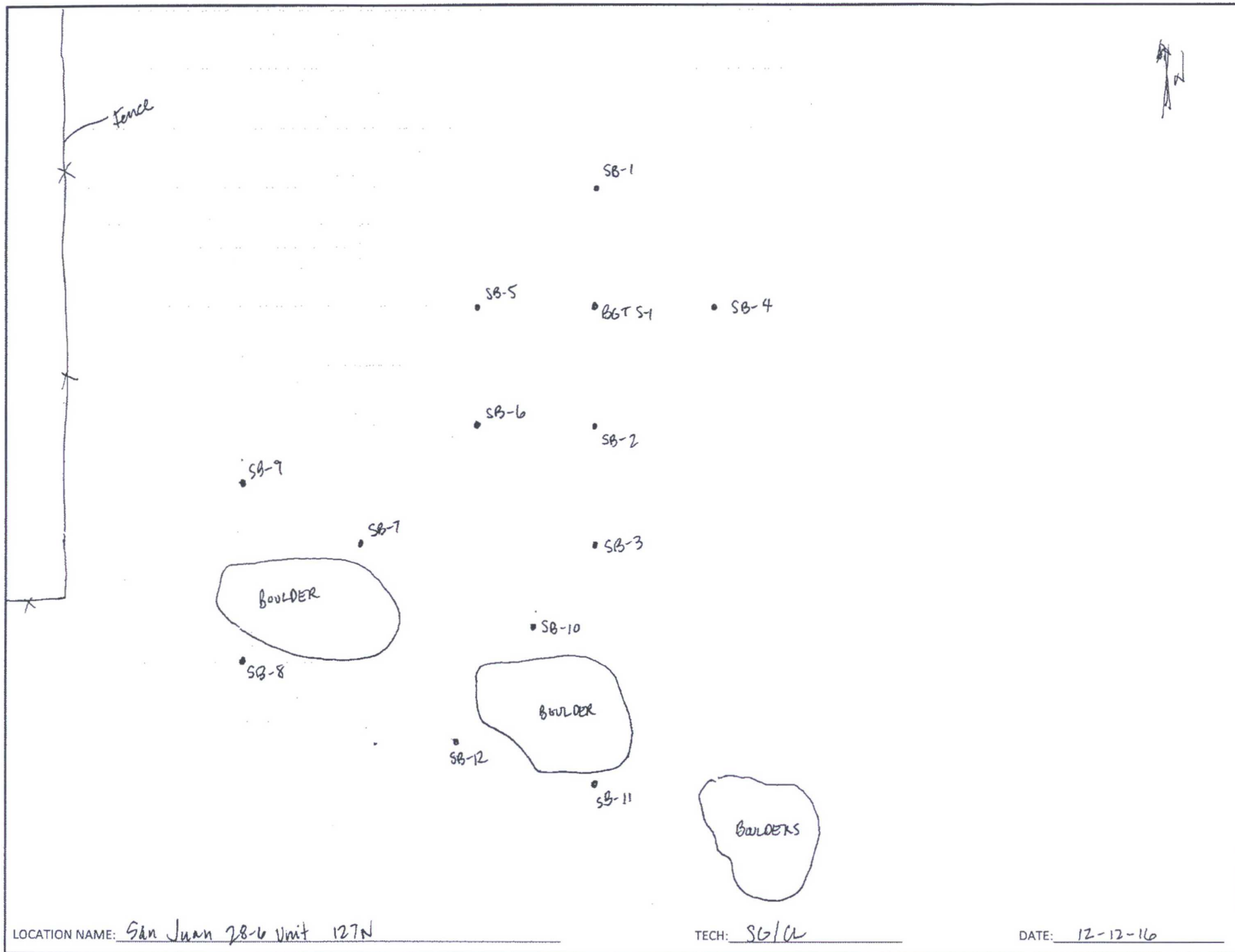
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2 of 2

Release Assessment Field Form 060215.xlsx





LOCATION NAME: San Juan 28-6 Unit 127N

TECH: SG/CL

DATE: 12-12-16

# Field Screening Release Assessment Field Report

Date: 3-17-17

Client: ConocoPhillips AES Personnel: C. Lameman  
 Well or Lease Name: San Juan 28-6 Unit 127N  
 CoP Onsite Supervisor: Kelly Ellis Beginning mileage: 94690  
 Site Arrival Time: 936 Ending Mileage: 94982  
 Site Departure Time: 1545 Release Source: Hydric BGT  
 Land Jurisdiction: BLM Well Head (GPS): 36.64374, -107.48761  
 County/State: Rio Arriba / NM Release Location (GPS): 36.64395, -107.48693  
 Site Rank: 10 but under 100 TPH, 10 Benzene, 50 BTEX

Billing Info:  
 WO #: 10398881  
 Supervisor: Randy Santa  
 USER: BLAKLBN  
 Area: 7  
 Activity Code:   
 Ordered by: Lisa Hunter

Equipment in place: 2 production tanks, BGT, 3 Separators  
3 WH, 3 Meter Runs  
 Photos taken: Yes

Buck Machine #	3		
Concentration	50 mg/kg	100 mg/kg	500 mg/kg
Calibration ABS Values	0.136	0.259	1.211

Project Details: BGT Regulatory Resample and Delineation completed.  
 Excavation Clearance and in progress. Found more  
 contamination when excavating.

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

Horizontal (Cross-Section View):

Vertical (Plan View):

Initial Recommendations:

Limitations: Shallow Sandstone. Williams pipeline N of Excavation. Facility fence  
 and communication lines.

Well or Lease Name: *San Juan 28-6 Unit 127N*

Date: *3-17-17*

AES personnel: *C. Lammeman*

Sample ID	Collection Date	Time of Sample Collection	Sample Location	OVM (ppm)	OVM Time	Field TPH (mg/kg)	Field TPH Analysis Time	ABS	NOTES
SC-1	3-17-17	1000	<del>North Wall</del> <sup>Q</sup>	113	1029	<20.0	1035	0.025	0-2 E Wall Center Lab
SC-2		1003	<del>South East Wall</del>	1,677	1030	80.1	1038	0.114	0-2
SC-3		1005	<del>North West Wall</del>	1167	1031	40.7	1040	0.067	0-2
SC-4		1120	<del>South Wall</del>	9.2	1137	<20.0	1140	0.013	0-4 <sup>W</sup> Wall Center Lab
SC-5		1125	<del>Base</del> <sup>ctr</sup>	2,934	1138	51.7	1143	0.435	on Standstone Lab
SC-2(2)		1213	<del>East or West Wall</del>	2,470	1226	-	-	-	S Wall
SC-3(2)		1215	<del>West Wall</del>	1,198	1227	73.4	1229	0.106	N Wall
S-1		1315	12' N of fence	1,336	1334	983	1351	1.192	Trench to find end of Cont.
S-2		1330	20' N of fence	12.0	1343	<20.0	1349	0.026	" " barrel
S-3		1518	5' N of fence	3.3	1525	<20.0	1528	0.028	Check Results.

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

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2 of \_\_\_\_\_

Release Assessment Field Form 012617.xlsx



Well or Lease Name: San Juan 28-6 Unit 127N

Date: 3-22-17

AES personnel: C. Lameman

Sample ID	Collection Date	Time of Sample Collection	Sample Location	OVM (ppm)	OVM Time	Field TPH (mg/kg)	Field TPH Analysis Time	ABS	NOTES
SC-2 (3)	3-22-17	840	<del>E Wall</del> a	3.5	1003	<20.0	1018	0.022	6-3 SWall Lab
SC-3 (3)		844	<del>W Wall</del> a	3,151	1004	50.7	1020	0.079	0-3 N Wall
SC-6		853	<del>N Wall</del> <del>NE 1/2</del> a	773	1005	55.8	1023	0.085	0-3 E Wall S 1/2
SC-7		859	<del>SWall</del> <del>SE 1/2</del>	19.1	1006	<20.0	1025	0.024	6-3 W Wall S 1/2 Lab
SC-8		915	<del>Base</del> S 1/2	2714	1007	572	1027	0.701	3-4 on SS Lab
SC-9		918	<del>N Wall</del> <del>NE 1/2</del> a	3,008	1008	373	1030	0.463	0-3 E Wall N 1/2
SC-10		922	<del>SWall</del> <del>SE 1/2</del> a	185	1009	<20.0	1032	0.038	0-3 W Wall N 1/2 Lab
SC-11		940	<del>Base</del> NE 1/2	2,857	1011	80.1	1034	0.114	3-4 on SS Lab
SC-3 (4)		1057	<del>N</del> Well	6.8	1119	<20.0	1122	0.027	0-2 Lab

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

Animas Environmental Services, LLC

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2 of \_\_\_\_\_

Release Assessment Field Form 060215.xlsx





Approximate  
wildfire line

Area of high  
Bengal concentration

Approximate location  
unable to get accurate  
due to terrain, some safety  
concerns

GGT

Communication  
Line





San Juan 28.6 West 127N

AES personnel: C. Wimmer/D. Johnson

Same Day  
or  
2 or 3 Day

Sample ID	Collection Date	Time of Sample Collection	Sample Location	OVM (ppm)	OVM Time	Field TPH (mg/kg)	Field TPH Analysis Time	ABS	NOTES
SC-2 (4)	3-29-17	1135	SWall East 5 1/2	0.8	1235	<20.0	1257	0.034	Was Extended Back 10' Standard Lab
SC-3 (2)		1140	EWall 5 1/2	2,960	1236	121	1306	0.083	Was Extended Back 10' Lab
SC-9 (2)		1145	NE Wall	1,876	1238	49.9	1313	0.074	Was Extended Back 8-10' Lab
Trench #1		1220	W 1/2 trench	2.1	1330	<20.0	1319	0.038	Lab 40'
Trench 2		1225	E 1/2 trench	3,640	1331	140	1325	0.186	on projects to see what Williams Lab had
SC-8 (2)		1415	S 1/2 Base	1,953	1425	47.4	1422	0.075	on SS extremely hard Lab
SC-5 (2)		1506	Base Center	2,337	1521	44.9	1526	0.072	on SS extremely hard Lab
									Ask Kelly to give him a call.
									970-739-5586
									Link sent texted for 3-Day TAT
									on all except SC-2 (Standard)

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

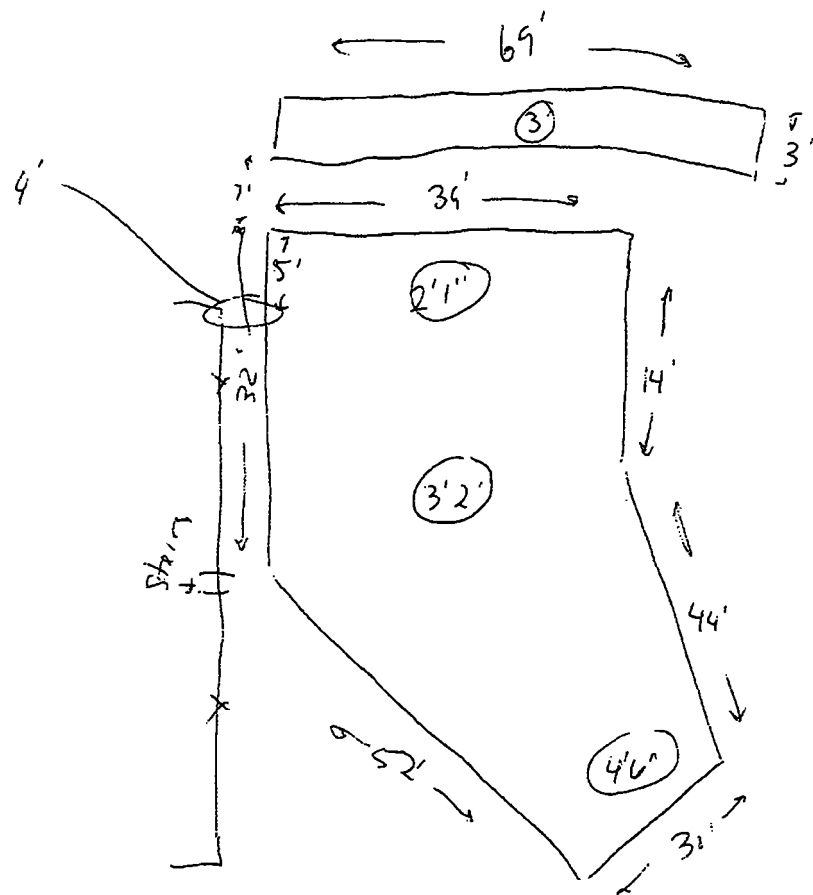
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3 of \_\_\_\_\_

Release Assessment Field Form 060215.xlsx



x Wellhead



AES personnel: C. Lameman

[illegible]

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

Animas Environmental Services, LLC

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

1911 N Main, Ste 280, Durango, CO 81301

## Analytical Reports





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)

November 23, 2016

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

RE: COPC San Juan 28-6 Unit 127N

OrderNo.: 1611721

Dear Emilee Skyles:

Hall Environmental Analysis Laboratory received 1 sample(s) on 11/15/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](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.

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

Sincerely,

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1611721

Date Reported: 11/23/2016

**CLIENT:** Animas Environmental

**Client Sample ID:** BGT S-1@3.5

**Project:** COPC San Juan 28-6 Unit 127N

**Collection Date:** 11/14/2016 10:45:00 AM

**Lab ID:** 1611721-001

**Matrix:** SOIL

**Received Date:** 11/15/2016 7:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 418.1: TPH</b>							Analyst: <b>MAB</b>
Petroleum Hydrocarbons, TR	3900	190		mg/Kg	10	11/22/2016	28783
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	ND	30		mg/Kg	20	11/21/2016 11:51:59 PM	28786
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>JME</b>
Diesel Range Organics (DRO)	1300	92		mg/Kg	10	11/16/2016 12:15:33 PM	28686
Motor Oil Range Organics (MRO)	620	460		mg/Kg	10	11/16/2016 12:15:33 PM	28686
Surr: DNOP	0	70-130	S	%Rec	10	11/16/2016 12:15:33 PM	28686
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	2100	99		mg/Kg	20	11/16/2016 11:54:43 AM	28653
Surr: BFB	412	68.3-144	S	%Rec	20	11/16/2016 11:54:43 AM	28653
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.49		mg/Kg	20	11/16/2016 11:54:43 AM	28653
Toluene	ND	0.99		mg/Kg	20	11/16/2016 11:54:43 AM	28653
Ethylbenzene	ND	0.99		mg/Kg	20	11/16/2016 11:54:43 AM	28653
Xylenes, Total	51	2.0		mg/Kg	20	11/16/2016 11:54:43 AM	28653
Surr: 4-Bromofluorobenzene	128	80-120	S	%Rec	20	11/16/2016 11:54:43 AM	28653

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



# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1611721

23-Nov-16

**Client:** Animas Environmental  
**Project:** COPC San Juan 28-6 Unit 127N

Sample ID	MB-28786		SampType:	MBLK		TestCode:	EPA Method 300.0: Anions				
Client ID:	PBS		Batch ID:	28786		RunNo:	38900				
Prep Date:	11/21/2016		Analysis Date:	11/21/2016		SeqNo:	1215934		Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	ND	1.5									

Sample ID	LCS-28786		SampType: LCS		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 28786		RunNo: 38900					
Prep Date:	11/21/2016		Analysis Date: 11/21/2016		SeqNo: 1215935		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.9	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  
W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1611721

23-Nov-16

**Client:** Animas Environmental  
**Project:** COPC San Juan 28-6 Unit 127N

Sample ID	MB-28783	SampType:	MBLK	TestCode:	EPA Method 418.1: TPH					
Client ID:	PBS	Batch ID:	28783	RunNo:	38917					
Prep Date:	11/21/2016	Analysis Date:	11/22/2016	SeqNo:	1216381	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-28783	SampType: LCS			TestCode: EPA Method 418.1: TPH					
Client ID:	LCSS	Batch ID: 28783			RunNo: 38917					
Prep Date:	11/21/2016	Analysis Date: 11/22/2016			SeqNo: 1216382		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	110	20	100.0	0	111	80.7	121			

Sample ID	LCSD-28783	SampType: LCSD			TestCode: EPA Method 418.1: TPH					
Client ID:	LCSS02	Batch ID: 28783			RunNo: 38917					
Prep Date:	11/21/2016	Analysis Date: 11/22/2016			SeqNo: 1216383		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	110	20	100.0	0	113	80.7	121	1.19	20	

## Qualifiers:

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



# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1611721

23-Nov-16

**Client:** Animas Environmental  
**Project:** COPC San Juan 28-6 Unit 127N

Sample ID	<b>MB-28682</b>		SampType:	<b>MBLK</b>		TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>			
Client ID:	<b>PBS</b>		Batch ID:	<b>28682</b>		RunNo:	<b>38735</b>			
Prep Date:	<b>11/15/2016</b>		Analysis Date:	<b>11/16/2016</b>		SeqNo:	<b>1210301</b>	Units:	<b>%Rec</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.0		10.00		80.2	70	130			

Sample ID	<b>LCS-28682</b>		SampType:	<b>LCS</b>		TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>			
Client ID:	<b>LCSS</b>		Batch ID:	<b>28682</b>		RunNo:	<b>38735</b>			
Prep Date:	<b>11/15/2016</b>		Analysis Date:	<b>11/16/2016</b>		SeqNo:	<b>1210302</b>	Units:	<b>%Rec</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.2		5.000		83.4	70	130			

Sample ID	<b>MB-28686</b>		SampType:	<b>MBLK</b>		TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>			
Client ID:	<b>PBS</b>		Batch ID:	<b>28686</b>		RunNo:	<b>38735</b>			
Prep Date:	<b>11/15/2016</b>		Analysis Date:	<b>11/16/2016</b>		SeqNo:	<b>1210466</b>	Units:	<b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	7.8		10.00		77.9	70	130			

Sample ID	<b>LCS-28686</b>		SampType:	<b>LCS</b>		TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>			
Client ID:	<b>LCSS</b>		Batch ID:	<b>28686</b>		RunNo:	<b>38735</b>			
Prep Date:	<b>11/15/2016</b>		Analysis Date:	<b>11/16/2016</b>		SeqNo:	<b>1210467</b>	Units:	<b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	90.9	62.6	124			
Surr: DNOP	4.1		5.000		81.4	70	130			

## Qualifiers:

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1611721

23-Nov-16

**Client:** Animas Environmental  
**Project:** COPC San Juan 28-6 Unit 127N

Sample ID	MB-28653		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 28653		RunNo: 38746					
Prep Date:	11/14/2016		Analysis Date: 11/16/2016		SeqNo: 1210935		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	830		1000		83.2	68.3	144			

Sample ID	LCS-28653		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 28653		RunNo: 38746					
Prep Date:	11/14/2016		Analysis Date: 11/16/2016		SeqNo: 1210936		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	88.0	74.6	123			
Surr: BFB	880		1000		88.2	68.3	144			

## Qualifiers:

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1611721

23-Nov-16

Client: Animas Environmental  
Project: COPC San Juan 28-6 Unit 127N

Sample ID	MB-28653	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	28653	RunNo:	38746					
Prep Date:	11/14/2016	Analysis Date:	11/16/2016	SeqNo:	1210951	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.98		1.000		97.7	80	120			

Sample ID	LCS-28653		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 28653		RunNo: 38746					
Prep Date:	11/14/2016		Analysis Date: 11/16/2016		SeqNo: 1210952		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	101	75.2	115			
Toluene	0.97	0.050	1.000	0	96.6	80.7	112			
Ethylbenzene	0.93	0.050	1.000	0	93.5	78.9	117			
Xylenes, Total	2.8	0.10	3.000	0	93.3	79.2	115			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

## Qualifiers:

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





Hall Environmental Analysis Laboratory  
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: 1811721

RcptNo: 1

Received by/date: AT 11/15/16

Logged By: Lindsay Mangin 11/15/2016 7:50:00 AM

Completed By: Lindsay Mangin 11/15/2016 8:50:20 AM

Reviewed By: AS 11/15/16

*[Signature]*

*[Signature]*

### Chain of Custody

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

### Log In

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

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

### Special Handling (If applicable)

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

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

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			







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)

December 29, 2016

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

RE: CoP San Juan 28-6 Unit 127N

OrderNo.: 1612945

Dear Corwin Lameman:

Hall Environmental Analysis Laboratory received 2 sample(s) on 12/17/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](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.

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1612945

Date Reported: 12/29/2016

CLIENT: Animas Environmental

Client Sample ID: SB-3

Project: CoP San Juan 28-6 Unit 127N

Collection Date: 12/12/2016 12:16:00 PM

Lab ID: 1612945-001

Matrix: SOIL

Received Date: 12/17/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 418.1: TPH</b>							Analyst: <b>MAB</b>
Petroleum Hydrocarbons, TR	25	19		mg/Kg	1	12/23/2016	29326
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	46	30		mg/Kg	20	12/28/2016 1:24:16 AM	29418
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	28	9.1		mg/Kg	1	12/23/2016 12:32:41 AM	29308
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/23/2016 12:32:41 AM	29308
Surr: DNOP	93.2	70-130		%Rec	1	12/23/2016 12:32:41 AM	29308
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	7.1	4.8		mg/Kg	1	12/22/2016 3:58:50 AM	29302
Surr: BFB	112	68.3-144		%Rec	1	12/22/2016 3:58:50 AM	29302
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	12/22/2016 3:58:50 AM	29302
Toluene	ND	0.048		mg/Kg	1	12/22/2016 3:58:50 AM	29302
Ethylbenzene	ND	0.048		mg/Kg	1	12/22/2016 3:58:50 AM	29302
Xylenes, Total	0.52	0.096		mg/Kg	1	12/22/2016 3:58:50 AM	29302
Surr: 4-Bromofluorobenzene	94.5	80-120		%Rec	1	12/22/2016 3:58:50 AM	29302

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



## Analytical Report

Lab Order 1612945

Date Reported: 12/29/2016

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental

Client Sample ID: SB-5

Project: CoP San Juan 28-6 Unit 127N

Collection Date: 12/12/2016 12:45:00 PM

Lab ID: 1612945-002

Matrix: SOIL

Received Date: 12/17/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 418.1: TPH</b>							Analyst: <b>MAB</b>
Petroleum Hydrocarbons, TR	78	19		mg/Kg	1	12/23/2016	29326
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	ND	30		mg/Kg	20	12/28/2016 1:36:40 AM	29418
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	62	9.8		mg/Kg	1	12/23/2016 12:55:58 AM	29308
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/23/2016 12:55:58 AM	29308
Surr: DNOP	90.8	70-130		%Rec	1	12/23/2016 12:55:58 AM	29308
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/22/2016 4:23:03 AM	29302
Surr: BFB	108	68.3-144		%Rec	1	12/22/2016 4:23:03 AM	29302
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	12/22/2016 4:23:03 AM	29302
Toluene	ND	0.049		mg/Kg	1	12/22/2016 4:23:03 AM	29302
Ethylbenzene	ND	0.049		mg/Kg	1	12/22/2016 4:23:03 AM	29302
Xylenes, Total	ND	0.099		mg/Kg	1	12/22/2016 4:23:03 AM	29302
Surr: 4-Bromofluorobenzene	91.9	80-120		%Rec	1	12/22/2016 4:23:03 AM	29302

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612945

29-Dec-16

Client: Animas Environmental  
Project: CoP San Juan 28-6 Unit 127N

Sample ID	MB-29418	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	29418	RunNo:	39674					
Prep Date:	12/27/2016	Analysis Date:	12/27/2016	SeqNo:	1243082	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-29418	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	29418	RunNo:	39674					
Prep Date:	12/27/2016	Analysis Date:	12/27/2016	SeqNo:	1243083	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.2	90	110			

## Qualifiers:

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



# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612945

29-Dec-16

**Client:** Animas Environmental  
**Project:** CoP San Juan 28-6 Unit 127N

Sample ID	MB-29326	SampType:	MBLK	TestCode:	EPA Method 418.1: TPH					
Client ID:	PBS	Batch ID:	29326	RunNo:	39621					
Prep Date:	12/21/2016	Analysis Date:	12/23/2016	SeqNo:	1241002	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-29326	SampType:	LCS	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS	Batch ID:	29326	RunNo:	39621					
Prep Date:	12/21/2016	Analysis Date:	12/23/2016	SeqNo:	1241003	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	94	20	100.0	0	94.1	80.7	121			

Sample ID	LCSD-29326	SampType:	LCSD	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS02	Batch ID:	29326	RunNo:	39621					
Prep Date:	12/21/2016	Analysis Date:	12/23/2016	SeqNo:	1241004	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	95	20	100.0	0	95.4	80.7	121	1.37	20	

## Qualifiers:

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612945

29-Dec-16

Client: Animas Environmental  
Project: CoP San Juan 28-6 Unit 127N

Sample ID	LCS-29308		SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	LCSS		Batch ID:	29308		RunNo:	39590				
Prep Date:	12/20/2016		Analysis Date:	12/22/2016		SeqNo:	1240933		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	47	10	50.00	0	94.9	63.8	116				
Surr: DNOP	4.4		5.000		88.5	70	130				

Sample ID	MB-29308		SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS		Batch ID:	29308		RunNo:	39590				
Prep Date:	12/20/2016		Analysis Date:	12/22/2016		SeqNo:	1240934		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	ND	10									
Motor Oil Range Organics (MRO)	ND	50									
Surr: DNOP	9.2		10.00		92.4	70	130				

## Qualifiers:

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



# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612945

29-Dec-16

Client: Animas Environmental  
Project: CoP San Juan 28-6 Unit 127N

Sample ID	MB-29302	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	29302	RunNo:	39562					
Prep Date:	12/20/2016	Analysis Date:	12/21/2016	SeqNo:	1239335	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	890		1000		89.0	68.3	144			

Sample ID	LCS-29302	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	29302	RunNo:	39562					
Prep Date:	12/20/2016	Analysis Date:	12/21/2016	SeqNo:	1239336	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	30	5.0	25.00	0	119	74.6	123			
Surr: BFB	930		1000		92.6	68.3	144			

## Qualifiers:

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612945

29-Dec-16

Client: Animas Environmental  
Project: CoP San Juan 28-6 Unit 127N

Sample ID	<b>MB-29302</b>		SampType:	<b>MBLK</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>PBS</b>		Batch ID:	<b>29302</b>		RunNo:	<b>39562</b>			
Prep Date:	<b>12/20/2016</b>		Analysis Date:	<b>12/21/2016</b>		SeqNo:	<b>1239374</b>		Units: <b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.96		1.000		95.9	80	120			

Sample ID	<b>LCS-29302</b>		SampType:	<b>LCS</b>		TestCode:	<b>EPA Method 8021B: Volatiles</b>			
Client ID:	<b>LCSS</b>		Batch ID:	<b>29302</b>		RunNo:	<b>39562</b>			
Prep Date:	<b>12/20/2016</b>		Analysis Date:	<b>12/21/2016</b>		SeqNo:	<b>1239375</b>		Units: <b>mg/Kg</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	107	75.2	115			
Toluene	1.0	0.050	1.000	0	100	80.7	112			
Ethylbenzene	0.96	0.050	1.000	0	96.2	78.9	117			
Xylenes, Total	2.8	0.10	3.000	0	93.3	79.2	115			
Surr: 4-Bromofluorobenzene	0.87		1.000		86.6	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  
W Sample container temperature is out of limit as specified



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

## Sample Log-In Check List

Client Name: Animas Environmental

Work Order Number: 1612945

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

12/17/2016 7:45:00 AM

Completed By: Lindsay Mangin

12/17/2016 8:39:06 AM

Reviewed By:

### Chain of Custody

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

### Log In

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

# of preserved  
bottles checked  
for pH:

(<2 or >12 unless noted)

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

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

### Special Handling (if applicable)

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

Person Notified:

Date:

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.1	Good	Yes			



nt: Animas Environmental Services, LLC

☒ Standard ☐ Rush

ling Address: 604 W Pinon St.

Project Name:

COPC SAN JUAN 28-6 UNIT 127N

Farmington, NM 87401

Project #:

Phone #: 505-564-2281

ail or Fax#: clameman@animasenvironmental.com

**Project Manager:**

C. Lameman/ E. McNally

**QC Package:**

☐ Level 4 (Full Validation)

reiteration:

Sampler: CL/SG





☒ NELAP ☐ Other \_\_\_\_\_

On Ice: ☒ Yes ☐ No

DD (Type) \_\_\_\_\_

Sample Temperature: 71

[illegible]

1:	Time:	Relinquished by:	Received by:	Date	Time
e/116	1856			12/16/16	1456
1:	Time:	Relinquished by:	Received by:	Date	Time
f/116	1804			12/17/16	0745

Remarks: Bill to Conoco Phillips  
WO # 21773118  
Supervisor: Erin Wyckoff  
USERID: KAITLW  
Area: 7  
Ordered by: Bobby Spearman

Call with any  
questions.

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



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

March 24, 2017

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

RE: COPC San Juan 28-6 Unit 127N

OrderNo.: 1703B58

Dear Corwin Lameman:

Hall Environmental Analysis Laboratory received 2 sample(s) on 3/23/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](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.

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

Sincerely,

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Analytical Report**

Lab Order 1703B58

Date Reported: 3/24/2017

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Animas Environmental**Client Sample ID:** SC-1**Project:** COPC San Juan 28-6 Unit 127N**Collection Date:** 3/17/2017 10:00:00 AM**Lab ID:** 1703B58-001**Matrix:** MEOH (SOIL)**Received Date:** 3/23/2017 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	3/23/2017 9:52:19 AM	30857
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/23/2017 9:52:19 AM	30857
Surr: DNOP	110	70-130		%Rec	1	3/23/2017 9:52:19 AM	30857
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	2.8		mg/Kg	1	3/23/2017 10:59:26 AM	G41606
Surr: BFB	93.1	54-150		%Rec	1	3/23/2017 10:59:26 AM	G41606
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.014		mg/Kg	1	3/23/2017 10:59:26 AM	R41606
Toluene	ND	0.028		mg/Kg	1	3/23/2017 10:59:26 AM	R41606
Ethylbenzene	ND	0.028		mg/Kg	1	3/23/2017 10:59:26 AM	R41606
Xylenes, Total	ND	0.056		mg/Kg	1	3/23/2017 10:59:26 AM	R41606
Surr: 4-Bromofluorobenzene	104	66.6-132		%Rec	1	3/23/2017 10:59:26 AM	R41606

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1703B58

Date Reported: 3/24/2017

CLIENT: Animas Environmental

Client Sample ID: SC-10

Project: COPC San Juan 28-6 Unit 127N

Collection Date: 3/22/2017 9:22:00 AM

Lab ID: 1703B58-002

Matrix: MEOH (SOIL)

Received Date: 3/23/2017 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	12	9.7		mg/Kg	1	3/23/2017 10:14:30 AM	30857
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/23/2017 10:14:30 AM	30857
Surr: DNOP	113	70-130		%Rec	1	3/23/2017 10:14:30 AM	30857
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	7.0	2.9		mg/Kg	1	3/23/2017 11:22:03 AM	G41606
Surr: BFB	146	54-150		%Rec	1	3/23/2017 11:22:03 AM	G41606
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.015		mg/Kg	1	3/23/2017 11:22:03 AM	R41606
Toluene	ND	0.029		mg/Kg	1	3/23/2017 11:22:03 AM	R41606
Ethylbenzene	ND	0.029		mg/Kg	1	3/23/2017 11:22:03 AM	R41606
Xylenes, Total	0.12	0.059		mg/Kg	1	3/23/2017 11:22:03 AM	R41606
Surr: 4-Bromofluorobenzene	110	66.6-132		%Rec	1	3/23/2017 11:22:03 AM	R41606

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

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1703B58

24-Mar-17

Client: Animas Environmental  
Project: COPC San Juan 28-6 Unit 127N

Sample ID	MB-30857	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	30857	RunNo:	41593					
Prep Date:	3/23/2017	Analysis Date:	3/23/2017	SeqNo:	1304737	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		107	70	130			

Sample ID	LCS-30857	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	30857	RunNo:	41593					
Prep Date:	3/23/2017	Analysis Date:	3/23/2017	SeqNo:	1304744	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	100	63.8	116			
Surr: DNOP	5.2		5.000		104	70	130			

Sample ID	LCS-30846	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	30846	RunNo:	41593					
Prep Date:	3/22/2017	Analysis Date:	3/23/2017	SeqNo:	1305627	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.2		5.000		103	70	130			

Sample ID	MB-30846	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	30846	RunNo:	41593					
Prep Date:	3/22/2017	Analysis Date:	3/23/2017	SeqNo:	1305628	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		105	70	130			

## Qualifiers:

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1703B58

24-Mar-17

**Client:** Animas Environmental  
**Project:** COPC San Juan 28-6 Unit 127N

Sample ID <b>RB</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>G41606</b>		RunNo: <b>41606</b>							
Prep Date:	Analysis Date: <b>3/23/2017</b>		SeqNo: <b>1305565</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	910		1000		91.2	54	150			

Sample ID <b>2.5UG GRO LCS</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>G41606</b>		RunNo: <b>41606</b>							
Prep Date:	Analysis Date: <b>3/23/2017</b>		SeqNo: <b>1305566</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	109	76.4	125			
Surr: BFB	1000		1000		99.6	54	150			

## Qualifiers:

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



# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1703B58

24-Mar-17

Client: Animas Environmental  
Project: COPC San Juan 28-6 Unit 127N

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	R41606	RunNo:	41606					
Prep Date:		Analysis Date:	3/23/2017	SeqNo:	1305574	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		112	66.6	132			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	R41606	RunNo:	41606					
Prep Date:		Analysis Date:	3/23/2017	SeqNo:	1305575	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	102	80	120			
Toluene	1.0	0.050	1.000	0	102	80	120			
Ethylbenzene	1.0	0.050	1.000	0	103	80	120			
Xylenes, Total	3.1	0.10	3.000	0	103	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		116	66.6	132			

## Qualifiers:

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



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

## Sample Log-In Check List

Client Name: Animas Environmental

Work Order Number: 1703B58

RcptNo: 1

Received by/date:

03/23/17

Logged By: Lindsay Mangin

3/23/2017 7:20:00 AM

Completed By: Lindsay Mangin

3/23/2017 8:27:05 AM

Reviewed By:

03/23/17

### Chain of Custody

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

### Log In

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

# of preserved  
bottles checked  
for pH:

(<2 or >12 unless noted)

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

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

### Special Handling (If applicable)

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

Person Notified: \_\_\_\_\_

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

By Whom: \_\_\_\_\_

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.7	Good	Yes			

<b>Chain-of-Custody Record</b>		Turn-Around Time:
Client: Animas Environmental Services, LLC		<input type="checkbox"/> Standard <input checked="" type="checkbox"/> Rush <u>Same Day</u>
Mailing Address: 604 W Pinon St.		Project Name: COPC SAN JUAN 28-6 UNIT 127N
Farmington, NM 87401		Project #:
Phone #: 505-564-2281		Project Manager:
Email or Fax#: clameman@animasenvironmental.com		C. Lameman/ E. McNally
QA/QC Package: X Standard <input type="checkbox"/> Level 4 (Full Validation)		
Accreditation: <input type="checkbox"/> NELAP <input type="checkbox"/> Other _____		Sampler: CL
<input type="checkbox"/> EDD (Type) _____		On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
		Sample Temperature: 1.7

☐ Standard ☒ Rush ☐ Same Day

COPC SAN JUAN 28-6 UNIT 127N

Project #:

**Project Manager:**

C. Lameman/ E. McNally

Sampler: CL

On Ice: ☒ Yes ☐ No

Sample Temperature: 17

[illegible]

Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks: Bill to Conoco Phillips WO # 10398881 Supervisor: Randy Smith USERID: BLAKLBN Area: 7 Ordered by: Lisa Hunter
3/22/17	1630	Carla	Must Wait	3/22/17	1630	
Date:	Time:	Relinquished by:	Received by:	Date	Time	
3/22/17	1824	Must Wait	JK	3/22/17	0720	



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

4901 Hawkins NE - Albuquerque, NM 87109

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

### Analysis Request

BTEX - 8021B  
TPH - 8015 (GRO/DRO/MRO)

Air Bubbles (Y or N)

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





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

March 27, 2017

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

RE: COPC San Juan 28-6 Unit 127N

OrderNo.: 1703B61

Dear Corwin Lameman:

Hall Environmental Analysis Laboratory received 7 sample(s) on 3/23/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](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.

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1703B61

Date Reported: 3/27/2017

CLIENT: Animas Environmental

Client Sample ID: SC-2

Project: COPC San Juan 28-6 Unit 127N

Collection Date: 3/22/2017 8:40:00 AM

Lab ID: 1703B61-001

Matrix: MEOH (SOIL)

Received Date: 3/23/2017 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>MAB</b>
Diesel Range Organics (DRO)	18	9.5		mg/Kg	1	3/24/2017 1:03:08 PM	30871
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/24/2017 1:03:08 PM	30871
Surr: DNOP	90.0	70-130		%Rec	1	3/24/2017 1:03:08 PM	30871
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	3.7	3.2		mg/Kg	1	3/23/2017 7:57:09 PM	30837
Surr: BFB	117	54-150		%Rec	1	3/23/2017 7:57:09 PM	30837
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.016		mg/Kg	1	3/23/2017 7:57:09 PM	30837
Toluene	ND	0.032		mg/Kg	1	3/23/2017 7:57:09 PM	30837
Ethylbenzene	ND	0.032		mg/Kg	1	3/23/2017 7:57:09 PM	30837
Xylenes, Total	0.44	0.063		mg/Kg	1	3/23/2017 7:57:09 PM	30837
Surr: 4-Bromofluorobenzene	104	66.6-132		%Rec	1	3/23/2017 7:57:09 PM	30837

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

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

## Analytical Report

Lab Order 1703B61

Date Reported: 3/27/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental

Client Sample ID: SC-3

Project: COPC San Juan 28-6 Unit 127N

Collection Date: 3/22/2017 10:57:00 AM

Lab ID: 1703B61-002

Matrix: MEOH (SOIL)

Received Date: 3/23/2017 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>MAB</b>
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	3/24/2017 4:16:42 PM	30871
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/24/2017 4:16:42 PM	30871
Surr: DNOP	88.5	70-130		%Rec	1	3/24/2017 4:16:42 PM	30871
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.0		mg/Kg	1	3/23/2017 8:23:28 PM	30837
Surr: BFB	93.0	54-150		%Rec	1	3/23/2017 8:23:28 PM	30837
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.015		mg/Kg	1	3/23/2017 8:23:28 PM	30837
Toluene	ND	0.030		mg/Kg	1	3/23/2017 8:23:28 PM	30837
Ethylbenzene	ND	0.030		mg/Kg	1	3/23/2017 8:23:28 PM	30837
Xylenes, Total	ND	0.059		mg/Kg	1	3/23/2017 8:23:28 PM	30837
Surr: 4-Bromofluorobenzene	102	66.6-132		%Rec	1	3/23/2017 8:23:28 PM	30837

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1703B61

Date Reported: 3/27/2017

CLIENT: Animas Environmental

Client Sample ID: SC-4

Project: COPC San Juan 28-6 Unit 127N

Collection Date: 3/17/2017 11:20:00 AM

Lab ID: 1703B61-003

Matrix: MEOH (SOIL)

Received Date: 3/23/2017 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>MAB</b>
Diesel Range Organics (DRO)	11	9.2		mg/Kg	1	3/24/2017 4:44:48 PM	30871
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	3/24/2017 4:44:48 PM	30871
Surr: DNOP	91.1	70-130		%Rec	1	3/24/2017 4:44:48 PM	30871
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.0		mg/Kg	1	3/23/2017 8:49:41 PM	30837
Surr: BFB	97.1	54-150		%Rec	1	3/23/2017 8:49:41 PM	30837
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.015		mg/Kg	1	3/23/2017 8:49:41 PM	30837
Toluene	ND	0.030		mg/Kg	1	3/23/2017 8:49:41 PM	30837
Ethylbenzene	ND	0.030		mg/Kg	1	3/23/2017 8:49:41 PM	30837
Xylenes, Total	ND	0.060		mg/Kg	1	3/23/2017 8:49:41 PM	30837
Surr: 4-Bromofluorobenzene	104	66.6-132		%Rec	1	3/23/2017 8:49:41 PM	30837

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

**Analytical Report**

Lab Order 1703B61

Date Reported: 3/27/2017

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Animas Environmental**Client Sample ID:** SC-5**Project:** COPC San Juan 28-6 Unit 127N**Collection Date:** 3/17/2017 11:25:00 AM**Lab ID:** 1703B61-004**Matrix:** MEOH (SOIL)**Received Date:** 3/23/2017 7:20:00 AM

<b>Analyses</b>	<b>Result</b>	<b>PQL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							<b>Analyst: MAB</b>
Diesel Range Organics (DRO)	260	10		mg/Kg	1	3/24/2017 5:12:47 PM	30871
Motor Oil Range Organics (MRO)	61	50		mg/Kg	1	3/24/2017 5:12:47 PM	30871
Surr: DNOP	86.4	70-130		%Rec	1	3/24/2017 5:12:47 PM	30871
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							<b>Analyst: NSB</b>
Gasoline Range Organics (GRO)	440	33		mg/Kg	10	3/23/2017 9:15:56 PM	30837
Surr: BFB	529	54-150	S	%Rec	10	3/23/2017 9:15:56 PM	30837
<b>EPA METHOD 8021B: VOLATILES</b>							<b>Analyst: NSB</b>
Benzene	ND	0.17		mg/Kg	10	3/23/2017 9:15:56 PM	30837
Toluene	ND	0.33		mg/Kg	10	3/23/2017 9:15:56 PM	30837
Ethylbenzene	ND	0.33		mg/Kg	10	3/23/2017 9:15:56 PM	30837
Xylenes, Total	14	0.66		mg/Kg	10	3/23/2017 9:15:56 PM	30837
Surr: 4-Bromofluorobenzene	119	66.6-132		%Rec	10	3/23/2017 9:15:56 PM	30837

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

## Analytical Report

Lab Order 1703B61

Date Reported: 3/27/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental

Client Sample ID: SC-7

Project: COPC San Juan 28-6 Unit 127N

Collection Date: 3/22/2017 8:59:00 AM

Lab ID: 1703B61-005

Matrix: MEOH (SOIL)

Received Date: 3/23/2017 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>MAB</b>
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	3/24/2017 5:41:21 PM	30871
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/24/2017 5:41:21 PM	30871
Surr: DNOP	88.6	70-130		%Rec	1	3/24/2017 5:41:21 PM	30871
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	3/23/2017 4:03:10 PM	G41606
Surr: BFB	94.7	54-150		%Rec	1	3/23/2017 4:03:10 PM	G41606
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.016		mg/Kg	1	3/23/2017 4:03:10 PM	R41606
Toluene	ND	0.032		mg/Kg	1	3/23/2017 4:03:10 PM	R41606
Ethylbenzene	ND	0.032		mg/Kg	1	3/23/2017 4:03:10 PM	R41606
Xylenes, Total	0.24	0.064		mg/Kg	1	3/23/2017 4:03:10 PM	R41606
Surr: 4-Bromofluorobenzene	111	66.6-132		%Rec	1	3/23/2017 4:03:10 PM	R41606

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1703B61

Date Reported: 3/27/2017

CLIENT: Animas Environmental

Client Sample ID: SC-8

Project: COPC San Juan 28-6 Unit 127N

Collection Date: 3/22/2017 9:15:00 AM

Lab ID: 1703B61-006

Matrix: MEOH (SOIL)

Received Date: 3/23/2017 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>MAB</b>
Diesel Range Organics (DRO)	92	9.5		mg/Kg	1	3/24/2017 6:09:21 PM	30871
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/24/2017 6:09:21 PM	30871
Surr: DNOP	113	70-130		%Rec	1	3/24/2017 6:09:21 PM	30871
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	390	16		mg/Kg	5	3/23/2017 4:26:31 PM	G41606
Surr: BFB	582	54-150	S	%Rec	5	3/23/2017 4:26:31 PM	G41606
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.079		mg/Kg	5	3/23/2017 4:26:31 PM	R41606
Toluene	0.63	0.16		mg/Kg	5	3/23/2017 4:26:31 PM	R41606
Ethylbenzene	1.1	0.16		mg/Kg	5	3/23/2017 4:26:31 PM	R41606
Xylenes, Total	14	0.32		mg/Kg	5	3/23/2017 4:26:31 PM	R41606
Surr: 4-Bromofluorobenzene	145	66.6-132	S	%Rec	5	3/23/2017 4:26:31 PM	R41606

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

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

## Analytical Report

Lab Order 1703B61

Date Reported: 3/27/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental

Client Sample ID: SC-11

Project: COPC San Juan 28-6 Unit 127N

Collection Date: 3/22/2017 9:40:00 AM

Lab ID: 1703B61-007

Matrix: MEOH (SOIL)

Received Date: 3/23/2017 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>MAB</b>
Diesel Range Organics (DRO)	41	9.5		mg/Kg	1	3/24/2017 6:37:26 PM	30871
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/24/2017 6:37:26 PM	30871
Surr: DNOP	77.1	70-130		%Rec	1	3/24/2017 6:37:26 PM	30871
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	49	6.0		mg/Kg	2	3/23/2017 4:49:50 PM	G41606
Surr: BFB	241	54-150	S	%Rec	2	3/23/2017 4:49:50 PM	G41606
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.030		mg/Kg	2	3/23/2017 4:49:50 PM	R41606
Toluene	ND	0.060		mg/Kg	2	3/23/2017 4:49:50 PM	R41606
Ethylbenzene	ND	0.060		mg/Kg	2	3/23/2017 4:49:50 PM	R41606
Xylenes, Total	0.79	0.12		mg/Kg	2	3/23/2017 4:49:50 PM	R41606
Surr: 4-Bromofluorobenzene	121	66.6-132		%Rec	2	3/23/2017 4:49:50 PM	R41606

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1703B61

27-Mar-17

Client: Animas Environmental  
Project: COPC San Juan 28-6 Unit 127N

Sample ID	MB-30871	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	30871	RunNo:	41626					
Prep Date:	3/23/2017	Analysis Date:	3/24/2017	SeqNo:	1306244	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.1		10.00		81.3	70	130			

Sample ID	LCS-30871	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	30871	RunNo:	41626					
Prep Date:	3/23/2017	Analysis Date:	3/24/2017	SeqNo:	1306288	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	97.0	63.8	116			
Surr: DNOP	4.5		5.000		89.5	70	130			

Sample ID	1703B61-001AMS	SampType:	MS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	SC-2	Batch ID:	30871	RunNo:	41626					
Prep Date:	3/23/2017	Analysis Date:	3/24/2017	SeqNo:	1306941	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	9.2	45.79	17.92	76.7	51.6	130			
Surr: DNOP	3.9		4.579		85.7	70	130			

Sample ID	1703B61-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	SC-2	Batch ID:	30871	RunNo:	41626					
Prep Date:	3/23/2017	Analysis Date:	3/24/2017	SeqNo:	1306942	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	56	9.3	46.25	17.92	83.0	51.6	130	6.01	20	
Surr: DNOP	4.3		4.625		92.4	70	130	0	0	

## Qualifiers:

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



# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1703B61

27-Mar-17

Client: Animas Environmental  
Project: COPC San Juan 28-6 Unit 127N

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	G41606	RunNo:	41606					
Prep Date:		Analysis Date:	3/23/2017	SeqNo:	1305565	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	910		1000		91.2	54	150			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	G41606	RunNo:	41606					
Prep Date:		Analysis Date:	3/23/2017	SeqNo:	1305566	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	109	76.4	125			
Surr: BFB	1000		1000		99.6	54	150			

Sample ID	MB-30837	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	30837	RunNo:	41605					
Prep Date:	3/22/2017	Analysis Date:	3/23/2017	SeqNo:	1305591	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	980		1000		97.8	54	150			

Sample ID	LCS-30837	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	30837	RunNo:	41605					
Prep Date:	3/22/2017	Analysis Date:	3/23/2017	SeqNo:	1305592	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	30	5.0	25.00	0	119	76.4	125			
Surr: BFB	1200		1000		116	54	150			

## Qualifiers:

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1703B61

27-Mar-17

Client: Animas Environmental  
Project: COPC San Juan 28-6 Unit 127N

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	R41606	RunNo:	41606					
Prep Date:		Analysis Date:	3/23/2017	SeqNo:	1305574	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		112	66.6	132			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	R41606	RunNo:	41606					
Prep Date:		Analysis Date:	3/23/2017	SeqNo:	1305575	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	102	80	120			
Toluene	1.0	0.050	1.000	0	102	80	120			
Ethylbenzene	1.0	0.050	1.000	0	103	80	120			
Xylenes, Total	3.1	0.10	3.000	0	103	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		116	66.6	132			

Sample ID	MB-30837	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	30837	RunNo:	41605					
Prep Date:	3/22/2017	Analysis Date:	3/23/2017	SeqNo:	1305611	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		108	66.6	132			

Sample ID	LCS-30837	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	30837	RunNo:	41605					
Prep Date:	3/22/2017	Analysis Date:	3/23/2017	SeqNo:	1305612	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	96.5	80	120			
Toluene	1.0	0.050	1.000	0	100	80	120			
Ethylbenzene	1.0	0.050	1.000	0	104	80	120			
Xylenes, Total	3.3	0.10	3.000	0	108	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		111	66.6	132			

## Qualifiers:

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



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

## Sample Log-In Check List

Client Name: Animas Environmental

Work Order Number: 1703B61

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

3/23/2017 7:20:00 AM

Completed By: Lindsay Mangin

3/23/2017 8:46:01 AM

Reviewed By:

### Chain of Custody

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

### Log In

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

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

### Special Handling (if applicable)

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

Person Notified:

Date:

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.7	Good	Yes			



<b>Chain-of-Custody Record</b>		Turn-Around Time:
Client: Animas Environmental Services, LLC		<input type="checkbox"/> Standard <input checked="" type="checkbox"/> Rush <u>3-TAT</u>
Mailing Address: 604 W Pinon St.		Project Name: COPC SAN JUAN 28-6 UNIT 127N
Farmington, NM 87401		Project #:
Phone #: 505-564-2281		Project Manager:
Email or Fax#: clameman@animasenvironmental.com		C. Lameman/ E. McNally
QA/QC Package: <input checked="" type="checkbox"/> X Standard <input type="checkbox"/> Level 4 (Full Validation)		
Accreditation:		Sampler: CL
<input type="checkbox"/> NELAP <input type="checkbox"/> Other		On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> EDD (Type)		Sample Temperature: 1.7

☐ Standard ☒ Rush 3-TAT

Project Name:

COPC SAN JUAN 28-6 UNIT 127N

Project #:

Project Manager:





C. Lameman/ E. McNally

Sampler: CL

On Ice: ☒ Yes ☐ No

Sample Temperature: 107

[illegible]

Date: 3/22/17	Time: 1630	Relinquished by: 	Received by: 	Date 3/22/17	Time 1630	Remarks: Bill to Conoco Phillips WO # 10398881 Supervisor: Randy Smith USERID: BLAKLBN Area: 7 Ordered by: Lisa Hunter
Date: 3/22/17	Time: 1824	Relinquished by: 	Received by: 	Date 03/23/17	Time 1730	

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



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

April 03, 2017

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

RE: COPC San Juan 28 6 Unit 127N

OrderNo.: 1703E72

Dear Elizabeth McNally:

Hall Environmental Analysis Laboratory received 4 sample(s) on 3/30/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](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.

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

Sincerely,

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109



## Analytical Report

Lab Order 1703E72

Date Reported: 4/3/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental

Client Sample ID: SC-5

Project: COPC San Juan 28 6 Unit 127N

Collection Date: 3/29/2017 3:06:00 PM

Lab ID: 1703E72-001

Matrix: MEOH (SOIL)

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

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	26	10		mg/Kg	1	3/31/2017 5:25:21 PM	30996
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/31/2017 5:25:21 PM	30996
Surr: DNOP	115	70-130		%Rec	1	3/31/2017 5:25:21 PM	30996
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	140	16		mg/Kg	5	3/31/2017 1:22:47 AM	G41768
Surr: BFB	212	54-150	S	%Rec	5	3/31/2017 1:22:47 AM	G41768
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.078		mg/Kg	5	3/31/2017 1:22:47 AM	B41768
Toluene	1.1	0.16		mg/Kg	5	3/31/2017 1:22:47 AM	B41768
Ethylbenzene	0.33	0.16		mg/Kg	5	3/31/2017 1:22:47 AM	B41768
Xylenes, Total	5.5	0.31		mg/Kg	5	3/31/2017 1:22:47 AM	B41768
Surr: 4-Bromofluorobenzene	105	66.6-132		%Rec	5	3/31/2017 1:22:47 AM	B41768

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

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



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1703E72

Date Reported: 4/3/2017

CLIENT: Animas Environmental

Client Sample ID: SC-6

Project: COPC San Juan 28 6 Unit 127N

Collection Date: 3/29/2017 11:40:00 AM

Lab ID: 1703E72-002

Matrix: MEOH (SOIL)

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

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	39	9.6		mg/Kg	1	3/31/2017 6:32:00 PM	30996
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/31/2017 6:32:00 PM	30996
Surr: DNOP	108	70-130		%Rec	1	3/31/2017 6:32:00 PM	30996
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	110	3.1		mg/Kg	1	3/31/2017 3:08:24 AM	G41768
Surr: BFB	292	54-150	S	%Rec	1	3/31/2017 3:08:24 AM	G41768
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.015		mg/Kg	1	3/31/2017 3:08:24 AM	B41768
Toluene	ND	0.031		mg/Kg	1	3/31/2017 3:08:24 AM	B41768
Ethylbenzene	ND	0.031		mg/Kg	1	3/31/2017 3:08:24 AM	B41768
Xylenes, Total	2.1	0.062		mg/Kg	1	3/31/2017 3:08:24 AM	B41768
Surr: 4-Bromofluorobenzene	95.3	66.6-132		%Rec	1	3/31/2017 3:08:24 AM	B41768

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

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

## Analytical Report

Lab Order 1703E72

Date Reported: 4/3/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental

Client Sample ID: SC-8

Project: COPC San Juan 28 6 Unit 127N

Collection Date: 3/29/2017 2:15:00 PM

Lab ID: 1703E72-003

Matrix: MEOH (SOIL)

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

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	19	10		mg/Kg	1	3/31/2017 6:53:57 PM	30996
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/31/2017 6:53:57 PM	30996
Surr: DNOP	108	70-130		%Rec	1	3/31/2017 6:53:57 PM	30996
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	36	3.3		mg/Kg	1	3/31/2017 3:34:45 AM	G41768
Surr: BFB	297	54-150	S	%Rec	1	3/31/2017 3:34:45 AM	G41768
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.017		mg/Kg	1	3/31/2017 3:34:45 AM	B41768
Toluene	0.072	0.033		mg/Kg	1	3/31/2017 3:34:45 AM	B41768
Ethylbenzene	0.10	0.033		mg/Kg	1	3/31/2017 3:34:45 AM	B41768
Xylenes, Total	1.5	0.066		mg/Kg	1	3/31/2017 3:34:45 AM	B41768
Surr: 4-Bromofluorobenzene	94.0	66.6-132		%Rec	1	3/31/2017 3:34:45 AM	B41768

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

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

# Analytical Report

Lab Order 1703E72

Date Reported: 4/3/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental

Client Sample ID: SC-9

Project: COPC San Juan 28 6 Unit 127N

Collection Date: 3/29/2017 11:45:00 AM

Lab ID: 1703E72-004

Matrix: MEOH (SOIL)

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

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	40	10		mg/Kg	1	3/31/2017 7:15:53 PM	30996
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	3/31/2017 7:15:53 PM	30996
Surr: DNOP	110	70-130		%Rec	1	3/31/2017 7:15:53 PM	30996
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	360	14		mg/Kg	5	3/31/2017 4:01:14 AM	G41768
Surr: BFB	513	54-150	S	%Rec	5	3/31/2017 4:01:14 AM	G41768
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.072		mg/Kg	5	3/31/2017 4:01:14 AM	B41768
Toluene	ND	0.14		mg/Kg	5	3/31/2017 4:01:14 AM	B41768
Ethylbenzene	ND	0.14		mg/Kg	5	3/31/2017 4:01:14 AM	B41768
Xylenes, Total	10	0.29		mg/Kg	5	3/31/2017 4:01:14 AM	B41768
Surr: 4-Bromofluorobenzene	110	66.6-132		%Rec	5	3/31/2017 4:01:14 AM	B41768

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

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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1703E72

03-Apr-17

Client: Animas Environmental  
Project: COPC San Juan 28 6 Unit 127N

Sample ID	LCS-30969	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	30969	RunNo:	41755					
Prep Date:	3/29/2017	Analysis Date:	3/30/2017	SeqNo:	1311683	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.2		5.000		104	70	130			

Sample ID	MB-30969	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	30969	RunNo:	41755					
Prep Date:	3/29/2017	Analysis Date:	3/30/2017	SeqNo:	1311684	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		101	70	130			

Sample ID	LCS-31008	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	31008	RunNo:	41755					
Prep Date:	3/31/2017	Analysis Date:	3/31/2017	SeqNo:	1312226	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.9		5.000		98.7	70	130			

Sample ID	MB-31008	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	31008	RunNo:	41755					
Prep Date:	3/31/2017	Analysis Date:	3/31/2017	SeqNo:	1312227	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		106	70	130			

Sample ID	1703E72-001AMS	SampType:	MS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	SC-5	Batch ID:	30996	RunNo:	41755					
Prep Date:	3/30/2017	Analysis Date:	3/31/2017	SeqNo:	1312823	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	68	9.7	48.50	26.25	86.0	51.6	130			
Surr: DNOP	4.7		4.850		97.0	70	130			

Sample ID	1703E72-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	SC-5	Batch ID:	30996	RunNo:	41755					
Prep Date:	3/30/2017	Analysis Date:	3/31/2017	SeqNo:	1312824	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	73	9.8	49.21	26.25	94.8	51.6	130	6.99	20	
Surr: DNOP	5.4		4.921		111	70	130	0	0	

### Qualifiers:

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1703E72

03-Apr-17

Client: Animas Environmental  
Project: COPC San Juan 28 6 Unit 127N

Sample ID	LCS-30996		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 30996		RunNo: 41755					
Prep Date:	3/30/2017		Analysis Date: 3/31/2017		SeqNo: 1312831		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	96.1	63.8	116			
Surr: DNOP	4.8		5.000		97.0	70	130			

Sample ID	MB-30996	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	30996	RunNo:	41755					
Prep Date:	3/30/2017	Analysis Date:	3/31/2017	SeqNo:	1312832	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		107	70	130			

## Qualifiers:

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1703E72

03-Apr-17

Client: Animas Environmental  
Project: COPC San Juan 28 6 Unit 127N

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	G41768	RunNo:	41768					
Prep Date:		Analysis Date:	3/30/2017	SeqNo:	1311397	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	880		1000		88.5	54	150			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	G41768	RunNo:	41768					
Prep Date:		Analysis Date:	3/30/2017	SeqNo:	1311398	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	106	76.4	125			
Surr: BFB	980		1000		98.4	54	150			

Sample ID	MB-30956	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	30956	RunNo:	41768					
Prep Date:	3/29/2017	Analysis Date:	3/30/2017	SeqNo:	1311406	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	780		1000		78.0	54	150			

Sample ID	LCS-30956	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	30956	RunNo:	41768					
Prep Date:	3/29/2017	Analysis Date:	3/30/2017	SeqNo:	1311407	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	830		1000		83.2	54	150			

## Qualifiers:

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



# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1703E72

03-Apr-17

Client: Animas Environmental  
Project: COPC San Juan 28 6 Unit 127N

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	B41768	RunNo:	41768					
Prep Date:		Analysis Date:	3/30/2017	SeqNo:	1311432	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		101	66.6	132			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	B41768	RunNo:	41768					
Prep Date:		Analysis Date:	3/30/2017	SeqNo:	1311433	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	1.000	0	94.1	80	120			
Toluene	0.98	0.050	1.000	0	97.9	80	120			
Ethylbenzene	1.0	0.050	1.000	0	100	80	120			
Xylenes, Total	3.1	0.10	3.000	0	104	80	120			
Surr: 4-Bromofluorobenzene	0.97		1.000		96.8	66.6	132			

Sample ID	MB-30956	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	30956	RunNo:	41768					
Prep Date:	3/29/2017	Analysis Date:	3/30/2017	SeqNo:	1311441	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.88		1.000		87.7	66.6	132			

Sample ID	LCS-30956	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	30956	RunNo:	41768					
Prep Date:	3/29/2017	Analysis Date:	3/30/2017	SeqNo:	1311442	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.84		1.000		84.4	66.6	132			

## Qualifiers:

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



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

## Sample Log-In Check List

Client Name: Animas Environmental

Work Order Number: 1703E72

RcptNo: 1

Received by/date:

*[Signature]*

03/30/17

Logged By: Lindsay Mangin

3/30/2017 7:30:00 AM

*[Signature]*

Completed By: Lindsay Mangin

3/30/2017 8:31:44 AM

*[Signature]*

Reviewed By:

*[Signature]*

03/30/17

### Chain of Custody

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

### Log In

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

### Special Handling (if applicable)

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

Person Notified:

Date

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes			



☐ EDD (Type) \_\_\_\_\_

Sample Temperature: 18

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

### Analysis Request

[illegible]

Received by:  Date: 03/30/17 Time: 0730

Remarks: Bill to Grace Phillips  
Watt: 10396581  
Supervisor: Ranch Smith  
user ID: BLAKEEN  
Area: 7  
ordered by: Lisa Hunter  
Call of Questions





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)

April 03, 2017

Corwin Lameman  
Animas Environmental Services  
604 Pinon Street  
Farmington, NM 87401  
TEL: (505) 564-2281  
FAX (505) 324-2022

RE: COPC San Juan 28-6 Unit 127 N

OrderNo.: 1703E90

Dear Corwin Lameman:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/30/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](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.

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

# Analytical Report

Lab Order 1703E90

Date Reported: 4/3/2017

## Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Animas Environmental Services

**Client Sample ID:** SC-2

**Project:** COPC San Juan 28-6 Unit 127 N

**Collection Date:** 3/29/2017 11:35:00 AM

**Lab ID:** 1703E90-001

**Matrix:** MEOH (SOIL)

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

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	3/31/2017 7:37:44 PM	30996
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	3/31/2017 7:37:44 PM	30996
Surr: DNOP	111	70-130		%Rec	1	3/31/2017 7:37:44 PM	30996
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.1		mg/Kg	1	3/31/2017 4:27:43 AM	G41768
Surr: BFB	85.2	54-150		%Rec	1	3/31/2017 4:27:43 AM	G41768
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.015		mg/Kg	1	3/31/2017 4:27:43 AM	B41768
Toluene	ND	0.031		mg/Kg	1	3/31/2017 4:27:43 AM	B41768
Ethylbenzene	ND	0.031		mg/Kg	1	3/31/2017 4:27:43 AM	B41768
Xylenes, Total	ND	0.062		mg/Kg	1	3/31/2017 4:27:43 AM	B41768
Surr: 4-Bromofluorobenzene	87.4	66.6-132		%Rec	1	3/31/2017 4:27:43 AM	B41768

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1703E90

03-Apr-17

**Client:** Animas Environmental Services  
**Project:** COPC San Juan 28-6 Unit 127 N

Sample ID	LCS-30969		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 30969		RunNo: 41755					
Prep Date:	3/29/2017		Analysis Date: 3/30/2017		SeqNo: 1311683		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.2		5.000		104	70	130			

Sample ID	MB-30969	SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	30969		RunNo:	41755					
Prep Date:	3/29/2017	Analysis Date:	3/30/2017		SeqNo:	1311684		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: DNOP	10		10.00		101	70	130				

Sample ID	LCS-31008		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 31008		RunNo: 41755					
Prep Date:	3/31/2017		Analysis Date: 3/31/2017		SeqNo: 1312226		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.9		5.000		98.7	70	130			

Sample ID	MB-31008		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 31008		RunNo: 41755					
Prep Date:	3/31/2017		Analysis Date: 3/31/2017		SeqNo: 1312227		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		106	70	130			

Sample ID	LCS-30996		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 30996		RunNo: 41755					
Prep Date:	3/30/2017		Analysis Date: 3/31/2017		SeqNo: 1312831		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	96.1	63.8	116			
Surr: DNOP	4.8		5.000		97.0	70	130			

Sample ID	MB-30996	SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS	Batch ID:	30996		RunNo:	41755				
Prep Date:	3/30/2017	Analysis Date:	3/31/2017		SeqNo:	1312832	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		107	70	130			

### Qualifiers:

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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1703E90

03-Apr-17

Client: Animas Environmental Services

Project: COPC San Juan 28-6 Unit 127 N

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	G41768	RunNo:	41768					
Prep Date:		Analysis Date:	3/30/2017	SeqNo:	1311397	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	880		1000		88.5	54	150			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	G41768	RunNo:	41768					
Prep Date:		Analysis Date:	3/30/2017	SeqNo:	1311398	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	106	76.4	125			
Surr: BFB	980		1000		98.4	54	150			

Sample ID	MB-30956	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	30956	RunNo:	41768					
Prep Date:	3/29/2017	Analysis Date:	3/30/2017	SeqNo:	1311406	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	780		1000		78.0	54	150			

Sample ID	LCS-30956	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	30956	RunNo:	41768					
Prep Date:	3/29/2017	Analysis Date:	3/30/2017	SeqNo:	1311407	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	830		1000		83.2	54	150			

### Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1703E90

03-Apr-17

**Client:** Animas Environmental Services  
**Project:** COPC San Juan 28-6 Unit 127 N

Sample ID <b>RB</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>B41768</b>		RunNo: <b>41768</b>							
Prep Date:	Analysis Date: <b>3/30/2017</b>		SeqNo: <b>1311432</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		101	66.6	132			

Sample ID <b>100NG BTEX LCS</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>B41768</b>		RunNo: <b>41768</b>							
Prep Date:	Analysis Date: <b>3/30/2017</b>		SeqNo: <b>1311433</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	1.000	0	94.1	80	120			
Toluene	0.98	0.050	1.000	0	97.9	80	120			
Ethylbenzene	1.0	0.050	1.000	0	100	80	120			
Xylenes, Total	3.1	0.10	3.000	0	104	80	120			
Surr: 4-Bromofluorobenzene	0.97		1.000		96.8	66.6	132			

Sample ID <b>MB-30956</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>30956</b>		RunNo: <b>41768</b>							
Prep Date: <b>3/29/2017</b>	Analysis Date: <b>3/30/2017</b>		SeqNo: <b>1311441</b>		Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.88		1.000		87.7	66.6	132			

Sample ID <b>LCS-30956</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>30956</b>		RunNo: <b>41768</b>							
Prep Date: <b>3/29/2017</b>	Analysis Date: <b>3/30/2017</b>		SeqNo: <b>1311442</b>		Units: <b>%Rec</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.84		1.000		84.4	66.6	132			

### Qualifiers:

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



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

## Sample Log-In Check List

Client Name: Animas Environmental

Work Order Number: 1703E90

RcptNo: 1

Received by/date: LM 03/30/17

Logged By: Andy Jansson 3/30/2017 7:30:00 AM

Completed By: Andy Jansson 03/30/17

Reviewed By: [Signature] 03/30/17

### Chain of Custody

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

### Log In

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

# of preserved  
bottles checked  
for pH:

(<2 or >12 unless noted)

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

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

### Special Handling (if applicable)

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

Person Notified: \_\_\_\_\_

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

By Whom: \_\_\_\_\_

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Not Present			



## Turn Around Time:

☒ Standard ☐ Rush

Project Name:

407 W. Pinar St

Project #:

CPCC Sun Chan 28-L Unit 127N

Project Manager:

☒ Standard ☐ Level 4 (Full Validation)

C. Lammiman / E. McNally

- NELAP

On Ice:

Sample Temperature: 1.8

Sample Request ID

## Preservative

HEAL No.

SC-2

5071

100-

X

X

1

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---

[illegible][illegible]

1

BTEX + MTBE + <del>TPH</del> (8021)
BTEX + MTBE + TPH (Gas only)
TPH 8015B (GRO / DRO / MRO)
TPH (Method 418.1)
EDB (Method 504.1)
PAH's (8310 or 8270 SIMS)
RCRA 8 Metals
Anions (F, Cl, NO <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)
Air Bubbles (Y or N)

**HALL ENVIRONMENTAL  
ANALYSIS LABORATORY**

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

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

Date:	3/29/17	Time:	1747	Remarks:	Bill to Conoco Phillips UB#1: 103478831 SuperV330: Kandy Smith UserID: BAKKEN Area: 7 Ordered by: Lita Printer: Call w/ questions.
Relinquished by:	John White	Received by:	John White	Date	3/29/17
Relinquished by:	John White	Received by:	John White	Date	03/30/17
Time:	1820	Time:	0730		

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



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

April 14, 2017

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

RE: COPC San Juan 28 6 Unit 127N

OrderNo.: 1704455

Dear Corwin Lameman:

Hall Environmental Analysis Laboratory received 5 sample(s) on 4/12/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](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.

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

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

## Analytical Report

Lab Order 1704455

Date Reported: 4/14/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental

Client Sample ID: SC-5

Project: COPC San Juan 28 6 Unit 127N

Collection Date: 4/11/2017 9:22:00 AM

Lab ID: 1704455-001

Matrix: MEOH (SOIL)

Received Date: 4/12/2017 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>MAB</b>
Diesel Range Organics (DRO)	63	9.5		mg/Kg	1	4/13/2017 11:41:16 AM	31205
Motor Oil Range Organics (MRO)	49	48		mg/Kg	1	4/13/2017 11:41:16 AM	31205
Surr: DNOP	81.1	70-130		%Rec	1	4/13/2017 11:41:16 AM	31205
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	4/12/2017 6:11:55 PM	SG4206C
Surr: BFB	111	54-150		%Rec	1	4/12/2017 6:11:55 PM	SG4206C
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.016		mg/Kg	1	4/12/2017 6:11:55 PM	SB4206C
Toluene	ND	0.033		mg/Kg	1	4/12/2017 6:11:55 PM	SB4206C
Ethylbenzene	ND	0.033		mg/Kg	1	4/12/2017 6:11:55 PM	SB4206C
Xylenes, Total	ND	0.065		mg/Kg	1	4/12/2017 6:11:55 PM	SB4206C
Surr: 4-Bromofluorobenzene	117	66.6-132		%Rec	1	4/12/2017 6:11:55 PM	SB4206C

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

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



# Analytical Report

Lab Order 1704455

Date Reported: 4/14/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental

Client Sample ID: SC-6

Project: COPC San Juan 28 6 Unit 127N

Collection Date: 4/11/2017 10:50:00 AM

Lab ID: 1704455-002

Matrix: MEOH (SOIL)

Received Date: 4/12/2017 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>MAB</b>
Diesel Range Organics (DRO)	28	9.2		mg/Kg	1	4/13/2017 1:05:15 PM	31205
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/13/2017 1:05:15 PM	31205
Surr: DNOP	86.7	70-130		%Rec	1	4/13/2017 1:05:15 PM	31205
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	130	2.9		mg/Kg	1	4/12/2017 6:35:21 PM	SG4206C
Surr: BFB	1020	54-150	S	%Rec	1	4/12/2017 6:35:21 PM	SG4206C
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	0.015	0.015		mg/Kg	1	4/12/2017 6:35:21 PM	SB4206C
Toluene	ND	0.029		mg/Kg	1	4/12/2017 6:35:21 PM	SB4206C
Ethylbenzene	ND	0.029		mg/Kg	1	4/12/2017 6:35:21 PM	SB4206C
Xylenes, Total	2.1	0.058		mg/Kg	1	4/12/2017 6:35:21 PM	SB4206C
Surr: 4-Bromofluorobenzene	183	66.6-132	S	%Rec	1	4/12/2017 6:35:21 PM	SB4206C

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

## Analytical Report

Lab Order 1704455

Date Reported: 4/14/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental

Client Sample ID: SC-9

Project: COPC San Juan 28 6 Unit 127N

Collection Date: 4/11/2017 9:30:00 AM

Lab ID: 1704455-003

Matrix: MEOH (SOIL)

Received Date: 4/12/2017 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>MAB</b>
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/13/2017 1:33:30 PM	31205
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/13/2017 1:33:30 PM	31205
Surr: DNOP	86.3	70-130		%Rec	1	4/13/2017 1:33:30 PM	31205
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	2.7		mg/Kg	1	4/12/2017 6:58:41 PM	SG4206C
Surr: BFB	102	54-150		%Rec	1	4/12/2017 6:58:41 PM	SG4206C
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.014		mg/Kg	1	4/12/2017 6:58:41 PM	SB4206C
Toluene	ND	0.027		mg/Kg	1	4/12/2017 6:58:41 PM	SB4206C
Ethylbenzene	ND	0.027		mg/Kg	1	4/12/2017 6:58:41 PM	SB4206C
Xylenes, Total	ND	0.055		mg/Kg	1	4/12/2017 6:58:41 PM	SB4206C
Surr: 4-Bromofluorobenzene	117	66.6-132		%Rec	1	4/12/2017 6:58:41 PM	SB4206C

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

## Analytical Report

Lab Order 1704455

Date Reported: 4/14/2017

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental

Client Sample ID: SC-12

Project: COPC San Juan 28 6 Unit 127N

Collection Date: 4/11/2017 9:35:00 AM

Lab ID: 1704455-004

Matrix: MEOH (SOIL)

Received Date: 4/12/2017 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>MAB</b>
Diesel Range Organics (DRO)	18	9.2		mg/Kg	1	4/13/2017 2:01:20 PM	31205
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/13/2017 2:01:20 PM	31205
Surr: DNOP	86.8	70-130		%Rec	1	4/13/2017 2:01:20 PM	31205
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	49	2.9		mg/Kg	1	4/12/2017 7:21:56 PM	SG4206C
Surr: BFB	416	54-150	S	%Rec	1	4/12/2017 7:21:56 PM	SG4206C
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.015		mg/Kg	1	4/12/2017 7:21:56 PM	SB4206C
Toluene	ND	0.029		mg/Kg	1	4/12/2017 7:21:56 PM	SB4206C
Ethylbenzene	ND	0.029		mg/Kg	1	4/12/2017 7:21:56 PM	SB4206C
Xylenes, Total	1.6	0.059		mg/Kg	1	4/12/2017 7:21:56 PM	SB4206C
Surr: 4-Bromofluorobenzene	135	66.6-132	S	%Rec	1	4/12/2017 7:21:56 PM	SB4206C

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



**Hall Environmental Analysis Laboratory, Inc.**

**CLIENT:** Animas Environmental **Client Sample ID:** SC-13  
**Project:** COPC San Juan 28 6 Unit 127N **Collection Date:** 4/11/2017 9:43:00 AM  
**Lab ID:** 1704455-005 **Matrix:** MEOH (SOIL) **Received Date:** 4/12/2017 7:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>MAB</b>
Diesel Range Organics (DRO)	16	9.8		mg/Kg	1	4/13/2017 2:29:09 PM	31205
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/13/2017 2:29:09 PM	31205
Surr: DNOP	79.6	70-130		%Rec	1	4/13/2017 2:29:09 PM	31205
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	6.3	3.2		mg/Kg	1	4/12/2017 7:45:20 PM	SG4206C
Surr: BFB	131	54-150		%Rec	1	4/12/2017 7:45:20 PM	SG4206C
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.016		mg/Kg	1	4/12/2017 7:45:20 PM	SB4206C
Toluene	ND	0.032		mg/Kg	1	4/12/2017 7:45:20 PM	SB4206C
Ethylbenzene	ND	0.032		mg/Kg	1	4/12/2017 7:45:20 PM	SB4206C
Xylenes, Total	0.13	0.064		mg/Kg	1	4/12/2017 7:45:20 PM	SB4206C
Surr: 4-Bromofluorobenzene	114	66.6-132		%Rec	1	4/12/2017 7:45:20 PM	SB4206C

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1704455

14-Apr-17

**Client:** Animas Environmental  
**Project:** COPC San Juan 28 6 Unit 127N

Sample ID	<b>MB-31222</b>		SampType:	<b>MBLK</b>		TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>			
Client ID:	<b>PBS</b>		Batch ID:	<b>31222</b>		RunNo:	<b>42086</b>			
Prep Date:	<b>4/13/2017</b>		Analysis Date:	<b>4/13/2017</b>		SeqNo:	<b>1321896</b>		Units: %Rec	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		112	70	130			

Sample ID	<b>LCS-31222</b>		SampType:	<b>LCS</b>		TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>			
Client ID:	<b>LCSS</b>		Batch ID:	<b>31222</b>		RunNo:	<b>42086</b>			
Prep Date:	<b>4/13/2017</b>		Analysis Date:	<b>4/13/2017</b>		SeqNo:	<b>1321918</b>		Units: %Rec	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.3		5.000		106	70	130			

Sample ID	<b>LCS-31205</b>		SampType:	<b>LCS</b>		TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>			
Client ID:	<b>LCSS</b>		Batch ID:	<b>31205</b>		RunNo:	<b>42092</b>			
Prep Date:	<b>4/12/2017</b>		Analysis Date:	<b>4/13/2017</b>		SeqNo:	<b>1322086</b>		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	10	50.00	0	83.8	63.8	116			
Surr: DNOP	4.3		5.000		85.9	70	130			

Sample ID	<b>MB-31205</b>		SampType:	<b>MBLK</b>		TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>			
Client ID:	<b>PBS</b>		Batch ID:	<b>31205</b>		RunNo:	<b>42092</b>			
Prep Date:	<b>4/12/2017</b>		Analysis Date:	<b>4/13/2017</b>		SeqNo:	<b>1322087</b>		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.4		10.00		83.9	70	130			

Sample ID	<b>1704455-001AMS</b>		SampType:	<b>MS</b>		TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>			
Client ID:	<b>SC-5</b>		Batch ID:	<b>31205</b>		RunNo:	<b>42092</b>			
Prep Date:	<b>4/12/2017</b>		Analysis Date:	<b>4/13/2017</b>		SeqNo:	<b>1322365</b>		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	91	9.9	49.60	63.13	56.5	51.6	130			
Surr: DNOP	4.7		4.960		95.0	70	130			

Sample ID	<b>1704455-001AMSD</b>		SampType:	<b>MSD</b>		TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>			
Client ID:	<b>SC-5</b>		Batch ID:	<b>31205</b>		RunNo:	<b>42092</b>			
Prep Date:	<b>4/12/2017</b>		Analysis Date:	<b>4/13/2017</b>		SeqNo:	<b>1322366</b>		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	96	9.6	47.80	63.13	69.2	51.6	130	5.35	20	

### Qualifiers:

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

# QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1704455

14-Apr-17

Client: Animas Environmental  
Project: COPC San Juan 28 6 Unit 127N

Sample ID	1704455-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	SC-5	Batch ID:	31205	RunNo:	42092					
Prep Date:	4/12/2017	Analysis Date:	4/13/2017	SeqNo:	1322366	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3		4.780		89.4	70	130	0	0	

## Qualifiers:

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



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1704455

14-Apr-17

**Client:** Animas Environmental  
**Project:** COPC San Juan 28 6 Unit 127N

Sample ID	RB	SampType: MBLK			TestCode: EPA Method 8015D: Gasoline Range						
Client ID:	PBS	Batch ID: SG42060			RunNo: 42060						
Prep Date:		Analysis Date: 4/12/2017			SeqNo: 1321736		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		910		1000		91.4	54	150			

Sample ID	2.5UG GRO LCS	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range						
Client ID:	LCSS	Batch ID: SG42060			RunNo: 42060						
Prep Date:		Analysis Date: 4/12/2017			SeqNo: 1321737		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	76.4	125			
Surr: BFB		990		1000		99.1	54	150			

### Qualifiers:

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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1704455

14-Apr-17

Client: Animas Environmental  
Project: COPC San Juan 28 6 Unit 127N

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	SB42060	RunNo:	42060					
Prep Date:		Analysis Date:	4/12/2017	SeqNo:	1321763	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.2		1.000		115	66.6	132			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	SB42060	RunNo:	42060					
Prep Date:		Analysis Date:	4/12/2017	SeqNo:	1321764	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	114	80	120			
Toluene	1.1	0.050	1.000	0	107	80	120			
Ethylbenzene	1.0	0.050	1.000	0	104	80	120			
Xylenes, Total	2.9	0.10	3.000	0	96.3	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		117	66.6	132			

### Qualifiers:

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



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

## Sample Log-In Check List

Client Name: Animas Environmental

Work Order Number: 1704455

RcptNo: 1

Received By: Lindsay Mangin

4/12/2017 7:00:00 AM

Completed By: Lindsay Mangin

4/12/2017 7:56:16 AM

Reviewed By: ENM

04/12/17

### Chain of Custody

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

### Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

### 18. Cooler Information

Cooler No.	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.5	Good	Yes			



<b>Chain-of-Custody Record</b>		Turn-Around Time:
Client: Animas Environmental Services, LLC		<input type="checkbox"/> Standard <input checked="" type="checkbox"/> Rush <u>2-TAT</u>
Mailing Address: 604 W Pinon St.		Project Name: COPC SAN JUAN 28-6 UNIT 127N
Farmington, NM 87401		Project #:
Phone #: 505-564-2281		Project Manager:
Email or Fax#: clameman@animasenvironmental.com		C. Lameman/ E. McNally
QA/QC Package: <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation)		
Accreditation: <input type="checkbox"/> NELAP <input type="checkbox"/> Other _____		Sampler: CL
<input type="checkbox"/> EDD (Type) _____		On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
		Sample Temperature: 15

☐ Standard ☒ Rush 2-TAT

COPC SAN JUAN 28-6 UNIT 127N

Project #:

**Project Manager:**

C. Lameman/ E. McNally

Sampler: CL

On Ice ☒ Yes ☐ No

Sample Temperature: 15

[illegible]

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

4/11/17	1620	Conch
---------	------	-------

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

4/11/17	1836	Ch. Waetz
---------	------	-----------

Received by:	Date	Time
--------------	------	------

Constable 4/11/17 1625

Received by:                      Date            Time           

04/12/17 0700

## HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

4901 Hawkins NE - Albuquerque, NM 87109

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

## Analysis Request

[illegible]

Remarks: Bill to Conoco Phillips  
WO # 10398881  
Supervisor: Randy Smith  
USERID: BLAKLBN  
Area: 7  
Ordered by: Lisa Hunter

Call v/ Questions

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.



