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

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)*: **NCS1918927061**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	

Location of Release Source

Latitude **36.556442** Longitude **-107.796758** *(NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Cleveland #4 Pipeline**	Site Type **Natural Gas Gathering Pipeline**
Date Release Discovered: **7/3/2019**	Serial Number *(if applicable)*: **NM 0 020695**

Unit Letter	Section	Township	Range	County
N	**24**	**27N**	**9W**	**San Juan**

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): **15-20 bbls**	Volume Recovered (bbls): **None**
☒ Natural Gas	Volume Released (Mcf): **1.5 MCF**	Volume Recovered (Mcf): **None**
☐ Other (describe)	Volume/Weight Released (provide units):	Volume/Weight Recovered (provide units)

Cause of Release: On July 3, 2019, Enterprise discovered a release of natural gas on the Cleveland #4 pipeline. An area of dead vegetation approximately 200 feet long the pipeline right-of way was observed. The pipeline was isolated, depressurized, locked out and tagged out. No fluids were observed on the ground surface. On August 7, 2018, 2019, Enterprise completed the repairs and remediation. The final excavation dimensions measured approximately 50 feet long by 37 feet wide by approximately 20 feet deep. Approximately 336 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, Environmental

Signature: Jon E. Fields Date: 3/5/2020

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: Cory Smith Date: 6/15/2020

Printed Name: Cory Smith Title: Environmental Specialist

ENSOLUM

CLOSURE REPORT

Property:

Cleveland #4 Pipeline Release
SW ¼, S21 T27N R9W
San Juan County, New Mexico

October 25, 2019
Ensolum Project No. 05A1226067

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

Cleveland #4 Pipeline Release
SW ¼, S21 T27N R9W
San Juan County, New Mexico

Ensolum Project No. 05A1226067

1.0 INTRODUCTION

1.1 Site Description & Background

Operator:	Enterprise Field Services, LLC / Enterprise Products Operating LLC (Enterprise)
Site Name:	Cleveland #4 Pipeline Release (Site)
Location:	36.556442° North, 107.796758° West Southwest (SW) ¼ of Section 21, Township 27 North, Range 9 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 July 3, 2019, a release of natural gas occurred from the Cleveland #4 pipeline. The release was identified due to a pressure loss on the pipeline. No visible evidence of the release was present at the ground surface. On July 24, 2019, Enterprise initiated activities to locate the release, facilitate the repair of the pipeline, and remediate potential 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.

- One water well (SJ 03898) was identified within a one-half mile radius of the Site on the OSE Water Rights Reporting System (WRRS) database with a recorded depth to water of 80 feet below grade surface (bgs).

- No cathodic-protection wells were identified within one-half mile of the Site.

- 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 not 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 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 July 24, 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 OFT Construction, Inc. (OFT) provided heavy equipment and labor support, while Ensolum provided environmental consulting support.

The final excavation measured approximately 50 feet long and 37 feet wide at the maximum extents. The maximum depth of the excavation measured approximately 20 feet bgs.

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

A total of approximately 336 cubic yards of petroleum hydrocarbon affected soils were transported to the Envirotech, Inc. (Envirotech) landfarm near Hilltop, New Mexico for disposal/remediation. The executed C-138 solid waste acceptance forms are provided in **Appendix B**. The excavation was backfilled with a combination of imported fill and segregated, laboratory-confirmed 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 14 composite soil samples (S-1 through S-14) 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 the 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 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 July 30, 2019 and August 7, 2019 sampling events, although a New Mexico EMNRD OCD representative was not on-Site. A BLM representative was on-Site during the August 7, 2019 sampling event.

First Sampling Event
Composite soil sample S-1 (0'-12') was collected from the north end-wall of the exploratory excavation (which would eventually become the southernmost sample for the remediation excavation) while Enterprise searched for the point of release, prior to extending the excavation to the north. This was done to provide a southern end-point prior to removing the end-wall soils.

Second Sampling Event
Composite soil sample S-2 (0'-12') was collected from the north end-wall of the remediation excavation as a safety precaution, prior to extending the excavation to the north to allow adequate sloping to deepen the remediation excavation. In addition, two (2) composite soil samples (SP-1 and SP-2) were collected from segregated stockpiled soils that were identified as potentially unaffected backfill material.

Third Sampling Event
The excavation was extended to the west and east to allow deeper excavation in the release area. Composite soil samples S-3 (20') and S-4 (20') were collected from the base of the remediation excavation. Composite soil samples S-5 (12' to 20'), S-6 (12' to 20'), S-7 (12' to 20'), S-8 (12' to 20'), S-9 (12' to 20') and S-10 (12' to 20') were collected from the vertical sidewalls in the deeper portion of the excavation. Composite soil samples S-11 (0' to 12'), S-12 (0' to 12'), S-13 (0' to 12'), and S-14 (0' to 12') were collected from the sloped portion of the remediation excavation sidewalls.

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, 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 (S-1 through S-14, SP-1, and SP-2) to the applicable New Mexico EMNRD OCD closure criteria.

- The laboratory analytical results for the composite soil samples 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 sample SP-2 indicates a total BTEX concentration of 0.37 mg/kg, which is less than the New Mexico EMNRD OCD closure criteria of 50 mg/kg. The laboratory analytical results for the remaining composite soil samples 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 sample SP-2 indicates a combined TPH GRO/DRO/MRO concentration of 36 mg/kg, which is less than the New Mexico EMNRD OCD closure criteria of 100 mg/kg. The laboratory analytical results for the remaining composite soil samples 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 the composite soil samples 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 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 July 24, 2019, Enterprise initiated activities to locate the release, facilitate the repair of the pipeline, and remediate potential 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 16 composite soil samples were collected from the walls and floor of the final excavation and segregated stockpiled soils for laboratory analyses. Based on laboratory analytical results, soils remaining in place do not exhibit COC concentrations above the New Mexico EMNRD OCD closure criteria.
- A total of approximately 336 cubic yards of petroleum hydrocarbon affected soils were transported to the Envirotech landfarm near Hilltop, New Mexico for disposal/remediation. The excavation was backfilled with a combination of imported fill and segregated, laboratory-confirmed 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.

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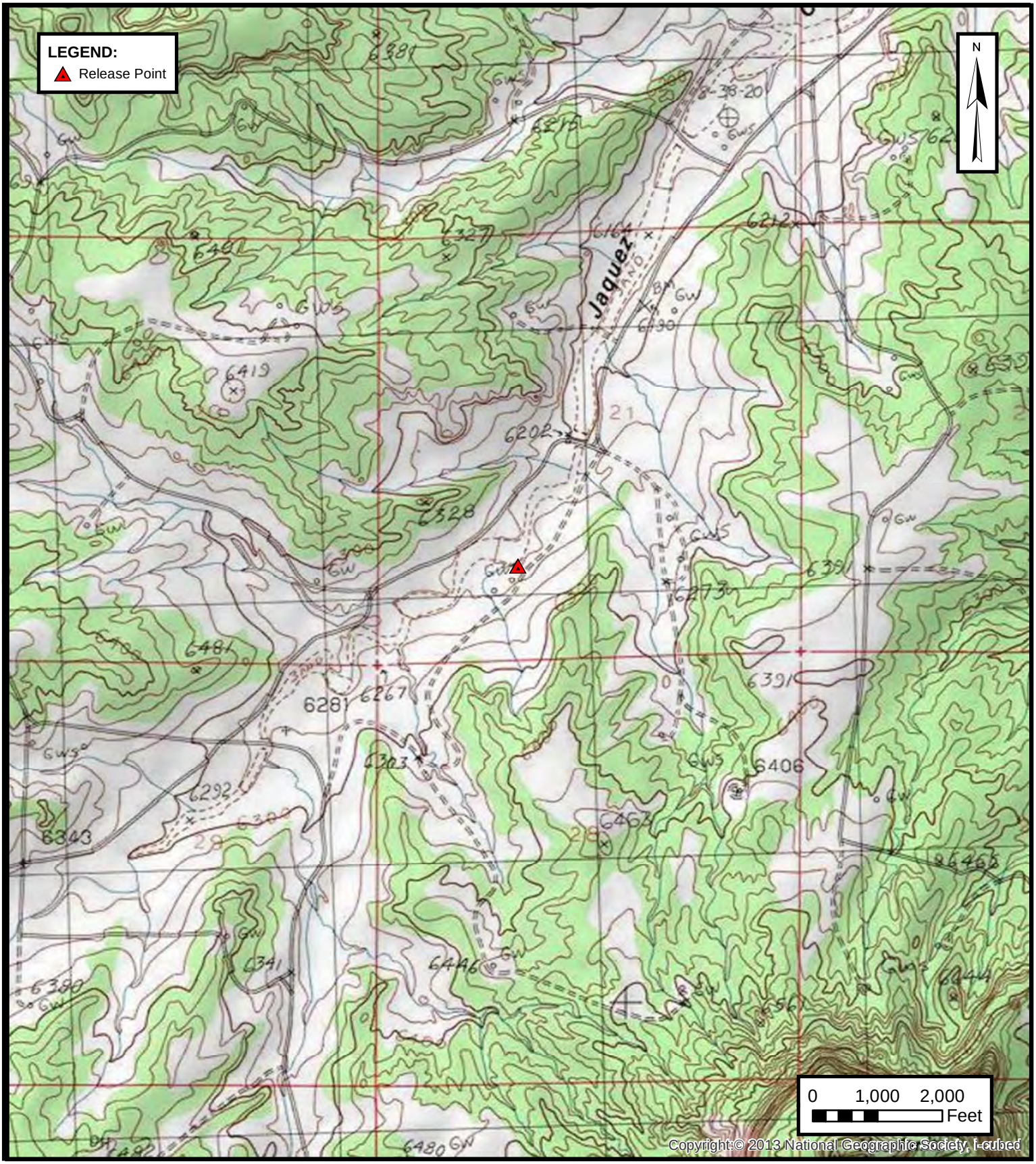
APPENDIX A

Figures



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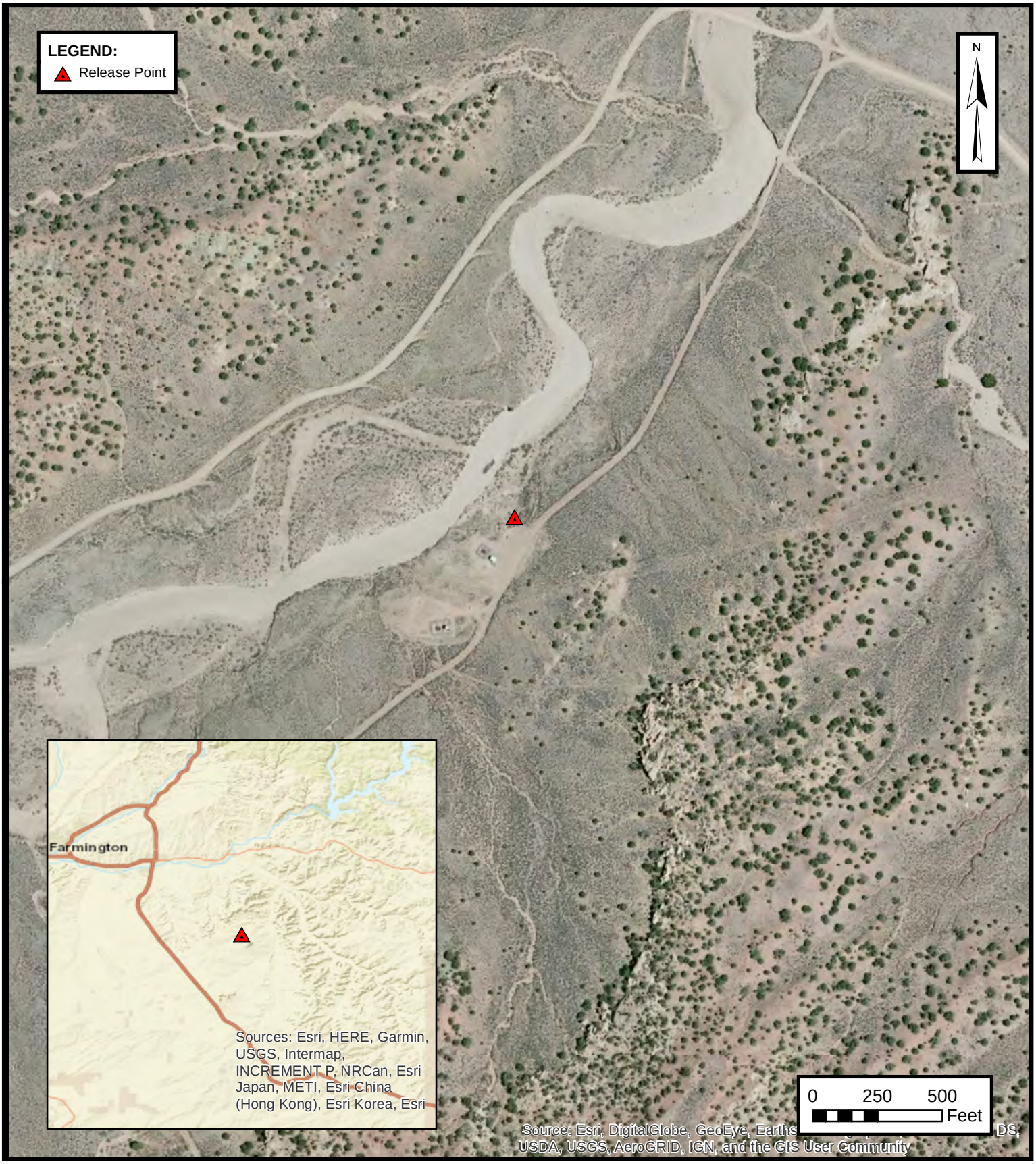
Environmental & Hydrogeologic Consultants

TOPOGRAPHIC MAP

ENTERPRISE FIELD SERVICES, LLC
CLEVELAND #4 PIPELINE RELEASE
SW ¼ , S21 T27N R9W, San Juan County, New Mexico
36.556442° N, 107.796758° W

PROJECT NUMBER: 05A1226067

FIGURE
1



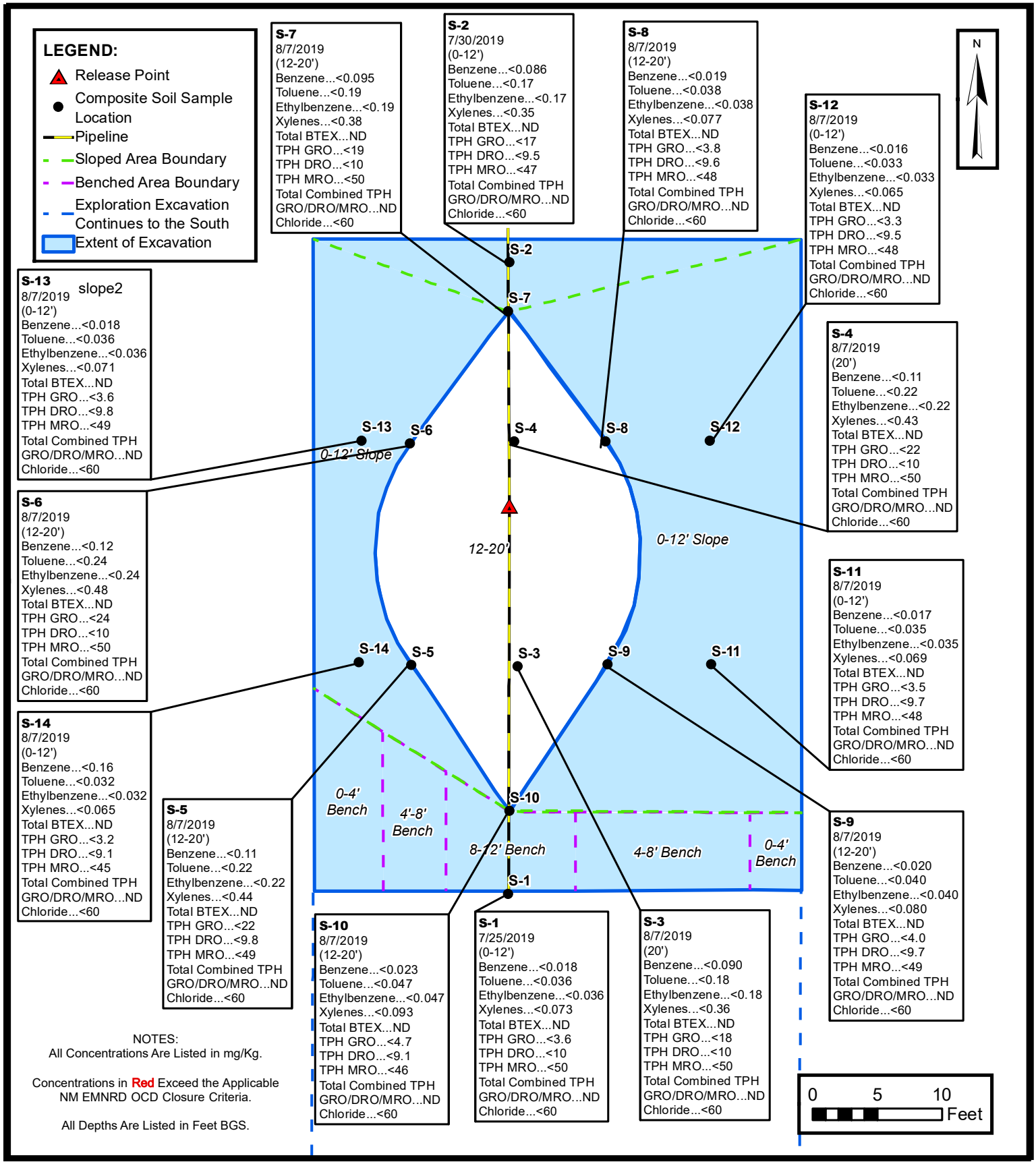
ENSOLUM
Environmental & Hydrogeologic Consultants

SITE VICINITY MAP

ENTERPRISE FIELD SERVICES, LLC
CLEVELAND #4 PIPELINE RELEASE
SW ¼ , S21 T27N R9W, San Juan County, New Mexico
36.556442° N, 107.796758° W

PROJECT NUMBER: 05A1226067

FIGURE
2



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Environmental & Hydrogeologic Consultants

SITE MAP

ENTERPRISE FIELD SERVICES, LLC
CLEVELAND #4 PIPELINE RELEASE
SW ¼ , S21 T27N R9W, San Juan County, New Mexico
36.556442° N, 107.796758° W

PROJECT NUMBER: 05A1226067

FIGURE
3

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APPENDIX B

Executed C-138 Solid Waste Acceptance Form

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 97057-1023

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

Form C-138
Revised August 1, 2011

*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 Avenue, Farmington, NM 87401

Invoice Information: PM: Matt Garrison
Non AFE: N43366
Pay Key: RB21200

2. Originating Site:
Cleveland #4

3. Location of Material (Street Address, City, State or ULSTR):
UL N Section 21 T27 R9W, 36.556442, -107.79675 Sep, 2019

4. Source and Description of Waste: Hydrocarbon impacted soils associated with a release from a natural gas gathering pipeline.
Estimated Volume (50) yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) 336 (yd^3) / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long (Thomas Long), representative or authorized agent for Enterprise Field Services, LLC do hereby
PRINT & SIGN NAME COMPANY NAME
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) 8-2-19 representative for Enterprise Field Services, LLC authorize Envirotech, Inc. to complete the required
Generator Signature
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: OFT and subcontractors
West States, Stan Horn,

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: Envirn Manager DATE: 8/2/19

SIGNATURE: _____ TELEPHONE NO.: 505-632-0615
Surface Waste Management Facility Authorized Agent

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APPENDIX C

Photographic Documentation

SITE PHOTOGRAPHS

Enterprise Field Services, LLC
Closure Report
Cleveland #4 Pipeline Release
Ensolum Project No. 05A1226067

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Photograph 1 Photograph Description: View of in-process excavation activities while searching for the release.	
Photograph 2 Photograph Description: View of in-process excavation activities while searching for the release.	
Photograph 3 Photograph Description: View of in-process excavation activities.	

SITE PHOTOGRAPHS

Enterprise Field Services, LLC
Closure Report
Cleveland #4 Pipeline Release
Ensolum Project No. 05A1226067

ENSOLUM

Photograph 4 Photograph Description: View of final excavation at the release area. Note that the pipeline was cut and removed to provide access for remediation.	
Photograph 5 Photograph Description: View of final excavation at the release area. Note that the pipeline was cut and removed to provide access for remediation.	
Photograph 6 Photograph Description: View of the final excavation after initial restoration.	

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APPENDIX D

Table 1 – Soil Analytical Summary

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TABLE 1
Cleveland #4 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
Stockpile Composite Soil Samples													
SP-1	7.30.19	C	Stockpile	<0.083	<0.17	<0.17	<0.33	ND	<17	<9.6	<48	ND	<60
SP-2	7.30.19	C	Stockpile	<0.084	<0.17	<0.17	0.37	0.37	<17	36	<48	36	<60
Excavation Composite Soil Samples													
S-1	7.25.19	C	0 to 12	<0.018	<0.036	<0.036	<0.073	ND	<3.6	<10	<50	ND	<60
S-2	7.30.19	C	0 to 12	<0.086	<0.17	<0.17	<0.35	ND	<17	<9.5	<47	ND	<60
S-3	8.07.19	C	20	<0.090	<0.18	<0.18	<0.36	ND	<18	<10	<50	ND	<60
S-4	8.07.19	C	20	<0.11	<0.22	<0.22	<0.43	ND	<22	<10	<50	ND	<60
S-5	8.07.19	C	12 to 20	<0.11	<0.22	<0.22	<0.44	ND	<22	<9.8	<49	ND	<60
S-6	8.07.19	C	12 to 20	<0.12	<0.24	<0.24	<0.48	ND	<24	<10	<50	ND	<60
S-7	8.07.19	C	12 to 20	<0.095	<0.19	<0.19	<0.38	ND	<19	<10	<50	ND	<60
S-8	8.07.19	C	12 to 20	<0.019	<0.038	<0.038	<0.077	ND	<3.8	<9.6	<48	ND	<60
S-9	8.07.19	C	12 to 20	<0.020	<0.040	<0.040	<0.080	ND	<4.0	<9.7	<49	ND	<60
S-10	8.07.19	C	12 to 20	<0.023	<0.047	<0.047	<0.093	ND	<4.7	<9.1	<46	ND	<60
S-11	8.07.19	C	0 to 12	<0.017	<0.035	<0.035	<0.069	ND	<3.5	<9.7	<48	ND	<60
S-12	8.07.19	C	0 to 12	<0.016	<0.033	<0.033	<0.065	ND	<3.3	<9.5	<48	ND	<60
S-13	8.07.19	C	0 to 12	<0.018	<0.036	<0.036	<0.071	ND	<3.6	<9.8	<49	ND	<59
S-14	8.07.19	C	0 to 12	<0.016	<0.032	<0.032	<0.065	ND	<3.2	<9.1	<45	ND	<60

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

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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

July 30, 2019

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

RE: Cleveland 4 OrderNo.: 1907D45

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 1 sample(s) on 7/26/2019 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 **1907D45**
Date Reported: **7/30/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-1
Project: Cleveland 4
Collection Date: 7/25/2019 1:00:00 PM
Lab ID: 1907D45-001 **Matrix:** SOIL **Received Date:** 7/26/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	7/26/2019 11:30:57 AM	46414
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/26/2019 10:22:27 AM	46413
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	7/26/2019 10:22:27 AM	46413
Surr: DNOP	102	70-130		%Rec	1	7/26/2019 10:22:27 AM	46413
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	7/26/2019 9:56:30 AM	G61677
Surr: BFB	91.0	73.8-119		%Rec	1	7/26/2019 9:56:30 AM	G61677
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.018		mg/Kg	1	7/26/2019 9:56:30 AM	B61677
Toluene	ND	0.036		mg/Kg	1	7/26/2019 9:56:30 AM	B61677
Ethylbenzene	ND	0.036		mg/Kg	1	7/26/2019 9:56:30 AM	B61677
Xylenes, Total	ND	0.073		mg/Kg	1	7/26/2019 9:56:30 AM	B61677
Surr: 4-Bromofluorobenzene	90.4	80-120		%Rec	1	7/26/2019 9:56:30 AM	B61677

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#: **1907D45**
30-Jul-19

Client: ENSOLUM
Project: Cleveland 4

Sample ID: **MB-46414** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **46414** RunNo: **61674**
Prep Date: **7/26/2019** Analysis Date: **7/26/2019** SeqNo: **2091616** Units: **mg/Kg**

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

Sample ID: **LCS-46414** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **46414** RunNo: **61674**
Prep Date: **7/26/2019** Analysis Date: **7/26/2019** SeqNo: **2091617** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
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#: **1907D45**

30-Jul-19

Client: ENSOLUM

Project: Cleveland 4

Sample ID: **LCS-46413** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **46413** RunNo: **61668**
Prep Date: **7/26/2019** Analysis Date: **7/26/2019** SeqNo: **2090616** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	57	10	50.00	0	114	63.9	124			
Surr: DNOP	5.3		5.000		107	70	130			

Sample ID: **MB-46413** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **46413** RunNo: **61668**
Prep Date: **7/26/2019** Analysis Date: **7/26/2019** SeqNo: **2090617** 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	10		10.00		103	70	130			

Sample ID: **LCS-46394** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **46394** RunNo: **61668**
Prep Date: **7/25/2019** Analysis Date: **7/26/2019** SeqNo: **2091169** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.4		5.000		88.6	70	130			

Sample ID: **MB-46394** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **46394** RunNo: **61668**
Prep Date: **7/25/2019** Analysis Date: **7/26/2019** SeqNo: **2091171** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.1		10.00		90.7	70	130			

Sample ID: **LCS-46401** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **46401** RunNo: **61669**
Prep Date: **7/25/2019** Analysis Date: **7/26/2019** SeqNo: **2091395** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3		5.000		85.9	70	130			

Sample ID: **MB-46401** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **46401** RunNo: **61669**
Prep Date: **7/25/2019** Analysis Date: **7/26/2019** SeqNo: **2091396** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		103	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#: **1907D45**

30-Jul-19

Client: ENSOLUM

Project: Cleveland 4

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **G61677**	RunNo: **61677**
Prep Date:	Analysis Date: **7/26/2019**	SeqNo: **2091146** 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	940		1000		93.9	73.8	119			

Sample ID: **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **G61677**	RunNo: **61677**
Prep Date:	Analysis Date: **7/26/2019**	SeqNo: **2091147** 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	93.8	80.1	123			
Surr: BFB	1200		1000		116	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#: **1907D45**

30-Jul-19

Client: ENSOLUM

Project: Cleveland 4

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **B61677**	RunNo: **61677**
Prep Date:	Analysis Date: **7/26/2019**	SeqNo: **2091155** 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	0.94		1.000		93.6	80	120			

Sample ID: **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **B61677**	RunNo: **61677**
Prep Date:	Analysis Date: **7/26/2019**	SeqNo: **2091156** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	1.000	0	94.1	80	120			
Toluene	1.0	0.050	1.000	0	100	80	120			
Ethylbenzene	1.0	0.050	1.000	0	102	80	120			
Xylenes, Total	3.0	0.10	3.000	0	102	80	120			
Surr: 4-Bromofluorobenzene	0.95		1.000		94.9	80	120			

Sample ID: **1907D45-001AMS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **S-1**	Batch ID: **B61677**	RunNo: **61677**
Prep Date:	Analysis Date: **7/26/2019**	SeqNo: **2091157** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.73	0.018	0.7267	0	100	63.9	127			
Toluene	0.78	0.036	0.7267	0	107	69.9	131			
Ethylbenzene	0.80	0.036	0.7267	0	110	71	132			
Xylenes, Total	2.4	0.073	2.180	0	110	71.8	131			
Surr: 4-Bromofluorobenzene	0.76		0.7267		104	80	120			

Sample ID: **1907D45-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **S-1**	Batch ID: **B61677**	RunNo: **61677**
Prep Date:	Analysis Date: **7/26/2019**	SeqNo: **2091158** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.67	0.018	0.7267	0	92.4	63.9	127	8.33	20	
Toluene	0.71	0.036	0.7267	0	98.1	69.9	131	9.01	20	
Ethylbenzene	0.72	0.036	0.7267	0	99.3	71	132	10.3	20	
Xylenes, Total	2.2	0.073	2.180	0	98.8	71.8	131	10.6	20	
Surr: 4-Bromofluorobenzene	0.69		0.7267		94.4	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: 1907D45 RcptNo: 1

Received By: **Anne Thorne** 7/26/2019 8:00:00 AM Anne Thorne

Completed By: **Anne Thorne** 7/26/2019 8:21:54 AM Anne Thorne

Reviewed By: DAD 7/26/19

Chain of Custody

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

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: _____
07/26/19

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:

CUSTODY SEALS INTACT ON SOIL JARS/at 7/26/19

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.6	Good	Yes			

Chain-of-Custody Record

Client: Ensolum

Mailing Address: 606 S Rio Grande Suit A 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 7-26-19

Project Name: Cleveland #4

Project #: 05A 1226067

Project Manager: K Summers

Sampler: C DAponti

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp (including CF): 1.5+0.1CF=1.6

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. 1907045	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)						
7-25-19	1300	S	S-1	1 4oz Jar	Cool	-001	X	X				~~X~~	X									
												AT 07/26/19										

A other MeSHLE

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
7-25-19	1606	[signature]	[signature]		7/25/19	1601
7/25/19	1820	Christa Wallen	[signature]		07/26/19	0900

Remarks: Pm Tom Long
Pay Key - N43181
AFE # N43366
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

August 02, 2019

Kyle Summers

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

RE: Cleveland 4 OrderNo.: 1907F72

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 3 sample(s) on 7/31/2019 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 **1907F72**
Date Reported: **8/2/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-2
Project: Cleveland 4
Collection Date: 7/30/2019 10:00:00 AM
Lab ID: 1907F72-001 **Matrix:** SOIL **Received Date:** 7/31/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	7/31/2019 10:53:40 AM	46511
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	7/31/2019 9:28:38 AM	46509
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/31/2019 9:28:38 AM	46509
Surr: DNOP	91.4	70-130		%Rec	1	7/31/2019 9:28:38 AM	46509
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	17		mg/Kg	5	7/31/2019 9:42:14 AM	GS61791
Surr: BFB	93.1	73.8-119		%Rec	5	7/31/2019 9:42:14 AM	GS61791
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.086		mg/Kg	5	7/31/2019 9:42:14 AM	BS61791
Toluene	ND	0.17		mg/Kg	5	7/31/2019 9:42:14 AM	BS61791
Ethylbenzene	ND	0.17		mg/Kg	5	7/31/2019 9:42:14 AM	BS61791
Xylenes, Total	ND	0.35		mg/Kg	5	7/31/2019 9:42:14 AM	BS61791
Surr: 4-Bromofluorobenzene	92.6	80-120		%Rec	5	7/31/2019 9:42:14 AM	BS61791

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 **1907F72**
Date Reported: **8/2/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: SP-1
Project: Cleveland 4
Collection Date: 7/30/2019 10:05:00 AM
Lab ID: 1907F72-002 **Matrix:** SOIL **Received Date:** 7/31/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	7/31/2019 11:06:05 AM	46511
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	7/31/2019 9:50:50 AM	46509
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/31/2019 9:50:50 AM	46509
Surr: DNOP	98.9	70-130		%Rec	1	7/31/2019 9:50:50 AM	46509
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	17		mg/Kg	5	7/31/2019 10:05:41 AM	GS61791
Surr: BFB	101	73.8-119		%Rec	5	7/31/2019 10:05:41 AM	GS61791
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.083		mg/Kg	5	7/31/2019 10:05:41 AM	BS61791
Toluene	ND	0.17		mg/Kg	5	7/31/2019 10:05:41 AM	BS61791
Ethylbenzene	ND	0.17		mg/Kg	5	7/31/2019 10:05:41 AM	BS61791
Xylenes, Total	ND	0.33		mg/Kg	5	7/31/2019 10:05:41 AM	BS61791
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	5	7/31/2019 10:05:41 AM	BS61791

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 **1907F72**
Date Reported: **8/2/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: SP-2
Project: Cleveland 4
Collection Date: 7/30/2019 10:10:00 AM
Lab ID: 1907F72-003 **Matrix:** SOIL **Received Date:** 7/31/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	7/31/2019 11:18:29 AM	46511
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	36	9.6		mg/Kg	1	7/31/2019 10:12:52 AM	46509
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	7/31/2019 10:12:52 AM	46509
Surr: DNOP	94.4	70-130		%Rec	1	7/31/2019 10:12:52 AM	46509
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	17		mg/Kg	5	7/31/2019 10:29:08 AM	GS61791
Surr: BFB	119	73.8-119	S	%Rec	5	7/31/2019 10:29:08 AM	GS61791
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.084		mg/Kg	5	7/31/2019 10:29:08 AM	BS61791
Toluene	ND	0.17		mg/Kg	5	7/31/2019 10:29:08 AM	BS61791
Ethylbenzene	ND	0.17		mg/Kg	5	7/31/2019 10:29:08 AM	BS61791
Xylenes, Total	0.37	0.34		mg/Kg	5	7/31/2019 10:29:08 AM	BS61791
Surr: 4-Bromofluorobenzene	93.8	80-120		%Rec	5	7/31/2019 10:29:08 AM	BS61791

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#: **1907F72**

02-Aug-19

Client: ENSOLUM

Project: Cleveland 4

Sample ID: **MB-46511** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **46511** RunNo: **61780**

Prep Date: **7/31/2019** Analysis Date: **7/31/2019** SeqNo: **2095324** Units: **mg/Kg**

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

Sample ID: **LCS-46511** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **46511** RunNo: **61780**

Prep Date: **7/31/2019** Analysis Date: **7/31/2019** SeqNo: **2095326** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.0	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#: **1907F72**
02-Aug-19

Client: ENSOLUM
Project: Cleveland 4

Sample ID: **LCS-46509** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **46509** RunNo: **61770**
Prep Date: **7/31/2019** Analysis Date: **7/31/2019** SeqNo: **2094077** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	98.4	63.9	124			
Surr: DNOP	4.5		5.000		90.3	70	130			

Sample ID: **MB-46509** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **46509** RunNo: **61770**
Prep Date: **7/31/2019** Analysis Date: **7/31/2019** SeqNo: **2094078** 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		96.9	70	130			

Sample ID: **1907F72-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-2** Batch ID: **46509** RunNo: **61770**
Prep Date: **7/31/2019** Analysis Date: **7/31/2019** SeqNo: **2094812** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	9.3	46.25	0	101	57	142			
Surr: DNOP	4.3		4.625		92.4	70	130			

Sample ID: **1907F72-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-2** Batch ID: **46509** RunNo: **61770**
Prep Date: **7/31/2019** Analysis Date: **7/31/2019** SeqNo: **2094813** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	9.4	46.77	0	102	57	142	2.55	20	
Surr: DNOP	4.5		4.677		96.4	70	130	0	0	

Sample ID: **LCS-46481** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **46481** RunNo: **61770**
Prep Date: **7/30/2019** Analysis Date: **7/31/2019** SeqNo: **2094814** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.8		5.000		96.3	70	130			

Sample ID: **MB-46481** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **46481** RunNo: **61770**
Prep Date: **7/30/2019** Analysis Date: **7/31/2019** SeqNo: **2094815** Units: **%Rec**

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#: **1907F72**
02-Aug-19

Client: ENSOLUM
Project: Cleveland 4

Sample ID: **MB-46481** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **46481** RunNo: **61770**
Prep Date: **7/30/2019** Analysis Date: **7/31/2019** SeqNo: **2094815** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.9		10.00		98.8	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#: **1907F72**

02-Aug-19

Client: ENSOLUM

Project: Cleveland 4

Sample ID: **1907F72-001AMS** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **S-2** Batch ID: **GS61791** RunNo: **61791**

Prep Date: Analysis Date: **7/31/2019** SeqNo: **2094787** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	81	17	86.26	0	93.4	69.1	142			
Surr: BFB	4000		3450		116	73.8	119			

Sample ID: **1907F72-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **S-2** Batch ID: **GS61791** RunNo: **61791**

Prep Date: Analysis Date: **7/31/2019** SeqNo: **2094788** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	75	17	86.26	0	86.8	69.1	142	7.37	20	
Surr: BFB	3600		3450		104	73.8	119	0	0	

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

Client ID: **LCSS** Batch ID: **GS61791** RunNo: **61791**

Prep Date: Analysis Date: **7/31/2019** SeqNo: **2096130** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	88.1	80.1	123			
Surr: BFB	1100		1000		111	73.8	119			

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

Client ID: **PBS** Batch ID: **GS61791** RunNo: **61791**

Prep Date: Analysis Date: **7/31/2019** SeqNo: **2096131** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	910		1000		90.6	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#: **1907F72**

02-Aug-19

Client: ENSOLUM

Project: Cleveland 4

Sample ID: **100NG BTEX LCS** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **BS61791** RunNo: **61791**

Prep Date: Analysis Date: **7/31/2019** SeqNo: **2096309** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	93.1	80	120			
Toluene	0.98	0.050	1.000	0	98.4	80	120			
Ethylbenzene	0.98	0.050	1.000	0	98.3	80	120			
Xylenes, Total	2.9	0.10	3.000	0	98.3	80	120			
Surr: 4-Bromofluorobenzene	0.94		1.000		94.0	80	120			

Sample ID: **1907F72-002AMS** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **SP-1** Batch ID: **BS61791** RunNo: **61791**

Prep Date: Analysis Date: **7/31/2019** SeqNo: **2096333** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	3.1	0.083	3.304	0	94.5	63.9	127			
Toluene	3.3	0.17	3.304	0	99.7	69.9	131			
Ethylbenzene	3.3	0.17	3.304	0	101	71	132			
Xylenes, Total	10	0.33	9.914	0	101	71.8	131			
Surr: 4-Bromofluorobenzene	3.2		3.304		95.5	80	120			

Sample ID: **1907F72-002AMSD** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **SP-1** Batch ID: **BS61791** RunNo: **61791**

Prep Date: Analysis Date: **7/31/2019** SeqNo: **2096334** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	3.1	0.083	3.304	0	94.0	63.9	127	0.499	20	
Toluene	3.3	0.17	3.304	0	100	69.9	131	0.560	20	
Ethylbenzene	3.4	0.17	3.304	0	102	71	132	0.986	20	
Xylenes, Total	10	0.33	9.914	0	101	71.8	131	0.125	20	
Surr: 4-Bromofluorobenzene	3.2		3.304		96.0	80	120	0	0	

Sample ID: **RB** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **BS61791** RunNo: **61791**

Prep Date: Analysis Date: **7/31/2019** SeqNo: **2096335** 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	0.91		1.000		90.8	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

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: 1907F72 RcptNo: 1

Received By: **Desiree Dominguez** 7/31/2019 8:00:00 AM

Completed By: **Anne Thorne** 7/31/2019 8:07:36 AM

Reviewed By: DAD 7/31/19

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: 07/31/19 (<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 SOIL JARS/at 7/31/19

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.6	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: 100 Eo
☐ Standard ☑ Rush 7-31-19

Project Name: Cleveland #4

Project #: 05A1226067

Project Manager: K Summers

Sampler: C Adonti

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 3.7-0.1=3.6°C

★ 0713HF Methods

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)
7/30/19	1000	S	S-2	4oz 1 Jar	Cool	001	X	X					X			
1	1005	S	SP-1	1	1	002	X	X					X			
	1010	S	SP-2	1	1	003	X	X					X			

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
7/30/19	1416		Chad Ward		7/30/19	1416
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
7/30/19	1802	Chad Ward	Daniel Marquez	courier	7/31/19	8:00

Remarks: PM - Tom Long
~~Pay Key - R321200~~
AFE # 43366
Pay Key - R321200

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

Analysis Request

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

August 09, 2019

Kyle Summers

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

RE: Cleveland 4 OrderNo.: 1908413

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 12 sample(s) on 8/8/2019 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 **1908413**
Date Reported: **8/9/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-3
Project: Cleveland 4
Collection Date: 8/7/2019 10:00:00 AM
Lab ID: 1908413-001 **Matrix:** SOIL **Received Date:** 8/8/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CAS**
Chloride	ND	60		mg/Kg	20	8/8/2019 11:18:14 AM	46667
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/8/2019 9:54:29 AM	46664
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/8/2019 9:54:29 AM	46664
Surr: DNOP	95.3	70-130		%Rec	1	8/8/2019 9:54:29 AM	46664
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	18		mg/Kg	5	8/8/2019 9:35:40 AM	G61992
Surr: BFB	96.3	77.4-118		%Rec	5	8/8/2019 9:35:40 AM	G61992
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.090		mg/Kg	5	8/8/2019 9:35:40 AM	B61992
Toluene	ND	0.18		mg/Kg	5	8/8/2019 9:35:40 AM	B61992
Ethylbenzene	ND	0.18		mg/Kg	5	8/8/2019 9:35:40 AM	B61992
Xylenes, Total	ND	0.36		mg/Kg	5	8/8/2019 9:35:40 AM	B61992
Surr: 4-Bromofluorobenzene	95.1	80-120		%Rec	5	8/8/2019 9:35:40 AM	B61992

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 **1908413**
Date Reported: **8/9/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-4
Project: Cleveland 4
Collection Date: 8/7/2019 10:05:00 AM
Lab ID: 1908413-002 **Matrix:** SOIL **Received Date:** 8/8/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CAS**
Chloride	ND	60		mg/Kg	20	8/8/2019 11:30:38 AM	46667
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/8/2019 9:57:03 AM	46664
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/8/2019 9:57:03 AM	46664
Surr: DNOP	96.8	70-130		%Rec	1	8/8/2019 9:57:03 AM	46664
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	22		mg/Kg	5	8/8/2019 9:58:28 AM	G61992
Surr: BFB	97.7	77.4-118		%Rec	5	8/8/2019 9:58:28 AM	G61992
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.11		mg/Kg	5	8/8/2019 9:58:28 AM	B61992
Toluene	ND	0.22		mg/Kg	5	8/8/2019 9:58:28 AM	B61992
Ethylbenzene	ND	0.22		mg/Kg	5	8/8/2019 9:58:28 AM	B61992
Xylenes, Total	ND	0.43		mg/Kg	5	8/8/2019 9:58:28 AM	B61992
Surr: 4-Bromofluorobenzene	97.2	80-120		%Rec	5	8/8/2019 9:58:28 AM	B61992

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 **1908413**
Date Reported: **8/9/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-5
Project: Cleveland 4
Collection Date: 8/7/2019 10:10:00 AM
Lab ID: 1908413-003 **Matrix:** SOIL **Received Date:** 8/8/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CAS**
Chloride	ND	60		mg/Kg	20	8/8/2019 11:43:03 AM	46667
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/8/2019 10:18:47 AM	46664
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/8/2019 10:18:47 AM	46664
Surr: DNOP	95.0	70-130		%Rec	1	8/8/2019 10:18:47 AM	46664
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	22		mg/Kg	5	8/8/2019 10:21:20 AM	G61992
Surr: BFB	99.2	77.4-118		%Rec	5	8/8/2019 10:21:20 AM	G61992
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.11		mg/Kg	5	8/8/2019 10:21:20 AM	B61992
Toluene	ND	0.22		mg/Kg	5	8/8/2019 10:21:20 AM	B61992
Ethylbenzene	ND	0.22		mg/Kg	5	8/8/2019 10:21:20 AM	B61992
Xylenes, Total	ND	0.44		mg/Kg	5	8/8/2019 10:21:20 AM	B61992
Surr: 4-Bromofluorobenzene	97.5	80-120		%Rec	5	8/8/2019 10:21:20 AM	B61992

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 **1908413**
Date Reported: **8/9/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-6
Project: Cleveland 4
Collection Date: 8/7/2019 10:15:00 AM
Lab ID: 1908413-004 **Matrix:** SOIL **Received Date:** 8/8/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CAS**
Chloride	ND	60		mg/Kg	20	8/8/2019 11:55:28 AM	46667
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/8/2019 10:19:15 AM	46664
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/8/2019 10:19:15 AM	46664
Surr: DNOP	93.9	70-130		%Rec	1	8/8/2019 10:19:15 AM	46664
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	24		mg/Kg	5	8/8/2019 10:44:16 AM	G61992
Surr: BFB	96.9	77.4-118		%Rec	5	8/8/2019 10:44:16 AM	G61992
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.12		mg/Kg	5	8/8/2019 10:44:16 AM	B61992
Toluene	ND	0.24		mg/Kg	5	8/8/2019 10:44:16 AM	B61992
Ethylbenzene	ND	0.24		mg/Kg	5	8/8/2019 10:44:16 AM	B61992
Xylenes, Total	ND	0.48		mg/Kg	5	8/8/2019 10:44:16 AM	B61992
Surr: 4-Bromofluorobenzene	95.6	80-120		%Rec	5	8/8/2019 10:44:16 AM	B61992

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 **1908413**
Date Reported: **8/9/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-7
Project: Cleveland 4
Collection Date: 8/7/2019 10:20:00 AM
Lab ID: 1908413-005 **Matrix:** SOIL **Received Date:** 8/8/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CAS**
Chloride	ND	60		mg/Kg	20	8/8/2019 12:07:53 PM	46667
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/8/2019 10:43:05 AM	46664
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	8/8/2019 10:43:05 AM	46664
Surr: DNOP	91.5	70-130		%Rec	1	8/8/2019 10:43:05 AM	46664
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	19		mg/Kg	5	8/8/2019 11:07:08 AM	G61992
Surr: BFB	93.8	77.4-118		%Rec	5	8/8/2019 11:07:08 AM	G61992
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.095		mg/Kg	5	8/8/2019 11:07:08 AM	B61992
Toluene	ND	0.19		mg/Kg	5	8/8/2019 11:07:08 AM	B61992
Ethylbenzene	ND	0.19		mg/Kg	5	8/8/2019 11:07:08 AM	B61992
Xylenes, Total	ND	0.38		mg/Kg	5	8/8/2019 11:07:08 AM	B61992
Surr: 4-Bromofluorobenzene	92.3	80-120		%Rec	5	8/8/2019 11:07:08 AM	B61992

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 **1908413**
Date Reported: **8/9/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-8
Project: Cleveland 4
Collection Date: 8/7/2019 10:25:00 AM
Lab ID: 1908413-006 **Matrix:** SOIL **Received Date:** 8/8/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CAS**
Chloride	ND	60		mg/Kg	20	8/8/2019 12:20:18 PM	46667
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/8/2019 10:41:27 AM	46664
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/8/2019 10:41:27 AM	46664
Surr: DNOP	98.3	70-130		%Rec	1	8/8/2019 10:41:27 AM	46664
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	8/8/2019 11:30:05 AM	G61992
Surr: BFB	95.1	77.4-118		%Rec	1	8/8/2019 11:30:05 AM	G61992
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.019		mg/Kg	1	8/8/2019 11:30:05 AM	B61992
Toluene	ND	0.038		mg/Kg	1	8/8/2019 11:30:05 AM	B61992
Ethylbenzene	ND	0.038		mg/Kg	1	8/8/2019 11:30:05 AM	B61992
Xylenes, Total	ND	0.077		mg/Kg	1	8/8/2019 11:30:05 AM	B61992
Surr: 4-Bromofluorobenzene	92.3	80-120		%Rec	1	8/8/2019 11:30:05 AM	B61992

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 **1908413**
Date Reported: **8/9/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-9
Project: Cleveland 4
Collection Date: 8/7/2019 10:30:00 AM
Lab ID: 1908413-007 **Matrix:** SOIL **Received Date:** 8/8/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	8/8/2019 12:32:43 PM	46667
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/8/2019 11:31:48 AM	46664
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/8/2019 11:31:48 AM	46664
Surr: DNOP	87.1	70-130		%Rec	1	8/8/2019 11:31:48 AM	46664
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	8/8/2019 11:53:00 AM	G61992
Surr: BFB	97.9	77.4-118		%Rec	1	8/8/2019 11:53:00 AM	G61992
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.020		mg/Kg	1	8/8/2019 11:53:00 AM	B61992
Toluene	ND	0.040		mg/Kg	1	8/8/2019 11:53:00 AM	B61992
Ethylbenzene	ND	0.040		mg/Kg	1	8/8/2019 11:53:00 AM	B61992
Xylenes, Total	ND	0.080		mg/Kg	1	8/8/2019 11:53:00 AM	B61992
Surr: 4-Bromofluorobenzene	94.6	80-120		%Rec	1	8/8/2019 11:53:00 AM	B61992

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 **1908413**
Date Reported: **8/9/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-10
Project: Cleveland 4
Collection Date: 8/7/2019 10:35:00 AM
Lab ID: 1908413-008 **Matrix:** SOIL **Received Date:** 8/8/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	8/8/2019 1:09:56 PM	46667
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	8/8/2019 11:03:38 AM	46664
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	8/8/2019 11:03:38 AM	46664
Surr: DNOP	94.9	70-130		%Rec	1	8/8/2019 11:03:38 AM	46664
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/8/2019 12:15:58 PM	G61992
Surr: BFB	97.9	77.4-118		%Rec	1	8/8/2019 12:15:58 PM	G61992
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	8/8/2019 12:15:58 PM	B61992
Toluene	ND	0.047		mg/Kg	1	8/8/2019 12:15:58 PM	B61992
Ethylbenzene	ND	0.047		mg/Kg	1	8/8/2019 12:15:58 PM	B61992
Xylenes, Total	ND	0.093		mg/Kg	1	8/8/2019 12:15:58 PM	B61992
Surr: 4-Bromofluorobenzene	93.9	80-120		%Rec	1	8/8/2019 12:15:58 PM	B61992

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 **1908413**
Date Reported: **8/9/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-11
Project: Cleveland 4
Collection Date: 8/7/2019 10:40:00 AM
Lab ID: 1908413-009 **Matrix:** SOIL **Received Date:** 8/8/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CAS**
Chloride	ND	60		mg/Kg	20	8/8/2019 1:22:21 PM	46667
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**BRM**
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/8/2019 11:56:15 AM	46664
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/8/2019 11:56:15 AM	46664
Surr: DNOP	92.0	70-130		%Rec	1	8/8/2019 11:56:15 AM	46664
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	8/8/2019 12:38:57 PM	G61992
Surr: BFB	98.3	77.4-118		%Rec	1	8/8/2019 12:38:57 PM	G61992
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.017		mg/Kg	1	8/8/2019 12:38:57 PM	B61992
Toluene	ND	0.035		mg/Kg	1	8/8/2019 12:38:57 PM	B61992
Ethylbenzene	ND	0.035		mg/Kg	1	8/8/2019 12:38:57 PM	B61992
Xylenes, Total	ND	0.069		mg/Kg	1	8/8/2019 12:38:57 PM	B61992
Surr: 4-Bromofluorobenzene	94.1	80-120		%Rec	1	8/8/2019 12:38:57 PM	B61992

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 **1908413**
Date Reported: **8/9/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-12
Project: Cleveland 4
Collection Date: 8/7/2019 10:45:00 AM
Lab ID: 1908413-010 **Matrix:** SOIL **Received Date:** 8/8/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	8/8/2019 11:31:06 AM	46669
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/8/2019 11:25:52 AM	46664
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	8/8/2019 11:25:52 AM	46664
Surr: DNOP	94.9	70-130		%Rec	1	8/8/2019 11:25:52 AM	46664
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	8/8/2019 9:39:06 AM	G61991
Surr: BFB	95.9	77.4-118		%Rec	1	8/8/2019 9:39:06 AM	G61991
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.016		mg/Kg	1	8/8/2019 9:39:06 AM	B61991
Toluene	ND	0.033		mg/Kg	1	8/8/2019 9:39:06 AM	B61991
Ethylbenzene	ND	0.033		mg/Kg	1	8/8/2019 9:39:06 AM	B61991
Xylenes, Total	ND	0.065		mg/Kg	1	8/8/2019 9:39:06 AM	B61991
Surr: 4-Bromofluorobenzene	97.1	80-120		%Rec	1	8/8/2019 9:39:06 AM	B61991

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 **1908413**
Date Reported: **8/9/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-13
Project: Cleveland 4
Collection Date: 8/7/2019 10:50:00 AM
Lab ID: 1908413-011 **Matrix:** SOIL **Received Date:** 8/8/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	59		mg/Kg	20	8/8/2019 11:43:31 AM	46669
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/8/2019 12:20:31 PM	46664
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	8/8/2019 12:20:31 PM	46664
Surr: DNOP	91.6	70-130		%Rec	1	8/8/2019 12:20:31 PM	46664
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	8/8/2019 10:02:37 AM	G61991
Surr: BFB	96.6	77.4-118		%Rec	1	8/8/2019 10:02:37 AM	G61991
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.018		mg/Kg	1	8/8/2019 10:02:37 AM	B61991
Toluene	ND	0.036		mg/Kg	1	8/8/2019 10:02:37 AM	B61991
Ethylbenzene	ND	0.036		mg/Kg	1	8/8/2019 10:02:37 AM	B61991
Xylenes, Total	ND	0.071		mg/Kg	1	8/8/2019 10:02:37 AM	B61991
Surr: 4-Bromofluorobenzene	97.7	80-120		%Rec	1	8/8/2019 10:02:37 AM	B61991

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 **1908413**
Date Reported: **8/9/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-14
Project: Cleveland 4
Collection Date: 8/7/2019 10:55:00 AM
Lab ID: 1908413-012 **Matrix:** SOIL **Received Date:** 8/8/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	8/8/2019 11:55:55 AM	46669
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	8/8/2019 11:48:13 AM	46664
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	8/8/2019 11:48:13 AM	46664
Surr: DNOP	96.5	70-130		%Rec	1	8/8/2019 11:48:13 AM	46664
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	8/8/2019 10:26:01 AM	G61991
Surr: BFB	94.8	77.4-118		%Rec	1	8/8/2019 10:26:01 AM	G61991
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.016		mg/Kg	1	8/8/2019 10:26:01 AM	B61991
Toluene	ND	0.032		mg/Kg	1	8/8/2019 10:26:01 AM	B61991
Ethylbenzene	ND	0.032		mg/Kg	1	8/8/2019 10:26:01 AM	B61991
Xylenes, Total	ND	0.065		mg/Kg	1	8/8/2019 10:26:01 AM	B61991
Surr: 4-Bromofluorobenzene	96.5	80-120		%Rec	1	8/8/2019 10:26:01 AM	B61991

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#: **1908413**

09-Aug-19

Client: ENSOLUM

Project: Cleveland 4

Sample ID: **MB-46667** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **46667** RunNo: **61996**

Prep Date: **8/8/2019** Analysis Date: **8/8/2019** SeqNo: **2103915** Units: **mg/Kg**

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

Sample ID: **LCS-46667** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **46667** RunNo: **61996**

Prep Date: **8/8/2019** Analysis Date: **8/8/2019** SeqNo: **2103916** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.1	90	110			

Sample ID: **MB-46669** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **46669** RunNo: **61993**

Prep Date: **8/8/2019** Analysis Date: **8/8/2019** SeqNo: **2104085** Units: **mg/Kg**

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

Sample ID: **LCS-46669** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **46669** RunNo: **61993**

Prep Date: **8/8/2019** Analysis Date: **8/8/2019** SeqNo: **2104086** 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#: **1908413**

09-Aug-19

Client: ENSOLUM

Project: Cleveland 4

Sample ID: **LCS-46614** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **46614** RunNo: **61951**
Prep Date: **8/6/2019** Analysis Date: **8/7/2019** SeqNo: **2101219** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.4		5.000		88.0	70	130			

Sample ID: **MB-46614** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **46614** RunNo: **61951**
Prep Date: **8/6/2019** Analysis Date: **8/7/2019** SeqNo: **2101220** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	12		10.00		121	70	130			

Sample ID: **LCS-46624** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **46624** RunNo: **61951**
Prep Date: **8/6/2019** Analysis Date: **8/7/2019** SeqNo: **2101649** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.4		5.000		88.2	70	130			

Sample ID: **MB-46624** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **46624** RunNo: **61951**
Prep Date: **8/6/2019** Analysis Date: **8/7/2019** SeqNo: **2101650** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.8		10.00		87.9	70	130			

Sample ID: **LCS-46664** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **46664** RunNo: **61951**
Prep Date: **8/8/2019** Analysis Date: **8/8/2019** SeqNo: **2102281** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	96.4	63.9	124			
Surr: DNOP	4.4		5.000		87.6	70	130			

Sample ID: **MB-46664** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **46664** RunNo: **61951**
Prep Date: **8/8/2019** Analysis Date: **8/8/2019** SeqNo: **2102282** 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		96.9	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#: **1908413**

09-Aug-19

Client: ENSOLUM

Project: Cleveland 4

Sample ID: **RB** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **G61992** RunNo: **61992**
Prep Date: Analysis Date: **8/8/2019** SeqNo: **2103328** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	980		1000		97.8	77.4	118			

Sample ID: **2.5UG GRO LCS** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **G61992** RunNo: **61992**
Prep Date: Analysis Date: **8/8/2019** SeqNo: **2103329** 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	95.2	80	120			
Surr: BFB	1100		1000		112	77.4	118			

Sample ID: **1908413-001AMS** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **S-3** Batch ID: **G61992** RunNo: **61992**
Prep Date: Analysis Date: **8/8/2019** SeqNo: **2103330** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	93	18	89.80	0	104	69.1	142			
Surr: BFB	4200		3592		117	77.4	118			

Sample ID: **1908413-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **S-3** Batch ID: **G61992** RunNo: **61992**
Prep Date: Analysis Date: **8/8/2019** SeqNo: **2103331** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	93	18	89.80	0	103	69.1	142	0.734	20	
Surr: BFB	4300		3592		119	77.4	118	0	0	S

Sample ID: **MB-46628** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **46628** RunNo: **61992**
Prep Date: **8/6/2019** Analysis Date: **8/8/2019** SeqNo: **2103332** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	980		1000		98.1	77.4	118			

Sample ID: **LCS-46628** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **46628** RunNo: **61992**
Prep Date: **8/6/2019** Analysis Date: **8/8/2019** SeqNo: **2103333** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1200		1000		115	77.4	118			

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#: **1908413**

09-Aug-19

Client: ENSOLUM

Project: Cleveland 4

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **G61991**	RunNo: **61991**
Prep Date:	Analysis Date: **8/8/2019**	SeqNo: **2103393** 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		95.0	77.4	118			

Sample ID: **2.5UG GRO LCS**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **G61991**	RunNo: **61991**
Prep Date:	Analysis Date: **8/8/2019**	SeqNo: **2103394** 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	92.3	80	120			
Surr: BFB	1100		1000		107	77.4	118			

Sample ID: **1908413-010AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **S-12**	Batch ID: **G61991**	RunNo: **61991**
Prep Date:	Analysis Date: **8/8/2019**	SeqNo: **2103395** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	15	3.3	16.29	0	91.7	69.1	142			
Surr: BFB	690		651.5		106	77.4	118			

Sample ID: **1908413-010AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **S-12**	Batch ID: **G61991**	RunNo: **61991**
Prep Date:	Analysis Date: **8/8/2019**	SeqNo: **2103396** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	18	3.3	16.29	0	111	69.1	142	18.6	20	
Surr: BFB	710		651.5		109	77.4	118	0	0	

Sample ID: **MB-46639**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **46639**	RunNo: **61991**
Prep Date: **8/7/2019**	Analysis Date: **8/8/2019**	SeqNo: **2103397** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		106	77.4	118			

Sample ID: **LCS-46639**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **46639**	RunNo: **61991**
Prep Date: **8/7/2019**	Analysis Date: **8/8/2019**	SeqNo: **2103398** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1200		1000		118	77.4	118			

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#: **1908413**

09-Aug-19

Client: ENSOLUM

Project: Cleveland 4

Sample ID: **RB**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **B61992**	RunNo: **61992**
Prep Date:	Analysis Date: **8/8/2019**	SeqNo: **2103360** 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	0.97		1.000		96.6	80	120			

Sample ID: **100NG BTEX LCS**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **B61992**	RunNo: **61992**
Prep Date:	Analysis Date: **8/8/2019**	SeqNo: **2103361** 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	96.0	80	120			
Toluene	0.99	0.050	1.000	0	99.4	80	120			
Ethylbenzene	1.0	0.050	1.000	0	101	80	120			
Xylenes, Total	3.0	0.10	3.000	0	98.9	80	120			
Surr: 4-Bromofluorobenzene	0.98		1.000		97.6	80	120			

Sample ID: **1908413-002AMS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **S-4**	Batch ID: **B61992**	RunNo: **61992**
Prep Date:	Analysis Date: **8/8/2019**	SeqNo: **2103362** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	4.1	0.11	4.325	0	95.5	63.9	127			
Toluene	4.3	0.22	4.325	0	99.4	69.9	131			
Ethylbenzene	4.4	0.22	4.325	0	102	71	132			
Xylenes, Total	13	0.43	12.98	0	101	71.8	131			
Surr: 4-Bromofluorobenzene	4.5		4.325		104	80	120			

Sample ID: **1908413-002AMSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **S-4**	Batch ID: **B61992**	RunNo: **61992**
Prep Date:	Analysis Date: **8/8/2019**	SeqNo: **2103363** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	3.8	0.11	4.325	0	88.9	63.9	127	7.21	20	
Toluene	4.1	0.22	4.325	0	93.9	69.9	131	5.65	20	
Ethylbenzene	4.1	0.22	4.325	0	95.3	71	132	6.49	20	
Xylenes, Total	12	0.43	12.98	0	95.2	71.8	131	5.75	20	
Surr: 4-Bromofluorobenzene	4.3		4.325		100	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#: **1908413**

09-Aug-19

Client: ENSOLUM

Project: Cleveland 4

Sample ID: **MB-46628** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **46628** RunNo: **61992**

Prep Date: **8/6/2019** Analysis Date: **8/8/2019** SeqNo: **2103364** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.95		1.000		95.2	80	120			

Sample ID: **LCS-46628** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **46628** RunNo: **61992**

Prep Date: **8/6/2019** Analysis Date: **8/8/2019** SeqNo: **2103365** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.97		1.000		97.4	80	120			

Sample ID: **RB** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **B61991** RunNo: **61991**

Prep Date: Analysis Date: **8/8/2019** SeqNo: **2103427** 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	0.95		1.000		95.2	80	120			

Sample ID: **100NG BTEX LCS** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **B61991** RunNo: **61991**

Prep Date: Analysis Date: **8/8/2019** SeqNo: **2103428** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	92.8	80	120			
Toluene	0.98	0.050	1.000	0	98.1	80	120			
Ethylbenzene	0.99	0.050	1.000	0	98.6	80	120			
Xylenes, Total	2.9	0.10	3.000	0	98.3	80	120			
Surr: 4-Bromofluorobenzene	0.98		1.000		98.2	80	120			

Sample ID: **1908413-011AMS** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **S-13** Batch ID: **B61991** RunNo: **61991**

Prep Date: Analysis Date: **8/8/2019** SeqNo: **2103429** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.74	0.018	0.7107	0	104	63.9	127			
Toluene	0.78	0.036	0.7107	0	110	69.9	131			
Ethylbenzene	0.79	0.036	0.7107	0	111	71	132			
Xylenes, Total	2.4	0.071	2.132	0	111	71.8	131			

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#: **1908413**

09-Aug-19

Client: ENSOLUM

Project: Cleveland 4

Sample ID: **1908413-011AMS** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **S-13** Batch ID: **B61991** RunNo: **61991**

Prep Date: Analysis Date: **8/8/2019** SeqNo: **2103429** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.76		0.7107		106	80	120			

Sample ID: **1908413-011AMSD** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **S-13** Batch ID: **B61991** RunNo: **61991**

Prep Date: Analysis Date: **8/8/2019** SeqNo: **2103430** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.67	0.018	0.7107	0	94.9	63.9	127	8.88	20	
Toluene	0.71	0.036	0.7107	0	101	69.9	131	8.83	20	
Ethylbenzene	0.72	0.036	0.7107	0	102	71	132	8.90	20	
Xylenes, Total	2.2	0.071	2.132	0	102	71.8	131	8.60	20	
Surr: 4-Bromofluorobenzene	0.70		0.7107		98.3	80	120	0	0	

Sample ID: **MB-46639** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **46639** RunNo: **61991**

Prep Date: **8/7/2019** Analysis Date: **8/8/2019** SeqNo: **2103431** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Sample ID: **LCS-46639** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **46639** RunNo: **61991**

Prep Date: **8/7/2019** Analysis Date: **8/8/2019** SeqNo: **2103432** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		100	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

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: 1908413 RcptNo: 1

Received By: 8/8/2019 8:00:00 AM

Completed By: Anne Thorne 8/8/2019 8:29:35 AM Anne Thorne

Reviewed By: ENM 8/8/19

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: 08/08/19 (<2 or >12 unless noted)

Adjusted?

Checked by: AT 08/08/19

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:

CUSTODY SEALS INTACT ON SOIL JARS/at 8/8/19

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.2	Good	Yes			
2	1.4	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: 1000 ea
☐ Standard ☒ Rush 8-8-19

Project Name: Cleveland #4

Project #: 05A1226067

Project Manager: K. Summers

Sampler: C DAponti

On Ice: ☑ Yes ☐ No

# of Coolers: 2

Cooler Temp(including CF): 4.3-0.1=4.2 | 1.5-0.1=1.4

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. 1908413	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)
8/7/19	1000	S	S-3	1 4oz Jar	Cool	201	X	X					X			
	1005	S	S-4			202	X	X					X			
	1010	S	S-5			203	X	X					X			
	1015	S	S-6			204	X	X					X			
	1020	S	S-7			205	X	X					X			
	1025	S	S-8			206	X	X					X			
	1030	S	S-9			207	X	X					X			
	1035	S	S-10			208	X	X					X			
	1040	S	S-11			209	X	X					X			
	1045	S	S-12			210	X	X					X			
	1050	S	S-13			211	X	X					X			
	1055	S	S-14			212	X	X					X			

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
8/7/19	1515				8/7/19	1515
8/7/19	1810			Courier	8/8/19	8:00

Remarks: pm Tom Long
Pay by RB $1200
AFE # N43366
2 coolers

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.