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-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

DENIED

Responsible Party: **Enterprise Field Services, LLC**	OGRID: **151618**
Contact Name: **Thomas Long**	Contact Telephone: **505-599-2286**
Contact email:**tjlong@eprod.com**	Incident # *(assigned by OCD)*: **NCS1916849922**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	

Location of Release Source

Latitude **36.79392** Longitude **-107.99780** *(NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Bruington GC C#1B**	Site Type **Natural Gas Gathering Pipeline**
Date Release Discovered: **6/5/2019**	Serial Number *(if applicable)*: **NM 0 010996**

Unit Letter	Section	Township	Range	County
M	**21**	**30N**	**11W**	**San Juan**

Closure Report Denied
- NO Alternative Sampling Approval
- No Sampling Notification etc.
-Resubmit Final C-141 with approvals.
No later than 3/30/2020

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (*Name*: BLM)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls): **> 25 bbls**	Volume Recovered (bbls): **None**
☐ Natural Gas	Volume Released (Mcf):	Volume Recovered (Mcf):
☐ Other (describe)	Volume/Weight Released (provide units):	Volume/Weight Recovered (provide units)

Cause of Release: On June 5, 2019, Enterprise had a rupture on the Bruington GC C#1B natural gas pipeline while conducting a hydro-static pressure test. No fluids were observed on the ground surface. No washes were affected. The pipeline was isolated, depressurized, locked out and tagged out. Repairs and remediation began on June 14, 2019 and Enterprise determined this release reportable on June 17, 2019 due the volume of impacted subsurface soil. On June 27, 2019, Enterprise completed the repairs and remediation. The final excavation dimensions measured approximately 58 feet long by 82 feet wide by approximately 17 feet deep. Approximately 2,532 cubic yards of hydrocarbon impacted soil were excavated and transported to a New Mexico Oil Conservation Division approved land farm facility. A third party closure report is included with this “Final.” C-141.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Jon E. Fields Title: Director, Field Environmental

Signature: Jon E. Fields Date: 12/2/19

email: jefields@eprod.com Telephone: (713) 381-6684

OCD Only

Received by: Date:

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: DENIED Date:

Printed Name: Title:

ENSOLUM

CLOSURE REPORT

Property:

Bruington GC C1B Pipeline Release
SW ¼, S21 T30N R11W
San Juan County, New Mexico

October 7, 2019
Ensolum Project No. 05A1226058

Prepared for:

Enterprise Field Services, LLC
614 Reilly Avenue
Farmington, NM 87401
Attn: Mr. Thomas Long

Prepared by:

Chad D'Aponti
Field Environmental Scientist

Ranee Deechilly
Environmental Scientist

Kyle Summers, CPG
Sr. Project Manager

Table of Contents

LIST OF APPENDICES

ENSOLUM

CLOSURE REPORT

Bruington GC C1B Pipeline Release
SW ¼, S21 T30N R11W
San Juan County, New Mexico

Ensolum Project No. 05A1226058

1.0 INTRODUCTION

1.1 Site Description & Background

Operator:	Enterprise Field Services, LLC / Enterprise Products Operating LLC (Enterprise)
Site Name:	Bruington GC C1B Pipeline Release (Site)
Location:	36.79394° North, 107.99781° West Southwest (SW) ¼ of Section 21, Township 30 North, Range 11 West San Juan County, New Mexico
Property:	United States Bureau of Land Management (BLM)
Regulatory:	New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD)

On June 4, 2019, Enterprise performed hydrostatic pressure testing on the Bruington GC C1B pipeline to evaluate the integrity of the pipeline. During the pressure test a leak was identified. On June 5, 2019, Enterprise initiated activities to facilitate the repair of the pipeline and remediate petroleum hydrocarbon impact resulting from the release.

A **Topographic Map** depicting the location of the Site is included as **Figure 1**, and a **Site Vicinity Map** is included as **Figure 2** in **Appendix A**.

1.2 Project Objective

The primary objective of the closure activities was to reduce constituent of concern (COC) concentrations in the on-Site soils to below the applicable New Mexico EMNRD OCD closure criteria.

2.0 CLOSURE CRITERIA

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. In order to address activities related to exempt oil and gas releases, the New Mexico EMNRD OCD references New Mexico Administrative Code (NMAC) 19.15.29 *Releases,* which establishes investigation and abatement action requirements for oil and gas release sites subject to reporting and/or corrective action. Ensolum, LLC (Ensolum) utilized information provided by Enterprise, the general site characteristics, and information available from the New Mexico Office of the State Engineer (OSE) and the New Mexico EMNRD OCD Imaging database to determine the appropriate closure criteria for the Site.

- No water wells were identified within a one-half mile radius of the Site on the OSE Water Rights Reporting System (WRRS) database.

- Two (2) cathodic-protection wells were identified within one-half mile of the Site. Data from the Morris A #6 cathodic protection well (Unit L, Sec 21 T20N R11W), located approximately 0.2 miles

from the Site, indicates water was identified at 140 feet below grade surface (bgs). Data from the Fifield #4 cathodic protection well (Unit E, Sec 21 T30N R11W), located approximately 0.4 miles from the Site, indicates water was identified at 100 feet bgs.

- The Site is located within 300 feet of a New Mexico ENMRD OCD-defined continuously flowing watercourse or significant watercourse.
- The Site is not located within 200 feet of a lakebed, sinkhole or playa lake.
- The Site is located within 300 feet of a permanent residence, school, hospital, institution or church.
- No springs, or private domestic fresh water wells used by less than five (5) households for domestic or stock watering purposes were identified within 500 feet of the Site.
- No fresh water wells or springs were identified within 1,000 feet of the Site.
- The Site is not located 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.
- The Site is not located within 300 feet of a wetland.
- Based on information identified on the New Mexico Mining and Minerals Division's GIS, Maps and Mine Data database, the Site is not located within an area overlying a subsurface mine.
- The Site is not located within an unstable area.
- The Site is not located within a 100-year floodplain.

Based on the identified siting criteria, cleanup goals for soils remaining in place at the Site include:

Closure Criteria for Soils Impacted by a Release		
Constituent	Method	Limit
Chloride	EPA 300.0 or SM4500 Cl B	600 mg/kg
TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015	100 mg/kg
BTEX	EPA SW-846 Method 8021 or 8260	50 mg/kg
Benzene	EPA SW-846 Method 8021 or 8260	10 mg/kg

3.0 SOIL REMEDIATION ACTIVITIES

On June 5, 2019, Enterprise initiated activities to facilitate the repair of the pipeline and remediate petroleum hydrocarbon impact resulting from the release. During the remediation and corrective action activities Sunland Construction, Inc. (Sunland), provided heavy equipment and labor support, while Ensolum provided environmental consulting support.

The final excavation measured approximately 58 feet long and 82 feet wide at the maximum extents. The maximum depth of the excavation measured approximately 17 feet bgs.

The lithology encountered during the completion of remediation activities consisted primarily of unconsolidated silty sand underlain by mudstone and sandstone.

A total of approximately 2,532 cubic yards of petroleum hydrocarbon affected soils were transported to the Envirotech, Inc. (Envirotech) landfarm near Hilltop, New Mexico and Industrial Ecosystems, Inc. (IEI) landfarm on Crouch Mesa, near Aztec, New Mexico for disposal/remediation. The executed C-138 solid waste acceptance forms are provided in **Appendix B**. The excavation was backfilled with imported fill and segregated, laboratory-confirmed, unaffected stockpiled soils, and then contoured to surrounding grade.

Figure 3 is a map that identifies approximate soil sample locations and depicts the approximate dimensions of the excavation with respect to the pipeline (**Appendix A**). Photographic documentation of the field activities is included in **Appendix C**.

4.0 SOIL SAMPLING PROGRAM

Ensolum field screened soil samples from the excavation utilizing a photoionization detector (PID) fitted with a 10.6 eV lamp and a calibrated Dexsil PetroFLAG® hydrocarbon analyzer system to guide excavation extents.

Ensolum's soil sampling program included the collection of 44 composite soil samples (S-1 through S-5, C-1 through C-34, and S-35 through S-39) comprised of five (5) aliquots each, from the excavation for laboratory analysis. In addition, two (2) stockpiled soil samples (SP-1 and SP-2), consisting of five (5) aliquots each, were collected from overburden soils that were segregated for potential reuse to confirm the material was suitable to remain on-Site. A clean shovel was utilized to obtain fresh aliquots from each accessible area of the excavation. An excavator, operated by Sunland, was utilized to obtain fresh aliquots from areas of the excavation that exceeded depths greater than six (6) feet bgs. The New Mexico EMNRD OCD provided verbal approval to proceed with the June 7, June 20, June 24, and June 27 sampling events, although a New Mexico EMNRD OCD representative was not on-Site during sampling. A New Mexico EMNRD OCD representative was on-Site during the June 26, 2019 sampling event.

First Sampling Event
The initial pipeline repair excavation was sampled during the first sampling event to evaluate petroleum hydrocarbon impact. Composite soil samples S-1 (7') and S-5 (7') were collected from the floor of the excavation. Composite soil samples S-2 (0'-7'), S-3 (0'-7'), and S-4 (0'-7') were collected from the sidewalls of the initial repair excavation. Analytical results from composite soil sample S-1 (floor) from the initial repair excavation indicated a New Mexico EMNRD OCD closure standard exceedance. In response to the data exceedances, the excavation was extended to remove petroleum hydrocarbon impact. Soils associated with composite soil samples S-1 and S-5 were removed by excavation and transported to the Envirotech landfarm for disposal/remediation. Soils associated with composite soil samples S-2 through S-4 were excavated and segregated for testing, to evaluate for potential reuse.

Second Sampling Event
While removing soils associated with composite soil sample S-1, additional petroleum hydrocarbon impact from a historical release was encountered. Highly elevated COC concentrations were identified by field analyses at depths greater than seven (7) feet bgs. Due to the extent of the historical impact, the excavation and subsequent sampling was performed in stages. Prior to the second sampling event, the excavation was deepened and extended to the north and south. On June 20, 2019, composite soil samples C-1 (3'-17') and C-11 (3'-16) were collected from the north and south sidewalls of the extended excavation. Composite soil samples C-2 (17'), C-3 (17'), C-4 (17'), C-5 (17'), C-6 (17'), C-7 (17'), C-8 (16'), C-9 (16'), and C-10 (16') were collected from the floor of the extended excavation. Subsequent to receiving confirmation that the composite soil samples exhibited acceptable analytical results, the excavation was partially backfilled to provide pipeline support, allowing further excavation to the west and east.

Third Sampling Event
On June 24, 2019, composite soil samples C-12 (0'-15') and C-22 (0'-14') were collected from the north and south sidewalls of the western extension of the excavation. Composite soil samples C-13 (15'), C-14 (15'), C-15 (15'), C-16 (15'), C-17 (15'), C-18 (15'), C-19 (14'), C-20 (14'), and C-21 (14') were collected from the floor of the western extension of the excavation.

Fourth Sampling Event
On June 26, 2019, composite soil samples C-23 (0'-12') and C-29 (3'-12) were collected from the north and south sidewalls of the eastern extension of the excavation. Composite soil samples C-30 (3'-11'), C-31 (3'-11'), C-32 (3'-11'), C-33 (3'-11'), and C-34 (3'-11') were collected from the eastern sidewall of the extended excavation. Composite soil samples C-24 (12'), C-25 (12'), C-26 (12'), C-27 (12'), and C-28 (12') were collected from the floor of the eastern extension of the excavation. A New Mexico EMNRD OCD representative was on-Site during the June 26, 2019 sampling event, and approved the adjusted sampling frequencies and location for this and the remaining sampling event.

Fifth Sampling Event
On June 27, 2019, composite soil samples S-35 (3'-15'), S-36 (3'-15'), S-37 (3'-15), S-38 (3'-14'), and S-39 (3'-14') were collected from the west sidewall of the western extension of the excavation.

Soil samples were collected and placed in laboratory prepared glassware, labeled/sealed using the laboratory supplied labels and custody seals, and stored on ice in a cooler. The samples were relinquished to the courier for Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, under proper chain-of-custody procedures.

5.0 SOIL LABORATORY ANALYTICAL METHODS

The composite soil samples were analyzed for benzene, toluene, ethylbenzene and total xylenes (BTEX) using Environmental Protection Agency (EPA) SW-846 Method #8021/8260, total petroleum hydrocarbon (TPH) gasoline range organics (GRO), diesel range organics (DRO), and motor oil/lube oil range organics (MRO) using EPA SW-846 Method #8015, and chlorides using EPA Method #300.0.

Laboratory analytical results are summarized in **Table 1** in **Appendix D**. The executed chain-of-custody forms and laboratory data sheets are provided in **Appendix E**.

6.0 DATA EVALUATION

Ensolum compared the BTEX, TPH, and chloride laboratory analytical results or laboratory practical quantitation limits (PQLs) / reporting limits (RLs) associated with the composite soil samples (C-1 through C-34, S-35 through S-39, S-2 through S-4, SP-1, and SP-2) to the applicable New Mexico EMNRD OCD closure criteria. Soils associated with composite soil samples S-1 and S-5 were removed from the Site and transported to Envirotech landfarm for disposal/remediation and are not included in the following discussion.

- The laboratory analytical results for composite soil sample C-33 indicates a benzene concentration of 0.027 milligrams per kilogram (mg/kg), which is less than the New Mexico EMNRD OCD closure criteria of 10 mg/kg. The laboratory analytical results for the remaining composite soil samples collected from soils remaining at the Site indicate benzene is not present in concentrations greater than the laboratory PQLs/RLs, which are less than the New Mexico EMNRD OCD closure criteria of 10 milligrams per kilogram (mg/kg).

- The laboratory analytical results for composite soil samples S-3, C-3, C-29, C-31 through C-34, S-36, and S-37 indicate total BTEX concentrations ranging from 0.064 mg/kg (C-29) to 1.07 mg/kg (C-31), which are less than the New Mexico EMNRD OCD closure criteria of 50 mg/kg. The

laboratory analytical results for the remaining composite soil samples collected from soils remaining at the Site indicate total BTEX is not present in concentrations greater than the laboratory PQLs/RLs, which are less than the New Mexico EMNRD OCD closure criteria of 50 mg/kg.

- The laboratory analytical results for composite soil samples S-3, C-12, C-29, C-32, and C-33 indicate combined TPH GRO/DRO/MRO concentrations ranging from 9.7 mg/kg (C-12) to 37 mg/kg (S-3), which are less than the New Mexico EMNRD OCD closure criteria of 100 mg/kg. The laboratory analytical results for the remaining composite soil samples collected from soils remaining at the Site indicate combined TPH GRO/DRO/MRO is not present in concentrations greater than the laboratory PQLs/RLs, which are less than the New Mexico EMNRD OCD closure criteria of 100 mg/kg.

- The laboratory analytical results for composite soil sample S-3 indicates a chloride concentration of 140 milligrams per kilogram (mg/kg), which is less than the New Mexico EMNRD OCD closure criteria of 600 mg/kg. The laboratory analytical results for the remaining composite soil samples collected from soils remaining at the Site indicate chloride is not present in concentrations greater than laboratory PQLs/RLs, which are less than the New Mexico EMNRD OCD closure criteria of 600 mg/kg for chlorides.

Laboratory analytical results are summarized in **Table 1** (**Appendix D**).

7.0 RECLAMATION AND RE-VEGETATION

The excavation was backfilled with a combination of imported fill and segregated, laboratory-confirmed, unaffected stockpiled soils, and was then contoured to the surrounding grade. Enterprise will re-seed the Site with a BLM Farmington Field Office approved seeding mixture.

8.0 FINDINGS AND RECOMMENDATION

On June 4, 2019, Enterprise performed hydrostatic pressure testing on the Bruington GC C1B pipeline to evaluate the integrity of the pipeline. During the pressure test a leak was identified. On June 5, 2019, Enterprise initiated activities to facilitate the repair of the pipeline and remediate petroleum hydrocarbon impact resulting from the release.

- The primary objective of the closure activities was to reduce COC concentrations in the on-Site soils to below the applicable New Mexico EMNRD OCD closure criteria using the New Mexico EMNRD OCD's NMAC 19.15.29 *Releases* as guidance.

- A total of 46 composite soil samples were collected from the excavation and stockpiled soils for laboratory analyses. Based on soil laboratory analytical results, soils remaining at the Site do not exhibit COC concentrations above the New Mexico EMNRD OCD closure criteria.

- A total of approximately 2,532 cubic yards of petroleum hydrocarbon affected soils were transported to the Envirotech landfarm near Hilltop, New Mexico, and IEI landfarm on Crouch Mesa, near Aztec, New Mexico for disposal/remediation. The excavation was backfilled with a combination of imported fill and segregated, laboratory-confirmed, unaffected stockpiled soils, and was then contoured to surrounding grade.

Based on field observations and laboratory analytical results, no additional investigation or corrective action appears warranted at this time.

9.0 STANDARDS OF CARE, LIMITATIONS, AND RELIANCE

9.1 Standard of Care

Ensolum's services were performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. Ensolum makes no warranties, express or implied, as to the services performed hereunder. Additionally, Ensolum does not warrant the work of third parties supplying information used in the report (e.g. laboratories, regulatory agencies, or other third parties).

9.2 Additional Limitations

Findings, conclusions, and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, or not present during these services, and Ensolum cannot represent that the Site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during the investigation. Environmental conditions at other areas or portions of the Site may vary from those encountered at actual sample locations. Ensolum's findings, and recommendations are based solely upon data available to Ensolum at the time of these services.

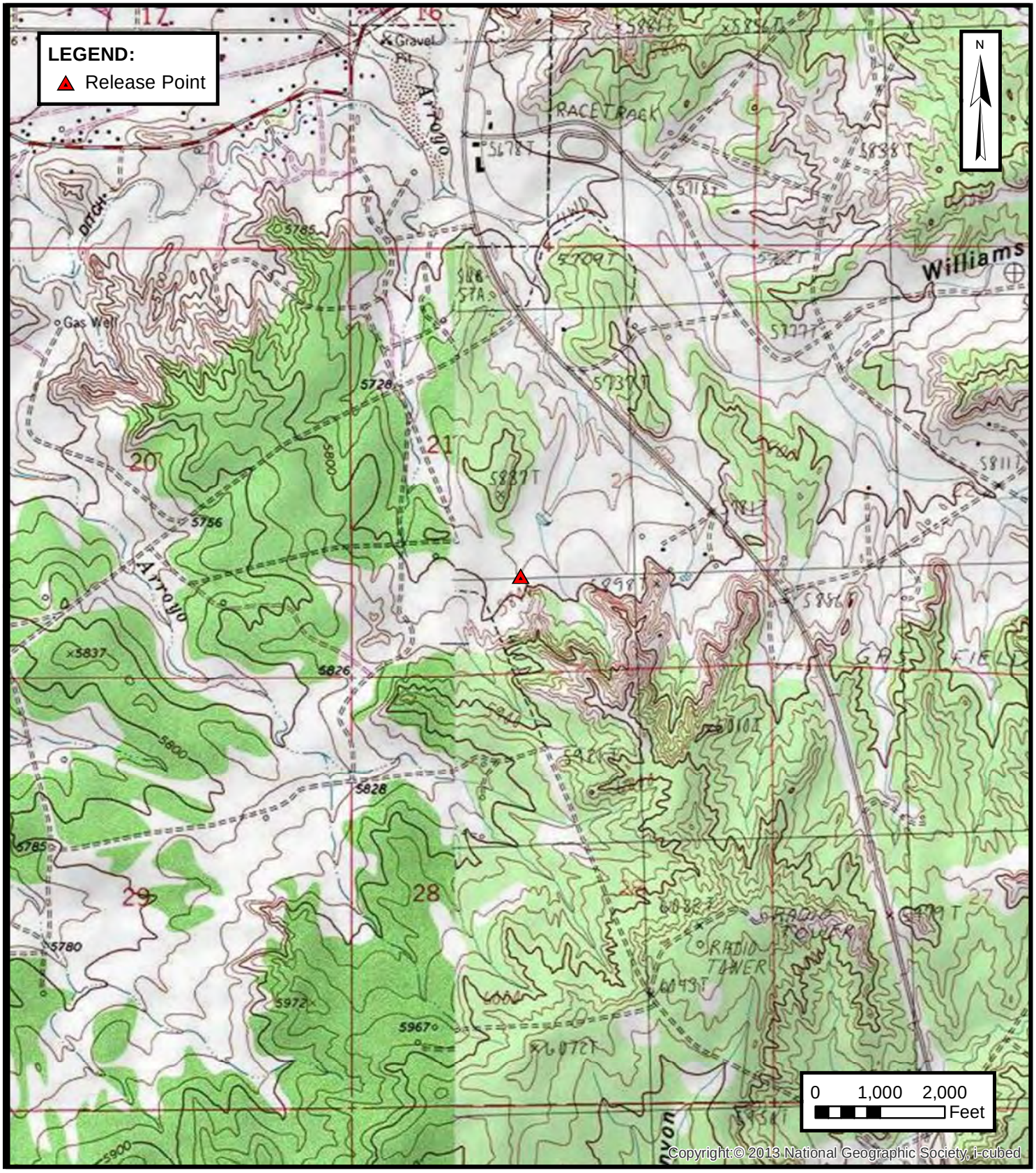
9.3 Reliance

This report has been prepared for the exclusive use of Enterprise Products Operating LLC, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the express written authorization Enterprise Products Operating LLC and Ensolum. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the Closure Report, and Ensolum's Master Services Agreement. The limitation of liability defined in the agreement is the aggregate limit of Ensolum's liability to the client.

ENSOLUM

APPENDIX A

Figures



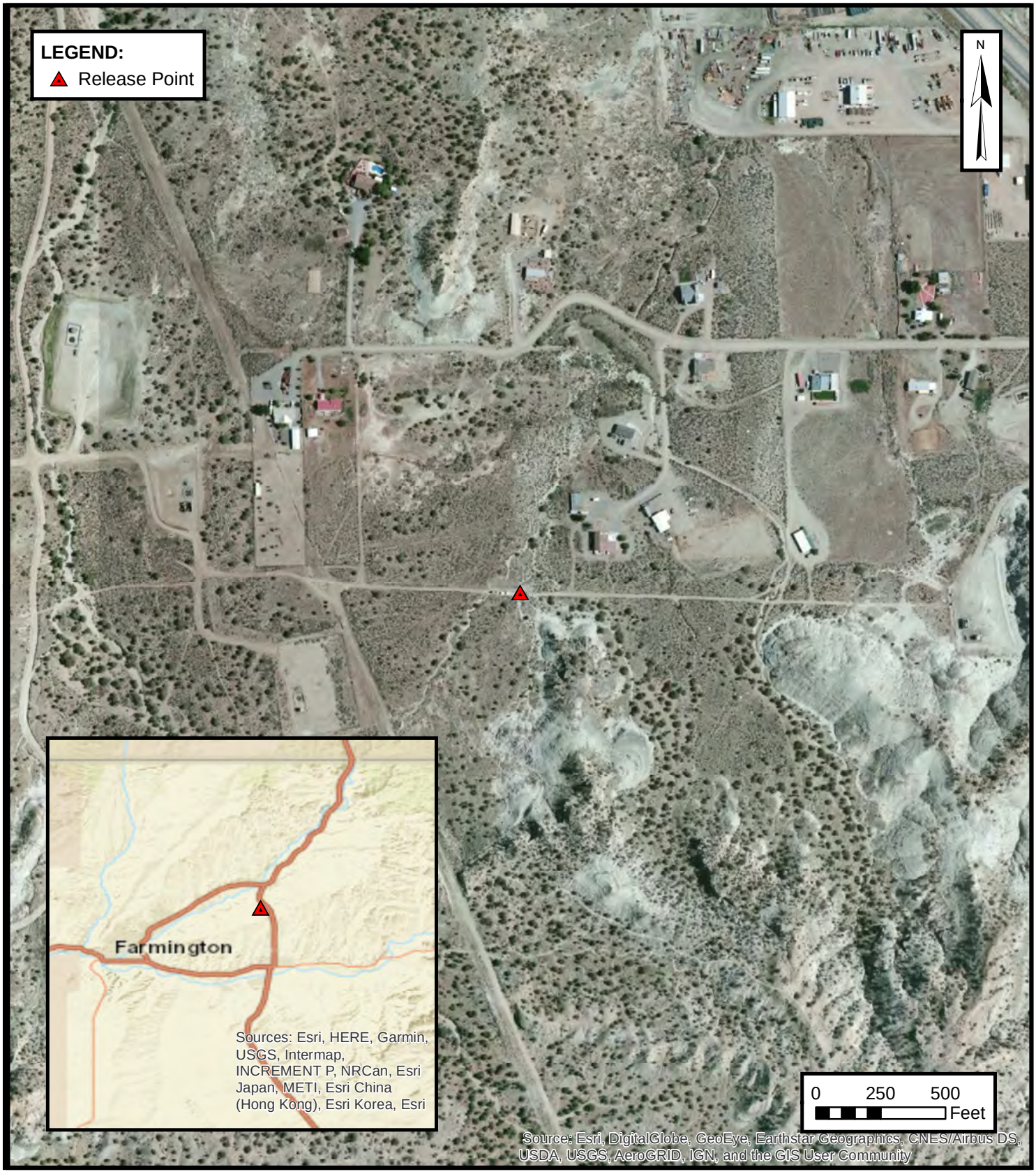
ENSOLUM
Environmental & Hydrogeologic Consultants

TOPOGRAPHIC MAP

ENTERPRISE FIELD SERVICES, LLC
BRUINGTON GC #1B RELEASE
SW ¼, S21 T30N R11W, San Juan County, New Mexico
36.79394° N, 107.99781° W

PROJECT NUMBER: 05A1226058

FIGURE
1



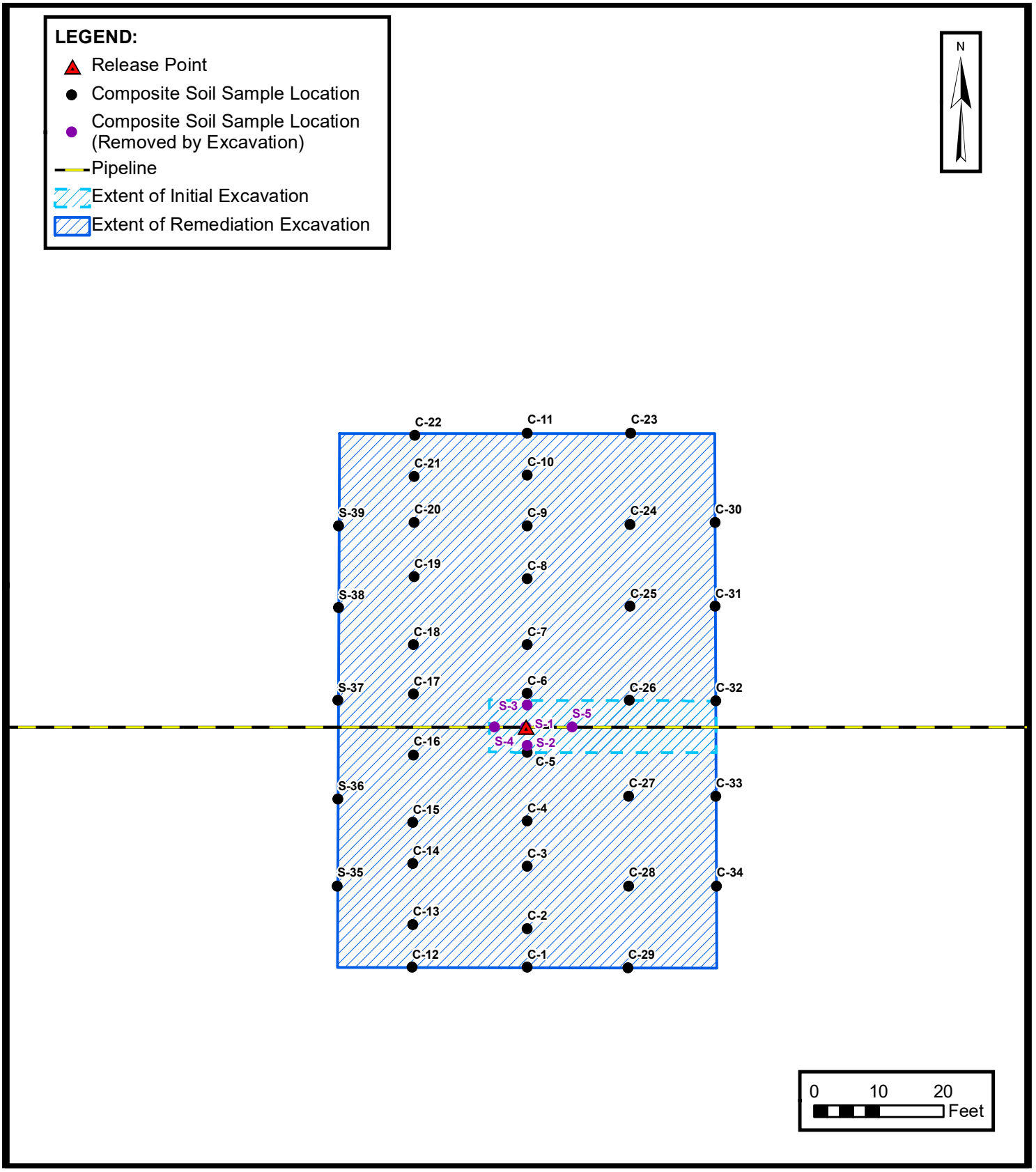
ENSOLUM
Environmental & Hydrogeologic Consultants

SITE VICINITY MAP

ENTERPRISE FIELD SERVICES, LLC
BRUINGTON GC #1B RELEASE
SW ¼, S21 T30N R11W, San Juan County, New Mexico
36.79394° N, 107.99781° W

PROJECT NUMBER: 05A1226058

FIGURE
2



ENSOLUM
Environmental & Hydrogeologic Consultants

SITE MAP

ENTERPRISE FIELD SERVICES, LLC
BRUINGTON GC #1B RELEASE
SW ¼, S21 T30N R11W, San Juan County, New Mexico
36.79394° N, 107.99781° W

PROJECT NUMBER: 05A1226058

FIGURE
3

ENSOLUM

APPENDIX B

Executed C-138 Solid Waste Acceptance Forms

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 97057-1014
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

Invoicing Information
AFE: N43024
PM: Chad Timmerman
PayKeyRB21200

2. Originating Site:
Bruington GC 1B Pipeline

3. Location of Material (Street Address, City, State or ULSTR):
UL M Section 2 T30N R11W; 36.79392, -107.99780

June 2019

4. Source and Description of Waste:
Source: Excavation Spoils from a Leak from a Natural Gas Gathering Pipeline
Description: Soil impacted with Natural Gas Liquids (Condensate and Water)
Estimated Volume 50 (yd³) / bbls Known Volume (to be entered by the operator at the end of the haul) 468 (yd³) / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long (Thomas Long), representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long (Thomas Long) 6-18-19, representative for Enterprise Products Operating authorizes Envirotech, Inc. to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, (Greg Crabtree), representative for Envirotech, Inc. do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: Sunland Construction or subcontractors. Stan Horn, OFT, Mesa, Paul+Son

OCD Permitted Surface Waste Management Facility

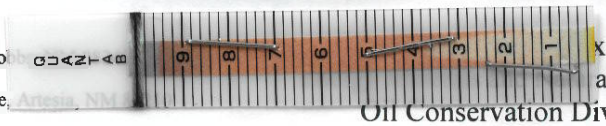
Name and Facility Permit #: **Envirotech Inc. Soil Remediation Facility * Permit #: NM 01-0011**
Address of Facility: **Hilltop, NM**
Method of Treatment and/or Disposal:
☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☒ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Greg Crabtree TITLE: Envir'd Manager DATE: 6/14/19
SIGNATURE: (Greg Crabtree) TELEPHONE NO.: 505-632-0615
Surface Waste Management Facility Authorized Agent

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



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

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

Invoicing Information
AFE: N43024
PM: Chad Timmerman
PayKeyRB21200

2. Originating Site:
Bruington GC 1B Pipeline

3. Location of Material (Street Address, City, State or ULSTR):
UL M Section 2 T30N R11W; 36.79392, -107.99780

6/19/19 - 60 yds
6/20/19 - 348 yd
6/25/19 - 324 yd
6/24/19 - 372 yd
6/21/19 - 612 yds

4. Source and Description of Waste:
Source: Excavation Spoils from a Leak from a Natural Gas Gathering Pipeline
Description: Soil impacted with Natural Gas Liquids (Condensate and Water)
Estimated Volume 50 (yd³) / bbls Known Volume (to be entered by the operator at the end of the haul) 300 (yd³) / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long, representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☑ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long 6-18-19, representative for Enterprise Products Operating authorizes IEI, Inc. to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for IEI, Inc. do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: Sunland Construction or subcontractors.

OCD Permitted Surface Waste Management Facility
Name and Facility Permit #: JFJ Landfarm/Industrial Ecosystems, Inc. * **Permit #: NM 01-0010B**
Address of Facility: **#49 CR 2150 Aztec, New Mexico**

PM-7

Method of Treatment and/or Disposal:
☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other CL-141

Waste Acceptance Status:

☑ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Celia Sanchez TITLE: Clerk DATE: 6/20/19

SIGNATURE: Celia Sanchez TELEPHONE NO.: 505-632-1782
Surface Waste Management Facility Authorized Agent

6/18/19

ENSOLUM

APPENDIX C

Photographic Documentation

SITE PHOTOGRAPHS

Enterprise Field Services, LLC
Closure Report
Bruington GC C1B Pipeline Release
Ensolum Project No. 05A1226058

ENSOLUM

Photograph 1 Photograph Description: View of the initial excavation.	
Photograph 2 Photograph Description: View of in-process excavation activities.	
Photograph 3 Photograph Description: View of in-process excavation activities.	

SITE PHOTOGRAPHS

Enterprise Field Services, LLC
Closure Report
Bruington GC C1B Pipeline Release
Ensolum Project No. 05A1226058

ENSOLUM

Photograph 4 Photograph Description: View of in-process excavation activities.	
Photograph 5 Photograph Description: View of in-process excavation activities.	
Photograph 6 Photograph Description: View of the final excavation after initial restoration.	

ENSOLUM

APPENDIX D

Table 1 – Soil Analytical Summary

ENSOLUM

TABLE 1
Bruington GC C1B Pipeline Release
SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Type C- Composite G - Grab	Sample Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total Combined TPH (mg/kg)	Chloride (mg/kg)
New Mexico Energy Mineral & Natural Resources Department Oil Conservation Division Closure Criteria				10	NE	NE	NE	50				100	600
Stockpiled Soil Samples													
SP-1	6.07.19	C	Stockpile	<0.020	<0.040	<0.040	<0.080	ND	<4.0	<9.8	<49	ND	<60
SP-2	6.07.19	C	Stockpile	<0.019	<0.039	<0.039	<0.078	ND	<3.9	<9.7	<49	ND	<60
Preliminary Composite Soil Samples Removed by Excavation and Transported to Landfarm													
S-1	6.07.19	C	7	<0.12	0.85	0.92	17	19	160	33	<46	**193**	200
S-5	6.07.19	C	7	<0.019	<0.039	<0.039	<0.078	ND	<3.9	<9.7	<48	ND	<60
Preliminary Composite Soil Samples Removed by Excavation and Segregated for Testing and Potential Reuse													
S-2	6.07.19	C	0 to 7	<0.022	<0.044	<0.044	<0.088	ND	<4.4	<9.9	<49	ND	<60
S-3	6.07.19	C	0 to 7	<0.020	<0.040	<0.040	0.22	0.22	<4.0	37	<48	37	140
S-4	6.07.19	C	0 to 7	<0.023	<0.045	<0.045	<0.091	ND	<4.5	<9.6	<48	ND	<60
Confirmation Composite Soil Samples													
C-1	6.20.19	C	3 to 17	<0.023	<0.047	<0.047	<0.094	ND	<4.7	<9.7	<48	ND	<60
C-2	6.20.19	C	17	<0.022	<0.043	<0.043	<0.086	ND	<4.3	<9.7	<48	ND	<60
C-3	6.20.19	C	17	<0.025	<0.049	<0.049	0.12	0.12	<4.9	<9.6	<48	ND	<60
C-4	6.20.19	C	17	<0.020	<0.040	<0.040	<0.081	ND	<4.0	<10	<50	ND	<60
C-5	6.20.19	C	17	<0.019	<0.038	<0.038	<0.076	ND	<3.8	<9.7	<48	ND	<60
C-6	6.20.19	C	17	<0.022	<0.045	<0.045	<0.089	ND	<4.5	<9.8	<49	ND	<60
C-7	6.20.19	C	17	<0.024	<0.049	<0.049	<0.098	ND	<4.9	<9.3	<46	ND	<60
C-8	6.20.19	C	16	<0.021	<0.042	<0.042	<0.083	ND	<4.2	<9.9	<49	ND	<60
C-9	6.20.19	C	16	<0.022	<0.044	<0.044	<0.088	ND	<4.4	<10	<50	ND	<60
C-10	6.20.19	C	16	<0.028	<0.056	<0.056	<0.11	ND	<5.6	<10	<50	ND	<60
C-11	6.20.19	C	3 to 16	<0.021	<0.041	<0.041	<0.082	ND	<4.1	<9.7	<48	ND	<60
C-12	6.24.19	C	0 to 15	<0.025	<0.049	<0.049	<0.098	ND	<4.9	9.7	<47	9.7	<60
C-13	6.24.19	C	15	<0.025	<0.049	<0.049	<0.098	ND	<4.9	<9.8	<49	ND	<60
C-14	6.24.19	C	15	<0.023	<0.047	<0.047	<0.093	ND	<4.7	<9.7	<48	ND	<60
C-15	6.24.19	C	15	<0.023	<0.045	<0.045	<0.090	ND	<4.5	<9.9	<49	ND	<60
C-16	6.24.19	C	15	<0.024	<0.048	<0.048	<0.096	ND	<4.8	<9.5	<47	ND	<60
C-17	6.24.19	C	15	<0.023	<0.045	<0.045	<0.091	ND	<4.5	<9.2	<46	ND	<60
C-18	6.24.19	C	15	<0.022	<0.044	<0.044	<0.087	ND	<4.4	<10	<50	ND	<60
C-19	6.24.19	C	14	<0.023	<0.047	<0.047	<0.094	ND	<4.7	<9.8	<49	ND	<60
C-20	6.24.19	C	14	<0.021	<0.041	<0.041	<0.083	ND	<4.1	<10	<50	ND	<60
C-21	6.24.19	C	14	<0.019	<0.038	<0.038	<0.077	ND	<3.8	<9.7	<48	ND	<59
C-22	6.24.19	C	0 to 14	<0.021	<0.041	<0.041	<0.082	ND	<4.1	<10	<50	ND	<60

ENSOLUM

TABLE 1
Bruington GC C1B Pipeline Release
SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Type C- Composite G - Grab	Sample Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)	Total Combined TPH (mg/kg)	Chloride (mg/kg)
New Mexico Energy Mineral & Natural Resources Department Oil Conservation Division Closure Criteria				**10**	**NE**	**NE**	**NE**	**50**				**100**	**600**
C-23	6.26.19	C	0 to 12	<0.019	<0.039	<0.039	<0.078	ND	<3.9	<10	<50	ND	<60
C-24	6.26.19	C	12	<0.019	<0.038	<0.038	<0.077	ND	<3.8	<9.9	<49	ND	<60
C-25	6.26.19	C	12	<0.018	<0.035	<0.035	<0.070	ND	<3.5	<9.3	<47	ND	<60
C-26	6.26.19	C	12	<0.019	<0.039	<0.039	<0.077	ND	<3.9	<9.3	<47	ND	<60
C-27	6.26.19	C	12	<0.021	<0.043	<0.043	<0.085	ND	<4.3	<9.6	<48	ND	<60
C-28	6.26.19	C	12	<0.019	<0.038	<0.038	<0.076	ND	<3.8	<9.7	<48	ND	<60
C-29	6.26.19	C	3 to 12	<0.022	0.064	<0.044	<0.088	0.064	13	<9.6	<48	13	<60
C-30	6.26.19	C	3 to 11	<0.10	<0.21	<0.21	<0.41	ND	<21	<9.7	<49	ND	<60
C-31	6.26.19	C	3 to 11	<0.10	0.35	<0.20	<0.40	0.35	34	<9.6	<48	ND	<60
C-32	6.26.19	C	3 to 11	<0.10	0.40	<0.21	0.67	1.07	23	<9.6	<48	23	<60
C-33	6.26.19	C	3 to 11	0.027	0.22	<0.037	0.30	0.55	12	<9.3	<46	12	<60
C-34	6.26.19	C	3 to 11	<0.018	0.069	<0.037	0.095	0.164	<3.7	<9.4	<47	ND	<60
S-35	6.27.19	C	3 to 15	<0.022	<0.044	<0.044	<0.087	ND	<4.4	<9.4	<47	ND	<60
S-36	6.27.19	C	3 to 15	<0.021	0.16	<0.042	0.15	0.31	<4.2	<9.9	<50	ND	<60
S-37	6.27.19	C	3 to 15	<0.022	0.14	<0.045	0.12	0.26	<4.5	<9.3	<47	ND	<60
S-38	6.27.19	C	3 to 14	<0.023	<0.45	<0.045	<0.090	ND	<4.5	<9.1	<45	ND	<60
S-39	6.27.19	C	3 to 14	<0.019	<0.039	<0.039	<0.077	ND	<3.9	<9.3	<47	ND	<60

Note: Concentrations in **bold** and yellow exceed the applicable NM EMNRD Closure Criteria

ND = Not Detected above the Practical Quantitation Limits

NA = Not Analyzed

NE = Not established

mg/kg = milligram per kilogram

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes

TPH = Total Petroleum Hydrocarbon

GRO = Gasoline Range Organics

DRO = Diesel Range Organics

MRO = Motor Oil/Lube Oil Range Organics

ENSOLUM

APPENDIX E

Laboratory Data Sheets & Chain of Custody Documentation

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

June 11, 2019

Kyle Summers
ENSOLUM
606 S. Rio Grande Suite A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: Bruington GC C1B East OrderNo.: 1906462

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 6/8/2019 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1906462**
Date Reported: **6/11/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-1
Project: Bruington GC C1B East **Collection Date:** 6/7/2019 1:15:00 PM
Lab ID: 1906462-001 **Matrix:** MEOH (SOIL) **Received Date:** 6/8/2019 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	200	60		mg/Kg	20	6/10/2019 10:53:13 AM	45461
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	33	9.2		mg/Kg	1	6/10/2019 11:07:16 AM	45459
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/10/2019 11:07:16 AM	45459
Surr: DNOP	87.1	70-130		%Rec	1	6/10/2019 11:07:16 AM	45459
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	160	24		mg/Kg	5	6/10/2019 10:48:29 AM	C60517
Surr: BFB	184	73.8-119	S	%Rec	5	6/10/2019 10:48:29 AM	C60517
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.12		mg/Kg	5	6/10/2019 10:48:29 AM	D60517
Toluene	0.85	0.24		mg/Kg	5	6/10/2019 10:48:29 AM	D60517
Ethylbenzene	0.92	0.24		mg/Kg	5	6/10/2019 10:48:29 AM	D60517
Xylenes, Total	17	0.49		mg/Kg	5	6/10/2019 10:48:29 AM	D60517
Surr: 4-Bromofluorobenzene	117	80-120		%Rec	5	6/10/2019 10:48:29 AM	D60517

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906462**
Date Reported: **6/11/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-2
Project: Bruington GC C1B East **Collection Date:** 6/7/2019 1:20:00 PM
Lab ID: 1906462-002 **Matrix:** MEOH (SOIL) **Received Date:** 6/8/2019 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	60		mg/Kg	20	6/10/2019 11:05:38 AM	45461
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/10/2019 11:31:39 AM	45459
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/10/2019 11:31:39 AM	45459
Surr: DNOP	87.9	70-130		%Rec	1	6/10/2019 11:31:39 AM	45459
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	6/10/2019 11:11:56 AM	C60517
Surr: BFB	86.4	73.8-119		%Rec	1	6/10/2019 11:11:56 AM	C60517
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.022		mg/Kg	1	6/10/2019 11:11:56 AM	D60517
Toluene	ND	0.044		mg/Kg	1	6/10/2019 11:11:56 AM	D60517
Ethylbenzene	ND	0.044		mg/Kg	1	6/10/2019 11:11:56 AM	D60517
Xylenes, Total	ND	0.088		mg/Kg	1	6/10/2019 11:11:56 AM	D60517
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	6/10/2019 11:11:56 AM	D60517

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

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
PQL	Practical Quanitative Limit
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 Limit

Analytical Report
Lab Order **1906462**
Date Reported: **6/11/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-3
Project: Bruington GC C1B East **Collection Date:** 6/7/2019 1:25:00 PM
Lab ID: 1906462-003 **Matrix:** MEOH (SOIL) **Received Date:** 6/8/2019 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	140	60		mg/Kg	20	6/10/2019 11:18:02 AM	45461
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	37	9.6		mg/Kg	1	6/10/2019 11:56:01 AM	45459
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/10/2019 11:56:01 AM	45459
Surr: DNOP	88.4	70-130		%Rec	1	6/10/2019 11:56:01 AM	45459
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	6/10/2019 11:35:13 AM	C60517
Surr: BFB	102	73.8-119		%Rec	1	6/10/2019 11:35:13 AM	C60517
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.020		mg/Kg	1	6/10/2019 11:35:13 AM	D60517
Toluene	ND	0.040		mg/Kg	1	6/10/2019 11:35:13 AM	D60517
Ethylbenzene	ND	0.040		mg/Kg	1	6/10/2019 11:35:13 AM	D60517
Xylenes, Total	0.22	0.081		mg/Kg	1	6/10/2019 11:35:13 AM	D60517
Surr: 4-Bromofluorobenzene	108	80-120		%Rec	1	6/10/2019 11:35:13 AM	D60517

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906462**
Date Reported: **6/11/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-4
Project: Bruington GC C1B East **Collection Date:** 6/7/2019 1:30:00 PM
Lab ID: 1906462-004 **Matrix:** MEOH (SOIL) **Received Date:** 6/8/2019 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	60		mg/Kg	20	6/10/2019 11:30:26 AM	45461
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/10/2019 12:20:33 PM	45459
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/10/2019 12:20:33 PM	45459
Surr: DNOP	88.4	70-130		%Rec	1	6/10/2019 12:20:33 PM	45459
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	6/10/2019 11:58:33 AM	C60517
Surr: BFB	86.1	73.8-119		%Rec	1	6/10/2019 11:58:33 AM	C60517
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	6/10/2019 11:58:33 AM	D60517
Toluene	ND	0.045		mg/Kg	1	6/10/2019 11:58:33 AM	D60517
Ethylbenzene	ND	0.045		mg/Kg	1	6/10/2019 11:58:33 AM	D60517
Xylenes, Total	ND	0.091		mg/Kg	1	6/10/2019 11:58:33 AM	D60517
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	6/10/2019 11:58:33 AM	D60517

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

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
PQL	Practical Quanitative Limit
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 Limit

Analytical Report
Lab Order **1906462**
Date Reported: **6/11/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-5
Project: Bruington GC C1B East **Collection Date:** 6/7/2019 1:35:00 PM
Lab ID: 1906462-005 **Matrix:** MEOH (SOIL) **Received Date:** 6/8/2019 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	60		mg/Kg	20	6/10/2019 11:42:50 AM	45461
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/10/2019 12:44:59 PM	45459
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/10/2019 12:44:59 PM	45459
Surr: DNOP	87.8	70-130		%Rec	1	6/10/2019 12:44:59 PM	45459
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	6/10/2019 12:21:56 PM	C60517
Surr: BFB	90.7	73.8-119		%Rec	1	6/10/2019 12:21:56 PM	C60517
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.019		mg/Kg	1	6/10/2019 12:21:56 PM	D60517
Toluene	ND	0.039		mg/Kg	1	6/10/2019 12:21:56 PM	D60517
Ethylbenzene	ND	0.039		mg/Kg	1	6/10/2019 12:21:56 PM	D60517
Xylenes, Total	ND	0.078		mg/Kg	1	6/10/2019 12:21:56 PM	D60517
Surr: 4-Bromofluorobenzene	108	80-120		%Rec	1	6/10/2019 12:21:56 PM	D60517

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

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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906462**

11-Jun-19

Client: ENSOLUM

Project: Bruington GC C1B East

Sample ID: **MB-45461**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **45461**	RunNo: **60521**							
Prep Date: **6/10/2019**	Analysis Date: **6/10/2019**	SeqNo: **2048088**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-45461**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **45461**	RunNo: **60521**							
Prep Date: **6/10/2019**	Analysis Date: **6/10/2019**	SeqNo: **2048089**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.6	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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906462**

11-Jun-19

Client: ENSOLUM

Project: Bruington GC C1B East

Sample ID: **MB-45459**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **45459**	RunNo: **60523**
Prep Date: **6/10/2019**	Analysis Date: **6/10/2019**	SeqNo: **2047589** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.6		10.00		96.0	70	130			

Sample ID: **LCS-45459**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **45459**	RunNo: **60523**
Prep Date: **6/10/2019**	Analysis Date: **6/10/2019**	SeqNo: **2047590** 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	95.7	63.9	124			
Surr: DNOP	4.8		5.000		96.1	70	130			

Sample ID: **MB-45450**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **45450**	RunNo: **60512**
Prep Date: **6/7/2019**	Analysis Date: **6/10/2019**	SeqNo: **2047733** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		100	70	130			

Sample ID: **LCS-45450**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **45450**	RunNo: **60512**
Prep Date: **6/7/2019**	Analysis Date: **6/10/2019**	SeqNo: **2047735** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.9		5.000		77.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906462**

11-Jun-19

Client: ENSOLUM

Project: Bruington GC C1B East

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **C60517**	RunNo: **60517**
Prep Date:	Analysis Date: **6/10/2019**	SeqNo: **2047718** 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		88.3	73.8	119			

Sample ID: **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **C60517**	RunNo: **60517**
Prep Date:	Analysis Date: **6/10/2019**	SeqNo: **2047719** 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	89.1	80.1	123			
Surr: BFB	1000		1000		104	73.8	119			

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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906462**

11-Jun-19

Client: ENSOLUM

Project: Bruington GC C1B East

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **D60517**	RunNo: **60517**
Prep Date:	Analysis Date: **6/10/2019**	SeqNo: **2047751** 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		104	80	120			

Sample ID: **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **D60517**	RunNo: **60517**
Prep Date:	Analysis Date: **6/10/2019**	SeqNo: **2047752** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.025	1.000	0	88.4	80	120			
Toluene	0.93	0.050	1.000	0	93.2	80	120			
Ethylbenzene	0.96	0.050	1.000	0	96.2	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.1	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		111	80	120			

Sample ID: **1906462-001AMS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **S-1**	Batch ID: **D60517**	RunNo: **60517**
Prep Date:	Analysis Date: **6/10/2019**	SeqNo: **2047754** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	4.6	0.12	4.897	0.1107	92.0	63.9	127			
Toluene	5.9	0.24	4.897	0.8526	102	69.9	131			
Ethylbenzene	6.1	0.24	4.897	0.9236	106	71	132			
Xylenes, Total	34	0.49	14.69	17.24	116	71.8	131			
Surr: 4-Bromofluorobenzene	5.9		4.897		121	80	120			S

Sample ID: **1906462-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **S-1**	Batch ID: **D60517**	RunNo: **60517**
Prep Date:	Analysis Date: **6/10/2019**	SeqNo: **2047755** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	4.5	0.12	4.897	0.1107	89.6	63.9	127	2.58	20	
Toluene	5.7	0.24	4.897	0.8526	98.0	69.9	131	3.50	20	
Ethylbenzene	5.9	0.24	4.897	0.9236	101	71	132	4.33	20	
Xylenes, Total	33	0.49	14.69	17.24	108	71.8	131	3.67	20	
Surr: 4-Bromofluorobenzene	5.8		4.897		118	80	120	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
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 Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **ENSOLUM AZTEC** Work Order Number: **1906462** RcptNo: 1

Received By: **Isaiah Ortiz** **6/8/2019 10:00:00 AM** I. Ortiz

Completed By: **Leah Baca** **6/9/2019 1:37:04 PM** Leah Baca

Reviewed By: TMM 6-10-19

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. 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: DAD 6/10/19

Special Handling (if applicable)

15. 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: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			

Chain-of-Custody Record

Client: Ensolum, LLC

Mailing Address: 6065 Rio Grande Suite A
Aztec, NM 87410

Phone #:

email or Fax#: KSummers@ensolum.com

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 6/11/19
☐ Standard ☒ Rush

Project Name: Bruington GC CIB East

Project #: 05A1226058

Project Manager: KSummers

Sampler: RDeechilly
On Ice: ☒ Yes ☐ No
# of Coolers: 1 (-02)
Cooler Temp(including CF): 1.4

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1906462
6/7/19	1315	S	S-1	1 4oz Jar	cool	-001
6/7/19	1320	S	S-2	1 4oz Jar	cool	-002
6/7/19	1325	S	S-3	1 4oz Jar	cool	-003
6/7/19	1330	S	S-4	1 4oz Jar	cool	-004
6/7/19	1335	S	S-5	1 4oz Jar	cool	-005

Analysis Request

BTEX / ~~MTBE~~ / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Chlorides
X	X									X
X	X									X
X	X									X
X	X									X
X	X									X

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
6/7/19	1549				6/7/19	1549
6/7/19	1752			Courier	6/8/19	1000

Remarks: PM - Tom Long (EPROD)
PO# KEY - RB21200

2-DAY

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

June 11, 2019

Kyle Summers
ENSOLUM
606 S. Rio Grande Suite A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: Bruington GC C1B East OrderNo.: 1906463

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/8/2019 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1906463**
Date Reported: **6/11/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** SP-1
Project: Bruington GC C1B East **Collection Date:** 6/7/2019 1:45:00 PM
Lab ID: 1906463-001 **Matrix:** MEOH (SOIL) **Received Date:** 6/8/2019 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	60		mg/Kg	20	6/10/2019 11:55:14 AM	45461
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/10/2019 12:26:18 PM	45459
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/10/2019 12:26:18 PM	45459
Surr: DNOP	98.0	70-130		%Rec	1	6/10/2019 12:26:18 PM	45459
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	6/10/2019 12:45:29 PM	C60517
Surr: BFB	97.3	73.8-119		%Rec	1	6/10/2019 12:45:29 PM	C60517
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.020		mg/Kg	1	6/10/2019 12:45:29 PM	D60517
Toluene	ND	0.040		mg/Kg	1	6/10/2019 12:45:29 PM	D60517
Ethylbenzene	ND	0.040		mg/Kg	1	6/10/2019 12:45:29 PM	D60517
Xylenes, Total	ND	0.080		mg/Kg	1	6/10/2019 12:45:29 PM	D60517
Surr: 4-Bromofluorobenzene	117	80-120		%Rec	1	6/10/2019 12:45:29 PM	D60517

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

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
PQL	Practical Quanitative Limit
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 Limit

Analytical Report
Lab Order **1906463**
Date Reported: **6/11/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** SP-2
Project: Bruington GC C1B East **Collection Date:** 6/7/2019 1:50:00 PM
Lab ID: 1906463-002 **Matrix:** MEOH (SOIL) **Received Date:** 6/8/2019 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	60		mg/Kg	20	6/10/2019 12:07:39 PM	45461
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/10/2019 12:48:16 PM	45459
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/10/2019 12:48:16 PM	45459
Surr: DNOP	103	70-130		%Rec	1	6/10/2019 12:48:16 PM	45459
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	6/10/2019 1:08:51 PM	C60517
Surr: BFB	89.2	73.8-119		%Rec	1	6/10/2019 1:08:51 PM	C60517
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.019		mg/Kg	1	6/10/2019 1:08:51 PM	D60517
Toluene	ND	0.039		mg/Kg	1	6/10/2019 1:08:51 PM	D60517
Ethylbenzene	ND	0.039		mg/Kg	1	6/10/2019 1:08:51 PM	D60517
Xylenes, Total	ND	0.078		mg/Kg	1	6/10/2019 1:08:51 PM	D60517
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	6/10/2019 1:08:51 PM	D60517

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906463**

11-Jun-19

Client: ENSOLUM

Project: Bruington GC C1B East

Sample ID: **MB-45461**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **45461**	RunNo: **60521**							
Prep Date: **6/10/2019**	Analysis Date: **6/10/2019**	SeqNo: **2048088**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-45461**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **45461**	RunNo: **60521**							
Prep Date: **6/10/2019**	Analysis Date: **6/10/2019**	SeqNo: **2048089**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.6	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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906463**

11-Jun-19

Client: ENSOLUM

Project: Bruington GC C1B East

Sample ID: **MB-45459**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **45459**	RunNo: **60523**
Prep Date: **6/10/2019**	Analysis Date: **6/10/2019**	SeqNo: **2047589** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.6		10.00		96.0	70	130			

Sample ID: **LCS-45459**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **45459**	RunNo: **60523**
Prep Date: **6/10/2019**	Analysis Date: **6/10/2019**	SeqNo: **2047590** 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	95.7	63.9	124			
Surr: DNOP	4.8		5.000		96.1	70	130			

Sample ID: **MB-45450**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **45450**	RunNo: **60512**
Prep Date: **6/7/2019**	Analysis Date: **6/10/2019**	SeqNo: **2047733** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		100	70	130			

Sample ID: **LCS-45450**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **45450**	RunNo: **60512**
Prep Date: **6/7/2019**	Analysis Date: **6/10/2019**	SeqNo: **2047735** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.9		5.000		77.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906463**

11-Jun-19

Client: ENSOLUM

Project: Bruington GC C1B East

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **C60517**	RunNo: **60517**
Prep Date:	Analysis Date: **6/10/2019**	SeqNo: **2047718** 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		88.3	73.8	119			

Sample ID: **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **C60517**	RunNo: **60517**
Prep Date:	Analysis Date: **6/10/2019**	SeqNo: **2047719** 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	89.1	80.1	123			
Surr: BFB	1000		1000		104	73.8	119			

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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906463**

11-Jun-19

Client: ENSOLUM

Project: Bruington GC C1B East

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **PBS**	Batch ID: **D60517**	RunNo: **60517**							
Prep Date:	Analysis Date: **6/10/2019**	SeqNo: **2047751**	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		104	80	120			

Sample ID: **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **LCSS**	Batch ID: **D60517**	RunNo: **60517**							
Prep Date:	Analysis Date: **6/10/2019**	SeqNo: **2047752**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.025	1.000	0	88.4	80	120			
Toluene	0.93	0.050	1.000	0	93.2	80	120			
Ethylbenzene	0.96	0.050	1.000	0	96.2	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.1	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		111	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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **ENSOLUM AZTEC** Work Order Number: **1906463** RcptNo: **1**

Received By: **Isaiah Ortiz** **6/8/2019 10:00:00 AM** I-Ox

Completed By: **Leah Baca** **6/9/2019 1:44:46 PM** Leah Baca

Reviewed By: JHM 6-10-19

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. 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: DAD 6/10/19

Special Handling (if applicable)

15. 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:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			

Chain-of-Custody Record

Client: Ensolum, LLC

Mailing Address: 6006 S. Rio Grande, Suite A
Aztec, NM 87410

Phone #:

email or Fax#: KSummers@ensolum.com

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 6/11/19
☐ Standard ☒ Rush

Project Name: Bruington GC CTB East

Project #: 05A122 6058

Project Manager: KSummers

Sampler: RDeechilly
On Ice: ☒ Yes ☐ No
# of Coolers: 1 (-0.2)
Cooler Temp(including CF): 1.4°C

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1906963	BTEX / ~~MTBE / TMB's~~ (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	chlorides
6/7/19	1345	S	SP-1	1 4oz Jar	Cool	-001	X	X									X
6/7/19	1350	S	SP-2	1 4oz Jar	Cool	-002	X	X									X

NAS

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
6/7/19	1549				6/7/19	1549
6/7/19	1752			Courier	6/8/19	1000

Remarks: PM - Tom Long (EPROD)
Pax Key - RB21200

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

June 24, 2019

Kyle Summers
ENSOLUM
606 S. Rio Grande Suite A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: Bruington GC C B OrderNo.: 1906B29

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 11 sample(s) on 6/21/2019 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1906B29**
Date Reported: **6/24/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** C-1
Project: Bruington GC C B **Collection Date:** 6/20/2019 11:00:00 AM
Lab ID: 1906B29-001 **Matrix:** MEOH (SOIL) **Received Date:** 6/21/2019 8:18:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/21/2019 11:32:22 AM	45735
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/21/2019 11:36:09 AM	45729
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/21/2019 11:36:09 AM	45729
Surr: DNOP	97.7	70-130		%Rec	1	6/21/2019 11:36:09 AM	45729
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/21/2019 9:55:47 AM	45717
Surr: BFB	103	73.8-119		%Rec	1	6/21/2019 9:55:47 AM	45717
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	6/21/2019 9:55:47 AM	45717
Toluene	ND	0.047		mg/Kg	1	6/21/2019 9:55:47 AM	45717
Ethylbenzene	ND	0.047		mg/Kg	1	6/21/2019 9:55:47 AM	45717
Xylenes, Total	ND	0.094		mg/Kg	1	6/21/2019 9:55:47 AM	45717
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	6/21/2019 9:55:47 AM	45717

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906B29**
Date Reported: **6/24/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** C-2
Project: Bruington GC C B **Collection Date:** 6/20/2019 11:05:00 AM
Lab ID: 1906B29-002 **Matrix:** MEOH (SOIL) **Received Date:** 6/21/2019 8:18:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/21/2019 11:57:12 AM	45735
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/21/2019 11:58:08 AM	45729
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/21/2019 11:58:08 AM	45729
Surr: DNOP	98.4	70-130		%Rec	1	6/21/2019 11:58:08 AM	45729
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	6/21/2019 10:18:26 AM	45717
Surr: BFB	103	73.8-119		%Rec	1	6/21/2019 10:18:26 AM	45717
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.022		mg/Kg	1	6/21/2019 10:18:26 AM	45717
Toluene	ND	0.043		mg/Kg	1	6/21/2019 10:18:26 AM	45717
Ethylbenzene	ND	0.043		mg/Kg	1	6/21/2019 10:18:26 AM	45717
Xylenes, Total	ND	0.086		mg/Kg	1	6/21/2019 10:18:26 AM	45717
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	6/21/2019 10:18:26 AM	45717

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906B29**
Date Reported: **6/24/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** C-3
Project: Bruington GC C B **Collection Date:** 6/20/2019 11:10:00 AM
Lab ID: 1906B29-003 **Matrix:** MEOH (SOIL) **Received Date:** 6/21/2019 8:18:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/21/2019 12:34:26 PM	45735
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/21/2019 12:20:12 PM	45729
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/21/2019 12:20:12 PM	45729
Surr: DNOP	86.8	70-130		%Rec	1	6/21/2019 12:20:12 PM	45729
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/21/2019 10:41:19 AM	45717
Surr: BFB	100	73.8-119		%Rec	1	6/21/2019 10:41:19 AM	45717
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/21/2019 10:41:19 AM	45717
Toluene	ND	0.049		mg/Kg	1	6/21/2019 10:41:19 AM	45717
Ethylbenzene	ND	0.049		mg/Kg	1	6/21/2019 10:41:19 AM	45717
Xylenes, Total	0.12	0.098		mg/Kg	1	6/21/2019 10:41:19 AM	45717
Surr: 4-Bromofluorobenzene	98.8	80-120		%Rec	1	6/21/2019 10:41:19 AM	45717

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906B29**
Date Reported: **6/24/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** C-4
Project: Bruington GC C B **Collection Date:** 6/20/2019 11:15:00 AM
Lab ID: 1906B29-004 **Matrix:** MEOH (SOIL) **Received Date:** 6/21/2019 8:18:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/21/2019 12:46:51 PM	45735
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/21/2019 12:42:03 PM	45729
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/21/2019 12:42:03 PM	45729
Surr: DNOP	91.2	70-130		%Rec	1	6/21/2019 12:42:03 PM	45729
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	6/21/2019 11:03:58 AM	45717
Surr: BFB	97.8	73.8-119		%Rec	1	6/21/2019 11:03:58 AM	45717
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.020		mg/Kg	1	6/21/2019 11:03:58 AM	45717
Toluene	ND	0.040		mg/Kg	1	6/21/2019 11:03:58 AM	45717
Ethylbenzene	ND	0.040		mg/Kg	1	6/21/2019 11:03:58 AM	45717
Xylenes, Total	ND	0.081		mg/Kg	1	6/21/2019 11:03:58 AM	45717
Surr: 4-Bromofluorobenzene	96.5	80-120		%Rec	1	6/21/2019 11:03:58 AM	45717

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906B29**
Date Reported: **6/24/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** C-5
Project: Bruington GC C B **Collection Date:** 6/20/2019 11:20:00 AM
Lab ID: 1906B29-005 **Matrix:** MEOH (SOIL) **Received Date:** 6/21/2019 8:18:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/21/2019 12:59:16 PM	45735
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/21/2019 1:04:05 PM	45729
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/21/2019 1:04:05 PM	45729
Surr: DNOP	88.9	70-130		%Rec	1	6/21/2019 1:04:05 PM	45729
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	6/21/2019 11:26:38 AM	45717
Surr: BFB	104	73.8-119		%Rec	1	6/21/2019 11:26:38 AM	45717
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.019		mg/Kg	1	6/21/2019 11:26:38 AM	45717
Toluene	ND	0.038		mg/Kg	1	6/21/2019 11:26:38 AM	45717
Ethylbenzene	ND	0.038		mg/Kg	1	6/21/2019 11:26:38 AM	45717
Xylenes, Total	ND	0.076		mg/Kg	1	6/21/2019 11:26:38 AM	45717
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	6/21/2019 11:26:38 AM	45717

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906B29**
Date Reported: **6/24/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** C-6
Project: Bruington GC C B **Collection Date:** 6/20/2019 11:25:00 AM
Lab ID: 1906B29-006 **Matrix:** MEOH (SOIL) **Received Date:** 6/21/2019 8:18:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/21/2019 1:11:40 PM	45735
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/21/2019 1:26:03 PM	45729
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/21/2019 1:26:03 PM	45729
Surr: DNOP	93.5	70-130		%Rec	1	6/21/2019 1:26:03 PM	45729
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	6/21/2019 11:49:13 AM	45717
Surr: BFB	101	73.8-119		%Rec	1	6/21/2019 11:49:13 AM	45717
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.022		mg/Kg	1	6/21/2019 11:49:13 AM	45717
Toluene	ND	0.045		mg/Kg	1	6/21/2019 11:49:13 AM	45717
Ethylbenzene	ND	0.045		mg/Kg	1	6/21/2019 11:49:13 AM	45717
Xylenes, Total	ND	0.089		mg/Kg	1	6/21/2019 11:49:13 AM	45717
Surr: 4-Bromofluorobenzene	99.0	80-120		%Rec	1	6/21/2019 11:49:13 AM	45717

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

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
PQL	Practical Quanitative Limit
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 Limit

Analytical Report
Lab Order **1906B29**
Date Reported: **6/24/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** C-7
Project: Bruington GC C B **Collection Date:** 6/20/2019 11:30:00 AM
Lab ID: 1906B29-007 **Matrix:** MEOH (SOIL) **Received Date:** 6/21/2019 8:18:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/21/2019 1:24:05 PM	45735
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	6/21/2019 1:48:11 PM	45729
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/21/2019 1:48:11 PM	45729
Surr: DNOP	94.0	70-130		%Rec	1	6/21/2019 1:48:11 PM	45729
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/21/2019 12:11:57 PM	45717
Surr: BFB	103	73.8-119		%Rec	1	6/21/2019 12:11:57 PM	45717
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	6/21/2019 12:11:57 PM	45717
Toluene	ND	0.049		mg/Kg	1	6/21/2019 12:11:57 PM	45717
Ethylbenzene	ND	0.049		mg/Kg	1	6/21/2019 12:11:57 PM	45717
Xylenes, Total	ND	0.098		mg/Kg	1	6/21/2019 12:11:57 PM	45717
Surr: 4-Bromofluorobenzene	99.1	80-120		%Rec	1	6/21/2019 12:11:57 PM	45717

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906B29**
Date Reported: **6/24/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** C-8
Project: Bruington GC C B **Collection Date:** 6/20/2019 11:35:00 AM
Lab ID: 1906B29-008 **Matrix:** MEOH (SOIL) **Received Date:** 6/21/2019 8:18:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/21/2019 1:36:30 PM	45735
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/21/2019 2:10:08 PM	45729
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/21/2019 2:10:08 PM	45729
Surr: DNOP	91.2	70-130		%Rec	1	6/21/2019 2:10:08 PM	45729
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	6/21/2019 12:34:39 PM	45717
Surr: BFB	99.8	73.8-119		%Rec	1	6/21/2019 12:34:39 PM	45717
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.021		mg/Kg	1	6/21/2019 12:34:39 PM	45717
Toluene	ND	0.042		mg/Kg	1	6/21/2019 12:34:39 PM	45717
Ethylbenzene	ND	0.042		mg/Kg	1	6/21/2019 12:34:39 PM	45717
Xylenes, Total	ND	0.083		mg/Kg	1	6/21/2019 12:34:39 PM	45717
Surr: 4-Bromofluorobenzene	96.3	80-120		%Rec	1	6/21/2019 12:34:39 PM	45717

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906B29**
Date Reported: **6/24/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** C-9
Project: Bruington GC C B **Collection Date:** 6/20/2019 11:40:00 AM
Lab ID: 1906B29-009 **Matrix:** MEOH (SOIL) **Received Date:** 6/21/2019 8:18:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/21/2019 1:48:54 PM	45735
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/21/2019 2:32:13 PM	45729
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/21/2019 2:32:13 PM	45729
Surr: DNOP	89.0	70-130		%Rec	1	6/21/2019 2:32:13 PM	45729
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	6/21/2019 12:57:21 PM	45717
Surr: BFB	98.8	73.8-119		%Rec	1	6/21/2019 12:57:21 PM	45717
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.022		mg/Kg	1	6/21/2019 12:57:21 PM	45717
Toluene	ND	0.044		mg/Kg	1	6/21/2019 12:57:21 PM	45717
Ethylbenzene	ND	0.044		mg/Kg	1	6/21/2019 12:57:21 PM	45717
Xylenes, Total	ND	0.088		mg/Kg	1	6/21/2019 12:57:21 PM	45717
Surr: 4-Bromofluorobenzene	95.5	80-120		%Rec	1	6/21/2019 12:57:21 PM	45717

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906B29**
Date Reported: **6/24/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** C-10
Project: Bruington GC C B **Collection Date:** 6/20/2019 11:45:00 AM
Lab ID: 1906B29-010 **Matrix:** MEOH (SOIL) **Received Date:** 6/21/2019 8:18:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/21/2019 2:01:19 PM	45735
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/21/2019 2:54:19 PM	45729
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/21/2019 2:54:19 PM	45729
Surr: DNOP	91.7	70-130		%Rec	1	6/21/2019 2:54:19 PM	45729
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.6		mg/Kg	1	6/21/2019 9:38:32 AM	G60833
Surr: BFB	90.8	73.8-119		%Rec	1	6/21/2019 9:38:32 AM	G60833
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.028		mg/Kg	1	6/21/2019 9:38:32 AM	B60833
Toluene	ND	0.056		mg/Kg	1	6/21/2019 9:38:32 AM	B60833
Ethylbenzene	ND	0.056		mg/Kg	1	6/21/2019 9:38:32 AM	B60833
Xylenes, Total	ND	0.11		mg/Kg	1	6/21/2019 9:38:32 AM	B60833
Surr: 4-Bromofluorobenzene	97.5	80-120		%Rec	1	6/21/2019 9:38:32 AM	B60833

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

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
PQL	Practical Quanitative Limit
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 Limit

Analytical Report
Lab Order **1906B29**
Date Reported: **6/24/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** C-11
Project: Bruington GC C B **Collection Date:** 6/20/2019 11:50:00 AM
Lab ID: 1906B29-011 **Matrix:** MEOH (SOIL) **Received Date:** 6/21/2019 8:18:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/21/2019 2:13:43 PM	45735
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/21/2019 3:16:35 PM	45729
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/21/2019 3:16:35 PM	45729
Surr: DNOP	90.9	70-130		%Rec	1	6/21/2019 3:16:35 PM	45729
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	6/21/2019 10:01:56 AM	G60833
Surr: BFB	88.1	73.8-119		%Rec	1	6/21/2019 10:01:56 AM	G60833
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.021		mg/Kg	1	6/21/2019 10:01:56 AM	B60833
Toluene	ND	0.041		mg/Kg	1	6/21/2019 10:01:56 AM	B60833
Ethylbenzene	ND	0.041		mg/Kg	1	6/21/2019 10:01:56 AM	B60833
Xylenes, Total	ND	0.082		mg/Kg	1	6/21/2019 10:01:56 AM	B60833
Surr: 4-Bromofluorobenzene	93.8	80-120		%Rec	1	6/21/2019 10:01:56 AM	B60833

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906B29**

24-Jun-19

Client: ENSOLUM

Project: Bruington GC C B

Sample ID: **MB-45735**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**								
Client ID: **PBS**	Batch ID: **45735**	RunNo: **60840**								
Prep Date: **6/21/2019**	Analysis Date: **6/21/2019**	SeqNo: **2059612**	Units: **mg/Kg**							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906B29**

24-Jun-19

Client: ENSOLUM

Project: Bruington GC C B

Sample ID: **LCS-45731**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **45731**	RunNo: **60825**
Prep Date: **6/21/2019**	Analysis Date: **6/21/2019**	SeqNo: **2058925** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.7		5.000		94.9	70	130			

Sample ID: **MB-45731**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **45731**	RunNo: **60825**
Prep Date: **6/21/2019**	Analysis Date: **6/21/2019**	SeqNo: **2058926** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.8		10.00		98.0	70	130			

Sample ID: **MB-45729**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **45729**	RunNo: **60825**
Prep Date: **6/21/2019**	Analysis Date: **6/21/2019**	SeqNo: **2058927** 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	9.7		10.00		96.6	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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906B29**

24-Jun-19

Client: ENSOLUM

Project: Bruington GC C B

Sample ID: **MB-45717**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **45717**	RunNo: **60835**
Prep Date: **6/20/2019**	Analysis Date: **6/21/2019**	SeqNo: **2059732** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		102	73.8	119			

Sample ID: **LCS-45717**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **45717**	RunNo: **60835**
Prep Date: **6/20/2019**	Analysis Date: **6/21/2019**	SeqNo: **2059733** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	91.9	80.1	123			
Surr: BFB	1100		1000		115	73.8	119			

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **G60833**	RunNo: **60833**
Prep Date:	Analysis Date: **6/21/2019**	SeqNo: **2059761** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	950		1000		95.4	73.8	119			

Sample ID: **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **G60833**	RunNo: **60833**
Prep Date:	Analysis Date: **6/21/2019**	SeqNo: **2059762** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	84.2	80.1	123			
Surr: BFB	1300		1000		127	73.8	119			S

Sample ID: **1906B29-010AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **C-10**	Batch ID: **G60833**	RunNo: **60833**
Prep Date:	Analysis Date: **6/21/2019**	SeqNo: **2059763** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.6	27.81	0	92.6	69.1	142			
Surr: BFB	1200		1112		112	73.8	119			

Sample ID: **1906B29-010AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **C-10**	Batch ID: **G60833**	RunNo: **60833**
Prep Date:	Analysis Date: **6/21/2019**	SeqNo: **2059764** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906B29**

24-Jun-19

Client: ENSOLUM

Project: Bruington GC C B

Sample ID: **1906B29-010AMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **C-10** Batch ID: **G60833** RunNo: **60833**

Prep Date: Analysis Date: **6/21/2019** SeqNo: **2059764** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.6	27.81	0	93.0	69.1	142	0.345	20	
Surr: BFB	1200		1112		109	73.8	119	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906B29**

24-Jun-19

Client: ENSOLUM

Project: Bruington GC C B

Sample ID: **MB-45717**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **PBS**	Batch ID: **45717**	RunNo: **60835**							
Prep Date: **6/20/2019**	Analysis Date: **6/21/2019**	SeqNo: **2059754**	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		102	80	120			

Sample ID: **LCS-45717**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **LCSS**	Batch ID: **45717**	RunNo: **60835**							
Prep Date: **6/20/2019**	Analysis Date: **6/21/2019**	SeqNo: **2059755**	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	96.6	80	120			
Toluene	0.97	0.050	1.000	0	97.0	80	120			
Ethylbenzene	0.97	0.050	1.000	0	97.1	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.9	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **PBS**	Batch ID: **B60833**	RunNo: **60833**							
Prep Date:	Analysis Date: **6/21/2019**	SeqNo: **2059769**	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		102	80	120			

Sample ID: **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **LCSS**	Batch ID: **B60833**	RunNo: **60833**							
Prep Date:	Analysis Date: **6/21/2019**	SeqNo: **2059770**	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	93.7	80	120			
Toluene	0.97	0.050	1.000	0	97.5	80	120			
Ethylbenzene	0.98	0.050	1.000	0	98.2	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.7	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		124	80	120			S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906B29**

24-Jun-19

Client: ENSOLUM

Project: Bruington GC C B

Sample ID: **1906B29-011AMS** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **C-11** Batch ID: **B60833** RunNo: **60833**

Prep Date: Analysis Date: **6/21/2019** SeqNo: **2059771** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.82	0.021	0.8217	0	100	63.9	127			
Toluene	0.86	0.041	0.8217	0	104	69.9	131			
Ethylbenzene	0.87	0.041	0.8217	0	106	71	132			
Xylenes, Total	2.6	0.082	2.465	0	106	71.8	131			
Surr: 4-Bromofluorobenzene	0.82		0.8217		99.8	80	120			

Sample ID: **1906B29-011AMSD** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **C-11** Batch ID: **B60833** RunNo: **60833**

Prep Date: Analysis Date: **6/21/2019** SeqNo: **2059772** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.80	0.021	0.8217	0	96.8	63.9	127	3.63	20	
Toluene	0.83	0.041	0.8217	0	101	69.9	131	2.83	20	
Ethylbenzene	0.84	0.041	0.8217	0	102	71	132	3.57	20	
Xylenes, Total	2.5	0.082	2.465	0	102	71.8	131	3.38	20	
Surr: 4-Bromofluorobenzene	0.82		0.8217		99.2	80	120	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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: ENSOLUM AZTEC Work Order Number: 1906B29 RcptNo: 1

Received By: **Anne Thorne** 6/21/2019 8:18:00 AM Anne Thorne
Completed By: **Michelle Garcia** 6/21/2019 8:23:32 AM Michelle Garcia
Reviewed By: AT 06/21/19

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

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

TO

# of preserved bottles checked for pH: 6/21/19 (<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

15. 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: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.1	Good	Yes			
2	1.0	Good	Yes			

Chain-of-Custody Record

Client: Ensolum

Mailing Address: 606 S Rio Grande Suite A 87410

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 1002
☐ Standard ☒ Rush 6-21-19

Project Name: Bevington GC C-1B

Project #: 05A1226058

Project Manager: K Summers

Sampler: C DiAdonti

On Ice: ☒ Yes ☐ No

# of Coolers: 2

Cooler Temp(including CF): 2.4-0.3 CF = 2.1
1.3-0.3 CF = 1.0

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / ~~MTBE~~ / ~~TMB~~'s (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	(Cl), ~~F~~, ~~Br~~, ~~NO3~~, ~~NO2~~, ~~PO4~~, ~~SO4~~	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
6/20/19	1100	S	C-1	1 4oz Jar	Cool	1906B29-001	X	X					X			
	1105		C-2			-002										
	1110		C-3			-003										
	1115		C-4			-004										
	1120		C-5			-005										
	1125		C-6			-006										
	1130		C-7			-007										
	1135		C-8			-008										
	1140		C-9			-009										
	1145		C-10			-010										
	1150		C-11			-011										
						~~012~~ mr										

Date	Time	Relinquished by:	Received by:	Via:	Date Time
6/20/19	1432				
6/20/19	1811				06/21/19 0818

Remarks: Pay Key R1321200
PM Tom Long
AFE # N43024

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

June 27, 2019

Kyle Summers
ENSOLUM
606 S. Rio Grande Suite A
Aztec, NM 87410
TEL: (903) 821-5603
FAX:

RE: Bruington GC C1B OrderNo.: 1906D11

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 11 sample(s) on 6/25/2019 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1906D11**
Date Reported: **6/27/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** C-12
Project: Bruington GC C1B **Collection Date:** 6/24/2019 9:00:00 AM
Lab ID: 1906D11-001 **Matrix:** MEOH (SOIL) **Received Date:** 6/25/2019 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/25/2019 2:33:57 PM	45798
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	9.7	9.4		mg/Kg	1	6/25/2019 10:38:15 AM	45792
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/25/2019 10:38:15 AM	45792
Surr: DNOP	91.9	70-130		%Rec	1	6/25/2019 10:38:15 AM	45792
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/25/2019 10:32:04 AM	G60921
Surr: BFB	100	73.8-119		%Rec	1	6/25/2019 10:32:04 AM	G60921
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/25/2019 10:32:04 AM	B60921
Toluene	ND	0.049		mg/Kg	1	6/25/2019 10:32:04 AM	B60921
Ethylbenzene	ND	0.049		mg/Kg	1	6/25/2019 10:32:04 AM	B60921
Xylenes, Total	ND	0.098		mg/Kg	1	6/25/2019 10:32:04 AM	B60921
Surr: 4-Bromofluorobenzene	96.3	80-120		%Rec	1	6/25/2019 10:32:04 AM	B60921

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906D11**
Date Reported: **6/27/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** C-13
Project: Bruington GC C1B **Collection Date:** 6/24/2019 9:05:00 AM
Lab ID: 1906D11-002 **Matrix:** MEOH (SOIL) **Received Date:** 6/25/2019 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/25/2019 2:46:21 PM	45798
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/25/2019 11:02:08 AM	45792
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/25/2019 11:02:08 AM	45792
Surr: DNOP	94.0	70-130		%Rec	1	6/25/2019 11:02:08 AM	45792
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	6/25/2019 10:54:36 AM	G60921
Surr: BFB	99.8	73.8-119		%Rec	1	6/25/2019 10:54:36 AM	G60921
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	6/25/2019 10:54:36 AM	B60921
Toluene	ND	0.049		mg/Kg	1	6/25/2019 10:54:36 AM	B60921
Ethylbenzene	ND	0.049		mg/Kg	1	6/25/2019 10:54:36 AM	B60921
Xylenes, Total	ND	0.098		mg/Kg	1	6/25/2019 10:54:36 AM	B60921
Surr: 4-Bromofluorobenzene	95.9	80-120		%Rec	1	6/25/2019 10:54:36 AM	B60921

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906D11**
Date Reported: **6/27/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** C-14
Project: Bruington GC C1B **Collection Date:** 6/24/2019 9:10:00 AM
Lab ID: 1906D11-003 **Matrix:** MEOH (SOIL) **Received Date:** 6/25/2019 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/25/2019 2:58:46 PM	45798
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/25/2019 11:26:07 AM	45792
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/25/2019 11:26:07 AM	45792
Surr: DNOP	95.3	70-130		%Rec	1	6/25/2019 11:26:07 AM	45792
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/25/2019 11:17:19 AM	G60921
Surr: BFB	102	73.8-119		%Rec	1	6/25/2019 11:17:19 AM	G60921
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	6/25/2019 11:17:19 AM	B60921
Toluene	ND	0.047		mg/Kg	1	6/25/2019 11:17:19 AM	B60921
Ethylbenzene	ND	0.047		mg/Kg	1	6/25/2019 11:17:19 AM	B60921
Xylenes, Total	ND	0.093		mg/Kg	1	6/25/2019 11:17:19 AM	B60921
Surr: 4-Bromofluorobenzene	99.4	80-120		%Rec	1	6/25/2019 11:17:19 AM	B60921

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906D11**
Date Reported: **6/27/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** C-15
Project: Bruington GC C1B **Collection Date:** 6/24/2019 9:15:00 AM
Lab ID: 1906D11-004 **Matrix:** MEOH (SOIL) **Received Date:** 6/25/2019 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/25/2019 3:11:11 PM	45798
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/25/2019 11:50:08 AM	45792
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/25/2019 11:50:08 AM	45792
Surr: DNOP	95.0	70-130		%Rec	1	6/25/2019 11:50:08 AM	45792
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	6/25/2019 11:40:06 AM	G60921
Surr: BFB	101	73.8-119		%Rec	1	6/25/2019 11:40:06 AM	G60921
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	6/25/2019 11:40:06 AM	B60921
Toluene	ND	0.045		mg/Kg	1	6/25/2019 11:40:06 AM	B60921
Ethylbenzene	ND	0.045		mg/Kg	1	6/25/2019 11:40:06 AM	B60921
Xylenes, Total	ND	0.090		mg/Kg	1	6/25/2019 11:40:06 AM	B60921
Surr: 4-Bromofluorobenzene	97.2	80-120		%Rec	1	6/25/2019 11:40:06 AM	B60921

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906D11**
Date Reported: **6/27/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** C-16
Project: Bruington GC C1B **Collection Date:** 6/24/2019 9:20:00 AM
Lab ID: 1906D11-005 **Matrix:** MEOH (SOIL) **Received Date:** 6/25/2019 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/25/2019 3:23:35 PM	45798
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	6/25/2019 12:14:13 PM	45792
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/25/2019 12:14:13 PM	45792
Surr: DNOP	91.7	70-130		%Rec	1	6/25/2019 12:14:13 PM	45792
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	6/25/2019 12:02:51 PM	G60921
Surr: BFB	101	73.8-119		%Rec	1	6/25/2019 12:02:51 PM	G60921
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	6/25/2019 12:02:51 PM	B60921
Toluene	ND	0.048		mg/Kg	1	6/25/2019 12:02:51 PM	B60921
Ethylbenzene	ND	0.048		mg/Kg	1	6/25/2019 12:02:51 PM	B60921
Xylenes, Total	ND	0.096		mg/Kg	1	6/25/2019 12:02:51 PM	B60921
Surr: 4-Bromofluorobenzene	95.2	80-120		%Rec	1	6/25/2019 12:02:51 PM	B60921

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906D11**
Date Reported: **6/27/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** C-17
Project: Bruington GC C1B **Collection Date:** 6/24/2019 9:25:00 AM
Lab ID: 1906D11-006 **Matrix:** MEOH (SOIL) **Received Date:** 6/25/2019 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/25/2019 3:36:00 PM	45798
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	6/25/2019 12:38:20 PM	45792
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/25/2019 12:38:20 PM	45792
Surr: DNOP	94.7	70-130		%Rec	1	6/25/2019 12:38:20 PM	45792
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	6/25/2019 12:25:32 PM	G60921
Surr: BFB	101	73.8-119		%Rec	1	6/25/2019 12:25:32 PM	G60921
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	6/25/2019 12:25:32 PM	B60921
Toluene	ND	0.045		mg/Kg	1	6/25/2019 12:25:32 PM	B60921
Ethylbenzene	ND	0.045		mg/Kg	1	6/25/2019 12:25:32 PM	B60921
Xylenes, Total	ND	0.091		mg/Kg	1	6/25/2019 12:25:32 PM	B60921
Surr: 4-Bromofluorobenzene	97.1	80-120		%Rec	1	6/25/2019 12:25:32 PM	B60921

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906D11**
Date Reported: **6/27/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** C-18
Project: Bruington GC C1B **Collection Date:** 6/24/2019 9:30:00 AM
Lab ID: 1906D11-007 **Matrix:** MEOH (SOIL) **Received Date:** 6/25/2019 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/25/2019 3:48:25 PM	45798
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/25/2019 1:02:30 PM	45792
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/25/2019 1:02:30 PM	45792
Surr: DNOP	94.0	70-130		%Rec	1	6/25/2019 1:02:30 PM	45792
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	6/25/2019 12:48:12 PM	G60921
Surr: BFB	100	73.8-119		%Rec	1	6/25/2019 12:48:12 PM	G60921
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.022		mg/Kg	1	6/25/2019 12:48:12 PM	B60921
Toluene	ND	0.044		mg/Kg	1	6/25/2019 12:48:12 PM	B60921
Ethylbenzene	ND	0.044		mg/Kg	1	6/25/2019 12:48:12 PM	B60921
Xylenes, Total	ND	0.087		mg/Kg	1	6/25/2019 12:48:12 PM	B60921
Surr: 4-Bromofluorobenzene	95.1	80-120		%Rec	1	6/25/2019 12:48:12 PM	B60921

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906D11**
Date Reported: **6/27/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** C-19
Project: Bruington GC C1B **Collection Date:** 6/24/2019 9:35:00 AM
Lab ID: 1906D11-008 **Matrix:** MEOH (SOIL) **Received Date:** 6/25/2019 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/25/2019 4:25:37 PM	45798
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	6/25/2019 1:26:44 PM	45792
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/25/2019 1:26:44 PM	45792
Surr: DNOP	92.6	70-130		%Rec	1	6/25/2019 1:26:44 PM	45792
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	6/25/2019 1:10:54 PM	G60921
Surr: BFB	94.9	73.8-119		%Rec	1	6/25/2019 1:10:54 PM	G60921
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	6/25/2019 1:10:54 PM	B60921
Toluene	ND	0.047		mg/Kg	1	6/25/2019 1:10:54 PM	B60921
Ethylbenzene	ND	0.047		mg/Kg	1	6/25/2019 1:10:54 PM	B60921
Xylenes, Total	ND	0.094		mg/Kg	1	6/25/2019 1:10:54 PM	B60921
Surr: 4-Bromofluorobenzene	84.8	80-120		%Rec	1	6/25/2019 1:10:54 PM	B60921

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906D11**
Date Reported: **6/27/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** C-20
Project: Bruington GC C1B **Collection Date:** 6/24/2019 9:40:00 AM
Lab ID: 1906D11-009 **Matrix:** MEOH (SOIL) **Received Date:** 6/25/2019 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	60		mg/Kg	20	6/25/2019 1:23:19 PM	45802
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/25/2019 1:51:01 PM	45792
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/25/2019 1:51:01 PM	45792
Surr: DNOP	95.1	70-130		%Rec	1	6/25/2019 1:51:01 PM	45792
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	6/25/2019 1:33:32 PM	G60921
Surr: BFB	100	73.8-119		%Rec	1	6/25/2019 1:33:32 PM	G60921
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.021		mg/Kg	1	6/25/2019 1:33:32 PM	B60921
Toluene	ND	0.041		mg/Kg	1	6/25/2019 1:33:32 PM	B60921
Ethylbenzene	ND	0.041		mg/Kg	1	6/25/2019 1:33:32 PM	B60921
Xylenes, Total	ND	0.083		mg/Kg	1	6/25/2019 1:33:32 PM	B60921
Surr: 4-Bromofluorobenzene	94.2	80-120		%Rec	1	6/25/2019 1:33:32 PM	B60921

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906D11**
Date Reported: **6/27/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** C-21
Project: Bruington GC C1B **Collection Date:** 6/24/2019 9:45:00 AM
Lab ID: 1906D11-010 **Matrix:** MEOH (SOIL) **Received Date:** 6/25/2019 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	59		mg/Kg	20	6/25/2019 1:35:44 PM	45802
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/25/2019 2:15:19 PM	45792
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/25/2019 2:15:19 PM	45792
Surr: DNOP	96.8	70-130		%Rec	1	6/25/2019 2:15:19 PM	45792
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	6/25/2019 1:56:18 PM	G60921
Surr: BFB	98.8	73.8-119		%Rec	1	6/25/2019 1:56:18 PM	G60921
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.019		mg/Kg	1	6/25/2019 1:56:18 PM	B60921
Toluene	ND	0.038		mg/Kg	1	6/25/2019 1:56:18 PM	B60921
Ethylbenzene	ND	0.038		mg/Kg	1	6/25/2019 1:56:18 PM	B60921
Xylenes, Total	ND	0.077		mg/Kg	1	6/25/2019 1:56:18 PM	B60921
Surr: 4-Bromofluorobenzene	93.5	80-120		%Rec	1	6/25/2019 1:56:18 PM	B60921

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906D11**
Date Reported: **6/27/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** C-22
Project: Bruington GC C1B **Collection Date:** 6/24/2019 9:50:00 AM
Lab ID: 1906D11-011 **Matrix:** MEOH (SOIL) **Received Date:** 6/25/2019 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **smb**	
Chloride	ND	60		mg/Kg	20	6/25/2019 1:48:08 PM	45802
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/25/2019 12:05:12 PM	45792
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/25/2019 12:05:12 PM	45792
Surr: DNOP	82.0	70-130		%Rec	1	6/25/2019 12:05:12 PM	45792
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	6/25/2019 2:19:00 PM	G60921
Surr: BFB	102	73.8-119		%Rec	1	6/25/2019 2:19:00 PM	G60921
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**	
Benzene	ND	0.021		mg/Kg	1	6/25/2019 10:42:51 AM	45770
Toluene	ND	0.041		mg/Kg	1	6/25/2019 10:42:51 AM	45770
Ethylbenzene	ND	0.041		mg/Kg	1	6/25/2019 10:42:51 AM	45770
Xylenes, Total	ND	0.082		mg/Kg	1	6/25/2019 10:42:51 AM	45770
Surr: 1,2-Dichloroethane-d4	91.8	70-130		%Rec	1	6/25/2019 10:42:51 AM	45770
Surr: 4-Bromofluorobenzene	94.2	70-130		%Rec	1	6/25/2019 10:42:51 AM	45770
Surr: Dibromofluoromethane	79.8	70-130		%Rec	1	6/25/2019 10:42:51 AM	45770
Surr: Toluene-d8	92.1	70-130		%Rec	1	6/25/2019 10:42:51 AM	45770

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906D11**

27-Jun-19

Client: ENSOLUM

Project: Bruington GC C1B

Sample ID: **MB-45798** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **45798** RunNo: **60944**

Prep Date: **6/25/2019** Analysis Date: **6/25/2019** SeqNo: **2063167** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-45798** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **45798** RunNo: **60944**

Prep Date: **6/25/2019** Analysis Date: **6/25/2019** SeqNo: **2063168** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.9	90	110			

Sample ID: **MB-45802** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **45802** RunNo: **60917**

Prep Date: **6/25/2019** Analysis Date: **6/25/2019** SeqNo: **2063373** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-45802** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **45802** RunNo: **60917**

Prep Date: **6/25/2019** Analysis Date: **6/25/2019** SeqNo: **2063374** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.7	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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906D11**

27-Jun-19

Client: ENSOLUM

Project: Bruington GC C1B

Sample ID: **LCS-45792** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **45792** RunNo: **60884**

Prep Date: **6/25/2019** Analysis Date: **6/25/2019** SeqNo: **2061792** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	56	10	50.00	0	111	63.9	124			
Surr: DNOP	5.0		5.000		99.7	70	130			

Sample ID: **MB-45792** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **45792** RunNo: **60884**

Prep Date: **6/25/2019** Analysis Date: **6/25/2019** SeqNo: **2061793** 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	9.7		10.00		96.8	70	130			

Sample ID: **1906D11-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **C-12** Batch ID: **45792** RunNo: **60878**

Prep Date: **6/25/2019** Analysis Date: **6/25/2019** SeqNo: **2062526** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	76	9.6	48.08	9.660	137	57	142			
Surr: DNOP	4.6		4.808		95.8	70	130			

Sample ID: **1906D11-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **C-12** Batch ID: **45792** RunNo: **60878**

Prep Date: **6/25/2019** Analysis Date: **6/25/2019** SeqNo: **2062527** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	38	9.6	47.98	9.660	58.2	57	142	67.3	20	R
Surr: DNOP	4.8		4.798		101	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906D11**

27-Jun-19

Client: ENSOLUM

Project: Bruington GC C1B

Sample ID: **RB** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **G60921** RunNo: **60921**
Prep Date: Analysis Date: **6/25/2019** SeqNo: **2062601** 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	1100		1000		107	73.8	119			

Sample ID: **2.5UG GRO LCS** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **G60921** RunNo: **60921**
Prep Date: Analysis Date: **6/25/2019** SeqNo: **2062602** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	97.5	80.1	123			
Surr: BFB	1100		1000		114	73.8	119			

Sample ID: **1906D11-001AMS** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **C-12** Batch ID: **G60921** RunNo: **60921**
Prep Date: Analysis Date: **6/25/2019** SeqNo: **2062603** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.9	24.53	0	97.8	69.1	142			
Surr: BFB	1100		981.4		114	73.8	119			

Sample ID: **1906D11-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **C-12** Batch ID: **G60921** RunNo: **60921**
Prep Date: Analysis Date: **6/25/2019** SeqNo: **2062604** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.9	24.53	0	97.7	69.1	142	0.0818	20	
Surr: BFB	1100		981.4		112	73.8	119	0	0	

Sample ID: **MB-45770** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **45770** RunNo: **60921**
Prep Date: **6/24/2019** Analysis Date: **6/25/2019** SeqNo: **2062605** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		102	73.8	119			

Sample ID: **LCS-45770** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **45770** RunNo: **60921**
Prep Date: **6/24/2019** Analysis Date: **6/25/2019** SeqNo: **2062606** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		109	73.8	119			

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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906D11**

27-Jun-19

Client: ENSOLUM

Project: Bruington GC C1B

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **B60921**	RunNo: **60921**
Prep Date:	Analysis Date: **6/25/2019**	SeqNo: **2062632** 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		104	80	120			

Sample ID: **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **B60921**	RunNo: **60921**
Prep Date:	Analysis Date: **6/25/2019**	SeqNo: **2062634** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	1.000	0	97.9	80	120			
Toluene	0.95	0.050	1.000	0	94.7	80	120			
Ethylbenzene	0.92	0.050	1.000	0	92.1	80	120			
Xylenes, Total	2.7	0.10	3.000	0	89.2	80	120			
Surr: 4-Bromofluorobenzene	0.97		1.000		96.9	80	120			

Sample ID: **1906D11-002AMS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **C-13**	Batch ID: **B60921**	RunNo: **60921**
Prep Date:	Analysis Date: **6/25/2019**	SeqNo: **2062635** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	0.9814	0	98.0	63.9	127			
Toluene	0.96	0.049	0.9814	0.004553	97.7	69.9	131			
Ethylbenzene	0.95	0.049	0.9814	0	96.9	71	132			
Xylenes, Total	2.8	0.098	2.944	0	94.7	71.8	131			
Surr: 4-Bromofluorobenzene	1.0		0.9814		102	80	120			

Sample ID: **1906D11-002AMSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **C-13**	Batch ID: **B60921**	RunNo: **60921**
Prep Date:	Analysis Date: **6/25/2019**	SeqNo: **2062636** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	0.9814	0	95.0	63.9	127	3.17	20	
Toluene	0.93	0.049	0.9814	0.004553	94.8	69.9	131	3.05	20	
Ethylbenzene	0.93	0.049	0.9814	0	94.8	71	132	2.21	20	
Xylenes, Total	2.7	0.098	2.944	0	92.3	71.8	131	2.60	20	
Surr: 4-Bromofluorobenzene	1.0		0.9814		102	80	120	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906D11**

27-Jun-19

Client: ENSOLUM

Project: Bruington GC C1B

Sample ID: **MB-45770**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **45770**	RunNo: **60921**
Prep Date: **6/24/2019**	Analysis Date: **6/25/2019**	SeqNo: **2062637** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.99		1.000		99.2	80	120			

Sample ID: **LCS-45770**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **45770**	RunNo: **60921**
Prep Date: **6/24/2019**	Analysis Date: **6/25/2019**	SeqNo: **2062638** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		103	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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906D11**

27-Jun-19

Client: ENSOLUM

Project: Bruington GC C1B

Sample ID: **mb-45770** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**

Client ID: **PBS** Batch ID: **45770** RunNo: **60919**

Prep Date: **6/24/2019** Analysis Date: **6/25/2019** SeqNo: **2062702** 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: 1,2-Dichloroethane-d4	0.46		0.5000		91.4	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		95.4	70	130			
Surr: Dibromofluoromethane	0.42		0.5000		83.7	70	130			
Surr: Toluene-d8	0.45		0.5000		90.6	70	130			

Sample ID: **lcs-45770** SampType: **LCS** TestCode: **EPA Method 8260B: Volatiles Short List**

Client ID: **LCSS** Batch ID: **45770** RunNo: **60919**

Prep Date: **6/24/2019** Analysis Date: **6/25/2019** SeqNo: **2062703** 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	111	70	130			
Toluene	0.91	0.050	1.000	0	91.2	70	130			
Surr: 1,2-Dichloroethane-d4	0.45		0.5000		90.7	70	130			
Surr: 4-Bromofluorobenzene	0.46		0.5000		92.3	70	130			
Surr: Dibromofluoromethane	0.40		0.5000		79.2	70	130			
Surr: Toluene-d8	0.47		0.5000		93.6	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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **ENSOLUM AZTEC** Work Order Number: **1906D11** RcptNo: **1**

Received By: **Desiree Dominguez** **6/25/2019 8:15:00 AM** DD

Completed By: **Erin Melendrez** **6/25/2019 9:05:37 AM**

Reviewed By: ENM 6/25/19

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

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

# of preserved bottles checked for pH: 6/25/19 (<2 or >12 unless noted)
Adjusted?
Checked by:

Special Handling (if applicable)

15. 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:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			
2	5.8	Good	Yes			

Chain-of-Custody Record

Client: Ensolum

Mailing Address: 606. South Rio Grande 87410

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time: 100 %
☐ Standard ☒ Rush 6-25-19

Project Name: Bruington GC C13

Project #: 05A1226058

Project Manager: K. Summers

Sampler: C DAfont.

On Ice: ☒ Yes ☐ No

# of Coolers: 2

Cooler Temp(including CF): 0.9+0.5=1.4°C, 5.3+0.5=5.8°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1906011	BTEX / ~~MTBE~~ / ~~TMB's~~ (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	(Cl, F, ~~Br~~, ~~NO3~~, ~~NO2~~, ~~PO4~~, SO4)	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
6/24/19	900	S	C-12	1 4oz Jar	Cool	-001	+	+								
	905		C-13			-002										
	910		C-14			-003										
	915		C-15			-004										
	920		C-16			-005										
	925		C-17			-006										
	930		C-18			-007										
	935		C-19			-008										
	940		C-20			-009										
	945		C-21			-010										
	950		C-22			-011										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
6/24/19	1301				6/24/19	1301
6/24/19	1910			Courier	6/25/19	8:15

Remarks: Pay Key A13212OO
PM - Tom Long
AFE # N43024
Same Day

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

June 28, 2019

Kyle Summers
ENSOLUM
606 S. Rio Grande Suite A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: Bruington GC C1B OrderNo.: 1906E84

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 12 sample(s) on 6/27/2019 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1906E84**
Date Reported: **6/28/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: C-23
Project: Bruington GC C1B
Collection Date: 6/26/2019 10:00:00 AM
Lab ID: 1906E84-001 **Matrix:** SOIL **Received Date:** 6/27/2019 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/27/2019 11:39:37 AM	45861
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/27/2019 10:00:29 AM	45859
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/27/2019 10:00:29 AM	45859
Surr: DNOP	88.1	70-130		%Rec	1	6/27/2019 10:00:29 AM	45859
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	6/27/2019 9:27:57 AM	G60991
Surr: BFB	88.0	73.8-119		%Rec	1	6/27/2019 9:27:57 AM	G60991
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.019		mg/Kg	1	6/27/2019 9:27:57 AM	B60991
Toluene	ND	0.039		mg/Kg	1	6/27/2019 9:27:57 AM	B60991
Ethylbenzene	ND	0.039		mg/Kg	1	6/27/2019 9:27:57 AM	B60991
Xylenes, Total	ND	0.078		mg/Kg	1	6/27/2019 9:27:57 AM	B60991
Surr: 4-Bromofluorobenzene	93.8	80-120		%Rec	1	6/27/2019 9:27:57 AM	B60991

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906E84**
Date Reported: **6/28/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: C-24
Project: Bruington GC C1B
Collection Date: 6/26/2019 10:05:00 AM
Lab ID: 1906E84-002 **Matrix:** SOIL **Received Date:** 6/27/2019 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/27/2019 11:52:02 AM	45861
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/27/2019 10:48:33 AM	45859
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/27/2019 10:48:33 AM	45859
Surr: DNOP	88.5	70-130		%Rec	1	6/27/2019 10:48:33 AM	45859
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	6/27/2019 9:51:18 AM	G60991
Surr: BFB	86.6	73.8-119		%Rec	1	6/27/2019 9:51:18 AM	G60991
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.019		mg/Kg	1	6/27/2019 9:51:18 AM	B60991
Toluene	ND	0.038		mg/Kg	1	6/27/2019 9:51:18 AM	B60991
Ethylbenzene	ND	0.038		mg/Kg	1	6/27/2019 9:51:18 AM	B60991
Xylenes, Total	ND	0.077		mg/Kg	1	6/27/2019 9:51:18 AM	B60991
Surr: 4-Bromofluorobenzene	92.8	80-120		%Rec	1	6/27/2019 9:51:18 AM	B60991

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906E84**
Date Reported: **6/28/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: C-25
Project: Bruington GC C1B
Collection Date: 6/26/2019 10:10:00 AM
Lab ID: 1906E84-003 **Matrix:** SOIL **Received Date:** 6/27/2019 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/27/2019 12:04:26 PM	45861
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	6/27/2019 11:12:32 AM	45859
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/27/2019 11:12:32 AM	45859
Surr: DNOP	85.7	70-130		%Rec	1	6/27/2019 11:12:32 AM	45859
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	6/27/2019 10:14:38 AM	G60991
Surr: BFB	86.6	73.8-119		%Rec	1	6/27/2019 10:14:38 AM	G60991
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.018		mg/Kg	1	6/27/2019 10:14:38 AM	B60991
Toluene	ND	0.035		mg/Kg	1	6/27/2019 10:14:38 AM	B60991
Ethylbenzene	ND	0.035		mg/Kg	1	6/27/2019 10:14:38 AM	B60991
Xylenes, Total	ND	0.070		mg/Kg	1	6/27/2019 10:14:38 AM	B60991
Surr: 4-Bromofluorobenzene	92.7	80-120		%Rec	1	6/27/2019 10:14:38 AM	B60991

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

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
PQL	Practical Quanitative Limit
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 Limit

Analytical Report
Lab Order **1906E84**
Date Reported: **6/28/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: C-26
Project: Bruington GC C1B
Collection Date: 6/26/2019 10:15:00 AM
Lab ID: 1906E84-004 **Matrix:** SOIL **Received Date:** 6/27/2019 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/27/2019 12:16:51 PM	45861
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	6/27/2019 11:36:38 AM	45859
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/27/2019 11:36:38 AM	45859
Surr: DNOP	84.2	70-130		%Rec	1	6/27/2019 11:36:38 AM	45859
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	6/27/2019 10:38:03 AM	G60991
Surr: BFB	85.8	73.8-119		%Rec	1	6/27/2019 10:38:03 AM	G60991
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.019		mg/Kg	1	6/27/2019 10:38:03 AM	B60991
Toluene	ND	0.039		mg/Kg	1	6/27/2019 10:38:03 AM	B60991
Ethylbenzene	ND	0.039		mg/Kg	1	6/27/2019 10:38:03 AM	B60991
Xylenes, Total	ND	0.077		mg/Kg	1	6/27/2019 10:38:03 AM	B60991
Surr: 4-Bromofluorobenzene	92.5	80-120		%Rec	1	6/27/2019 10:38:03 AM	B60991

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

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
PQL	Practical Quanitative Limit
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 Limit

Analytical Report
Lab Order **1906E84**
Date Reported: **6/28/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: C-27
Project: Bruington GC C1B
Collection Date: 6/26/2019 10:20:00 AM
Lab ID: 1906E84-005 **Matrix:** SOIL **Received Date:** 6/27/2019 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/27/2019 12:29:15 PM	45861
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/27/2019 12:00:45 PM	45859
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/27/2019 12:00:45 PM	45859
Surr: DNOP	88.2	70-130		%Rec	1	6/27/2019 12:00:45 PM	45859
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	6/27/2019 11:01:29 AM	G60991
Surr: BFB	85.0	73.8-119		%Rec	1	6/27/2019 11:01:29 AM	G60991
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.021		mg/Kg	1	6/27/2019 11:01:29 AM	B60991
Toluene	ND	0.043		mg/Kg	1	6/27/2019 11:01:29 AM	B60991
Ethylbenzene	ND	0.043		mg/Kg	1	6/27/2019 11:01:29 AM	B60991
Xylenes, Total	ND	0.085		mg/Kg	1	6/27/2019 11:01:29 AM	B60991
Surr: 4-Bromofluorobenzene	90.5	80-120		%Rec	1	6/27/2019 11:01:29 AM	B60991

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906E84**
Date Reported: **6/28/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: C-28
Project: Bruington GC C1B
Collection Date: 6/26/2019 10:25:00 AM
Lab ID: 1906E84-006 **Matrix:** SOIL **Received Date:** 6/27/2019 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/27/2019 12:41:39 PM	45861
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/27/2019 12:24:55 PM	45859
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/27/2019 12:24:55 PM	45859
Surr: DNOP	86.3	70-130		%Rec	1	6/27/2019 12:24:55 PM	45859
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	6/27/2019 11:24:53 AM	G60991
Surr: BFB	84.6	73.8-119		%Rec	1	6/27/2019 11:24:53 AM	G60991
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.019		mg/Kg	1	6/27/2019 11:24:53 AM	B60991
Toluene	ND	0.038		mg/Kg	1	6/27/2019 11:24:53 AM	B60991
Ethylbenzene	ND	0.038		mg/Kg	1	6/27/2019 11:24:53 AM	B60991
Xylenes, Total	ND	0.076		mg/Kg	1	6/27/2019 11:24:53 AM	B60991
Surr: 4-Bromofluorobenzene	91.0	80-120		%Rec	1	6/27/2019 11:24:53 AM	B60991

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

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
PQL	Practical Quanitative Limit
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 Limit

Analytical Report
Lab Order **1906E84**
Date Reported: **6/28/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: C-29
Project: Bruington GC C1B
Collection Date: 6/26/2019 10:30:00 AM
Lab ID: 1906E84-007 **Matrix:** SOIL **Received Date:** 6/27/2019 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/27/2019 12:54:04 PM	45861
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/27/2019 12:49:09 PM	45859
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/27/2019 12:49:09 PM	45859
Surr: DNOP	88.7	70-130		%Rec	1	6/27/2019 12:49:09 PM	45859
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	13	4.4		mg/Kg	1	6/27/2019 11:48:19 AM	G60991
Surr: BFB	92.3	73.8-119		%Rec	1	6/27/2019 11:48:19 AM	G60991
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.022		mg/Kg	1	6/27/2019 11:48:19 AM	B60991
Toluene	0.064	0.044		mg/Kg	1	6/27/2019 11:48:19 AM	B60991
Ethylbenzene	ND	0.044		mg/Kg	1	6/27/2019 11:48:19 AM	B60991
Xylenes, Total	ND	0.088		mg/Kg	1	6/27/2019 11:48:19 AM	B60991
Surr: 4-Bromofluorobenzene	97.1	80-120		%Rec	1	6/27/2019 11:48:19 AM	B60991

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906E84**
Date Reported: **6/28/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: C-30
Project: Bruington GC C1B
Collection Date: 6/26/2019 10:35:00 AM
Lab ID: 1906E84-008 **Matrix:** SOIL **Received Date:** 6/27/2019 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/27/2019 1:31:16 PM	45861
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	6/27/2019 12:55:57 PM	45859
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	6/27/2019 12:55:57 PM	45859
Surr: DNOP	83.7	70-130		%Rec	1	6/27/2019 12:55:57 PM	45859
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	21		mg/Kg	5	6/27/2019 12:11:47 PM	G60991
Surr: BFB	88.6	73.8-119		%Rec	5	6/27/2019 12:11:47 PM	G60991
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.10		mg/Kg	5	6/27/2019 12:11:47 PM	B60991
Toluene	ND	0.21		mg/Kg	5	6/27/2019 12:11:47 PM	B60991
Ethylbenzene	ND	0.21		mg/Kg	5	6/27/2019 12:11:47 PM	B60991
Xylenes, Total	ND	0.41		mg/Kg	5	6/27/2019 12:11:47 PM	B60991
Surr: 4-Bromofluorobenzene	93.6	80-120		%Rec	5	6/27/2019 12:11:47 PM	B60991

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

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
PQL	Practical Quanitative Limit
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 Limit

Analytical Report
Lab Order **1906E84**
Date Reported: **6/28/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: C-31
Project: Bruington GC C1B
Collection Date: 6/26/2019 10:40:00 AM
Lab ID: 1906E84-009 **Matrix:** SOIL **Received Date:** 6/27/2019 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/27/2019 1:43:41 PM	45861
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/27/2019 11:25:41 AM	45859
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/27/2019 11:25:41 AM	45859
Surr: DNOP	72.1	70-130		%Rec	1	6/27/2019 11:25:41 AM	45859
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	34	20		mg/Kg	5	6/27/2019 12:35:18 PM	G60991
Surr: BFB	89.7	73.8-119		%Rec	5	6/27/2019 12:35:18 PM	G60991
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.10		mg/Kg	5	6/27/2019 12:35:18 PM	B60991
Toluene	0.35	0.20		mg/Kg	5	6/27/2019 12:35:18 PM	B60991
Ethylbenzene	ND	0.20		mg/Kg	5	6/27/2019 12:35:18 PM	B60991
Xylenes, Total	ND	0.40		mg/Kg	5	6/27/2019 12:35:18 PM	B60991
Surr: 4-Bromofluorobenzene	95.0	80-120		%Rec	5	6/27/2019 12:35:18 PM	B60991

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

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
PQL	Practical Quanitative Limit
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 Limit

Analytical Report
Lab Order **1906E84**
Date Reported: **6/28/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: C-32
Project: Bruington GC C1B
Collection Date: 6/26/2019 10:45:00 AM
Lab ID: 1906E84-010 **Matrix:** SOIL **Received Date:** 6/27/2019 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/27/2019 1:56:05 PM	45861
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	6/27/2019 1:18:02 PM	45859
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	6/27/2019 1:18:02 PM	45859
Surr: DNOP	92.5	70-130		%Rec	1	6/27/2019 1:18:02 PM	45859
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	23	21		mg/Kg	5	6/27/2019 12:58:49 PM	G60991
Surr: BFB	89.7	73.8-119		%Rec	5	6/27/2019 12:58:49 PM	G60991
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.10		mg/Kg	5	6/27/2019 12:58:49 PM	B60991
Toluene	0.40	0.21		mg/Kg	5	6/27/2019 12:58:49 PM	B60991
Ethylbenzene	ND	0.21		mg/Kg	5	6/27/2019 12:58:49 PM	B60991
Xylenes, Total	0.67	0.42		mg/Kg	5	6/27/2019 12:58:49 PM	B60991
Surr: 4-Bromofluorobenzene	94.4	80-120		%Rec	5	6/27/2019 12:58:49 PM	B60991

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906E84**
Date Reported: **6/28/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: C-33
Project: Bruington GC C1B
Collection Date: 6/26/2019 10:50:00 AM
Lab ID: 1906E84-011 **Matrix:** SOIL **Received Date:** 6/27/2019 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/27/2019 2:08:30 PM	45861
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	6/27/2019 1:40:14 PM	45859
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	6/27/2019 1:40:14 PM	45859
Surr: DNOP	93.7	70-130		%Rec	1	6/27/2019 1:40:14 PM	45859
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	12	3.7		mg/Kg	1	6/27/2019 2:09:20 PM	G60991
Surr: BFB	94.8	73.8-119		%Rec	1	6/27/2019 2:09:20 PM	G60991
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	0.027	0.019		mg/Kg	1	6/27/2019 2:09:20 PM	B60991
Toluene	0.22	0.037		mg/Kg	1	6/27/2019 2:09:20 PM	B60991
Ethylbenzene	ND	0.037		mg/Kg	1	6/27/2019 2:09:20 PM	B60991
Xylenes, Total	0.30	0.075		mg/Kg	1	6/27/2019 2:09:20 PM	B60991
Surr: 4-Bromofluorobenzene	97.6	80-120		%Rec	1	6/27/2019 2:09:20 PM	B60991

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906E84**
Date Reported: **6/28/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: C-34
Project: Bruington GC C1B
Collection Date: 6/26/2019 10:55:00 AM
Lab ID: 1906E84-012 **Matrix:** SOIL **Received Date:** 6/27/2019 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/27/2019 2:20:55 PM	45861
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	6/27/2019 1:13:23 PM	45859
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/27/2019 1:13:23 PM	45859
Surr: DNOP	93.3	70-130		%Rec	1	6/27/2019 1:13:23 PM	45859
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	6/27/2019 2:32:53 PM	G60991
Surr: BFB	88.0	73.8-119		%Rec	1	6/27/2019 2:32:53 PM	G60991
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.018		mg/Kg	1	6/27/2019 2:32:53 PM	B60991
Toluene	0.069	0.037		mg/Kg	1	6/27/2019 2:32:53 PM	B60991
Ethylbenzene	ND	0.037		mg/Kg	1	6/27/2019 2:32:53 PM	B60991
Xylenes, Total	0.095	0.074		mg/Kg	1	6/27/2019 2:32:53 PM	B60991
Surr: 4-Bromofluorobenzene	94.6	80-120		%Rec	1	6/27/2019 2:32:53 PM	B60991

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906E84**

28-Jun-19

Client: ENSOLUM

Project: Bruington GC C1B

Sample ID: **MB-45861**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **45861**	RunNo: **60990**							
Prep Date: **6/27/2019**	Analysis Date: **6/27/2019**	SeqNo: **2065483**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-45861**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **45861**	RunNo: **60990**							
Prep Date: **6/27/2019**	Analysis Date: **6/27/2019**	SeqNo: **2065484**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.3	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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906E84**

28-Jun-19

Client: ENSOLUM

Project: Bruington GC C1B

Sample ID: **LCS-45859** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **45859** RunNo: **60979**

Prep Date: **6/27/2019** Analysis Date: **6/27/2019** SeqNo: **2064514** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	56	10	50.00	0	111	63.9	124			
Surr: DNOP	3.8		5.000		75.1	70	130			

Sample ID: **MB-45859** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **45859** RunNo: **60979**

Prep Date: **6/27/2019** Analysis Date: **6/27/2019** SeqNo: **2064515** 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	7.8		10.00		77.7	70	130			

Sample ID: **1906E84-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **C-23** Batch ID: **45859** RunNo: **60979**

Prep Date: **6/27/2019** Analysis Date: **6/27/2019** SeqNo: **2064940** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	61	9.9	49.60	0	122	57	142			
Surr: DNOP	4.6		4.960		92.2	70	130			

Sample ID: **1906E84-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **C-23** Batch ID: **45859** RunNo: **60979**

Prep Date: **6/27/2019** Analysis Date: **6/27/2019** SeqNo: **2064941** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	57	9.7	48.64	0	117	57	142	6.49	20	
Surr: DNOP	4.5		4.864		92.3	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906E84**

28-Jun-19

Client: ENSOLUM

Project: Bruington GC C1B

Sample ID: **RB** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **PBS** Batch ID: **G60991** RunNo: **60991**

Prep Date: Analysis Date: **6/27/2019** SeqNo: **2065164** 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	870		1000		87.2	73.8	119			

Sample ID: **2.5UG GRO LCS** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **LCSS** Batch ID: **G60991** RunNo: **60991**

Prep Date: Analysis Date: **6/27/2019** SeqNo: **2065165** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	96.0	80.1	123			
Surr: BFB	1000		1000		105	73.8	119			

Sample ID: **1906E84-001AMS** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **C-23** Batch ID: **G60991** RunNo: **60991**

Prep Date: Analysis Date: **6/27/2019** SeqNo: **2065166** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	17	3.9	19.46	0	88.9	69.1	142			
Surr: BFB	760		778.2		97.4	73.8	119			

Sample ID: **1906E84-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **C-23** Batch ID: **G60991** RunNo: **60991**

Prep Date: Analysis Date: **6/27/2019** SeqNo: **2065167** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	18	3.9	19.46	0	94.9	69.1	142	6.57	20	
Surr: BFB	820		778.2		105	73.8	119	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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906E84**

28-Jun-19

Client: ENSOLUM

Project: Bruington GC C1B

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **B60991**	RunNo: **60991**
Prep Date:	Analysis Date: **6/27/2019**	SeqNo: **2065195** 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	0.93		1.000		93.1	80	120			

Sample ID: **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **B60991**	RunNo: **60991**
Prep Date:	Analysis Date: **6/27/2019**	SeqNo: **2065196** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.025	1.000	0	99.5	80	120			
Toluene	1.0	0.050	1.000	0	103	80	120			
Ethylbenzene	1.0	0.050	1.000	0	105	80	120			
Xylenes, Total	3.1	0.10	3.000	0	105	80	120			
Surr: 4-Bromofluorobenzene	0.99		1.000		99.3	80	120			

Sample ID: **1906E84-002AMS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **C-24**	Batch ID: **B60991**	RunNo: **60991**
Prep Date:	Analysis Date: **6/27/2019**	SeqNo: **2065197** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.74	0.019	0.7669	0.01081	95.5	63.9	127			
Toluene	0.80	0.038	0.7669	0.02101	101	69.9	131			
Ethylbenzene	0.78	0.038	0.7669	0	102	71	132			
Xylenes, Total	2.4	0.077	2.301	0.01679	102	71.8	131			
Surr: 4-Bromofluorobenzene	0.72		0.7669		94.0	80	120			

Sample ID: **1906E84-002AMSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **C-24**	Batch ID: **B60991**	RunNo: **60991**
Prep Date:	Analysis Date: **6/27/2019**	SeqNo: **2065198** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.74	0.019	0.7669	0.01081	95.3	63.9	127	0.238	20	
Toluene	0.79	0.038	0.7669	0.02101	100	69.9	131	0.917	20	
Ethylbenzene	0.78	0.038	0.7669	0	102	71	132	0.108	20	
Xylenes, Total	2.3	0.077	2.301	0.01679	101	71.8	131	0.733	20	
Surr: 4-Bromofluorobenzene	0.72		0.7669		94.5	80	120	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
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 Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: ENSOLUM AZTEC Work Order Number: 1906E84 RcptNo: 1

Received By: Anne Thorne 6/27/2019 8:25:00 AM Anne Thorne
Completed By: Anne Thorne 6/27/2019 8:41:11 AM Anne Thorne
Reviewed By: ENM 6/27/19

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

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

# of preserved bottles checked for pH: _____ 06/27/19
(<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

15. 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: _____

16. Additional remarks: Custody Seals intact on Sail Jars IA 06/27/19

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.6	Good	Yes			
2	0.6	Good	Yes			
3	0.8	Good	Yes			
4	5.7	Good	Yes			

Chain-of-Custody Record

Client: Ensolum

Mailing Address: 606 Rio Grande Aztec NM

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time: 100%
☐ Standard ☒ Rush 6-27-19

Project Name: Bivington GC CTB

Project #: 05A 122C 058

Project Manager: K. Summers

Sampler: C DAport

On Ice: ☒ Yes ☐ No

# of Coolers: 4

Cooler Temp (including CF): 0.4 + 0.2CF = 0.6; 2.4 + 0.2CF = 2.6; 5.5 + 0.2CF = 5.7

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1906E84	BTEX / MTBE / TMBs (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
6/20/19	1000	S	C-23	4oz 1 Jar	Cool	001	X	X					X			
	1005		C-24			002										
	1010		C-25			003										
	1015		C-26			004										
	1020		C-27			005										
	1025		C-28			006										
	1030		C-29			007										
	1035		C-30			008										
	1040		C-31			009										
	1045		C-32			010										
	1050		C-33			011										
	1055		C-34			012										

Date:	Time:	Relinquished by:	Received by:	Via:	Date Time	Remarks:
6/26/19	1340				6/26/19 1340	Pas Key RB21200
6/26/19	1840				6/27/19 0825	Pm Tom Long AFE # N43024 Same Day

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

July 01, 2019

Kyle Summers
ENSOLUM
606 S. Rio Grande Suite A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: Bruington GC C1B OrderNo.: 1906F82

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 6/28/2019 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1906F82**
Date Reported: **7/1/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-35
Project: Bruington GC C1B **Collection Date:** 6/27/2019 8:00:00 AM
Lab ID: 1906F82-001 **Matrix:** MEOH (SOIL) **Received Date:** 6/28/2019 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/28/2019 1:12:53 PM	45893
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	6/28/2019 12:09:26 PM	45889
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/28/2019 12:09:26 PM	45889
Surr: DNOP	85.6	70-130		%Rec	1	6/28/2019 12:09:26 PM	45889
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	6/28/2019 12:24:41 PM	G61018
Surr: BFB	97.5	73.8-119		%Rec	1	6/28/2019 12:24:41 PM	G61018
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.022		mg/Kg	1	6/28/2019 12:24:41 PM	R61018
Toluene	ND	0.044		mg/Kg	1	6/28/2019 12:24:41 PM	R61018
Ethylbenzene	ND	0.044		mg/Kg	1	6/28/2019 12:24:41 PM	R61018
Xylenes, Total	ND	0.087		mg/Kg	1	6/28/2019 12:24:41 PM	R61018
Surr: 4-Bromofluorobenzene	92.7	80-120		%Rec	1	6/28/2019 12:24:41 PM	R61018

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906F82**
Date Reported: **7/1/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-36
Project: Bruington GC C1B **Collection Date:** 6/27/2019 8:05:00 AM
Lab ID: 1906F82-002 **Matrix:** MEOH (SOIL) **Received Date:** 6/28/2019 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/28/2019 1:25:17 PM	45893
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	6/28/2019 12:33:42 PM	45889
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/28/2019 12:33:42 PM	45889
Surr: DNOP	90.6	70-130		%Rec	1	6/28/2019 12:33:42 PM	45889
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	6/28/2019 12:47:22 PM	G61018
Surr: BFB	103	73.8-119		%Rec	1	6/28/2019 12:47:22 PM	G61018
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.021		mg/Kg	1	6/28/2019 12:47:22 PM	R61018
Toluene	0.16	0.042		mg/Kg	1	6/28/2019 12:47:22 PM	R61018
Ethylbenzene	ND	0.042		mg/Kg	1	6/28/2019 12:47:22 PM	R61018
Xylenes, Total	0.15	0.084		mg/Kg	1	6/28/2019 12:47:22 PM	R61018
Surr: 4-Bromofluorobenzene	96.4	80-120		%Rec	1	6/28/2019 12:47:22 PM	R61018

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906F82**
Date Reported: **7/1/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-37
Project: Bruington GC C1B **Collection Date:** 6/27/2019 8:10:00 AM
Lab ID: 1906F82-003 **Matrix:** MEOH (SOIL) **Received Date:** 6/28/2019 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/28/2019 1:37:41 PM	45893
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	6/28/2019 12:57:55 PM	45889
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/28/2019 12:57:55 PM	45889
Surr: DNOP	88.3	70-130		%Rec	1	6/28/2019 12:57:55 PM	45889
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	6/28/2019 1:10:06 PM	G61018
Surr: BFB	102	73.8-119		%Rec	1	6/28/2019 1:10:06 PM	G61018
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.022		mg/Kg	1	6/28/2019 1:10:06 PM	R61018
Toluene	0.14	0.045		mg/Kg	1	6/28/2019 1:10:06 PM	R61018
Ethylbenzene	ND	0.045		mg/Kg	1	6/28/2019 1:10:06 PM	R61018
Xylenes, Total	0.12	0.090		mg/Kg	1	6/28/2019 1:10:06 PM	R61018
Surr: 4-Bromofluorobenzene	94.4	80-120		%Rec	1	6/28/2019 1:10:06 PM	R61018

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906F82**
Date Reported: **7/1/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-38
Project: Bruington GC C1B
Collection Date: 6/27/2019 8:15:00 AM
Lab ID: 1906F82-004
Matrix: MEOH (SOIL)
Received Date: 6/28/2019 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/28/2019 1:50:06 PM	45893
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	6/28/2019 1:27:38 PM	45889
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	6/28/2019 1:27:38 PM	45889
Surr: DNOP	88.3	70-130		%Rec	1	6/28/2019 1:27:38 PM	45889
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	6/28/2019 1:55:34 PM	G61018
Surr: BFB	103	73.8-119		%Rec	1	6/28/2019 1:55:34 PM	G61018
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.023		mg/Kg	1	6/28/2019 1:55:34 PM	R61018
Toluene	ND	0.045		mg/Kg	1	6/28/2019 1:55:34 PM	R61018
Ethylbenzene	ND	0.045		mg/Kg	1	6/28/2019 1:55:34 PM	R61018
Xylenes, Total	ND	0.090		mg/Kg	1	6/28/2019 1:55:34 PM	R61018
Surr: 4-Bromofluorobenzene	97.0	80-120		%Rec	1	6/28/2019 1:55:34 PM	R61018

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1906F82**
Date Reported: **7/1/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-39
Project: Bruington GC C1B **Collection Date:** 6/27/2019 8:20:00 AM
Lab ID: 1906F82-005 **Matrix:** MEOH (SOIL) **Received Date:** 6/28/2019 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	6/28/2019 2:02:31 PM	45893
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	6/28/2019 1:51:56 PM	45889
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	6/28/2019 1:51:56 PM	45889
Surr: DNOP	88.3	70-130		%Rec	1	6/28/2019 1:51:56 PM	45889
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	6/28/2019 2:18:21 PM	G61018
Surr: BFB	103	73.8-119		%Rec	1	6/28/2019 2:18:21 PM	G61018
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.019		mg/Kg	1	6/28/2019 2:18:21 PM	R61018
Toluene	ND	0.039		mg/Kg	1	6/28/2019 2:18:21 PM	R61018
Ethylbenzene	ND	0.039		mg/Kg	1	6/28/2019 2:18:21 PM	R61018
Xylenes, Total	ND	0.077		mg/Kg	1	6/28/2019 2:18:21 PM	R61018
Surr: 4-Bromofluorobenzene	95.7	80-120		%Rec	1	6/28/2019 2:18:21 PM	R61018

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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906F82**

01-Jul-19

Client: ENSOLUM

Project: Bruington GC C1B

Sample ID	**MB-45893**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**45893**	RunNo:	**61037**					
Prep Date:	**6/28/2019**	Analysis Date:	**6/28/2019**	SeqNo:	**2067458**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-45893**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**45893**	RunNo:	**61037**					
Prep Date:	**6/28/2019**	Analysis Date:	**6/28/2019**	SeqNo:	**2067459**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.2	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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906F82**

01-Jul-19

Client: ENSOLUM

Project: Bruington GC C1B

Sample ID **LCS-45845**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **45845**	RunNo: **61002**
Prep Date: **6/26/2019**	Analysis Date: **6/28/2019**	SeqNo: **2065564** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	6.3		5.000		127	70	130			

Sample ID **MB-45889**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **45889**	RunNo: **61002**
Prep Date: **6/28/2019**	Analysis Date: **6/28/2019**	SeqNo: **2065968** 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	8.5		10.00		85.4	70	130			

Sample ID **LCS-45889**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **45889**	RunNo: **61002**
Prep Date: **6/28/2019**	Analysis Date: **6/28/2019**	SeqNo: **2065969** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.00	0	87.4	63.9	124			
Surr: DNOP	4.2		5.000		83.1	70	130			

Sample ID **MB-45871**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **45871**	RunNo: **61002**
Prep Date: **6/27/2019**	Analysis Date: **6/29/2019**	SeqNo: **2066567** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.6		10.00		85.9	70	130			

Sample ID **LCS-45871**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **45871**	RunNo: **61002**
Prep Date: **6/27/2019**	Analysis Date: **6/29/2019**	SeqNo: **2066568** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.6		5.000		92.5	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906F82**

01-Jul-19

Client: ENSOLUM

Project: Bruington GC C1B

Sample ID **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **G61018**	RunNo: **61018**							
Prep Date:	Analysis Date: **6/28/2019**	SeqNo: **2065999**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	98.9	80.1	123			
Surr: BFB	1100		1000		114	73.8	119			

Sample ID **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **G61018**	RunNo: **61018**							
Prep Date:	Analysis Date: **6/28/2019**	SeqNo: **2066000**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		103	73.8	119			

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
PQL	Practical Quanitative Limit
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 Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1906F82**

01-Jul-19

Client: ENSOLUM

Project: Bruington GC C1B

Sample ID	**100NG BTEX LCS**	SampType:	**LCS**		TestCode:	**EPA Method 8021B: Volatiles**				
Client ID:	**LCSS**	Batch ID:	**R61018**		RunNo:	**61018**				
Prep Date:		Analysis Date:	**6/28/2019**		SeqNo:	**2066002**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	95.5	80	120			
Toluene	0.93	0.050	1.000	0	93.3	80	120			
Ethylbenzene	0.94	0.050	1.000	0	93.9	80	120			
Xylenes, Total	2.8	0.10	3.000	0	91.9	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID	**RB**	SampType:	**MBLK**		TestCode:	**EPA Method 8021B: Volatiles**				
Client ID:	**PBS**	Batch ID:	**R61018**		RunNo:	**61018**				
Prep Date:		Analysis Date:	**6/28/2019**		SeqNo:	**2066007**	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		97.5	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
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: ENSOLUM AZTEC Work Order Number: 1906F82 RcptNo: 1

Received By: Thom Maybee 6/28/2019 8:30:00 AM

Completed By: Erin Melendrez 6/28/2019 8:53:15 AM

Reviewed By: YG 6/28/19

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

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

TO 6/28/19

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

15. 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: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes			
2	3.6	Good	Yes			

Chain-of-Custody Record

Client: Enselom

Mailing Address: 606 S Rio Grande Aztec NM

Phone #:

email or Fax#:

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time: 10 Day
☐ Standard ☒ Rush 6-28-19

Project Name: Bruington GC C1B

Project #: 05A1226058

Project Manager: K. Summers

Sampler: CB Arant

On Ice: ☒ Yes ☐ No

# of Coolers: 2

Cooler Temp(including CF): 1.8 +0 = 1.8 (3.6+0=7.6)°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1906F82	BTEX / MTBE / TMBs (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	(Cl, F, Br, NO3, NO2, PO4, SO4)	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
6/27/19	800	S	S-35	1 4oz Jar	Cool	-001	X	X					X			
	805		S-36			-002										
	810		S-37			-003										
	815		S-38			-004										
	820		S-39			-005										

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
6/27/19	1050				6/27/19	1050
6/27/19	2010			Courier	6-28-19	8:30

Remarks: Pay Key RB21200
PM - Tom Long
AFE # N43024

Sent Dry

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.