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)*: **NRM2009441119**
Contact mailing address: **614 Reilly Ave, Farmington, NM 87401**	

Location of Release Source

Latitude **36.531891** Longitude **-108.161737** *(NAD 83 in decimal degrees to 5 decimal places)*

Site Name **Lateral 10E-1 Pipeline**	Site Type **Natural Gas Gathering Pipeline**
Date Release Discovered: **03/10/2020**	Serial Number *(if applicable)*: **N/A**

Unit Letter	Section	Township	Range	County
H	**36**	**27N**	**13W**	**San Juan**

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

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 MCF**	Volume Recovered (Mcf): **None**
☐ Other (describe)	Volume/Weight Released (provide units):	Volume/Weight Recovered (provide units)

Cause of Release On March 10, 2020, Enterprise discovered a release of natural gas and natural gas liquids on the Lateral 10E-1 pipeline. Minimal fluids were observed on the ground surface. No washes were affected. Enterprise began repairs and remediation on Mach 11, 2020 and then suspended the remediation activities until the week of March 23, 2020. Enterprise determined the release reportable per NMOCD regulation due the volume of impacted subsurface soil on March 26, 2020. Remediation was completed on April 3, 2020. The final excavation dimensions measured approximately 55 feet long by 33 feet wide by approximately 19 feet deep. Approximately 768 cubic yards of hydrocarbon impacted soil was 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: 10/28/2020

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: Nelson Velez Date: 05/17/2022

Printed Name: Nelson Velez Title: Environmental Specialist – Adv

ENSOLUM

CLOSURE REPORT

Property:

Lateral 10E-1 Pipeline Release
NE ¼, S36 T27N R13W
San Juan County, New Mexico

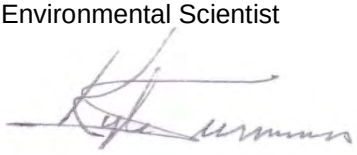
June 17, 2020
Ensolum Project No. 05A1226097

Prepared for:

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

Prepared by:

Ranee Deechilly
Environmental Scientist



Kyle Summers, CPG
Sr. Project Manager

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LIST OF APPENDICES

ENSOLUM

CLOSURE REPORT

Lateral 10E-1 Pipeline Release
NE ¼, S36 T27N R13W
San Juan County, New Mexico

Ensolum Project No. 05A1226097

1.0 INTRODUCTION

1.1 Site Description & Background

Operator:	Enterprise Field Services, LLC / Enterprise Products Operating LLC (Enterprise)
Site Name:	Lateral 10E-1 Pipeline Release (Site)
Location:	36.531891° North, 108.161737° West Northeast (NE) ¼ of Section 36, Township 27 North, Range 13 West San Juan County, New Mexico
Property:	Navajo Nation
Regulatory:	Navajo Nation Environmental Protection Agency (NNEPA) and New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Oil Conservation Division (OCD)

On March 10, 2020, a release of natural gas and condensate from the Lateral 10E-1 pipeline was identified by Enterprise personnel. Enterprise subsequently isolated and locked the pipeline out of service. On March 11, 2020, Enterprise initiated activities to facilitate the repair of the pipeline. Soil remediation activities began on March 23, 2020.

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 NNEPA and the New Mexico EMNRD OCD. Ensolum, LLC (Ensolum) referenced New Mexico Administrative Code (NMAC) 19.15.29 *Releases,* which establishes investigation and abatement action requirements for oil and gas release sites that are subject to reporting and/or corrective action, during the evaluation and remediation of the Site. Ensolum utilized 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.

- The OSE tracks the usage and assignment of water rights and water well installations and records this information in the Water Rights Reporting System (WRRS) database. Water wells and other points of diversion (PODs) are each assigned POD numbers in the database (which is searchable and includes an interactive map). No PODs were identified within a one-mile radius of the Site

using the Universal Transverse Mercator (UTM) radius search in the OSE WRRS database. The POD Section, Township, and Range search identified a POD (SJ-00802) in Section 2, Township 26N, Range 13W, which is the adjacent Section to the southwest of Section 36, Township 27N, Range 13W (the Site location). However, the online interactive map indicates that this POD is actually adjacent to US Route 491, near Little Water, NM (Navajo Nation). Based on the New Mexico State Plane (NAD 27) x and y coordinates (in feet) identified in the well record document, the well is actually located in Section 23, Township 26 North, Range 18 West (as indicated on the GIS database map). The OSE was notified of the discrepancy. Although no depth to water is listed for SJ-00802 in the database, the first water-bearing unit is identified in the well record at 911 feet below grade surface (bgs). The nearest water well (SJ 01058), based on the water well records and online interactive map, actually appears to be located approximately 3.5 miles southeast of the Site, with a depth to water of 220 feet bgs. Supporting documentation is provided in **Appendix B**.

- No cathodic protection wells were identified within one mile of the site.
- The Site is located within 300 feet of a New Mexico EMNRD OCD-defined continuously flowing watercourse or significant watercourse. An ephemeral wash is located approximately 14 feet west of the western extent of the excavation.
- 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 New Mexico Statues Annotated (NMSA) 1978, Section 3-27-3.
- The Site is not located within 300 feet of a wetland.
- Based on information identified in the New Mexico Mining and Minerals Division's Geographic Information System (GIS), Maps and Mine Data database, the Site is not located within an area overlying a subsurface mine.
- The Site is not located within an unstable area.
- The Site is not located within a 100-year floodplain.

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

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

Preliminary samples were collected on March 11, 2020, and on March 23, 2020, Enterprise initiated activities to facilitate the remediation of petroleum hydrocarbon impact. During the remediation and corrective action activities, West States Energy Contractors, Inc. (West States), provided heavy equipment and labor support, while Ensolum provided environmental consulting support.

The final excavation measured approximately 55 feet long and 33 feet wide at the maximum extents. The maximum depth of the excavation measured approximately 19 feet bgs.

The lithology that was encountered during the completion of the remediation activities consisted primarily of silty sand, weathered sandstone, a cemented gravel conglomerate, and sandstone.

A total of approximately 768 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 form is provided in **Appendix C**. The excavation was backfilled with imported fill and segregated, laboratory-confirmed overburden soils and then contoured to surrounding grade.

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

4.0 SOIL SAMPLING PROGRAM

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

Ensolum's soil sampling program included the collection of 37 composite soil samples (S-1 through S-37), comprised of five (5) aliquots each, from the excavation for laboratory analysis. In addition, one (1) composite soil sample (SP-1) was collected from soils that were segregated for potential reuse, to confirm the material was suitable to remain on Site. A clean shovel was utilized to obtain fresh aliquots from each accessible area of the excavation. An excavator, operated by West States, was utilized to obtain fresh aliquots from areas of the excavation that exceeded nine (9) feet bgs. A New Mexico EMNRD OCD representative was on Site during excavation activities on March 31, 2020. New Mexico EMNRD OCD correspondence is provided in **Appendix G**.

First Sampling Event
On March 11, 2020, the initial pipeline repair excavation was sampled to evaluate the magnitude of petroleum hydrocarbon impact. Composite soil samples S-1 (0'-4.5') and S-2 (0'-4.5') were collected from a combination of the floor and sidewalls of the excavation. Analytical results from the composite soil samples indicated exceedances of the applicable New Mexico EMNRD OCD closure criteria. In response to the data exceedances, the excavation was extended to remove petroleum hydrocarbon impacts. Soils associated with composite soil samples S-1 and S-2 were removed by excavation and transported to the landfarm for disposal/remediation.

Second Sampling Event
On March 23, 2020, a second sampling event was performed. Composite soil samples S-3 (9') and S-4 (9') were collected from the floor of the excavation. Composite soil samples S-5 (0'-9'), S-6 (0'-9'), S-7 (0'-9'), S-8 (0'-9'), S-9 (0'-9'), and S-10 (0'-9') were collected from the sidewalls of the excavation. Composite soil sample S-11 (5'-9') was collected from directly beneath the pipeline from soils (bridge soils) that were initially left in place to support the pipeline. Subsequent analytical results from composite soil samples S-5, S-10, and S-11 indicated exceedances of the applicable New Mexico EMNRD OCD total petroleum

hydrocarbons (TPH) closure criteria. In response to this information, Enterprise deepened and extended the excavation and removed the bridge soils associated with composite soil sample S-11. Removed soils were transported to the landfarm for disposal/remediation. At this time, Enterprise upgraded the Site to a "reportable" release due to the volume of impacted soil and the New Mexico EMNRD OCD was notified.

Third Sampling Event
On March 27, 2020, after additional excavation and the removal of bridge soils beneath the pipeline, a third sampling event was performed. The New Mexico EMNRD OCD was notified of the sampling event, but they were not present during the sampling activities. Composite soil samples S-12 (9'), S-13 (8'), and S-14 (8') were collected from the floor of the excavation. Composite soil sample S-15 (0'-9'), S-16 (0'-8'), S-17 (0'-8'), and S-18 (0'-8') were collected from newly exposed sidewalls of the excavation. Analytical results from composite soil samples S-14 and S-16 indicated New Mexico EMNRD OCD closure criteria TPH exceedances. The excavation was extended to the southwest and deepened. Soils associated with composite soil samples S-14 and S-16 were removed by excavation and transported to the landfarm for disposal/remediation. During the removal of soils associated with S-14, deeper, apparently historic impact was identified on the floor of the excavation.

Fourth Sampling Event
On April 1, 2020, the fourth sampling event was performed at the Site. The New Mexico EMNRD OCD provided approval to proceed with the sampling event but were not present to witness the sampling activities. Composite soil samples S-19 (19'), S-20 (19'), and S-21 (19') were collected from the floor of the excavation. Composite soil samples S-22 (8'-19') and S-23 (8'-19') were collected from the sidewalls of the excavation. Soils associated with composite soil sample S-18 (that did not exhibit closure standard exceedances from the third sampling event) had to be removed to access the deeper, apparently historic impact that had migrated laterally at depths greater than eight (8) feet bgs. These overburden soils associated with composite soil sample S-18 (0'-8') were segregated for reuse as backfill. Composite soil sample S-22 (8'-19') was collected to confirm that the historic impact had been completely removed laterally below the depth represented by soil sample S-18.

Soil associated with composite soil sample S-13 was removed by excavation and transported to the land farm for disposal/remediation

Fifth Sampling Event
On April 2, 2020, after the extension of the excavation to the southwest, a fifth sampling event was performed. The New Mexico EMNRD OCD provided approval to proceed with the sampling event but were not present to witness the sampling activities. Composite soil samples S-24 (19') and S-25 (19') were collected from the floor of the excavation. Composite soil sample S-26 (8'-19') was collected from the sidewall of the excavation. Soils associated with composite soil sample S-17 (that did not exhibit closure standard exceedances from the third sampling event) had to be removed to access the deeper, apparently historic impact that had migrated laterally at depths greater than eight (8) feet bgs. These overburden soils associated with composite soil sample S-17 (0'-8') were segregated for reuse as backfill. Composite soil sample S-26 (8'-19') was collected to confirm that the historic impact had been completely removed laterally below the depth represented by soil sample S-17.

Sixth Sampling Event
After additional excavation, a sixth sampling event was performed on April 3, 2020. The New Mexico EMNRD OCD provided approval to proceed with the sampling event but were not present to witness the sampling activities. Composite soil samples S-27 (19') and S-28 (19') were collected from the floor of the excavation. Composite soil samples S-29 (0'-8'), S-30 (8'-19'), S-31 (0'-8'), and S-32 (8'-19') were collected from the walls of the extended excavation to replace composite soil sample S-16 which exhibited a closure criteria exceedance and was removed by excavation. Additional sidewall composite soil samples included S-33 (9'-19'), S-34 (9'-19'), S-36 (8'-19'), and S-37 (8'-19'). Soils associated with composite soil samples S-15 and S-17 (that did not exhibit closure standard exceedances from the third sampling event) had to be removed to access the deeper, apparently historic impact that had migrated laterally at depths greater than

eight (8) to nine (9) feet bgs. These overburden soils associated with composite soil samples S-15 (0'-9') and S-17 (0'-8') were segregated for reuse as backfill. Composite soil samples S-33 (9'-19'), S-36 (8'-19'), and S-37 (8'-19') were collected to confirm that the historic impact had been completely removed laterally below the depths represented by soil samples S-15 and S-17. Composite soil sample S-35 (9'-19') was collected from the sidewall that was created beneath the pipeline while remediating the historic impact south and west of the current point of release.

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

5.0 SOIL LABORATORY ANALYTICAL METHODS

The composite soil samples were analyzed for benzene, toluene, ethylbenzene and total xylenes (BTEX) using Environmental Protection Agency (EPA) SW-846 Method #8021/8260, 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.

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

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 representing soils remaining at the Site (S-3, S-4, S-6 through S-9, S-12, S-15, and S-17 through S-37) to the applicable New Mexico EMNRD OCD closure criteria. The soils associated with composite soil samples S-1, S-2, S-5, S-10, S-11, S-13, S-14, S-16, and SP-1 were removed from the Site and transported to Envirotech landfarm for disposal/remediation and are not included in the following discussion.

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

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

- The laboratory analytical results for composite soil samples S-4, S-12, and S-17 indicate combined TPH GRO/DRO/MRO concentrations ranging from 11 mg/kg (S-12) to 85 mg/kg (S-4), which do not exceed the applicable New Mexico EMNRD OCD closure criteria of 100 mg/kg. The laboratory analytical results for the remaining composite soil samples collected from soils remaining at the Site indicate combined TPH GRO/DRO/MRO is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the applicable New Mexico EMNRD OCD closure criteria of 100 mg/kg.

- The laboratory analytical results for composite soil samples S-3, S-4, S-7, S-17, and S-22 indicate chloride concentrations ranging from 68 mg/kg (S-17) to 220 mg/kg (S-3), which do not exceed the applicable New Mexico EMNRD OCD closure criteria of 600 mg/kg. The laboratory analytical results for the remaining composite soil samples collected from soils remaining at the Site indicate

chloride is not present at concentrations greater than the laboratory PQLs/RLs, which are less than the applicable New Mexico EMNRD OCD closure criteria of 600 mg/kg.

The laboratory analytical results are summarized in **Table 1** (**Appendix E**).

7.0 RECLAMATION AND REVEGETATION

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

8.0 FINDINGS AND RECOMMENDATION

- A total of 37 composite soil samples were collected from the excavation. Additionally, one (1) composite soil sample was collected from stockpiled soil. Based on laboratory analytical results, the soils remaining at the Site do not exhibit COC concentrations above the applicable New Mexico EMNRD OCD closure criteria.

- A total of approximately 768 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 imported fill and segregated, laboratory-confirmed overburden soils, and 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 recommendation are based solely upon data available to Ensolum at the time of these services.

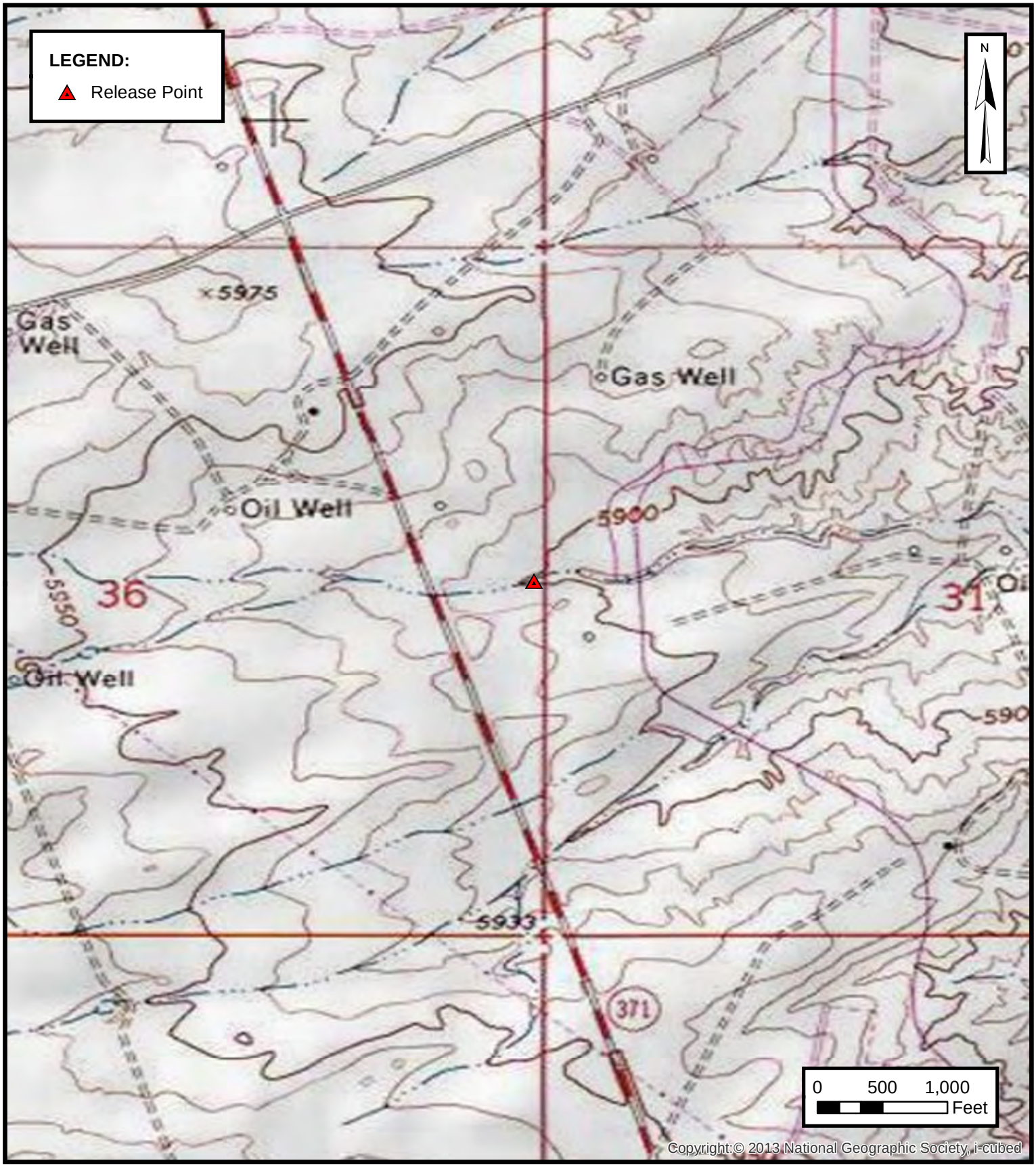
9.3 Reliance

This report has been prepared for the exclusive use of Enterprise, 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 of Enterprise and Ensolum. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the Closure Report, and Ensolum's Master Services Agreement. The limitation of liability defined in the agreement is the aggregate limit of Ensolum's liability to the client.

ENSOLUM

APPENDIX A

Figures



ENSOLUM
Environmental & Hydrogeologic Consultants

TOPOGRAPHIC MAP

ENTERPRISE FIELD SERVICES, LLC
LATERAL 10E-1 PIPELINE RELEASE
NE ¼, S36 T27N R13W, San Juan County, New Mexico
36.531891° N, 108.161737° W

PROJECT NUMBER: 05A1226097

FIGURE
1

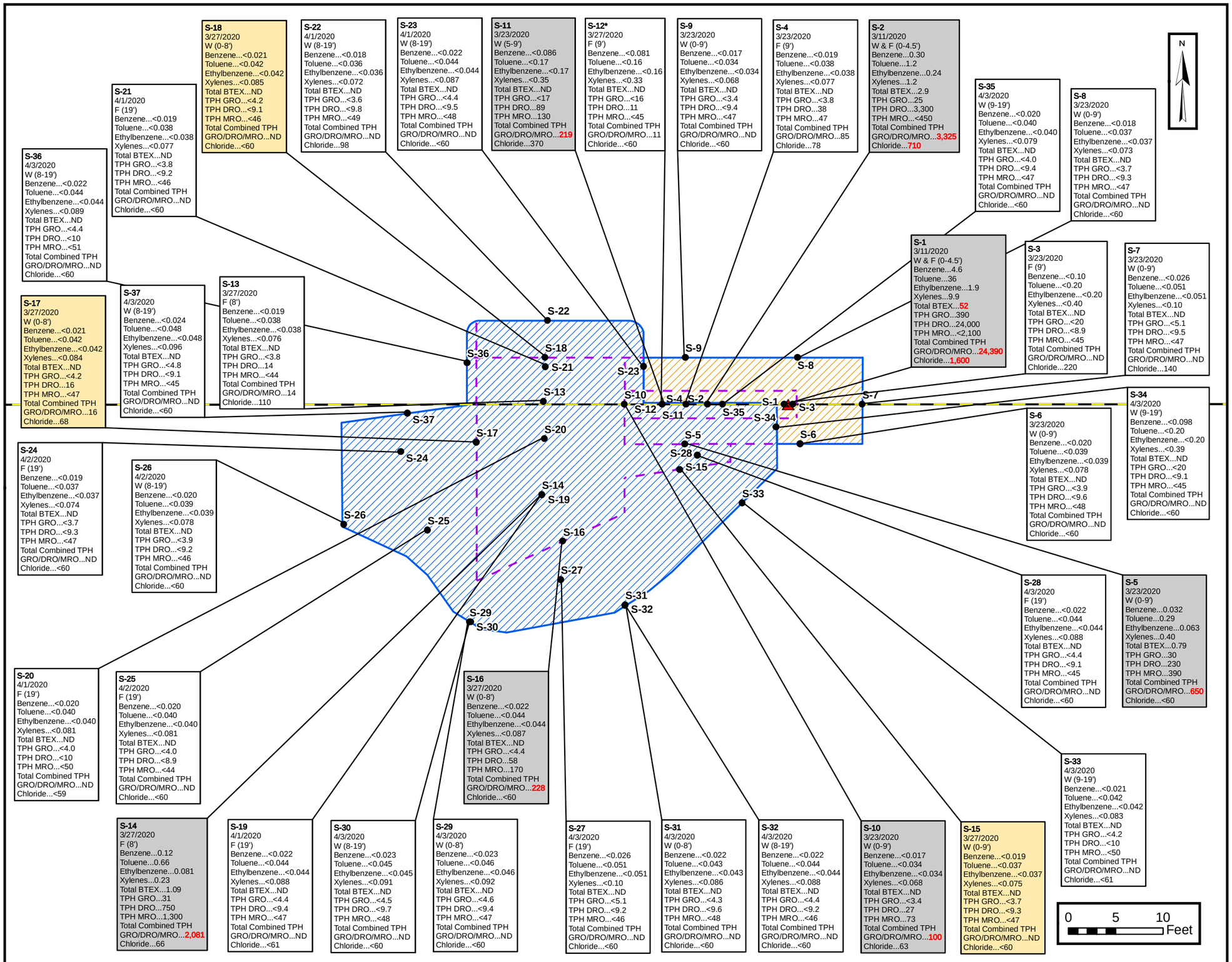
ENSOLUM
Environmental & Hydrogeologic Consultants

SITE VICINITY MAP

ENTERPRISE FIELD SERVICES, LLC
LATERAL 10E-1 PIPELINE RELEASE
NE ¼, S36 T27N R13W, San Juan County, New Mexico
36.531891° N, 108.161737° W

PROJECT NUMBER: 05A1226097

FIGURE
2



LEGEND:

- Release Point
- Composite Soil Sample Location
- Extent of Excavation (9' bgs)
- Extent of Excavation (19' bgs)
- Former Sidewall
- Apptoximate Pipeline Location

NOTE:

W - Wall Sample
E - Floor Sample

All Concentrations Are Listed in mg/Kg.

Concentrations in **Red** Exceed the Applicable NM EMNRD OCD Closure Criteria.

Analytical Callouts in Gray Denote Sampling Location Removed by Excavation.

* - Partially removed by excavation

Analytical Callouts in Tan Denote Samples Representing Overburden Soil that was Removed to Access Underlying Impact.

All Depths Are Listed in Feet BGS.

ENSOLUM
Environmental & Hydrogeologic Consultants

SITE MAP

ENTERPRISE FIELD SERVICES
LATERAL 10E-1 PIPELINE RELEASE

NE ¼, S36 T27N R13W, San Juan County, New Mexico
36.531891° N, 108.161737° W

FIGURE

3

PROJECT NUMBER: 05A1226097

ENSOLUM

APPENDIX B

Siting Documentation

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

No records found.

PLSS Search:

Section(s): 36, 25, 26, 35 **Township:** 27N **Range:** 13W

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

No records found.

PLSS Search:

Section(s): 30, 31 **Township:** 27N **Range:** 12W

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

No records found.

PLSS Search:

Section(s): 6 **Township:** 26N **Range:** 12W

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
SJ 00802	SJ	SJ	2	1	1	02	26N	13W	165960	4043745	1774		

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

Record Count: 1

PLSS Search:

Section(s): 1, 2 **Township:** 26N **Range:** 13W

226045

READ INSTRUCTIONS ON BACK

Revised March 1979

APPLICATION TO APPROPRIATE UNDERGROUND WATERS IN ACCORDANCE WITH SECTION 72-12-1 NEW MEXICO STATUTES

1. Name and Address of Applicant:

File No. SJ-802-T

New Mexico State Highways Dept
P.O. Box 1149, c/o Jack Victor, R/W
Santa Fe, New Mexico 87503

2. Describe well location under one of the following subheadings:

a. NE ¼ NW ¼ NW ¼ of Sec. 2 Twp. 26N. Rge. 13W. N.M.P.M., in San Juan County.

b. Tract No. _____ of Map No. _____ of the _____

c. Lot No. _____ of Block No. _____ of the _____ Subdivision, recorded in _____ County.

d. X = 237080.161 feet, Y = 1995476.014 feet, N.M. Coordinate System Western Zone in the Navajo Indian Lands (San Juan Cty) Grant.

e. Give street address or route and box No. of property upon which well is to be located, or location by direction and distance from known landmarks 1,000 ft east of center line on US 666 at Station 1414± on Project FLP 12-20.

3. Approximate depth (if known) Unknwn feet; outside diameter of casing _____ inches.

Name of driller (if known) Unknwn

4. Use of water (check appropriate box or boxes):

- ☐ One household, non-commercial trees, lawn and garden not to exceed 1 acre.
- ☐ Livestock watering.
- ☐ More than one household, non-commercial trees, lawns and gardens not to exceed a total of 1 acre.
- ☒ Drinking and sanitary purposes and the irrigation of non-commercial trees, shrubs and lawns in conjunction with a commercial operation.
- ☐ Prospecting, mining or drilling operations to discover or develop natural resources.
- ☐ Construction of public works, highways and roads.

If any of the last four were marked, give name and nature of business under Remarks. (Item 5)

STATE ENGINEER
SANTA FE, N.M.
'80 OCT 20 PM 3 56

5. Remarks: This well is identified as SJ-969 reference SJ-802. The location is where Brown Construction will have their construction camp setup for this project.

I, John A. Victor, Agent, affirm that the foregoing statements are true to the best of my knowledge and belief and that development shall not commence until approval of the permit has been obtained.

New Mexico State Highway Dept. Applicant

By: John A. Victor Date: 20 Oct 1980

ACTION OF STATE ENGINEER

This application is approved for the use indicated, subject to all general conditions and to the specific conditions numbered 3; 5-a on the reverse side hereof. This permit will automatically expire unless this well is drilled or driven and the well record filed on or before October 31, 1981.

S.E. Reynolds, State Engineer

By: Bob Rogers
Bob Rogers, Engineer

Date: 10/20/80 Water Rights Bureau

File No. SJ-802-T

GENERAL CONDITIONS OF APPROVAL

A. The maximum amount of water that may be appropriated under this permit is 3 acre feet in any calendar year.

B The well shall be drilled only by a driller licensed in the State of New Mexico in accordance with Section 72-12-12 New Mexico Statutes Annotated. A licensed driller shall not be required for the construction of a driven well; provided, that the casing shall not exceed two and three-eighths (2 3/8) inches outside diameter (Section 72-12-12).

C. Driller's log must be filed with the State Engineer within 10 days after the well is drilled or driven. Failure to file the log within that time shall result in automatic cancellation of the permit. Log forms will be provided by the State Engineer upon request.

D. The casing shall not exceed 7 inches outside diameter except under specific conditions in which reasons satisfactory to the State Engineer are shown.

E. If the well under this permit is used at any time to serve more than one household, livestock in a commercial feed lot operation, or any other commercial purpose, the permittee shall comply with Specific Condition of Approval number 5(b).

F. In the event this well is combined with other wells permitted under Section 72-12-1 New Mexico Statutes Annotated, the total outdoor use shall not exceed the irrigation of one acre of non-commercial trees, lawn, and garden, or the equivalent outside consumptive use, and the total appropriation for household and outdoor use from the entire water distribution system shall not exceed 3 acre feet per annum.

SPECIFIC CONDITIONS OF APPROVAL

(Applicable only when so indicated on the other side of this form.)

1. Depth of the well shall not exceed the thickness of the (a) the valley fill or (b) Ogallala formation.
2. The well shall be constructed to artesian well specifications and the State Engineer shall be notified before casing is landed or cemented.
3. Appropriation and use of water under this permit shall not exceed a period of one year from the date of approval.
4. Use shall be limited to household, non-commercial trees, lawn and garden not to exceed one acre and/or stock use.
5. A totalizing meter shall be installed before the first branch of the discharge line from the well and the installation shall be acceptable to the State Engineer; the Engineer shall be advised of the make, model, serial number, date of installation, and initial reading of the meter prior to appropriation of water and pumping records shall be submitted to the District Supervisor; (a) for each calendar month, on or before the 30th day of the following month (b) on or before the 10th of January, April, July and October of each year for the three preceding calendar months (c) for each calendar year on or before the 30th day of January of the following year.
6. The well shall be plugged upon completion of the permitted use and a plugging report shall be filed with the State Engineer within 10 days.
7. Final approval for the use of the well shall be dependent upon a leakage test made by the State Engineer.
8. Use shall be limited strictly to household and/or drinking and sanitary purposes; water shall be conveyed from the well to the place of use in closed conduit and the effluent returned to the underground so that it will not appear on the surface. No irrigation of lawns, gardens, trees or use in any type of pool or pond is authorized under this permit.

INSTRUCTIONS

The application shall be made in the name of the actual user of the well for the purpose specified in the application.

The application shall be executed in triplicate and forwarded with a $1.00 filing fee to the State Engineer.

A separate application must be filed for each well to be drilled or used.

If well to be used is an existing well, an explanation (and file number, if possible) should be given under Remarks. (Item 5.)

Applications for appropriation, well logs and request for information in the following basins should be addressed to the State Engineer at the location indicated:

Bluewater, Estancia, Rio Grande, Sandia and San Juan Basins
District No. 1, 2340 Menaul NE, Room 206, Albuquerque, New Mexico 87107

Capitan, Carlsbad, Fort Sumner, Hondo, Jal, Lea, Penasco, Portales, Roswell, and Upper Pecos Basins
District No. 2, Box 1717, Roswell, New Mexico 88201

Animas, Gila-San Francisco, Hot Springs, Las Animas Creek, Lordsburg, Mimbres, Nutt-Hockett, Playas, San Simon, and Virden Valley Basins
District No. 3, Box 844, Deming, New Mexico 88030

Canadian River Basin
State Engineer, State Capitol, Bataan Memorial Bldg., Santa Fe, New Mexico 87503

No. 89920

STATE ENGINEER
SANTA FE, NEW MEXICO

OFFICIAL RECEIPT

CONTROL NUMBER 98139

DATE October 20, 1980

FILE NO	AM'T REC'D	GW	SW	TOTAL
	CASH	X		
	CHECK			

BANK
Two Dollars Cash****

FOR PAYMENT AS INDICATED BELOW
1 ~~xxxxxxx~~ permit (Drinking & Sanitary)
1 permit (Construction)

NAME AND ADDRESS
~~TM~~ State Highway Dept.
Attn: Victor, Jack R/W
P. O. Box 1149

Santa Fe, NM 87503'

FOR USE BY ADMINISTRATIVE DIVISION

FOR USE BY SANTA FE OFFICE ONLY
WATER RIGHTS

DATE	EARNED GW	EARNED SW	REFUND	TRANSCRIPT EXP.	BALANCE

TRN 2-00-50
Revised June 1972

STATE ENGINEER OFFICE
WELL RECORD

'78 OCT 25 AM 10 58

STATE ENGINEER OFFICE
SANTA FE, N.M. 87501

Section 1. GENERAL INFORMATION

(A) Owner of well Exxon Minerals Co. USA Owner's Well No. HB-10-2
Street or Post Office Address 5101 Copper Avenue, NE
City and State Albuquerque NM 87108

Well was drilled under Permit No. SJ-802 and is located in the:

a. ___ ¼ NE ¼ NW ¼ NW ¼ of Section 2 Township 26N Range 18W N.M.P.M.

b. Tract No. ___ of Map No. ___ of the ___

c. Lot No. ___ of Block No. ___ of the ___
Subdivision, recorded in ___ County.

d. X= ___ feet, Y= ___ feet, N.M. Coordinate System ___ Zone in the ___ Grant.

(B) Drilling Contractor Stewart Brothers Drilling Co. License No. ___

Address P.O. Box 2067, Grants NM 87020

Drilling Began 9/4/78 Completed 9/5/78 Type tools Rotary Size of hole 5 in.

Elevation of land surface or ___ at well is 5498 ft. Total depth of well 1774 ft.

Completed well is ☐ shallow ☒ artesian. Depth to water upon completion of well flowing ft.

Section 2. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	Depth in Feet To	Thickness in Feet	Description of Water-Bearing Formation	Estimated Yield (gallons per minute)
911	1132	221	Lt. gray fine to medium grained sand	15
1313	1619	306	Lt. gray fine to medium grained sand	85

Section 3. RECORD OF CASING

Diameter (inches)	Pounds per foot	Threads per in.	Depth in Feet Top	Depth in Feet Bottom	Length (feet)	Type of Shoe	Perforations From	Perforations To
2	2	8	0	1323	1323	none	Open @ 1323	

Section 4. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	Depth in Feet To	Hole Diameter	Sacks of Mud	Cubic Feet of Cement	Method of Placement
0	1323	5"	—	140.4	Pumped from surface

STATE ENGINEER OFFICE
DISTRICT I
ALBUQUERQUE, N. MEX.
SEP 22 AM 8 56

Section 5. PLUGGING RECORD

Plugging Contractor ___
Address ___
Plugging Method ___
Date Well Plugged ___
Plugging approved by:
___
State Engineer Representative

No.	Depth in Feet Top	Depth in Feet Bottom	Cubic Feet of Cement
1			
2			
3			
4			

FOR USE OF STATE ENGINEER ONLY

Date Received 9-22-78

Quad ___ FWL ___ FSL ___

File No. SJ-802 Use stk Location No. 26N.18W.2 112 (S.J.)

Section 6. LOG OF HOLE

Depth in Feet From	Depth in Feet To	Thickness in Feet	Color and Type of Material Encountered
0	100	100	Surface sand and weathered Mancos shale
100	340	240	fine lt gray and yellow sand
340	911	571	dark gray and black shale
911	1132	221	lt. gray fine to medium grained sand ± organic shale
1132	1313	181	green and red shale w/ minor sand
1313	1619	306	lt. gray fine to medium grained sand
1619	1774	155	lt. gray and pink fine grained sand.
	T.D.		

Section 7. REMARKS AND ADDITIONAL INFORMATION

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

Ron Smith
Driller

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the appropriate district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1(a), and Section 5 need be completed.

TRN 226440

Revised June 1972

STATE ENGINEER OFFICE

WELL RECORD

'79 OCT 16 PM 1 11

STATE ENGINEER OFFICE
SANTA FE, N.M. 87501

Section 1. GENERAL INFORMATION

(A) Owner of well Wilford Pete Owner's Well No. _____
Street or Post Office Address Box 234
City and State Bloomfield, New Mex.

Well was drilled under Permit No. SJ-1058 and is located in the:

a. _____ ¼ _____ ¼ SW ¼ NW ¼ of Section 3 Township 26N Range 12W N.M.P.M.

b. Tract No. _____ of Map No. _____ of the _____

c. Lot No. _____ of Block No. _____ of the _____
Subdivision, recorded in San Juan County.

d. X= _____ feet, Y= _____ feet, N.M. Coordinate System _____ Zone in the _____ Grant.

(B) Drilling Contractor W.J. Hood License No. WD-717

Address Flora Vista, New Mex.

Drilling Began 9/18/79 Completed 9/28/79 Type tools Cable Size of hole 7 in.

Elevation of land surface or _____ at well is 5550 ft. Total depth of well 254 ft.

Completed well is ☒ shallow ☐ artesian. Depth to water upon completion of well 220 ft.

Section 2. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	Depth in Feet To	Thickness in Feet	Description of Water-Bearing Formation	Estimated Yield (gallons per minute)
240	254	14	Blue Water Bearing Sand	5
		Gravel packed		

Section 3. RECORD OF CASING

Diameter (inches)	Pounds per foot	Threads per in.	Depth in Feet Top	Depth in Feet Bottom	Length (feet)	Type of Shoe	Perforations From	Perforations To
5 in.	Class 200 P.V.C.		0	254	254		234	254

Section 4. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	Depth in Feet To	Hole Diameter	Sacks of Mud	Cubic Feet of Cement	Method of Placement

Section 5. PLUGGING RECORD

Plugging Contractor _____
Address _____
Plugging Method _____
Date Well Plugged _____
Plugging approved by:
_____
State Engineer Representative

No.	Depth in Feet Top	Depth in Feet Bottom	Cubic Feet of Cement
1			
2			
3			
4			

FOR USE OF STATE ENGINEER ONLY

Date Received 10/16/79

Quad _____ FWL _____ FSL _____

File No. SJ-1058 Use Dom. &Stk. Location No. 26N.12W.3 130

jts

San Juan County

Section 6. LOG OF HOLE

Depth in Feet From	Depth in Feet To	Thickness in Feet	Color and Type of Material Encountered
0	10	10	Over Burden
10	40	30	Sand Stone
40	110	70	Blue Soft Shale
110	155	45	Blue Sandy Shale
155	180	25	Hard Wax Shale
180	240	60	Sandy Shale
240	254	14	Blue Water Bearing Sand

Section 7. REMARKS AND ADDITIONAL INFORMATION

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

W. J. Hood
Driller

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the appropriate district office of the State Engineer. All sections, e[illegible] Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1(a) and Section 5 need be completed.

ENSOLUM

APPENDIX C

Executed C-138 Solid Waste Acceptance Form

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

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

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

97057 - 1105

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

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

Invoicing Information
PayKeyRB21200
AFE: Pending

2. Originating Site:
Lateral 10E-1 Pipeline

3. Location of Material (Street Address, City, State or ULSTR):
Section 36 T27N R13W; 36.531891 -108.161737

March/April 2020

4. Source and Description of Waste:
Source: Hydrocarbon Impacted soil associated remediation activities associated with a natural gas pipeline leak.
Description: Hydrocarbon Impacted soil associated remediation activities associated with a natural gas pipeline leak..
Estimated Volume 50 yd³ / bbls Known Volume (to be entered by the operator at the end of the haul) 768 yd³ bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

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

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

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

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

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long, 3-19-2020, representative for Enterprise Products Operating authorizes Envirotech, Inc. to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

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

5. Transporter: TBD

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: **Envirotech, Inc. Soil Remediation Facility * Permit #: NM01-0011**
Address of Facility: **Hill Top, 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: Enviro Manager DATE: 3/23/2020

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

ENSOLUM

APPENDIX D

Photographic Documentation

SITE PHOTOGRAPHS

Enterprise Field Services, LLC
Closure Report
Lateral 10E-1Pipeline Release
Ensolum Project No. 05A1226097

ENSOLUM

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

SITE PHOTOGRAPHS

Enterprise Field Services, LLC
Closure Report
Lateral 10E-1Pipeline Release
Ensolum Project No. 05A1226097

ENSOLUM

Photograph 4 Photograph Description: View of in-process excavation activities.	
Photograph 5 Photograph Description: View of in-process excavation activities.	
Photograph 6 Photograph Description: View of in-process excavation activities.	

SITE PHOTOGRAPHS

Enterprise Field Services, LLC
Closure Report
Lateral 10E-1Pipeline Release
Ensolum Project No. 05A1226097

ENSOLUM

Photograph 7 Photograph Description: View of in-process excavation activities.	
Photograph 8 Photograph Description: View of the final pipeline excavation.	
Photograph 9 Photograph Description: View of the final pipeline excavation.	

SITE PHOTOGRAPHS

Photograph 10 Photograph Description: View of the final excavation after initial restoration.	
Photograph 11 Photograph Description: View of the final excavation after initial restoration.	

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APPENDIX E

Table 1 – Soil Analytical Summary

ENSOLUM

TABLE 1
Lateral 10E-1 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 (GRO/DRO/MRO) (mg/kg)	Chloride (mg/kg)
New Mexico Energy, Mineral & Natural Resources Department Oil Conservation Division Closure Criteria				**10**	**NE**	**NE**	**NE**	**50**				**100**	**600**
Composite Soil Samples Removed by Excavation and Tranported to the Landfarm for Disoposal/Remediation													
S-1	3.11.20	C	0 to 4.5	4.6	36	1.9	9.9	**52**	390	24,000	<2,100	**24,390**	**1,600**
S-2	3.11.20	C	0 to 4.5	0.30	1.2	0.24	1.2	2.9	25	3,300	<450	**3,325**	**710**
SP-1	3.11.20	C	Stockpile	0.54	2.8	0.44	2.3	6.1	48	760	250	**1,058**	**950**
S-5	3.23.20	C	0 to 9	0.032	0.29	0.063	0.40	0.79	30	230	390	**650**	<60
S-10	3.23.20	C	0 to 9	<0.017	<0.034	<0.034	<0.068	ND	<3.4	27	73	**100**	63
S-11	3.23.20	C	5 to 9	<0.086	<0.17	<0.17	<0.35	ND	<17	89	130	**219**	370
S-13	3.27.20	C	8	<0.019	<0.038	<0.038	<0.076	ND	<3.8	14	<44	14	110
S-14	3.27.20	C	8	0.12	0.66	0.081	0.23	1.09	31	750	1,300	**2,081**	66
S-16	3.27.20	C	0 to 8	<0.022	<0.044	<0.044	<0.087	ND	<4.4	58	170	**228**	<60
Composite Soil Samples Representing Soil that was Removed and Reused as Backfill													
S-15	3.27.20	C	0 to 9	<0.019	<0.037	<0.037	<0.075	ND	<3.7	<9.3	<47	ND	<60
S-17	3.27.20	C	0 to 8	<0.021	<0.042	<0.042	<0.084	ND	<4.2	16	<47	16	68
S-18	3.27.20	C	0 to 8	<0.021	<0.042	<0.042	<0.085	ND	<4.2	<9.1	<46	ND	<60
Excavation Composite Soil Samples													
S-3	3.23.20	C	9	<0.10	<0.20	<0.20	<0.40	ND	<20	<8.9	<45	ND	220
S-4	3.23.20	C	9	<0.019	<0.038	<0.038	<0.077	ND	<3.8	38	47	85	78
S-6	3.23.20	C	0 to 9	<0.020	<0.039	<0.039	<0.078	ND	<3.9	<9.6	<48	ND	<60
S-7	3.23.20	C	0 to 9	<0.026	<0.051	<0.051	<0.10	ND	<5.1	<9.5	<47	ND	140
S-8	3.23.20	C	0 to 9	<0.018	<0.037	<0.037	<0.073	ND	<3.7	<9.3	<47	ND	<60
S-9	3.23.20	C	0 to 9	<0.017	<0.034	<0.034	<0.068	ND	<3.4	<9.4	<47	ND	<60
S-12*	3.27.20	C	9	<0.081	<0.16	<0.16	<0.33	ND	<16	11	<45	11	<60
S-19	4.01.20	C	19	<0.022	<0.044	<0.044	<0.088	ND	<4.4	<9.4	<47	ND	<61
S-20	4.01.20	C	19	<0.020	<0.040	<0.040	<0.081	ND	<4.0	<10	<50	ND	<59
S-21	4.01.20	C	19	<0.019	<0.038	<0.038	<0.077	ND	<3.8	<9.2	<46	ND	<60
S-22	4.01.20	C	8 to 19	<0.018	<0.036	<0.036	<0.072	ND	<3.6	<9.8	<49	ND	98
S-23	4.01.20	C	8 to 19	<0.022	<0.044	<0.044	<0.087	ND	<4.4	<9.5	<48	ND	<60
S-24	4.02.20	C	19	<0.019	<0.037	<0.037	<0.074	ND	<3.7	<9.3	<47	ND	<60
S-25	4.02.20	C	19	<0.020	<0.040	<0.040	<0.081	ND	<4.0	<8.9	<44	ND	<60
S-26	4.02.20	C	8 to 19	<0.020	<0.039	<0.039	<0.078	ND	<3.9	<9.2	<46	ND	<60
S-27	4.03.20	C	19	<0.026	<0.051	<0.051	<0.10	ND	<5.1	<9.2	<46	ND	<60

ENSOLUM

TABLE 1
Lateral 10E-1 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 (GRO/DRO/MRO) (mg/kg)	Chloride (mg/kg)
New Mexico Energy, Mineral & Natural Resources Department Oil Conservation Division Closure Criteria				**10**	**NE**	**NE**	**NE**	**50**				**100**	**600**
S-28	4.03.20	C	19	<0.022	<0.044	<0.044	<0.088	ND	<4.4	<9.1	<45	ND	<60
S-29	4.03.20	C	0 to 8	<0.023	<0.046	<0.046	<0.092	ND	<4.6	<9.4	<47	ND	<60
S-30	4.03.20	C	8 to 19	<0.023	<0.045	<0.045	<0.091	ND	<4.5	<9.7	<48	ND	<60
S-31	4.03.20	C	0 to 8	<0.022	<0.043	<0.043	<0.086	ND	<4.3	<9.6	<48	ND	<60
S-32	4.03.20	C	8 to 19	<0.022	<0.044	<0.044	<0.088	ND	<4.4	<9.2	<46	ND	<60
S-33	4.03.20	C	9 to 19	<0.021	<0.042	<0.042	<0.083	ND	<4.2	<10	<50	ND	<61
S-34	4.03.20	C	9 to 19	<0.098	<0.20	<0.20	<0.39	ND	<20	<9.1	<45	ND	<60
S-35	4.03.20	C	9 to 19	<0.020	<0.040	<0.040	<0.079	ND	<4.0	<9.4	<47	ND	<60
S-36	4.03.20	C	8 to 19	<0.022	<0.044	<0.044	<0.089	ND	<4.4	<10	<51	ND	<60
S-37	4.03.20	C	8 to 19	<0.024	<0.048	<0.048	<0.096	ND	<4.8	<9.1	<45	ND	<60

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

* = Partially removed by excavation

ND = Not Detected above the Practical Quantitation Limits or Reporting Limits

NA = Not Analyzed

NE = Not Established

mg/kg = milligram per kilogram

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes

TPH = Total Petroleum Hydrocarbon

GRO = Gasoline Range Organics

DRO = Diesel Range Organics

MRO = Motor Oil/Lube Oil Range Organics

ENSOLUM

APPENDIX F

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

March 13, 2020

Kyle Summers

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

RE: Lateral 10E-1 OrderNo.: 2003535

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 3 sample(s) on 3/12/2020 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 **2003535**
Date Reported: **3/13/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-1
Project: Lateral 10E-1 **Collection Date:** 3/11/2020 10:30:00 AM
Lab ID: 2003535-001 **Matrix:** MEOH (SOIL) **Received Date:** 3/12/2020 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	1600	60		mg/Kg	20	3/12/2020 11:58:14 AM	51058
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	24000	430		mg/Kg	10	3/12/2020 1:38:36 PM	51054
Motor Oil Range Organics (MRO)	ND	2100	D	mg/Kg	10	3/12/2020 1:38:36 PM	51054
Surr: DNOP	0	55.1-146	S	%Rec	10	3/12/2020 1:38:36 PM	51054
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	390	19		mg/Kg	5	3/12/2020 8:32:16 AM	G67183
Surr: BFB	204	66.6-105	S	%Rec	5	3/12/2020 8:32:16 AM	G67183
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	4.6	0.094		mg/Kg	5	3/12/2020 8:32:16 AM	B67183
Toluene	36	0.75		mg/Kg	20	3/12/2020 9:59:59 PM	B67183
Ethylbenzene	1.9	0.19		mg/Kg	5	3/12/2020 8:32:16 AM	B67183
Xylenes, Total	9.9	0.38		mg/Kg	5	3/12/2020 8:32:16 AM	B67183
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	5	3/12/2020 8:32:16 AM	B67183

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 **2003535**
Date Reported: **3/13/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-2
Project: Lateral 10E-1 **Collection Date:** 3/11/2020 10:35:00 AM
Lab ID: 2003535-002 **Matrix:** MEOH (SOIL) **Received Date:** 3/12/2020 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	710	60		mg/Kg	20	3/12/2020 12:10:34 PM	51058
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	3300	90		mg/Kg	5	3/12/2020 11:02:42 AM	51054
Motor Oil Range Organics (MRO)	ND	450	D	mg/Kg	5	3/12/2020 11:02:42 AM	51054
Surr: DNOP	96.8	55.1-146		%Rec	5	3/12/2020 11:02:42 AM	51054
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	25	17		mg/Kg	5	3/12/2020 9:05:27 AM	G67183
Surr: BFB	103	66.6-105		%Rec	5	3/12/2020 9:05:27 AM	G67183
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	0.30	0.084		mg/Kg	5	3/12/2020 9:05:27 AM	B67183
Toluene	1.2	0.17		mg/Kg	5	3/12/2020 9:05:27 AM	B67183
Ethylbenzene	0.24	0.17		mg/Kg	5	3/12/2020 9:05:27 AM	B67183
Xylenes, Total	1.2	0.34		mg/Kg	5	3/12/2020 9:05:27 AM	B67183
Surr: 4-Bromofluorobenzene	91.2	80-120		%Rec	5	3/12/2020 9:05:27 AM	B67183

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 **2003535**
Date Reported: **3/13/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** SP-1
Project: Lateral 10E-1 **Collection Date:** 3/11/2020 10:40:00 AM
Lab ID: 2003535-003 **Matrix:** MEOH (SOIL) **Received Date:** 3/12/2020 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	950	60		mg/Kg	20	3/12/2020 12:22:54 PM	51058
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	760	45		mg/Kg	5	3/12/2020 11:01:45 AM	51054
Motor Oil Range Organics (MRO)	250	230		mg/Kg	5	3/12/2020 11:01:45 AM	51054
Surr: DNOP	92.4	55.1-146		%Rec	5	3/12/2020 11:01:45 AM	51054
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	48	19		mg/Kg	5	3/12/2020 9:29:05 AM	G67183
Surr: BFB	113	66.6-105	S	%Rec	5	3/12/2020 9:29:05 AM	G67183
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	0.54	0.094		mg/Kg	5	3/12/2020 9:29:05 AM	B67183
Toluene	2.8	0.19		mg/Kg	5	3/12/2020 9:29:05 AM	B67183
Ethylbenzene	0.44	0.19		mg/Kg	5	3/12/2020 9:29:05 AM	B67183
Xylenes, Total	2.3	0.38		mg/Kg	5	3/12/2020 9:29:05 AM	B67183
Surr: 4-Bromofluorobenzene	92.5	80-120		%Rec	5	3/12/2020 9:29:05 AM	B67183

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#: **2003535**

13-Mar-20

Client: ENSOLUM

Project: Lateral 10E-1

Sample ID: **MB-51058**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **51058**	RunNo: **67231**							
Prep Date: **3/12/2020**	Analysis Date: **3/12/2020**	SeqNo: **2317707**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-51058**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **51058**	RunNo: **67231**							
Prep Date: **3/12/2020**	Analysis Date: **3/12/2020**	SeqNo: **2317708**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.3	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#: **2003535**

13-Mar-20

Client: ENSOLUM

Project: Lateral 10E-1

Sample ID: **LCS-51054** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **51054** RunNo: **67226**
Prep Date: **3/12/2020** Analysis Date: **3/12/2020** SeqNo: **2316514** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	94.0	70	130			
Surr: DNOP	4.6		5.000		91.3	55.1	146			

Sample ID: **MB-51054** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **51054** RunNo: **67226**
Prep Date: **3/12/2020** Analysis Date: **3/12/2020** SeqNo: **2316515** 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	55.1	146			

Sample ID: **MB-51014** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **51014** RunNo: **67226**
Prep Date: **3/11/2020** Analysis Date: **3/12/2020** SeqNo: **2317399** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		103	55.1	146			

Sample ID: **LCS-51014** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **51014** RunNo: **67226**
Prep Date: **3/11/2020** Analysis Date: **3/12/2020** SeqNo: **2317400** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.4		5.000		89.0	55.1	146			

Sample ID: **LCS-51025** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **51025** RunNo: **67227**
Prep Date: **3/11/2020** Analysis Date: **3/12/2020** SeqNo: **2317675** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.1		5.000		102	55.1	146			

Sample ID: **LCSD-51054** SampType: **LCSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS02** Batch ID: **51054** RunNo: **67227**
Prep Date: **3/12/2020** Analysis Date: **3/12/2020** SeqNo: **2317676** 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	96.2	70	130	2.33	20	
Surr: DNOP	4.2		5.000		83.3	55.1	146	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#: **2003535**
13-Mar-20

Client: ENSOLUM
Project: Lateral 10E-1

Sample ID: **MB-51025** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **51025** RunNo: **67227**
Prep Date: **3/11/2020** Analysis Date: **3/12/2020** SeqNo: **2317677** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		102	55.1	146			

Sample ID: **MB-51054** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **51054** RunNo: **67227**
Prep Date: **3/12/2020** Analysis Date: **3/12/2020** SeqNo: **2317678** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.6		10.00		95.6	55.1	146			

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#: **2003535**

13-Mar-20

Client: ENSOLUM

Project: Lateral 10E-1

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **G67183**	RunNo: **67183**
Prep Date:	Analysis Date: **3/11/2020**	SeqNo: **2314718** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	96.6	80	120			
Surr: BFB	930		1000		93.2	66.6	105			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **G67183**	RunNo: **67183**
Prep Date:	Analysis Date: **3/11/2020**	SeqNo: **2314721** 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	900		1000		89.6	66.6	105			

Sample ID: **mb-51002**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **51002**	RunNo: **67183**
Prep Date: **3/10/2020**	Analysis Date: **3/11/2020**	SeqNo: **2315344** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	880		1000		87.8	66.6	105			

Sample ID: **lcs-51002**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **51002**	RunNo: **67183**
Prep Date: **3/10/2020**	Analysis Date: **3/11/2020**	SeqNo: **2315345** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	930		1000		93.5	66.6	105			

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#: **2003535**

13-Mar-20

Client: ENSOLUM

Project: Lateral 10E-1

Sample ID: **100ng btex lcs** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **B67183** RunNo: **67183**

Prep Date: Analysis Date: **3/11/2020** SeqNo: **2314724** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.025	1.000	0	90.7	80	120			
Toluene	0.93	0.050	1.000	0	93.3	80	120			
Ethylbenzene	0.95	0.050	1.000	0	95.2	80	120			
Xylenes, Total	2.9	0.10	3.000	0	96.6	80	120			
Surr: 4-Bromofluorobenzene	0.92		1.000		92.2	80	120			

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

Client ID: **PBS** Batch ID: **B67183** RunNo: **67183**

Prep Date: Analysis Date: **3/11/2020** SeqNo: **2314727** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.98		1.000		97.9	80	120			

Sample ID: **mb-51002** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **51002** RunNo: **67183**

Prep Date: **3/10/2020** Analysis Date: **3/11/2020** SeqNo: **2315396** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.96		1.000		96.0	80	120			

Sample ID: **LCS-51002** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **51002** RunNo: **67183**

Prep Date: **3/10/2020** Analysis Date: **3/11/2020** SeqNo: **2315397** 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: **2003535** RcptNo: **1**

Received By: **Yazmine Garduno** **3/12/2020 8:30:00 AM**

Completed By: **Erin Melendrez** **3/12/2020 8:49:09 AM**

Reviewed By: LB 3/12/20

Chain of Custody

1. Is Chain of Custody sufficiently 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. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
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: SR 3/12/20

Special Handling (if applicable)

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

Person Notified: Date:

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

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.6	Good	Yes			

Chain-of-Custody Record

Client: Ensolum, LLC

Mailing Address: 606 S. Rio Grande Suite A
Aztec, NM 87410

Phone #:

email or Fax#: Ksummers@ensolum.com

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: SAME DAY
☐ Standard ☒ Rush 100%

Project Name: Lateral 10E-1

Project #: See notes

Project Manager: KSummers

Sampler: RDeechilly

On Ice: ☐ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 5.5 +0.1 = 5.6 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	36+0.1=37 HEAL No. 2003535	BTEX / ~~MTBE~~ / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Chlorides
3/11/20	1030	S	S-1	1x4oz Jar	Cool	-001	X	X									X
3/11/20	1035	S	S-2	1x4oz Jar	Cool	-002	X	X									X
3/11/20	1040	S	SP-1	1x4oz Jar	Cool	-003	X	X									X

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
3/11/20	1538		Chase Ward		3/11/20	1538
3/11/20	1804	Christa Waeton		courier	3/12/20	0930

Remarks: PM - Tom Long (EPROD)
PayKey - RB21200

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

March 26, 2020

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

RE: Lateral 10E-1 OrderNo.: 2003A41

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 9 sample(s) on 3/24/2020 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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2003A41**
Date Reported: **3/26/2020**

CLIENT: ENSOLUM
Client Sample ID: S-3
Project: Lateral 10E-1
Collection Date: 3/23/2020 1:35:00 PM
Lab ID: 2003A41-001 **Matrix:** SOIL **Received Date:** 3/24/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	220	60		mg/Kg	20	3/24/2020 12:03:35 PM	51292
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	20		mg/Kg	5	3/24/2020 11:00:20 AM	GS6753
Surr: BFB	103	70-130		%Rec	5	3/24/2020 11:00:20 AM	GS6753
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	3/24/2020 10:17:41 AM	51283
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	3/24/2020 10:17:41 AM	51283
Surr: DNOP	96.1	55.1-146		%Rec	1	3/24/2020 10:17:41 AM	51283
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**	
Benzene	ND	0.10		mg/Kg	5	3/24/2020 11:00:20 AM	SS6753
Toluene	ND	0.20		mg/Kg	5	3/24/2020 11:00:20 AM	SS6753
Ethylbenzene	ND	0.20		mg/Kg	5	3/24/2020 11:00:20 AM	SS6753
Xylenes, Total	ND	0.40		mg/Kg	5	3/24/2020 11:00:20 AM	SS6753
Surr: 4-Bromofluorobenzene	92.0	70-130		%Rec	5	3/24/2020 11:00:20 AM	SS6753
Surr: Toluene-d8	94.9	70-130		%Rec	5	3/24/2020 11:00:20 AM	SS6753

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 **2003A41**
Date Reported: **3/26/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-4
Project: Lateral 10E-1
Collection Date: 3/23/2020 1:40:00 PM
Lab ID: 2003A41-002 **Matrix:** SOIL **Received Date:** 3/24/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	78	60		mg/Kg	20	3/24/2020 12:15:56 PM	51292
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	3/24/2020 11:59:28 AM	GS6753
Surr: BFB	101	70-130		%Rec	1	3/24/2020 11:59:28 AM	GS6753
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	38	8.8		mg/Kg	1	3/24/2020 10:07:12 AM	51283
Motor Oil Range Organics (MRO)	47	44		mg/Kg	1	3/24/2020 10:07:12 AM	51283
Surr: DNOP	103	55.1-146		%Rec	1	3/24/2020 10:07:12 AM	51283
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**	
Benzene	ND	0.019		mg/Kg	1	3/24/2020 11:59:28 AM	SS6753
Toluene	ND	0.038		mg/Kg	1	3/24/2020 11:59:28 AM	SS6753
Ethylbenzene	ND	0.038		mg/Kg	1	3/24/2020 11:59:28 AM	SS6753
Xylenes, Total	ND	0.077		mg/Kg	1	3/24/2020 11:59:28 AM	SS6753
Surr: 4-Bromofluorobenzene	85.6	70-130		%Rec	1	3/24/2020 11:59:28 AM	SS6753
Surr: Toluene-d8	92.9	70-130		%Rec	1	3/24/2020 11:59:28 AM	SS6753

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 **2003A41**
Date Reported: **3/26/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-5
Project: Lateral 10E-1
Collection Date: 3/23/2020 1:45:00 PM
Lab ID: 2003A41-003 **Matrix:** SOIL **Received Date:** 3/24/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	3/24/2020 12:28:16 PM	51292
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	30	3.8		mg/Kg	1	3/24/2020 12:28:32 PM	GS6753
Surr: BFB	98.2	70-130		%Rec	1	3/24/2020 12:28:32 PM	GS6753
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	230	9.6		mg/Kg	1	3/24/2020 11:20:06 AM	51283
Motor Oil Range Organics (MRO)	390	48		mg/Kg	1	3/24/2020 11:20:06 AM	51283
Surr: DNOP	97.2	55.1-146		%Rec	1	3/24/2020 11:20:06 AM	51283
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**	
Benzene	0.032	0.019		mg/Kg	1	3/24/2020 12:28:32 PM	SS6753
Toluene	0.29	0.038		mg/Kg	1	3/24/2020 12:28:32 PM	SS6753
Ethylbenzene	0.063	0.038		mg/Kg	1	3/24/2020 12:28:32 PM	SS6753
Xylenes, Total	0.40	0.077		mg/Kg	1	3/24/2020 12:28:32 PM	SS6753
Surr: 4-Bromofluorobenzene	78.4	70-130		%Rec	1	3/24/2020 12:28:32 PM	SS6753
Surr: Toluene-d8	96.5	70-130		%Rec	1	3/24/2020 12:28:32 PM	SS6753

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 **2003A41**
Date Reported: **3/26/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-6
Project: Lateral 10E-1
Collection Date: 3/23/2020 1:50:00 PM
Lab ID: 2003A41-004 **Matrix:** SOIL **Received Date:** 3/24/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	3/24/2020 12:40:37 PM	51292
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	3/24/2020 12:58:13 PM	GS6753
Surr: BFB	100	70-130		%Rec	1	3/24/2020 12:58:13 PM	GS6753
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	3/24/2020 10:39:29 AM	51283
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	3/24/2020 10:39:29 AM	51283
Surr: DNOP	94.1	55.1-146		%Rec	1	3/24/2020 10:39:29 AM	51283
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**	
Benzene	ND	0.020		mg/Kg	1	3/24/2020 12:58:13 PM	SS6753
Toluene	ND	0.039		mg/Kg	1	3/24/2020 12:58:13 PM	SS6753
Ethylbenzene	ND	0.039		mg/Kg	1	3/24/2020 12:58:13 PM	SS6753
Xylenes, Total	ND	0.078		mg/Kg	1	3/24/2020 12:58:13 PM	SS6753
Surr: 4-Bromofluorobenzene	82.5	70-130		%Rec	1	3/24/2020 12:58:13 PM	SS6753
Surr: Toluene-d8	97.3	70-130		%Rec	1	3/24/2020 12:58:13 PM	SS6753

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 **2003A41**
Date Reported: **3/26/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-7
Project: Lateral 10E-1 **Collection Date:** 3/23/2020 1:55:00 PM
Lab ID: 2003A41-005 **Matrix:** SOIL **Received Date:** 3/24/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	140	61		mg/Kg	20	3/24/2020 12:52:58 PM	51292
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	5.1		mg/Kg	1	3/24/2020 1:27:34 PM	GS6753
Surr: BFB	95.1	70-130		%Rec	1	3/24/2020 1:27:34 PM	GS6753
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	3/24/2020 11:01:25 AM	51283
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/24/2020 11:01:25 AM	51283
Surr: DNOP	93.6	55.1-146		%Rec	1	3/24/2020 11:01:25 AM	51283
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**	
Benzene	ND	0.026		mg/Kg	1	3/24/2020 1:27:34 PM	SS6753
Toluene	ND	0.051		mg/Kg	1	3/24/2020 1:27:34 PM	SS6753
Ethylbenzene	ND	0.051		mg/Kg	1	3/24/2020 1:27:34 PM	SS6753
Xylenes, Total	ND	0.10		mg/Kg	1	3/24/2020 1:27:34 PM	SS6753
Surr: 4-Bromofluorobenzene	84.5	70-130		%Rec	1	3/24/2020 1:27:34 PM	SS6753
Surr: Toluene-d8	92.8	70-130		%Rec	1	3/24/2020 1:27:34 PM	SS6753

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 **2003A41**
Date Reported: **3/26/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-8
Project: Lateral 10E-1
Collection Date: 3/23/2020 2:00:00 PM
Lab ID: 2003A41-006 **Matrix:** SOIL **Received Date:** 3/24/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	3/24/2020 1:05:19 PM	51292
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	3/24/2020 1:56:37 PM	GS6753
Surr: BFB	102	70-130		%Rec	1	3/24/2020 1:56:37 PM	GS6753
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	3/24/2020 10:10:36 AM	51283
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/24/2020 10:10:36 AM	51283
Surr: DNOP	91.9	55.1-146		%Rec	1	3/24/2020 10:10:36 AM	51283
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**	
Benzene	ND	0.018		mg/Kg	1	3/24/2020 1:56:37 PM	SS6753
Toluene	ND	0.037		mg/Kg	1	3/24/2020 1:56:37 PM	SS6753
Ethylbenzene	ND	0.037		mg/Kg	1	3/24/2020 1:56:37 PM	SS6753
Xylenes, Total	ND	0.073		mg/Kg	1	3/24/2020 1:56:37 PM	SS6753
Surr: 4-Bromofluorobenzene	85.8	70-130		%Rec	1	3/24/2020 1:56:37 PM	SS6753
Surr: Toluene-d8	97.4	70-130		%Rec	1	3/24/2020 1:56:37 PM	SS6753

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 **2003A41**
Date Reported: **3/26/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-9
Project: Lateral 10E-1
Collection Date: 3/23/2020 2:05:00 PM
Lab ID: 2003A41-007 **Matrix:** SOIL **Received Date:** 3/24/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	3/24/2020 1:17:39 PM	51292
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	3/24/2020 2:25:51 PM	GS6753
Surr: BFB	101	70-130		%Rec	1	3/24/2020 2:25:51 PM	GS6753
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	3/24/2020 10:34:22 AM	51283
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/24/2020 10:34:22 AM	51283
Surr: DNOP	93.0	55.1-146		%Rec	1	3/24/2020 10:34:22 AM	51283
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**	
Benzene	ND	0.017		mg/Kg	1	3/24/2020 2:25:51 PM	SS6753
Toluene	ND	0.034		mg/Kg	1	3/24/2020 2:25:51 PM	SS6753
Ethylbenzene	ND	0.034		mg/Kg	1	3/24/2020 2:25:51 PM	SS6753
Xylenes, Total	ND	0.068		mg/Kg	1	3/24/2020 2:25:51 PM	SS6753
Surr: 4-Bromofluorobenzene	87.0	70-130		%Rec	1	3/24/2020 2:25:51 PM	SS6753
Surr: Toluene-d8	92.6	70-130		%Rec	1	3/24/2020 2:25:51 PM	SS6753

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 **2003A41**
Date Reported: **3/26/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-10
Project: Lateral 10E-1
Collection Date: 3/23/2020 2:10:00 PM
Lab ID: 2003A41-008 **Matrix:** SOIL **Received Date:** 3/24/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	63	60		mg/Kg	20	3/24/2020 1:30:01 PM	51292
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	3/24/2020 2:55:26 PM	GS6753
Surr: BFB	104	70-130		%Rec	1	3/24/2020 2:55:26 PM	GS6753
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	27	8.7		mg/Kg	1	3/24/2020 10:58:07 AM	51283
Motor Oil Range Organics (MRO)	73	43		mg/Kg	1	3/24/2020 10:58:07 AM	51283
Surr: DNOP	97.8	55.1-146		%Rec	1	3/24/2020 10:58:07 AM	51283
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**	
Benzene	ND	0.017		mg/Kg	1	3/24/2020 2:55:26 PM	SS6753
Toluene	ND	0.034		mg/Kg	1	3/24/2020 2:55:26 PM	SS6753
Ethylbenzene	ND	0.034		mg/Kg	1	3/24/2020 2:55:26 PM	SS6753
Xylenes, Total	ND	0.068		mg/Kg	1	3/24/2020 2:55:26 PM	SS6753
Surr: 4-Bromofluorobenzene	87.3	70-130		%Rec	1	3/24/2020 2:55:26 PM	SS6753
Surr: Toluene-d8	90.6	70-130		%Rec	1	3/24/2020 2:55:26 PM	SS6753

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 **2003A41**
Date Reported: **3/26/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-11
Project: Lateral 10E-1
Collection Date: 3/23/2020 2:15:00 PM
Lab ID: 2003A41-009 **Matrix:** SOIL **Received Date:** 3/24/2020 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	370	61		mg/Kg	20	3/24/2020 2:07:03 PM	51292
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	17		mg/Kg	5	3/24/2020 11:29:56 AM	GS6753
Surr: BFB	104	70-130		%Rec	5	3/24/2020 11:29:56 AM	GS6753
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	89	8.9		mg/Kg	1	3/24/2020 10:55:47 AM	51283
Motor Oil Range Organics (MRO)	130	44		mg/Kg	1	3/24/2020 10:55:47 AM	51283
Surr: DNOP	99.0	55.1-146		%Rec	1	3/24/2020 10:55:47 AM	51283
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**	
Benzene	ND	0.086		mg/Kg	5	3/24/2020 11:29:56 AM	SS6753
Toluene	ND	0.17		mg/Kg	5	3/24/2020 11:29:56 AM	SS6753
Ethylbenzene	ND	0.17		mg/Kg	5	3/24/2020 11:29:56 AM	SS6753
Xylenes, Total	ND	0.35		mg/Kg	5	3/24/2020 11:29:56 AM	SS6753
Surr: 4-Bromofluorobenzene	87.7	70-130		%Rec	5	3/24/2020 11:29:56 AM	SS6753
Surr: Toluene-d8	93.7	70-130		%Rec	5	3/24/2020 11:29:56 AM	SS6753

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#: **2003A41**

26-Mar-20

Client: ENSOLUM

Project: Lateral 10E-1

Sample ID: **MB-51292**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **51292**	RunNo: **67533**							
Prep Date: **3/24/2020**	Analysis Date: **3/24/2020**	SeqNo: **2331598**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-51292**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **51292**	RunNo: **67533**							
Prep Date: **3/24/2020**	Analysis Date: **3/24/2020**	SeqNo: **2331599**	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#: **2003A41**
26-Mar-20

Client: ENSOLUM
Project: Lateral 10E-1

Sample ID: **MB-51283** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **51283** RunNo: **67512**
Prep Date: **3/24/2020** Analysis Date: **3/24/2020** SeqNo: **2330406** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.6		10.00		95.5	55.1	146			

Sample ID: **LCS-51283** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **51283** RunNo: **67512**
Prep Date: **3/24/2020** Analysis Date: **3/24/2020** SeqNo: **2330509** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	89.2	70	130			
Surr: DNOP	4.3		5.000		86.4	55.1	146			

Sample ID: **2003A41-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-3** Batch ID: **51283** RunNo: **67513**
Prep Date: **3/24/2020** Analysis Date: **3/24/2020** SeqNo: **2331559** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	9.6	47.94	4.360	87.3	47.4	136			
Surr: DNOP	4.3		4.794		90.3	55.1	146			

Sample ID: **2003A41-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-3** Batch ID: **51283** RunNo: **67513**
Prep Date: **3/24/2020** Analysis Date: **3/24/2020** SeqNo: **2331560** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	9.0	44.80	4.360	84.2	47.4	136	9.40	43.4	
Surr: DNOP	4.0		4.480		89.6	55.1	146	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#: **2003A41**
26-Mar-20

Client: ENSOLUM
Project: Lateral 10E-1

Sample ID: **mb1** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS** Batch ID: **SS67534** RunNo: **67534**
Prep Date: Analysis Date: **3/24/2020** SeqNo: **2331524** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.51		0.5000		102	70	130			
Surr: 4-Bromofluorobenzene	0.45		0.5000		89.9	70	130			
Surr: Dibromofluoromethane	0.52		0.5000		105	70	130			
Surr: Toluene-d8	0.50		0.5000		100	70	130			

Sample ID: **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **LCSS** Batch ID: **SS67534** RunNo: **67534**
Prep Date: Analysis Date: **3/24/2020** SeqNo: **2331525** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	101	70	130			
Toluene	0.89	0.050	1.000	0	89.4	70	130			
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		105	70	130			
Surr: 4-Bromofluorobenzene	0.43		0.5000		85.8	70	130			
Surr: Dibromofluoromethane	0.54		0.5000		108	70	130			
Surr: Toluene-d8	0.45		0.5000		89.6	70	130			

Sample ID: **2003a41-001ams** SampType: **MS** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **S-3** Batch ID: **SS67534** RunNo: **67534**
Prep Date: Analysis Date: **3/24/2020** SeqNo: **2331526** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.020	0.7987	0	108	70	130			
Toluene	0.76	0.040	0.7987	0.02488	91.4	70	130			
Surr: 1,2-Dichloroethane-d4	0.42		0.3994		106	70	130			
Surr: 4-Bromofluorobenzene	0.37		0.3994		93.1	70	130			
Surr: Dibromofluoromethane	0.42		0.3994		106	70	130			
Surr: Toluene-d8	0.36		0.3994		89.2	70	130			

Sample ID: **2003a41-001amsd** SampType: **MSD** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **S-3** Batch ID: **SS67534** RunNo: **67534**
Prep Date: Analysis Date: **3/24/2020** SeqNo: **2331527** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.020	0.7987	0	105	70	130	2.95	20	
Toluene	0.71	0.040	0.7987	0.02488	85.5	70	130	6.47	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
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#: **2003A41**
26-Mar-20

Client: ENSOLUM
Project: Lateral 10E-1

Sample ID: **2003a41-001amsd** SampType: **MSD** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **S-3** Batch ID: **SS67534** RunNo: **67534**
Prep Date: Analysis Date: **3/24/2020** SeqNo: **2331527** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.42		0.3994		105	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.35		0.3994		86.9	70	130	0	0	
Surr: Dibromofluoromethane	0.44		0.3994		109	70	130	0	0	
Surr: Toluene-d8	0.36		0.3994		89.1	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2003A41**
26-Mar-20

Client: ENSOLUM
Project: Lateral 10E-1

Sample ID: **mb1**	SampType: **MBLK**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS**	Batch ID: **GS67534**	RunNo: **67534**
Prep Date:	Analysis Date: **3/24/2020**	SeqNo: **2331548** 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	500		500.0		101	70	130			

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS**	Batch ID: **GS67534**	RunNo: **67534**
Prep Date:	Analysis Date: **3/24/2020**	SeqNo: **2331549** 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	87.4	70	130			
Surr: BFB	510		500.0		103	70	130			

Sample ID: **2003a41-002ams**	SampType: **MS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **S-4**	Batch ID: **GS67534**	RunNo: **67534**
Prep Date:	Analysis Date: **3/24/2020**	SeqNo: **2331550** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	3.8	19.23	1.585	90.2	70	130			
Surr: BFB	390		384.6		102	70	130			

Sample ID: **2003a41-002amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **S-4**	Batch ID: **GS67534**	RunNo: **67534**
Prep Date:	Analysis Date: **3/24/2020**	SeqNo: **2331551** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	17	3.8	19.23	1.585	82.0	70	130	8.65	20	
Surr: BFB	390		384.6		102	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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: 2003A41 RcptNo: 1

Received By: Juan Rojas 3/24/2020 8:25:00 AM

Completed By: Anne Thorne 3/24/2020 8:40:09 AM

Reviewed By: LB 3/24/20

Chain of Custody

1. Is Chain of Custody sufficiently 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. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: DAD 3/24/20

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 3/24/20

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.3	Good	Yes			

Chain-of-Custody Record

Client: Ensolum, LLC

Mailing Address: 606 S. Rio Grande Suite A
Aztec, NM 87410

Phone #:

email or Fax#: ksummers@ensolum.com

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

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: SAME DAY
☐ Standard ☒ Rush 100%

Project Name: Lateral 10E-1

Project #: See notes

Project Manager: Ksummers

Sampler: RDeechilly / LDaniell

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 2.3 - 0 = 2.3

03/24/20 Mkathkit

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. 2003A41	BTEX / ~~MTBE~~ / ~~TMB's~~ (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Chlorides
3/23/20	1335	S	S-3	1x4oz Jar	cool	001	X	X									X
3/23/20	1340	S	S-4	1x4oz Jar	cool	002	X	X									X
3/23/20	1345	S	S-5	1x4oz Jar	cool	003	X	X									X
3/23/20	1350	S	S-6	1x4oz Jar	cool	004	X	X									X
3/23/20	1355	S	S-7	1x4oz Jar	cool	005	X	X									X
3/23/20	1400	S	S-8	1x4oz Jar	cool	006	X	X									X
3/23/20	1405	S	S-9	1x4oz Jar	cool	007	X	X									X
3/23/20	1410	S	S-10	1x4oz Jar	cool	008	X	X									X
3/23/20	1415	S	S-11	1x4oz Jar	cool	009	X	X									X

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
3/23/20	1602			Walk	3/23/20	1602
3/23/20	1746			courier	3/24/20	8:25

Remarks: SAME DAY!

PM - Tom Long (EPROD)
Pay Key - RB21200

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

March 31, 2020

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

RE: Lateral 10E 1 OrderNo.: 2003C57

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 7 sample(s) on 3/28/2020 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 **2003C57**
Date Reported: **3/31/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-12
Project: Lateral 10E 1 **Collection Date:** 3/27/2020 10:15:00 AM
Lab ID: 2003C57-001 **Matrix:** MEOH (SOIL) **Received Date:** 3/28/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	60		mg/Kg	20	3/29/2020 12:42:02 PM	51388
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	11	8.9		mg/Kg	1	3/29/2020 9:49:12 AM	51385
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	3/29/2020 9:49:12 AM	51385
Surr: DNOP	88.2	55.1-146		%Rec	1	3/29/2020 9:49:12 AM	51385
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	16		mg/Kg	5	3/28/2020 12:42:06 PM	G67672
Surr: BFB	95.8	66.6-105		%Rec	5	3/28/2020 12:42:06 PM	G67672
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.081		mg/Kg	5	3/28/2020 12:42:06 PM	B67672
Toluene	ND	0.16		mg/Kg	5	3/28/2020 12:42:06 PM	B67672
Ethylbenzene	ND	0.16		mg/Kg	5	3/28/2020 12:42:06 PM	B67672
Xylenes, Total	ND	0.33		mg/Kg	5	3/28/2020 12:42:06 PM	B67672
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	5	3/28/2020 12:42:06 PM	B67672

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 **2003C57**
Date Reported: **3/31/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-13
Project: Lateral 10E 1 **Collection Date:** 3/27/2020 10:20:00 AM
Lab ID: 2003C57-002 **Matrix:** MEOH (SOIL) **Received Date:** 3/28/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	110	60		mg/Kg	20	3/29/2020 12:54:27 PM	51388
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	14	8.9		mg/Kg	1	3/29/2020 12:25:35 PM	51385
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	3/29/2020 12:25:35 PM	51385
Surr: DNOP	91.3	55.1-146		%Rec	1	3/29/2020 12:25:35 PM	51385
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	3/28/2020 1:05:37 PM	G67672
Surr: BFB	94.6	66.6-105		%Rec	1	3/28/2020 1:05:37 PM	G67672
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.019		mg/Kg	1	3/28/2020 1:05:37 PM	B67672
Toluene	ND	0.038		mg/Kg	1	3/28/2020 1:05:37 PM	B67672
Ethylbenzene	ND	0.038		mg/Kg	1	3/28/2020 1:05:37 PM	B67672
Xylenes, Total	ND	0.076		mg/Kg	1	3/28/2020 1:05:37 PM	B67672
Surr: 4-Bromofluorobenzene	99.8	80-120		%Rec	1	3/28/2020 1:05:37 PM	B67672

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 **2003C57**
Date Reported: **3/31/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-14
Project: Lateral 10E 1 **Collection Date:** 3/27/2020 10:25:00 AM
Lab ID: 2003C57-003 **Matrix:** MEOH (SOIL) **Received Date:** 3/28/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	66	60		mg/Kg	20	3/29/2020 1:06:52 PM	51388
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	750	96		mg/Kg	10	3/29/2020 1:47:00 PM	51385
Motor Oil Range Organics (MRO)	1300	480		mg/Kg	10	3/29/2020 1:47:00 PM	51385
Surr: DNOP	0	55.1-146	S	%Rec	10	3/29/2020 1:47:00 PM	51385
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	31	4.2		mg/Kg	1	3/28/2020 1:29:06 PM	G67672
Surr: BFB	127	66.6-105	S	%Rec	1	3/28/2020 1:29:06 PM	G67672
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	0.12	0.021		mg/Kg	1	3/28/2020 1:29:06 PM	B67672
Toluene	0.66	0.042		mg/Kg	1	3/28/2020 1:29:06 PM	B67672
Ethylbenzene	0.081	0.042		mg/Kg	1	3/28/2020 1:29:06 PM	B67672
Xylenes, Total	0.23	0.084		mg/Kg	1	3/28/2020 1:29:06 PM	B67672
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	3/28/2020 1:29:06 PM	B67672

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 **2003C57**
Date Reported: **3/31/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-15
Project: Lateral 10E 1 **Collection Date:** 3/27/2020 10:30:00 AM
Lab ID: 2003C57-004 **Matrix:** MEOH (SOIL) **Received Date:** 3/28/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	3/29/2020 1:19:17 PM	51388
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	3/29/2020 10:58:27 AM	51385
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/29/2020 10:58:27 AM	51385
Surr: DNOP	88.4	55.1-146		%Rec	1	3/29/2020 10:58:27 AM	51385
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	3/28/2020 1:52:30 PM	G67672
Surr: BFB	97.4	66.6-105		%Rec	1	3/28/2020 1:52:30 PM	G67672
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.019		mg/Kg	1	3/28/2020 1:52:30 PM	B67672
Toluene	ND	0.037		mg/Kg	1	3/28/2020 1:52:30 PM	B67672
Ethylbenzene	ND	0.037		mg/Kg	1	3/28/2020 1:52:30 PM	B67672
Xylenes, Total	ND	0.075		mg/Kg	1	3/28/2020 1:52:30 PM	B67672
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	3/28/2020 1:52:30 PM	B67672

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 **2003C57**
Date Reported: **3/31/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-16
Project: Lateral 10E 1 **Collection Date:** 3/27/2020 10:35:00 AM
Lab ID: 2003C57-005 **Matrix:** MEOH (SOIL) **Received Date:** 3/28/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	60		mg/Kg	20	3/29/2020 1:31:41 PM	51388
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	58	9.2		mg/Kg	1	3/29/2020 1:09:35 PM	51385
Motor Oil Range Organics (MRO)	170	46		mg/Kg	1	3/29/2020 1:09:35 PM	51385
Surr: DNOP	94.3	55.1-146		%Rec	1	3/29/2020 1:09:35 PM	51385
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	3/28/2020 2:15:56 PM	G67672
Surr: BFB	95.9	66.6-105		%Rec	1	3/28/2020 2:15:56 PM	G67672
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.022		mg/Kg	1	3/28/2020 2:15:56 PM	B67672
Toluene	ND	0.044		mg/Kg	1	3/28/2020 2:15:56 PM	B67672
Ethylbenzene	ND	0.044		mg/Kg	1	3/28/2020 2:15:56 PM	B67672
Xylenes, Total	ND	0.087		mg/Kg	1	3/28/2020 2:15:56 PM	B67672
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	3/28/2020 2:15:56 PM	B67672

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 **2003C57**
Date Reported: **3/31/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-17
Project: Lateral 10E 1 **Collection Date:** 3/27/2020 10:40:00 AM
Lab ID: 2003C57-006 **Matrix:** MEOH (SOIL) **Received Date:** 3/28/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	68	60		mg/Kg	20	3/29/2020 2:08:54 PM	51388
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	16	9.4		mg/Kg	1	3/29/2020 11:41:56 AM	51385
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	3/29/2020 11:41:56 AM	51385
Surr: DNOP	81.7	55.1-146		%Rec	1	3/29/2020 11:41:56 AM	51385
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	3/28/2020 2:39:27 PM	G67672
Surr: BFB	96.7	66.6-105		%Rec	1	3/28/2020 2:39:27 PM	G67672
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.021		mg/Kg	1	3/28/2020 2:39:27 PM	B67672
Toluene	ND	0.042		mg/Kg	1	3/28/2020 2:39:27 PM	B67672
Ethylbenzene	ND	0.042		mg/Kg	1	3/28/2020 2:39:27 PM	B67672
Xylenes, Total	ND	0.084		mg/Kg	1	3/28/2020 2:39:27 PM	B67672
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	3/28/2020 2:39:27 PM	B67672

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 **2003C57**
Date Reported: **3/31/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-18
Project: Lateral 10E 1 **Collection Date:** 3/27/2020 10:45:00 AM
Lab ID: 2003C57-007 **Matrix:** MEOH (SOIL) **Received Date:** 3/28/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	ND	60		mg/Kg	20	3/29/2020 2:21:19 PM	51388
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	3/29/2020 12:03:41 PM	51385
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	3/29/2020 12:03:41 PM	51385
Surr: DNOP	88.5	55.1-146		%Rec	1	3/29/2020 12:03:41 PM	51385
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	3/28/2020 3:02:57 PM	G67672
Surr: BFB	98.1	66.6-105		%Rec	1	3/28/2020 3:02:57 PM	G67672
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.021		mg/Kg	1	3/28/2020 3:02:57 PM	B67672
Toluene	ND	0.042		mg/Kg	1	3/28/2020 3:02:57 PM	B67672
Ethylbenzene	ND	0.042		mg/Kg	1	3/28/2020 3:02:57 PM	B67672
Xylenes, Total	ND	0.085		mg/Kg	1	3/28/2020 3:02:57 PM	B67672
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	3/28/2020 3:02:57 PM	B67672

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#: **2003C57**

31-Mar-20

Client: ENSOLUM

Project: Lateral 10E 1

Sample ID: **MB-51388** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **51388** RunNo: **67692**

Prep Date: **3/29/2020** Analysis Date: **3/29/2020** SeqNo: **2337003** Units: **mg/Kg**

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

Sample ID: **LCS-51388** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **51388** RunNo: **67692**

Prep Date: **3/29/2020** Analysis Date: **3/29/2020** SeqNo: **2337004** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.2	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
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#: **2003C57**

31-Mar-20

Client: ENSOLUM

Project: Lateral 10E 1

Sample ID: **LCS-51385** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **51385** RunNo: **67660**

Prep Date: **3/28/2020** Analysis Date: **3/29/2020** SeqNo: **2335966** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	89.5	70	130			
Surr: DNOP	4.3		5.000		85.4	55.1	146			

Sample ID: **MB-51385** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **51385** RunNo: **67660**

Prep Date: **3/28/2020** Analysis Date: **3/29/2020** SeqNo: **2335967** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.9		10.00		89.0	55.1	146			

Sample ID: **2003C57-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **S-12** Batch ID: **51385** RunNo: **67660**

Prep Date: **3/28/2020** Analysis Date: **3/29/2020** SeqNo: **2336117** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	9.7	48.64	10.54	84.4	47.4	136			
Surr: DNOP	4.5		4.864		92.2	55.1	146			

Sample ID: **2003C57-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **S-12** Batch ID: **51385** RunNo: **67660**

Prep Date: **3/28/2020** Analysis Date: **3/29/2020** SeqNo: **2336147** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	9.6	48.17	10.54	77.1	47.4	136	7.88	43.4	
Surr: DNOP	4.4		4.817		90.5	55.1	146	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#: **2003C57**
31-Mar-20

Client: ENSOLUM
Project: Lateral 10E 1

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **G67672**	RunNo: **67672**							
Prep Date:	Analysis Date: **3/28/2020**	SeqNo: **2336386**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		104	66.6	105			

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **G67672**	RunNo: **67672**							
Prep Date:	Analysis Date: **3/28/2020**	SeqNo: **2336387**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.2	80	120			
Surr: BFB	1100		1000		110	66.6	105			S

Sample ID: **2003c57-001a ms**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **S-12**	Batch ID: **G67672**	RunNo: **67672**							
Prep Date:	Analysis Date: **3/28/2020**	SeqNo: **2336389**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	81	16	81.43	0	99.0	69.1	142			
Surr: BFB	3600		3257		111	66.6	105			S

Sample ID: **2003c57-001a msd**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **S-12**	Batch ID: **G67672**	RunNo: **67672**							
Prep Date:	Analysis Date: **3/28/2020**	SeqNo: **2336390**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	75	16	81.43	0	92.5	69.1	142	6.81	20	
Surr: BFB	3500		3257		109	66.6	105	0	0	S

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#: **2003C57**

31-Mar-20

Client: ENSOLUM

Project: Lateral 10E 1

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

Client ID: **PBS** Batch ID: **B67672** RunNo: **67672**

Prep Date: Analysis Date: **3/28/2020** SeqNo: **2336454** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		112	80	120			

Sample ID: **100ng btex lcs** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **B67672** RunNo: **67672**

Prep Date: Analysis Date: **3/28/2020** SeqNo: **2336455** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	92.3	80	120			
Toluene	0.93	0.050	1.000	0	93.0	80	120			
Ethylbenzene	0.94	0.050	1.000	0	93.8	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.2	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Sample ID: **2003c57-002a ms** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **S-13** Batch ID: **B67672** RunNo: **67672**

Prep Date: Analysis Date: **3/28/2020** SeqNo: **2336458** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.66	0.019	0.7634	0.01076	85.2	78.5	119			
Toluene	0.67	0.038	0.7634	0.01252	86.3	75.7	123			
Ethylbenzene	0.67	0.038	0.7634	0	88.1	74.3	126			
Xylenes, Total	2.1	0.076	2.290	0.02756	88.8	72.9	130			
Surr: 4-Bromofluorobenzene	0.82		0.7634		108	80	120			

Sample ID: **2003c57-002a msd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **S-13** Batch ID: **B67672** RunNo: **67672**

Prep Date: Analysis Date: **3/28/2020** SeqNo: **2336459** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.72	0.019	0.7634	0.01076	92.7	78.5	119	8.31	20	
Toluene	0.73	0.038	0.7634	0.01252	93.5	75.7	123	7.91	20	
Ethylbenzene	0.73	0.038	0.7634	0	95.9	74.3	126	8.48	20	
Xylenes, Total	2.3	0.076	2.290	0.02756	97.1	72.9	130	8.81	20	
Surr: 4-Bromofluorobenzene	0.82		0.7634		108	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: 2003C57 RcptNo: 1

Received By: **Erin Melendrez** 3/28/2020 8:15:00 AM

Completed By: **Erin Melendrez** 3/28/2020 9:45:27 AM

Reviewed By: ENM 3/28/20

Chain of Custody

1. Is Chain of Custody sufficiently 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. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
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: JP 03/28/20

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.9	Good				

Chain-of-Custody Record

Client: Ensolum, LLC

Mailing Address: 606 S. Rio Grande Suite A
Aztec, NM 87410

Phone #:

email or Fax#: KSummers@ensolum.com

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time: SAME DAY
☐ Standard ☒ Rush 100%

Project Name: Lateral 10E-1

Project #: see notes

Project Manager: KSummers

Sampler: RDeechilly
On Ice: ☒ Yes ☐ No
Sample Temperature: 4.1-0.2(CF)=3.9°C

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 2003C57	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chlorides				Air Bubbles (Y or N)
3/27/20	1015	S	S-12	1x4oz Jar	cool	-001	X		X									X				
3/27/20	1020	S	S-13	1x4oz Jar	cool	-002	X		X									X				
3/27/20	1025	S	S-14	1x4oz Jar	cool	-003	X		X									X				
3/27/20	1030	S	S-15	1x4oz Jar	cool	-004	X		X									X				
3/27/20	1035	S	S-16	1x4oz Jar	cool	-005	X		X									X				
3/27/20	1040	S	S-17	1x4oz Jar	cool	-006	X		X									X				
3/27/20	1045	S	S-18	1x4oz Jar	cool	-007	X		X									X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
3/27/20	1241			3/27/20	1241
3/27/20	1728		Courier	3/28/20	0815

Remarks: SAME DAY

PM - Tom Long (EPROD)
Pay Key - RB21200
Non AFE - N47709

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

April 03, 2020

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

RE: Lateral 10E 1 OrderNo.: 2004059

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 4/2/2020 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 **2004059**
Date Reported: **4/3/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-19
Project: Lateral 10E 1 **Collection Date:** 4/1/2020 2:45:00 PM
Lab ID: 2004059-001 **Matrix:** MEOH (SOIL) **Received Date:** 4/2/2020 8:16:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	61		mg/Kg	20	4/2/2020 11:13:43 AM	51509
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/2/2020 10:46:08 AM	51506
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/2/2020 10:46:08 AM	51506
Surr: DNOP	93.4	55.1-146		%Rec	1	4/2/2020 10:46:08 AM	51506
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	4/2/2020 8:51:47 AM	G67775
Surr: BFB	97.9	66.6-105		%Rec	1	4/2/2020 8:51:47 AM	G67775
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.022		mg/Kg	1	4/2/2020 8:51:47 AM	B67775
Toluene	ND	0.044		mg/Kg	1	4/2/2020 8:51:47 AM	B67775
Ethylbenzene	ND	0.044		mg/Kg	1	4/2/2020 8:51:47 AM	B67775
Xylenes, Total	ND	0.088		mg/Kg	1	4/2/2020 8:51:47 AM	B67775
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	4/2/2020 8:51:47 AM	B67775

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 **2004059**
Date Reported: **4/3/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-20
Project: Lateral 10E 1 **Collection Date:** 4/1/2020 2:50:00 PM
Lab ID: 2004059-002 **Matrix:** MEOH (SOIL) **Received Date:** 4/2/2020 8:16:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	59		mg/Kg	20	4/2/2020 11:26:04 AM	51509
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/2/2020 10:00:00 AM	51506
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/2/2020 10:00:00 AM	51506
Surr: DNOP	83.5	55.1-146		%Rec	1	4/2/2020 10:00:00 AM	51506
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	4/2/2020 9:15:15 AM	G67775
Surr: BFB	98.2	66.6-105		%Rec	1	4/2/2020 9:15:15 AM	G67775
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.020		mg/Kg	1	4/2/2020 9:15:15 AM	B67775
Toluene	ND	0.040		mg/Kg	1	4/2/2020 9:15:15 AM	B67775
Ethylbenzene	ND	0.040		mg/Kg	1	4/2/2020 9:15:15 AM	B67775
Xylenes, Total	ND	0.081		mg/Kg	1	4/2/2020 9:15:15 AM	B67775
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	4/2/2020 9:15:15 AM	B67775

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 **2004059**
Date Reported: **4/3/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-21
Project: Lateral 10E 1 **Collection Date:** 4/1/2020 2:55:00 PM
Lab ID: 2004059-003 **Matrix:** MEOH (SOIL) **Received Date:** 4/2/2020 8:16:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	4/2/2020 11:38:25 AM	51509
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	4/2/2020 10:21:51 AM	51506
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/2/2020 10:21:51 AM	51506
Surr: DNOP	82.6	55.1-146		%Rec	1	4/2/2020 10:21:51 AM	51506
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	4/2/2020 9:38:44 AM	G67775
Surr: BFB	99.9	66.6-105		%Rec	1	4/2/2020 9:38:44 AM	G67775
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.019		mg/Kg	1	4/2/2020 9:38:44 AM	B67775
Toluene	ND	0.038		mg/Kg	1	4/2/2020 9:38:44 AM	B67775
Ethylbenzene	ND	0.038		mg/Kg	1	4/2/2020 9:38:44 AM	B67775
Xylenes, Total	ND	0.077		mg/Kg	1	4/2/2020 9:38:44 AM	B67775
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	4/2/2020 9:38:44 AM	B67775

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 **2004059**
Date Reported: **4/3/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-22
Project: Lateral 10E 1 **Collection Date:** 4/1/2020 3:00:00 PM
Lab ID: 2004059-004 **Matrix:** MEOH (SOIL) **Received Date:** 4/2/2020 8:16:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	98	59		mg/Kg	20	4/2/2020 11:50:46 AM	51509
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/2/2020 10:43:56 AM	51506
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/2/2020 10:43:56 AM	51506
Surr: DNOP	84.8	55.1-146		%Rec	1	4/2/2020 10:43:56 AM	51506
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	4/2/2020 10:02:12 AM	G67775
Surr: BFB	104	66.6-105		%Rec	1	4/2/2020 10:02:12 AM	G67775
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.018		mg/Kg	1	4/2/2020 10:02:12 AM	B67775
Toluene	ND	0.036		mg/Kg	1	4/2/2020 10:02:12 AM	B67775
Ethylbenzene	ND	0.036		mg/Kg	1	4/2/2020 10:02:12 AM	B67775
Xylenes, Total	ND	0.072		mg/Kg	1	4/2/2020 10:02:12 AM	B67775
Surr: 4-Bromofluorobenzene	109	80-120		%Rec	1	4/2/2020 10:02:12 AM	B67775

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 **2004059**
Date Reported: **4/3/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-23
Project: Lateral 10E 1 **Collection Date:** 4/1/2020 3:05:00 PM
Lab ID: 2004059-005 **Matrix:** MEOH (SOIL) **Received Date:** 4/2/2020 8:16:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	4/2/2020 12:03:06 PM	51509
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/2/2020 11:05:55 AM	51506
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/2/2020 11:05:55 AM	51506
Surr: DNOP	84.8	55.1-146		%Rec	1	4/2/2020 11:05:55 AM	51506
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	4/2/2020 10:25:39 AM	G67775
Surr: BFB	104	66.6-105		%Rec	1	4/2/2020 10:25:39 AM	G67775
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.022		mg/Kg	1	4/2/2020 10:25:39 AM	B67775
Toluene	ND	0.044		mg/Kg	1	4/2/2020 10:25:39 AM	B67775
Ethylbenzene	ND	0.044		mg/Kg	1	4/2/2020 10:25:39 AM	B67775
Xylenes, Total	ND	0.087		mg/Kg	1	4/2/2020 10:25:39 AM	B67775
Surr: 4-Bromofluorobenzene	109	80-120		%Rec	1	4/2/2020 10:25:39 AM	B67775

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#: **2004059**

03-Apr-20

Client: ENSOLUM

Project: Lateral 10E 1

Sample ID: **MB-51509**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **51509**	RunNo: **67778**
Prep Date: **4/2/2020**	Analysis Date: **4/2/2020**	SeqNo: **2342104** Units: **mg/Kg**

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

Sample ID: **LCS-51509**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **51509**	RunNo: **67778**
Prep Date: **4/2/2020**	Analysis Date: **4/2/2020**	SeqNo: **2342105** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.2	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2004059**
03-Apr-20

Client: ENSOLUM
Project: Lateral 10E 1

Sample ID: **LCS-51489** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **51489** RunNo: **67768**
Prep Date: **4/1/2020** Analysis Date: **4/1/2020** SeqNo: **2340347** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.7		5.000		73.3	55.1	146			

Sample ID: **MB-51489** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **51489** RunNo: **67768**
Prep Date: **4/1/2020** Analysis Date: **4/1/2020** SeqNo: **2340350** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	7.8		10.00		77.6	55.1	146			

Sample ID: **LCS-51433** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **51433** RunNo: **67718**
Prep Date: **3/31/2020** Analysis Date: **4/2/2020** SeqNo: **2340681** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.6		5.000		91.9	55.1	146			

Sample ID: **LCS-51506** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **51506** RunNo: **67718**
Prep Date: **4/2/2020** Analysis Date: **4/2/2020** SeqNo: **2340682** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	97.5	70	130			
Surr: DNOP	3.9		5.000		78.2	55.1	146			

Sample ID: **MB-51433** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **51433** RunNo: **67718**
Prep Date: **3/31/2020** Analysis Date: **4/1/2020** SeqNo: **2340683** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.9		10.00		98.6	55.1	146			

Sample ID: **MB-51506** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **51506** RunNo: **67718**
Prep Date: **4/2/2020** Analysis Date: **4/2/2020** SeqNo: **2340684** 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	9.0		10.00		89.9	55.1	146			

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#: **2004059**

03-Apr-20

Client: ENSOLUM

Project: Lateral 10E 1

Sample ID: **LCS-51460** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **51460** RunNo: **67718**

Prep Date: **3/31/2020** Analysis Date: **4/2/2020** SeqNo: **2341419** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.0		5.000		100	55.1	146			

Sample ID: **MB-51460** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **51460** RunNo: **67718**

Prep Date: **3/31/2020** Analysis Date: **4/2/2020** SeqNo: **2341420** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		113	55.1	146			

Sample ID: **2004059-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **S-19** Batch ID: **51506** RunNo: **67768**

Prep Date: **4/2/2020** Analysis Date: **4/2/2020** SeqNo: **2341569** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	9.8	49.16	2.779	82.6	47.4	136			
Surr: DNOP	3.9		4.916		78.5	55.1	146			

Sample ID: **2004059-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **S-19** Batch ID: **51506** RunNo: **67768**

Prep Date: **4/2/2020** Analysis Date: **4/2/2020** SeqNo: **2341570** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	9.7	48.64	2.779	83.7	47.4	136	0.174	43.4	
Surr: DNOP	3.8		4.864		78.2	55.1	146	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#: **2004059**
03-Apr-20

Client: ENSOLUM
Project: Lateral 10E 1

Sample ID: **mb1** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **G67775** RunNo: **67775**
Prep Date: Analysis Date: **4/2/2020** SeqNo: **2341387** 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	990		1000		99.5	66.6	105			

Sample ID: **2.5ug gro lcs** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **G67775** RunNo: **67775**
Prep Date: Analysis Date: **4/2/2020** SeqNo: **2341390** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	98.8	80	120			
Surr: BFB	1100		1000		110	66.6	105			S

Sample ID: **2004059-001ams** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **S-19** Batch ID: **G67775** RunNo: **67775**
Prep Date: Analysis Date: **4/2/2020** SeqNo: **2341396** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.4	22.08	0	94.6	69.1	142			
Surr: BFB	1000		883.4		115	66.6	105			S

Sample ID: **2004059-001amsd** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **S-19** Batch ID: **G67775** RunNo: **67775**
Prep Date: Analysis Date: **4/2/2020** SeqNo: **2341397** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.4	22.08	0	97.9	69.1	142	3.45	20	
Surr: BFB	1000		883.4		115	66.6	105	0	0	S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2004059**

03-Apr-20

Client: ENSOLUM

Project: Lateral 10E 1

Sample ID: **mb1** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **B67775** RunNo: **67775**

Prep Date: Analysis Date: **4/2/2020** SeqNo: **2341400** Units: **mg/Kg**

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

Sample ID: **100ng btex lcs** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **B67775** RunNo: **67775**

Prep Date: Analysis Date: **4/2/2020** SeqNo: **2341401** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	94.5	80	120			
Toluene	0.96	0.050	1.000	0	95.8	80	120			
Ethylbenzene	0.98	0.050	1.000	0	97.6	80	120			
Xylenes, Total	2.9	0.10	3.000	0	98.0	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID: **2004059-002ams** SampType: **MS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **S-20** Batch ID: **B67775** RunNo: **67775**

Prep Date: Analysis Date: **4/2/2020** SeqNo: **2341407** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.76	0.020	0.8052	0	94.0	78.5	119			
Toluene	0.76	0.040	0.8052	0	94.0	75.7	123			
Ethylbenzene	0.77	0.040	0.8052	0	95.4	74.3	126			
Xylenes, Total	2.3	0.081	2.416	0	97.1	72.9	130			
Surr: 4-Bromofluorobenzene	0.87		0.8052		109	80	120			

Sample ID: **2004059-002amsd** SampType: **MSD** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **S-20** Batch ID: **B67775** RunNo: **67775**

Prep Date: Analysis Date: **4/2/2020** SeqNo: **2341408** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.76	0.020	0.8052	0	94.2	78.5	119	0.298	20	
Toluene	0.77	0.040	0.8052	0	95.3	75.7	123	1.32	20	
Ethylbenzene	0.78	0.040	0.8052	0	96.4	74.3	126	1.11	20	
Xylenes, Total	2.4	0.081	2.416	0	98.1	72.9	130	1.09	20	
Surr: 4-Bromofluorobenzene	0.92		0.8052		114	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: **2004059** RcptNo: 1

Received By: **Isaiah Ortiz** **4/2/2020 8:16:00 AM** I-Ox

Completed By: **Isaiah Ortiz** **4/2/2020 8:16:36 AM** I-Ox

Reviewed By: LR 4/2/20

Chain of Custody

1. Is Chain of Custody sufficiently 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. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: DAD 4/2/20

Special Handling (if applicable)

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

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

16. Additional remarks:

17. **Cooler Information**

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

Chain-of-Custody Record

Client: Ensolum, LLC

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

Phone #:

email or Fax#: Ksummers@ensolum.com

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time: SAME DAY
☐ Standard ☒ Rush 100%

Project Name: Lateral 10E-1

Project #: See notes

Project Manager: KSummers

Sampler: RDeechilly
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.2 -0.2 [CF] 1.0 °C

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 2004059	BTEX + ~~MTBE + TMB's~~ (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chlorides				Air Bubbles (Y or N)
4/1/20	1445	S	S-19	1x4oz Jar	cool	-001	X		X									X				
4/1/20	1450	S	S-20	1x4oz Jar	cool	-002	X		X									X				
4/1/20	1455	S	S-21	1x4oz Jar	cool	-003	X		X									X				
4/1/20	1500	S	S-22	1x4oz Jar	cool	-004	X		X									X				
4/1/20	1505	S	S-23	1x4oz Jar	cool	-005	X		X									X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
4/1/20	1653		Christa Waelen	4/1/20	1653
4/1/20	1747	Christa Waelen		4/2/20	0816

Remarks: SAME DAY

PM - Tom Long (EPROD)
Pay Key - RB21200
Non AFE - N47709

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
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April 05, 2020

Kyle Summers

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

RE: Lateral 10E 1 OrderNo.: 2004126

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 3 sample(s) on 4/3/2020 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 **2004126**
Date Reported: **4/5/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Project: Lateral 10E 1
Lab ID: 2004126-001 **Matrix:** SOIL

Client Sample ID: S-24
Collection Date: 4/2/2020 12:45:00 PM
Received Date: 4/3/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	4/3/2020 12:02:14 PM	51532
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	4/3/2020 11:25:06 AM	51531
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/3/2020 11:25:06 AM	51531
Surr: DNOP	92.2	55.1-146		%Rec	1	4/3/2020 11:25:06 AM	51531
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	4/3/2020 12:27:51 PM	G67819
Surr: BFB	103	66.6-105		%Rec	1	4/3/2020 12:27:51 PM	G67819
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.019		mg/Kg	1	4/3/2020 12:27:51 PM	R67819
Toluene	ND	0.037		mg/Kg	1	4/3/2020 12:27:51 PM	R67819
Ethylbenzene	ND	0.037		mg/Kg	1	4/3/2020 12:27:51 PM	R67819
Xylenes, Total	ND	0.074		mg/Kg	1	4/3/2020 12:27:51 PM	R67819
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	4/3/2020 12:27:51 PM	R67819

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 **2004126**
Date Reported: **4/5/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-25
Project: Lateral 10E 1
Collection Date: 4/2/2020 12:50:00 PM
Lab ID: 2004126-002 **Matrix:** SOIL **Received Date:** 4/3/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	4/3/2020 12:39:16 PM	51532
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	4/3/2020 11:49:24 AM	51531
Motor Oil Range Organics (MRO)	ND	44		mg/Kg	1	4/3/2020 11:49:24 AM	51531
Surr: DNOP	92.2	55.1-146		%Rec	1	4/3/2020 11:49:24 AM	51531
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	4/3/2020 12:51:18 PM	G67819
Surr: BFB	103	66.6-105		%Rec	1	4/3/2020 12:51:18 PM	G67819
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.020		mg/Kg	1	4/3/2020 12:51:18 PM	R67819
Toluene	ND	0.040		mg/Kg	1	4/3/2020 12:51:18 PM	R67819
Ethylbenzene	ND	0.040		mg/Kg	1	4/3/2020 12:51:18 PM	R67819
Xylenes, Total	ND	0.081		mg/Kg	1	4/3/2020 12:51:18 PM	R67819
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	4/3/2020 12:51:18 PM	R67819

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 **2004126**
Date Reported: **4/5/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM
Client Sample ID: S-26
Project: Lateral 10E 1
Collection Date: 4/2/2020 12:55:00 PM
Lab ID: 2004126-003 **Matrix:** SOIL **Received Date:** 4/3/2020 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Chloride	ND	60		mg/Kg	20	4/3/2020 12:51:37 PM	51532
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	4/3/2020 1:02:09 PM	51531
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/3/2020 1:02:09 PM	51531
Surr: DNOP	90.8	55.1-146		%Rec	1	4/3/2020 1:02:09 PM	51531
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	4/3/2020 1:14:43 PM	G67819
Surr: BFB	102	66.6-105		%Rec	1	4/3/2020 1:14:43 PM	G67819
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.020		mg/Kg	1	4/3/2020 1:14:43 PM	R67819
Toluene	ND	0.039		mg/Kg	1	4/3/2020 1:14:43 PM	R67819
Ethylbenzene	ND	0.039		mg/Kg	1	4/3/2020 1:14:43 PM	R67819
Xylenes, Total	ND	0.078		mg/Kg	1	4/3/2020 1:14:43 PM	R67819
Surr: 4-Bromofluorobenzene	107	80-120		%Rec	1	4/3/2020 1:14:43 PM	R67819

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#: **2004126**

06-Apr-20

Client: ENSOLUM

Project: Lateral 10E 1

Sample ID: **MB-51532** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **51532** RunNo: **67815**

Prep Date: **4/3/2020** Analysis Date: **4/3/2020** SeqNo: **2342819** Units: **mg/Kg**

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

Sample ID: **LCS-51532** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **51532** RunNo: **67815**

Prep Date: **4/3/2020** Analysis Date: **4/3/2020** SeqNo: **2342820** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.0	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#: **2004126**

06-Apr-20

Client: ENSOLUM

Project: Lateral 10E 1

Sample ID: **LCS-51531** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **51531** RunNo: **67813**

Prep Date: **4/3/2020** Analysis Date: **4/3/2020** SeqNo: **2342461** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	10	50.00	0	82.5	70	130			
Surr: DNOP	3.6		5.000		72.6	55.1	146			

Sample ID: **MB-51531** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **51531** RunNo: **67813**

Prep Date: **4/3/2020** Analysis Date: **4/3/2020** SeqNo: **2342462** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	7.8		10.00		78.4	55.1	146			

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#: **2004126**

06-Apr-20

Client: ENSOLUM

Project: Lateral 10E 1

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **G67819**	RunNo: **67819**
Prep Date:	Analysis Date: **4/3/2020**	SeqNo: **2342508** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	96.7	80	120			
Surr: BFB	1100		1000		110	66.6	105			S

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **G67819**	RunNo: **67819**
Prep Date:	Analysis Date: **4/3/2020**	SeqNo: **2342518** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1100		1000		109	66.6	105			S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2004126**

06-Apr-20

Client: ENSOLUM

Project: Lateral 10E 1

Sample ID: **100ng btex lcs**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **R67819**	RunNo: **67819**
Prep Date:	Analysis Date: **4/3/2020**	SeqNo: **2342520** 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	0.98	0.050	1.000	0	98.3	80	120			
Ethylbenzene	0.99	0.050	1.000	0	99.4	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.7	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **R67819**	RunNo: **67819**
Prep Date:	Analysis Date: **4/3/2020**	SeqNo: **2342530** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		114	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

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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: **2004126** RcptNo: **1**

Received By: **Isaiah Ortiz** **4/3/2020 8:00:00 AM** I-OA

Completed By: **Anne Thorne** **4/3/2020 8:10:34 AM** Anne Thorne

Reviewed By: JR 4/3/20

Chain of Custody

1. Is Chain of Custody sufficiently 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. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

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

Adjusted? _____

Checked by: DAD 4/3/20

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/04/03/20 at

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.1	Good	Yes			

Chain-of-Custody Record

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

Client: Ensolum, LLC
Mailing Address: 606 S. Rio Grande Suite A
Aztec, NM 87410
Phone #:
email or Fax#: ksummers@ensolum.com
QA/QC Package: ☐ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ NELAP ☐ Other ____
☐ EDD (Type) ____

Turn-Around Time: SAME DAY
☐ Standard ☒ Rush 10890
Project Name: Lateral 10E-1
Project #: see notes
Project Manager: KSummers
Sampler: RDeechilly
On Ice: ☒ Yes ☐ No
Sample Temperature: 4.4-0.1 (cf) 4.3°C; 4.2-0.1 (cf) 4.1°C

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and # (A-04/03/20 Meoh Kit)	Preservative Type	HEAL No. 2004126	BTEX + ~~MTBE + TMB's~~ (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chlorides				Air Bubbles (Y or N)
4/2/20	1245	S	S-24	1x4oz Jar	cool	-001	X		X									X				
4/2/20	1250	S	S-25	1x4oz Jar	cool	-002	X		X									X				
4/2/20	1255	S	S-26	1x4oz Jar	cool	-003	X		X									X				

Date	Time	Relinquished by	Received by	Date	Time
4/2/20	1440	[signature]	Christine Walters	4/2/20	1440
4/2/20	1827	Christine Walters	[signature] courier	4/3/20	0800

Remarks: SAME DAY
PM - Tom Long (EPROD)
Pay Key - RB21200
NonAFE -

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

April 06, 2020

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

RE: Lateral 10E 1 OrderNo.: 2004184

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 11 sample(s) on 4/4/2020 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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2004184**
Date Reported: **4/6/2020**

CLIENT: ENSOLUM
Project: Lateral 10E 1
Lab ID: 2004184-001
Client Sample ID: S-27
Collection Date: 4/3/2020 3:20:00 PM
Matrix: MEOH (SOIL)
Received Date: 4/4/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	4/4/2020 9:07:17 PM	51561
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	4/5/2020 9:37:29 AM	51555
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/5/2020 9:37:29 AM	51555
Surr: DNOP	85.9	55.1-146		%Rec	1	4/5/2020 9:37:29 AM	51555
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	5.1		mg/Kg	1	4/4/2020 1:18:15 PM	G67819
Surr: BFB	98.0	66.6-105		%Rec	1	4/4/2020 1:18:15 PM	G67819
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.026		mg/Kg	1	4/4/2020 1:18:15 PM	R67819
Toluene	ND	0.051		mg/Kg	1	4/4/2020 1:18:15 PM	R67819
Ethylbenzene	ND	0.051		mg/Kg	1	4/4/2020 1:18:15 PM	R67819
Xylenes, Total	ND	0.10		mg/Kg	1	4/4/2020 1:18:15 PM	R67819
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	4/4/2020 1:18:15 PM	R67819

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 **2004184**
Date Reported: **4/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-28
Project: Lateral 10E 1 **Collection Date:** 4/3/2020 3:25:00 PM
Lab ID: 2004184-002 **Matrix:** MEOH (SOIL) **Received Date:** 4/4/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	4/4/2020 9:19:37 PM	51561
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	4/5/2020 10:50:31 AM	51555
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	4/5/2020 10:50:31 AM	51555
Surr: DNOP	85.6	55.1-146		%Rec	1	4/5/2020 10:50:31 AM	51555
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	4/4/2020 1:41:48 PM	G67819
Surr: BFB	102	66.6-105		%Rec	1	4/4/2020 1:41:48 PM	G67819
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.022		mg/Kg	1	4/4/2020 1:41:48 PM	R67819
Toluene	ND	0.044		mg/Kg	1	4/4/2020 1:41:48 PM	R67819
Ethylbenzene	ND	0.044		mg/Kg	1	4/4/2020 1:41:48 PM	R67819
Xylenes, Total	ND	0.088		mg/Kg	1	4/4/2020 1:41:48 PM	R67819
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	4/4/2020 1:41:48 PM	R67819

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 **2004184**
Date Reported: **4/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-29
Project: Lateral 10E 1 **Collection Date:** 4/3/2020 3:30:00 PM
Lab ID: 2004184-003 **Matrix:** MEOH (SOIL) **Received Date:** 4/4/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CAS**
Chloride	ND	60		mg/Kg	20	4/4/2020 9:31:58 PM	51561
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**CLP**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/5/2020 11:14:59 AM	51555
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/5/2020 11:14:59 AM	51555
Surr: DNOP	92.2	55.1-146		%Rec	1	4/5/2020 11:14:59 AM	51555
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**RAA**
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/4/2020 2:05:30 PM	G67819
Surr: BFB	99.9	66.6-105		%Rec	1	4/4/2020 2:05:30 PM	G67819
EPA METHOD 8021B: VOLATILES						Analyst:	**RAA**
Benzene	ND	0.023		mg/Kg	1	4/4/2020 2:05:30 PM	R67819
Toluene	ND	0.046		mg/Kg	1	4/4/2020 2:05:30 PM	R67819
Ethylbenzene	ND	0.046		mg/Kg	1	4/4/2020 2:05:30 PM	R67819
Xylenes, Total	ND	0.092		mg/Kg	1	4/4/2020 2:05:30 PM	R67819
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	4/4/2020 2:05:30 PM	R67819

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 **2004184**
Date Reported: **4/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-30
Project: Lateral 10E 1 **Collection Date:** 4/3/2020 3:35:00 PM
Lab ID: 2004184-004 **Matrix:** MEOH (SOIL) **Received Date:** 4/4/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	4/4/2020 9:44:19 PM	51561
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/5/2020 11:39:31 AM	51555
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/5/2020 11:39:31 AM	51555
Surr: DNOP	88.2	55.1-146		%Rec	1	4/5/2020 11:39:31 AM	51555
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	4/4/2020 2:29:16 PM	G67819
Surr: BFB	97.1	66.6-105		%Rec	1	4/4/2020 2:29:16 PM	G67819
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.023		mg/Kg	1	4/4/2020 2:29:16 PM	R67819
Toluene	ND	0.045		mg/Kg	1	4/4/2020 2:29:16 PM	R67819
Ethylbenzene	ND	0.045		mg/Kg	1	4/4/2020 2:29:16 PM	R67819
Xylenes, Total	ND	0.091		mg/Kg	1	4/4/2020 2:29:16 PM	R67819
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	4/4/2020 2:29:16 PM	R67819

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 **2004184**
Date Reported: **4/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-31
Project: Lateral 10E 1 **Collection Date:** 4/3/2020 3:40:00 PM
Lab ID: 2004184-005 **Matrix:** MEOH (SOIL) **Received Date:** 4/4/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	4/4/2020 9:56:41 PM	51561
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	4/5/2020 12:04:10 PM	51555
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/5/2020 12:04:10 PM	51555
Surr: DNOP	93.2	55.1-146		%Rec	1	4/5/2020 12:04:10 PM	51555
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	4/4/2020 2:52:58 PM	G67819
Surr: BFB	99.1	66.6-105		%Rec	1	4/4/2020 2:52:58 PM	G67819
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.022		mg/Kg	1	4/4/2020 2:52:58 PM	R67819
Toluene	ND	0.043		mg/Kg	1	4/4/2020 2:52:58 PM	R67819
Ethylbenzene	ND	0.043		mg/Kg	1	4/4/2020 2:52:58 PM	R67819
Xylenes, Total	ND	0.086		mg/Kg	1	4/4/2020 2:52:58 PM	R67819
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	4/4/2020 2:52:58 PM	R67819

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 **2004184**
Date Reported: **4/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-32
Project: Lateral 10E 1 **Collection Date:** 4/3/2020 3:45:00 PM
Lab ID: 2004184-006 **Matrix:** MEOH (SOIL) **Received Date:** 4/4/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	4/4/2020 10:09:01 PM	51561
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	4/5/2020 12:28:34 PM	51555
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/5/2020 12:28:34 PM	51555
Surr: DNOP	89.0	55.1-146		%Rec	1	4/5/2020 12:28:34 PM	51555
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	4/4/2020 3:16:26 PM	G67819
Surr: BFB	99.1	66.6-105		%Rec	1	4/4/2020 3:16:26 PM	G67819
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.022		mg/Kg	1	4/4/2020 3:16:26 PM	R67819
Toluene	ND	0.044		mg/Kg	1	4/4/2020 3:16:26 PM	R67819
Ethylbenzene	ND	0.044		mg/Kg	1	4/4/2020 3:16:26 PM	R67819
Xylenes, Total	ND	0.088		mg/Kg	1	4/4/2020 3:16:26 PM	R67819
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	4/4/2020 3:16:26 PM	R67819

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 **2004184**
Date Reported: **4/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-33
Project: Lateral 10E 1 **Collection Date:** 4/3/2020 3:50:00 PM
Lab ID: 2004184-007 **Matrix:** MEOH (SOIL) **Received Date:** 4/4/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	61		mg/Kg	20	4/4/2020 10:21:21 PM	51561
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/5/2020 12:53:19 PM	51555
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/5/2020 12:53:19 PM	51555
Surr: DNOP	85.7	55.1-146		%Rec	1	4/5/2020 12:53:19 PM	51555
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	4/4/2020 3:39:54 PM	G67819
Surr: BFB	101	66.6-105		%Rec	1	4/4/2020 3:39:54 PM	G67819
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.021		mg/Kg	1	4/4/2020 3:39:54 PM	R67819
Toluene	ND	0.042		mg/Kg	1	4/4/2020 3:39:54 PM	R67819
Ethylbenzene	ND	0.042		mg/Kg	1	4/4/2020 3:39:54 PM	R67819
Xylenes, Total	ND	0.083		mg/Kg	1	4/4/2020 3:39:54 PM	R67819
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	4/4/2020 3:39:54 PM	R67819

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 **2004184**
Date Reported: **4/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-34
Project: Lateral 10E 1 **Collection Date:** 4/3/2020 3:55:00 PM
Lab ID: 2004184-008 **Matrix:** MEOH (SOIL) **Received Date:** 4/4/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**CAS**
Chloride	ND	60		mg/Kg	20	4/4/2020 10:58:21 PM	51561
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**CLP**
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	4/5/2020 1:17:56 PM	51555
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	4/5/2020 1:17:56 PM	51555
Surr: DNOP	86.3	55.1-146		%Rec	1	4/5/2020 1:17:56 PM	51555
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**RAA**
Gasoline Range Organics (GRO)	ND	20		mg/Kg	5	4/4/2020 4:03:25 PM	G67819
Surr: BFB	102	66.6-105		%Rec	5	4/4/2020 4:03:25 PM	G67819
EPA METHOD 8021B: VOLATILES						Analyst:	**RAA**
Benzene	ND	0.098		mg/Kg	5	4/4/2020 4:03:25 PM	R67819
Toluene	ND	0.20		mg/Kg	5	4/4/2020 4:03:25 PM	R67819
Ethylbenzene	ND	0.20		mg/Kg	5	4/4/2020 4:03:25 PM	R67819
Xylenes, Total	ND	0.39		mg/Kg	5	4/4/2020 4:03:25 PM	R67819
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	5	4/4/2020 4:03:25 PM	R67819

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 **2004184**
Date Reported: **4/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-35
Project: Lateral 10E 1 **Collection Date:** 4/3/2020 4:00:00 PM
Lab ID: 2004184-009 **Matrix:** MEOH (SOIL) **Received Date:** 4/4/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	4/4/2020 11:10:42 PM	51561
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	4/5/2020 1:42:40 PM	51555
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/5/2020 1:42:40 PM	51555
Surr: DNOP	84.7	55.1-146		%Rec	1	4/5/2020 1:42:40 PM	51555
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	4/4/2020 4:26:50 PM	G67819
Surr: BFB	101	66.6-105		%Rec	1	4/4/2020 4:26:50 PM	G67819
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.020		mg/Kg	1	4/4/2020 4:26:50 PM	R67819
Toluene	ND	0.040		mg/Kg	1	4/4/2020 4:26:50 PM	R67819
Ethylbenzene	ND	0.040		mg/Kg	1	4/4/2020 4:26:50 PM	R67819
Xylenes, Total	ND	0.079		mg/Kg	1	4/4/2020 4:26:50 PM	R67819
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	4/4/2020 4:26:50 PM	R67819

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 **2004184**
Date Reported: **4/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-36
Project: Lateral 10E 1 **Collection Date:** 4/3/2020 4:05:00 PM
Lab ID: 2004184-010 **Matrix:** MEOH (SOIL) **Received Date:** 4/4/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	4/4/2020 11:23:01 PM	51561
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/5/2020 2:07:31 PM	51555
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	4/5/2020 2:07:31 PM	51555
Surr: DNOP	85.0	55.1-146		%Rec	1	4/5/2020 2:07:31 PM	51555
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	4/4/2020 4:50:23 PM	G67819
Surr: BFB	102	66.6-105		%Rec	1	4/4/2020 4:50:23 PM	G67819
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Benzene	ND	0.022		mg/Kg	1	4/4/2020 4:50:23 PM	R67819
Toluene	ND	0.044		mg/Kg	1	4/4/2020 4:50:23 PM	R67819
Ethylbenzene	ND	0.044		mg/Kg	1	4/4/2020 4:50:23 PM	R67819
Xylenes, Total	ND	0.089		mg/Kg	1	4/4/2020 4:50:23 PM	R67819
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	4/4/2020 4:50:23 PM	R67819

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 **2004184**
Date Reported: **4/6/2020**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** S-37
Project: Lateral 10E 1 **Collection Date:** 4/3/2020 4:10:00 PM
Lab ID: 2004184-011 **Matrix:** MEOH (SOIL) **Received Date:** 4/4/2020 8:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	4/4/2020 11:35:22 PM	51561
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **DJF**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/5/2020 6:09:19 AM	51530
Surr: BFB	93.8	70-130		%Rec	1	4/5/2020 6:09:19 AM	51530
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **CLP**	
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	4/5/2020 2:32:30 PM	51555
Motor Oil Range Organics (MRO)	ND	45		mg/Kg	1	4/5/2020 2:32:30 PM	51555
Surr: DNOP	89.2	55.1-146		%Rec	1	4/5/2020 2:32:30 PM	51555
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **DJF**	
Benzene	ND	0.024		mg/Kg	1	4/5/2020 6:09:19 AM	51530
Toluene	ND	0.048		mg/Kg	1	4/5/2020 6:09:19 AM	51530
Ethylbenzene	ND	0.048		mg/Kg	1	4/5/2020 6:09:19 AM	51530
Xylenes, Total	ND	0.096		mg/Kg	1	4/5/2020 6:09:19 AM	51530
Surr: 1,2-Dichloroethane-d4	90.5	70-130		%Rec	1	4/5/2020 6:09:19 AM	51530
Surr: 4-Bromofluorobenzene	93.4	70-130		%Rec	1	4/5/2020 6:09:19 AM	51530
Surr: Dibromofluoromethane	93.3	70-130		%Rec	1	4/5/2020 6:09:19 AM	51530
Surr: Toluene-d8	96.3	70-130		%Rec	1	4/5/2020 6:09:19 AM	51530

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#: **2004184**

06-Apr-20

Client: ENSOLUM

Project: Lateral 10E 1

Sample ID: **MB-51561**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **51561**	RunNo: **67852**
Prep Date: **4/4/2020**	Analysis Date: **4/4/2020**	SeqNo: **2343786** Units: **mg/Kg**

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

Sample ID: **LCS-51561**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **51561**	RunNo: **67852**
Prep Date: **4/4/2020**	Analysis Date: **4/4/2020**	SeqNo: **2343787** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.6	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2004184**
06-Apr-20

Client: ENSOLUM
Project: Lateral 10E 1

Sample ID: **MB-51555** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **51555** RunNo: **67858**
Prep Date: **4/4/2020** Analysis Date: **4/5/2020** SeqNo: **2344047** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.5		10.00		84.8	55.1	146			

Sample ID: **LCS-51555** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **51555** RunNo: **67858**
Prep Date: **4/4/2020** Analysis Date: **4/5/2020** SeqNo: **2344048** 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	96.3	70	130			
Surr: DNOP	3.6		5.000		71.5	55.1	146			

Sample ID: **2004184-001AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-27** Batch ID: **51555** RunNo: **67858**
Prep Date: **4/4/2020** Analysis Date: **4/5/2020** SeqNo: **2344054** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	8.9	44.37	0	99.0	47.4	136			
Surr: DNOP	3.6		4.437		80.5	55.1	146			

Sample ID: **2004184-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **S-27** Batch ID: **51555** RunNo: **67858**
Prep Date: **4/4/2020** Analysis Date: **4/5/2020** SeqNo: **2344055** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	9.7	48.64	0	96.6	47.4	136	6.72	43.4	
Surr: DNOP	3.8		4.864		77.7	55.1	146	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#: **2004184**

06-Apr-20

Client: ENSOLUM

Project: Lateral 10E 1

Sample ID: **2.5ug gro lcs**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **G67819**	RunNo: **67819**
Prep Date:	Analysis Date: **4/3/2020**	SeqNo: **2342508** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	96.7	80	120			
Surr: BFB	1100		1000		110	66.6	105			S

Sample ID: **mb**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **G67819**	RunNo: **67819**
Prep Date:	Analysis Date: **4/3/2020**	SeqNo: **2342518** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1100		1000		109	66.6	105			S

Sample ID: **lcs-51420**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **51420**	RunNo: **67819**
Prep Date: **3/30/2020**	Analysis Date: **4/3/2020**	SeqNo: **2343527** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		109	66.6	105			S

Sample ID: **mb-51420**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **51420**	RunNo: **67819**
Prep Date: **3/30/2020**	Analysis Date: **4/3/2020**	SeqNo: **2343529** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	990		1000		98.6	66.6	105			

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#: **2004184**

06-Apr-20

Client: ENSOLUM

Project: Lateral 10E 1

Sample ID: **100ng btex lcs** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **R67819** RunNo: **67819**

Prep Date: Analysis Date: **4/3/2020** SeqNo: **2342520** 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	0.98	0.050	1.000	0	98.3	80	120			
Ethylbenzene	0.99	0.050	1.000	0	99.4	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.7	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

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

Client ID: **PBS** Batch ID: **R67819** RunNo: **67819**

Prep Date: Analysis Date: **4/3/2020** SeqNo: **2342530** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		114	80	120			

Sample ID: **LCS-51420** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSS** Batch ID: **51420** RunNo: **67819**

Prep Date: **3/30/2020** Analysis Date: **4/3/2020** SeqNo: **2343576** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

Sample ID: **mb-51420** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBS** Batch ID: **51420** RunNo: **67819**

Prep Date: **3/30/2020** Analysis Date: **4/3/2020** SeqNo: **2343578** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2004184**
06-Apr-20

Client: ENSOLUM
Project: Lateral 10E 1

Sample ID: **mb-51528** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS** Batch ID: **51528** RunNo: **67853**
Prep Date: **4/2/2020** Analysis Date: **4/4/2020** SeqNo: **2343875** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.44		0.5000		88.2	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		95.4	70	130			
Surr: Dibromofluoromethane	0.47		0.5000		93.0	70	130			
Surr: Toluene-d8	0.50		0.5000		99.6	70	130			

Sample ID: **lcs-51528** SampType: **LCS4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC** Batch ID: **51528** RunNo: **67853**
Prep Date: **4/2/2020** Analysis Date: **4/4/2020** SeqNo: **2343876** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.48		0.5000		95.8	70	130			
Surr: Toluene-d8	0.51		0.5000		102	70	130			

Sample ID: **mb-51530** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS** Batch ID: **51530** RunNo: **67853**
Prep Date: **4/2/2020** Analysis Date: **4/5/2020** SeqNo: **2343895** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.43		0.5000		85.8	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		97.4	70	130			
Surr: Dibromofluoromethane	0.45		0.5000		89.1	70	130			
Surr: Toluene-d8	0.49		0.5000		97.3	70	130			

Sample ID: **lcs-51530** SampType: **LCS4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC** Batch ID: **51530** RunNo: **67853**
Prep Date: **4/2/2020** Analysis Date: **4/5/2020** SeqNo: **2343896** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.86	0.025	1.000	0	86.5	80	120			
Toluene	1.1	0.050	1.000	0	105	80	120			
Ethylbenzene	1.1	0.050	1.000	0	106	80	120			
Xylenes, Total	3.1	0.10	3.000	0	104	80	120			
Surr: 4-Bromofluorobenzene	0.48		0.5000		95.1	70	130			
Surr: Toluene-d8	0.50		0.5000		99.2	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#: **2004184**
06-Apr-20

Client: ENSOLUM
Project: Lateral 10E 1

Sample ID: **mb-51487** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS** Batch ID: **51487** RunNo: **67881**
Prep Date: **4/1/2020** Analysis Date: **4/5/2020** SeqNo: **2345162** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.45		0.5000		90.5	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.5000		94.0	70	130			
Surr: Dibromofluoromethane	0.47		0.5000		94.2	70	130			
Surr: Toluene-d8	0.49		0.5000		98.8	70	130			

Sample ID: **lcs-51487** SampType: **LCS4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **BatchQC** Batch ID: **51487** RunNo: **67881**
Prep Date: **4/1/2020** Analysis Date: **4/5/2020** SeqNo: **2345164** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.48		0.5000		97.0	70	130			
Surr: Toluene-d8	0.50		0.5000		100	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#: **2004184**

06-Apr-20

Client: ENSOLUM

Project: Lateral 10E 1

Sample ID: **mb-51528** SampType: **MBLK** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS** Batch ID: **51528** RunNo: **67853**
Prep Date: **4/2/2020** Analysis Date: **4/4/2020** SeqNo: **2343912** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	490		500.0		98.2	70	130			

Sample ID: **lcs-51528** SampType: **LCS** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS** Batch ID: **51528** RunNo: **67853**
Prep Date: **4/2/2020** Analysis Date: **4/4/2020** SeqNo: **2343913** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	490		500.0		98.3	70	130			

Sample ID: **mb-51530** SampType: **MBLK** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS** Batch ID: **51530** RunNo: **67853**
Prep Date: **4/2/2020** Analysis Date: **4/5/2020** SeqNo: **2343932** 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	490		500.0		97.5	70	130			

Sample ID: **lcs-51530** SampType: **LCS** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS** Batch ID: **51530** RunNo: **67853**
Prep Date: **4/2/2020** Analysis Date: **4/5/2020** SeqNo: **2343933** 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	93.5	70	130			
Surr: BFB	500		500.0		101	70	130			

Sample ID: **mb-51487** SampType: **MBLK** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS** Batch ID: **51487** RunNo: **67881**
Prep Date: **4/1/2020** Analysis Date: **4/5/2020** SeqNo: **2345213** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	490		500.0		98.6	70	130			

Sample ID: **lcs-51487** SampType: **LCS** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS** Batch ID: **51487** RunNo: **67881**
Prep Date: **4/1/2020** Analysis Date: **4/5/2020** SeqNo: **2345214** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	500		500.0		99.3	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

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: 2004184 RcptNo: 1

Received By: **Erin Melendrez** 4/4/2020 8:15:00 AM

Completed By: **Erin Melendrez** 4/4/2020 8:43:19 AM

Reviewed By: ENM 4/4/20

Chain of Custody

1. Is Chain of Custody sufficiently 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. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: JP 04/03/20 04/04/20 JP 04/04/20

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 ☐

Special Handling (if applicable)

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

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

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.3	Good				

Chain-of-Custody Record

Client: Ensolum, LLC

Mailing Address: 6060 S. Rio Grande Suite A
Aztec, NM 87410

Phone #:

email or Fax#: KSummers@ensolum.com

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

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

Turn-Around Time: SAME DAY
☐ Standard ☒ Rush 100%

Project Name: Lateral 10E-1

Project #: see notes

Project Manager: KSummers

Sampler: RDeechilly
On Ice: ☒ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): 0.3-0(CF)=0.3 (°C)

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2004184	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Chlorides
4/3/20	1520	S	S-27	1x4oz Jar	cool	-001	X	X									X
4/3/20	1525	S	S-28	1x4oz Jar	cool	-002	X	X									X
4/3/20	1530	S	S-29	1x4oz Jar	cool	-003	X	X									X
4/3/20	1535	S	S-30	1x4oz Jar	cool	-004	X	X									X
4/3/20	1540	S	S-31	1x4oz Jar	cool	-005	X	X									X
4/3/20	1545	S	S-32	1x4oz Jar	cool	-006	X	X									X
4/3/20	1550	S	S-33	1x4oz Jar	cool	-007	X	X									X
4/3/20	1555	S	S-34	1x4oz Jar	cool	-008	X	X									X
4/3/20	1600	S	S-35	1x4oz Jar	cool	-009	X	X									X
4/3/20	1605	S	S-36	1x4oz Jar	cool	-010	X	X									X
4/3/20	1610	S	S-37	1x4oz Jar	cool	-011	X	X									X

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
4/3/20	1757			Walk	4/3/20	1757
4/3/20	1830			Courier	4/14/20	0815

Remarks: SAMEDAY
PM - Tom Long (EPROD)
Pay Key - RB21200
NonAPE-

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.

ENSOLUM

APPENDIX G

Regulatory Correspondence

From: Steve Austin
To: Long, Thomas; "Smith, Cory, EMNRD"
Cc: Stone, Brian
Subject: RE: Lateral 10E-1 - UL H Section 36 T27N R13W; 36.531891 -108.161737
Date: Monday, April 6, 2020 10:44:16 AM

Looks good. Thanks Tom.

--Steve

Steve Austin
Senior Hydrologist
NNEPA WQ/NPDES Program
505-368-1037

From: Long, Thomas [mailto:tjlong@eprod.com]
Sent: Monday, April 06, 2020 8:23 AM
To: 'Smith, Cory, EMNRD (Cory.Smith@state.nm.us)' <Cory.Smith@state.nm.us>; Steve Austin <nnepawq@frontiernet.net>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: FW: Lateral 10E-1 - UL H Section 36 T27N R13W; 36.531891 -108.161737

Cory/Steve,

Please find the attached site sketch and laboratory reports for the Lateral 10E-1 excavation. All sample results are now below the NMOCD Tier I remediation standard. Enterprise will backfill the excavation with clean imported fill material. If you have any questions, please call or email.

Thomas J. Long
Senior Environmental Scientist
Enterprise Products Company
614 Reilly Ave.
Farmington, New Mexico 87401
505-599-2286 (office)
505-215-4727 (Cell)
tjlong@eprod.com

Enterprise Products

From: Smith, Cory, EMNRD <Cory.Smith@statenm.us>
Sent: Thursday, April 2, 2020 8:24 AM
To: Long, Thomas <tjlong@eprod.com>; Steve Austin <nnepawq@frontiernet.net>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: RE: Lateral 10E-1 - UL H Section 36 T27N R13W; 36.531891 -108.161737

Tom,

Thank you for the follow up please proceeded as discussed.

Cory Smith
Environmental Specialist
Oil Conservation Division
Energy, Minerals, & Natural Resources
1000 Rio Brazos, Aztec, NM 87410
(505)334-6178 ext 115
cory.smith@state.nm.us

From: Long, Thomas <tjlong@eprod.com>
Sent: Wednesday, April 1, 2020 2:24 PM
To: Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; Steve Austin <nnepawq@frontiernet.net>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: [EXT] FW: Lateral 10E-1 - UL H Section 36 T27N R13W; 36.531891 -108.161737

Cory,

This is a follow up to our phone conversation earlier today and an email notification that Enterprise will be collecting soil samples for laboratory analysis at the Lateral 10E-1 excavation this afternoon. It is Enterprise's understanding that NMOCD has granted the sampling event without the 24 hour notification. If you have any questions, please call or email.

Thomas J. Long
Senior Environmental Scientist
Enterprise Products Company
614 Reilly Ave.
Farmington, New Mexico 87401
505-599-2286 (office)
505-215-4727 (Cell)
tjlong@eprod.com

From: Long, Thomas
Sent: Tuesday, March 31, 2020 7:29 AM
To: 'Smith, Cory, EMNRD (Cory.Smith@state.nm.us)' <Cory.Smith@state.nm.us>; Steve Austin <nnepawq@frontiernet.net>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: FW: Lateral 10E-1 - UL H Section 36 T27N R13W; 36.531891 -108.161737

Cory/Steve,

.
Please find the attached site sketch and lab reports for the Lateral 10E-1 excavation. Enterprise still needs to continue remediation is the areas of S-14 and S-16. This email is also a notification that Enterprise will be collecting soil samples for laboratory analysis today, March 31, 2020 a 2:00 p.m. If you have any questions, please call or email.

Please disregard that last email. I accidently hit sent it before I finished the email.

Thomas J. Long
Senior Environmental Scientist
Enterprise Products Company
614 Reilly Ave.
Farmington, New Mexico 87401
505-599-2286 (office)
505-215-4727 (Cell)
tjlong@eprod.com

Enterprise Products

From: Long, Thomas
Sent: Tuesday, March 31, 2020 7:23 AM
To: 'Smith, Cory, EMNRD (Cory.Smith@state.nm.us)' <Cory.Smith@state.nm.us>; Steve Austin <nnepawq@frontiernet.net>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: FW: Lateral 10E-1 - UL H Section 36 T27N R13W; 36.531891 -108.161737

Cory/Steve,

Please find the attached site sketch and lab reports for the Lateral 10E-1 excavation. Entp still needs to continue remediation is the areas of S-14 and S-16

Thomas J. Long
Senior Environmental Scientist
Enterprise Products Company
614 Reilly Ave.
Farmington, New Mexico 87401
505-599-2286 (office)
505-215-4727 (Cell)
tjlong@eprod.com

Enterprise Products

From: Long, Thomas
Sent: Thursday, March 26, 2020 11:20 AM
To: 'Smith, Cory, EMNRD (Cory.Smith@state.nm.us)' <Cory.Smith@state.nm.us>; Steve Austin <nnepawq@frontiernet.net>
Cc: Stone, Brian <bmstone@eprod.com>
Subject: Lateral 10E-1 - UL H Section 36 T27N R13W; 36.531891 -108.161737

Cory/Steve,

This email is a notification that Enterprise had a release of natural gas a and natural gas liquids on the Latera 10E-1 on March 10, 2020. Enterprise began repairs and remediation on Mach 11, 2020 and then suspended the remediation activities until this week at which time this release was determined reportable per NMOCD regulation due the volume of impacted subsurface soil. The release is located at UL H Section 36 T27N R13W; 36.531891 -108.161737. This email is also a notification that Enterprise will collect soil samples for laboratory analysis tomorrow, March 27, 2020 at 10:00 a.m. If you have any questions, please call or email.

Thomas J. Long
Senior Environmental Scientist
Enterprise Products Company
614 Reilly Ave.
Farmington, New Mexico 87401
505-599-2286 (office)
505-215-4727 (Cell)
tjlong@eprod.com

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210	OGRID: 241602
	Action Number: 11073
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	5/17/2022