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: <b>151618</b>
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
Η	36	27N	13W	San Juan

Surface Owner: State Federal X 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.

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Page 2

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:/M. Turol	Date: 10/28/7070					
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: <u>Nelson Velez</u> Printed Name: Nelson Velez	Date:05/17/2022					
Printed Name: Nelson Velez	Title: Environmental Specialist – Adv					

•



#### **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

ummo

Kyle Summers, CPG Sr. Project Manager

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- Appendix E: Table 1 Soil Analytical Summary
- Appendix F: Laboratory Data Sheets & Chain of Custody Documentation
- Appendix G: Regulatory Correspondence



#### **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)		
36.531891° North, 108.161737° WestLocation:Northeast (NE) ¼ of Section 36, Township 27 North, Range 13 WestSan 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	600 mg/kg						
TPH (GRO+DRO+MRO)	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<sup>®</sup> 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 samples 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-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 samples 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



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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.



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#### 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.



## APPENDIX A

Figures

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# APPENDIX B

Siting Documentation



No records found.

PLSS Search:

Section(s): 36, 25, 26, 35 Township: 27N

Range: 13W



No records found.

PLSS Search:

Section(s): 30, 31

Township: 27N

Range: 12W



No records found.

PLSS Search:

Section(s): 6

Township: 26N

Range: 12W



(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)	(quar				IE 3=SW largest)	,	3 UTM in meters)		(In feet	)
POD Number	POD Sub- Code basin C	ounty	Q Q	 Soc	Two	Png	x	Y	-	Depth	Water Column
SJ 00802	SJ	SJ	2 1		26N	-	165960	4043745 🥌	1774	Waler	Column
				-				Average Depth to Minimum Maximum	Water: Depth:		
Record Count: 1				 							

#### PLSS Search:

Section(s): 1, 2

Township: 26N

Range: 13W

226045

Revised March 1979



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

1.	Nar	The and Address of Applicant: File No. $SJ - 802 - T$
	Ner	v Mexico State Highways Dept
		D. Box 1149, c/o Jack Victor, R/W
	_	nta Fa, New Mexico 87503
2.	Des	cribe well location under one of the following subheadings:
	a	<u>NE ¼ NW ¼ NW ¼of Sec. 2 Twp. 26N, Rge. 13W.</u> N.M.P.M., ir San Juan County.
	b.T	ract Noof Map Noof the
		t Noof Block Noof the
	Sı	bdivision, recorded inCounty.
		x =237080.161 feet, Y = 1995476.014 feet, N.M. Coordinate System Western Zone n the Navajo Indian Lands (San Juan Cry). Grant
3.	d	Bive street address or route and box No. of property upon which well is to be located, or location by direction and istance from known landmarks <u>1,000 ft east of canter line on US 666 at Station 1414</u> <u>on Project FLP 12-20</u> proximate depth (if known) <u>Unknwn</u> feet; outside diameter of casing inches
	Nar	ne of driller (if known) Unknwn
4.		of water (check appropriate box or boxes):
		One household, non-commercial trees, lawn and garden not to exceed 1 acre.
		One household, non-commercial trees, lawn and garden not to exceed 1 acre.
		More than one household, non-commercial trees, lawns and gardens not to exceed a total of Lacre.
		Drinking and sanitary purposes and the irrigation of non-commercial trees, shrubs and lawns in conjunction with
		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)
5.	Ren Br	marks: This well is identified as SJ-969 reference SJ-802. The location is when own Construction will have their construction camp setup for this project.
		<b>John A. Victor, Agent</b> , affirm that the foregoing statements are true to the best of my knowledge belief and that development shall not commence until approval of the permit has been obtained.

New Maxico State Highway D plicant B

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 Engineer Date: 10/20/80

<u>Water</u> 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 noncommercial trees, lawn, and garden, or the equivalent outside consumptive use, and the total appropriation for household and outdoor use from the entite 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 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:

Bluewarer, 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

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0.89920 STATE ENGINEER	*			CONTROL NU	MBER .	
SANTA FE, NEW MEXICO				Q	8139	•
OFFICIAL RECEIP	Т			Octobe		1980
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			CASH	X		<u>2.0)</u>
· · · · · · · · · · · · · · · · · · ·			CHECK	1L		
Two Dollars Cash**** R PAYMENT AS INDICATED BELOW 1 MMENEKE permit (Drinking & Sanitan 1 Dermit (Construction)	cy)	······································				
ME AND ADDRESS		FOR USE	BY SANTA F	E OFFICE O	NLY	
Attn: Victor, Jack R/W		EARNED			1	_ <b>_</b>
P. O. Box 1149	DATE	GW	sw	REFUND	TRANSCRIPT EXP.	BALANCI
Santa Fe, NM_ 87503'						
R USE BY ADMINISTRATIVE DIVISION						
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ived by OCD:	: 11/4/2020 10:	42:57 AM	<u> </u>				There	Page 24 2 4 70 sed June 1972
•			ST /	TE ENGINEE	R OFFICE	A DE DE S		
				WELL REC	ORD	*10 JOT 25	AM 10 58	
		F	Section	I. GENERAL II	NFORMATI		5 F. A. 110	
(A) Owner (		t damas	scon/	Minerals	(D. US mue	E SANTA PE	swell No.	-10-2
	r Post Office A		16. que	raue NN				······································
Well was drille	ed under Permit	No. 5.	<u> </u>	<u>k</u>	_ and is locat	ted in the:		
а	WE ,	NW 1/4 h	W yorse	Z noite	Townshir	26N Rar	18W	N.M.P.M.
	•	•			-			
		-						
	ivision, recorde					· · · · · · · · · · · · · · · · · · ·		
d. X= _		_ feet, Y=		feet, N.	M. Coordina	te System		
the _			. 0	10 0	<u></u>			Grant.
(B) Drilling			_			License No.		
Address	<u> </u>	). Sox	2067,	wints	5 NM	87020		······································
Drilling Began	9/4/7	8 Com	pleted	15/78	_ Type tools	Rotain	Size of hole_	<u> </u>
	and surface or _		•/	at mal		8_ft. Total depth		
		•					$\sim$	<b>N</b>
Completed we	ellis L…⊸ls	hallow Sec		ICIPAL WATER		ter upon completion	of well $\int wn$	fi.
	in Feet	Thickness in Feet		Description of V			Estimated	
<u> </u>	то 1/32	22/				·	(gallons per	
13/3	1619	306		h. T	Inel:	grained saul	85	
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	·····			n 3. RECORD	r	·		
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Depth	in Feet	Section Hole	on 4. RECO		NG AND CF			······································
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				n 5. PLUGGIN	G RECORD	DUE UE	All	
	ractor					Depth fn	ିଲି <b>ଦ୍ୱା</b> Ci	ubic Feet
_	od				No.	Top <b>F</b>	inttom of	f Cement
Plugging appro			-				<del>ст</del>	
		State Engi	neer Repres	entative	$\frac{3}{4}$			
	<u>,</u>		FOR USE	OF STATE EN				
Date Received	9-22-7	8	I GR UBE					
						FWL		
File No		SJ-802		stk		_ Location No. 261	V.18W.2 11	2 (S.J.)

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			Section 6. LOG OF HOLE
	in Feet	Thickness	Color and Type of Material Encountered
From	То	in Feet	A
0	100	100	Surface sand and weathered Mances shale
100	340	240	fine by gray and yellow rand
340	911	571	dade gay and black Mide
911	1132	221	It. way fire to melin gained sand I organi shale
1132	1313	181	green and red deale of minor sand
1313	1619	306	It. Spy sine to medium Grained sand
1619	1774	155	It was and mink sur warred sand.
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		Contine	

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.

Driffer

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, ap-submitted to the appropriate district office of the State Engineer. All sections, examples a Section 5, shall be answered as completely 4 accurately as possible when any well is drilled, repaired or deepened. When this 1 is used as a plugging record, only Section 16a, and Section 5 need be completed. Released to Imaging: 5/17/2022 12:58:46 PM

			STATE ENC	INEER OFFICE	TRA			
			WELL	RECORD	M. C.			
			Section 1. GENE	RAL INFORMATION	19 901 1		14	
A) Owner of	well Wil	lford Pete			Owner's '	Well No	: :	
Street or I	Post Office Ad	$H_{\text{dress}} = B0X 2$	<u>234</u> .eld, New M	ex.	Owner's OTATE SMS SAUTA	HERR OF	Mns	
						. N. M. 8751		
				and is located				
				<u> </u>				
b. Tract N	lo	of Map No		of the		···· ·		
c. Lot No	icion recorde	of Block No		of the				
							7 '	
				feet, N.M. Coordinate S				
(B) Drilling C	ontractor	W.J. Hoc			License No谜	-717		
				· · · · · · · · · · · · · · · · · · ·				
				Type tools				
Elevation of lan	d surface or _			at well is <u>5550</u>	ft. Total depth of	well254	ft.	
Completed well	is 🕱 s	hallow 🔲 art	esian.	Depth to water	upon completion of	well220	ft.	
		Sectio	on 2. PRINCIPAL	WATER-BEARING ST	RATA			
Depth i From		Thickness in Feet	Descript	ion of Water-Bearing F	ormation	Estimate (gallons pe:		
240		14	Blue Wat	er Bearing Sa	ามส์ เ	5		
		0 0	6 (2 A	bearing be				
a*.		Gamel_	Perse-					
·		<u> </u>	<u>-  </u>	<u></u>	·	<u></u>		
		<u> </u>		<u></u>				
			<u> </u>	CORD OF CASING			forations	
Diameter (inches)	Pounds per foot	Threads	Depth in Feet Top Bot	tom (feet)	Type of Shoe	From	To	
5 in.	Class 2	do p.v.c.	0 25	64 254		234	254	
	<u> </u>	Continu					I	
Depth	in Feet	Hole	Sacks	MUDDING AND CEM		of Placement		
From	To	Diameter	of Mud	of Cement			<u></u>	
	·	<u> </u>	<u>·</u>		·			
	1						<u></u>	
	· · · · ·	1	•					
			=					
			Section 5 DT	HGGING RECORD				
	Ictor	· · · · · · · · · · · · · · · · · · ·		UGGING RECORD				
Plugging Contra Address					Depth in Fe		Cubic Feet	
Plugging Contra Address Plugging Metho Date Well Plugg	d			No. 1	·	et lottom	Cubic Feet of Cement	
Plugging Contra Address Plugging Metho	d			No	·			
Plugging Contra Address Plugging Metho Date Well Plugg	d			No	·			
Plugging Contra Address Plugging Metho Date Well Plugg	d	State Engin	neer Representative	No.				

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		T	Section 6. LOG OF HOLE
Depth From	in Feet To	Thickness in Feet	Color and Type of Material Encountered
0	1.0	10	Over Burden
10	40	30	
<b>4</b> 0	110	70	
			Blue Soft Shale
<u> </u>	155	-45	Blue Sandy Shale
	180	25	Hard Wax Shale
180_	249	60	Sandy-Shale
<b>24</b> 0	254		Blue Water Bearing Sand
	} 		
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£.	+	<u> </u>	
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			· · · · · · · · · · · · · · · · · · ·

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.

le Driller

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, ard submitted to the appropriate district office of the State Engineer. All sections, et al. Section 5, shall be answered as completel discurately 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. *Released to Imaging: 5/17/2022 12:58:46 PM* 



## APPENDIX C

Executed C-138 Solid Waste Acceptance Form

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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 Page 29 of 130

Form C-138 Revised 08/01/11

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

REQUEST FOR APPROVAL TO	ACCEPT SOLID WASTE
1. Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401	Invoicing Information 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
<ol> <li>Source and Description of Waste:</li> <li>Source: Hydrocarbon Impacted soil associated remediation activities associa</li> <li>Description: Hydrocarbon Impacted soil associated remediation activities ass</li> <li>Estimated Volume 50 vd<sup>3</sup> / bbls Known Volume (to be entered by the ope</li> </ol>	ted with a natural gas pipeline leak. ociated with a natural gas pipeline leak
5. GENERATOR CERTIFICATION STATES I, Thomas Long for presentative or authorized agent for Enterprise P Generator Signature certify that according to the Resource Conservation and Recovery Act (RCRA regulatory determination, the above described waste is: (Check the appropriate	roducts Operating do hereby
RCRA Exempt: Oil field wastes generated from oil and gas explorate exempt waste. <u>Operator Use Only: Waste Acceptance Frequency</u>	ion and production operations and are not mixed with non-
☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that doe characteristics established in RCRA regulations, 40 CFR 261.21-261.24, subpart D, as amended. The following documentation is attached to demothe appropriate items)	or listed hazardous waste as defined in 40 CFR, part 261,
□ MSDS Information □ RCRA Hazardous Waste Analysis □ Process	Knowledge D Other (Provide description in Box 4)
GENERATOR 19.15.36.15 WASTE TESTING CERTIFICAT	ION STATEMENT FOR LANDFARMS
I, Thomas Long Journ Jarge 3-19-2020, representative for Enterprise Products O Generator Signature the required testing/sign the Generator Waste Testing Certification.	perating authorizes Envirotech, Inc. to complete
I, <u>Greg Crabbre</u> , representative for <u>Envirot</u> representative samples of the oil field waste have been subjected to the paint f have been found to conform to the specific requirements applicable to landfar of the representative samples are attached to demonstrate the above-described 19.15.36 NMAC.	ms pursuant to Section 15 of 19.15.36 NMAC. The results
5. Transporter: TBD	
OCD Permitted Surface Waste Management Facility	
Name and Facility Permit #: Envirotech, Inc. Soil Remediation Facility * Permit #: NM01-4 Address of Facility: Hill Top, NM Method of Treatment and/or Disposal: Evaporation Injection Treating Plant La Waste Acceptance Status:	undfarm  Landfill  Other DENIED (Must Be Maintained As Permanent Record)
PRINT NAME: Greg Crabbree TITLE: E	Enviro Managen DATE: 3/23/2020
SIGNATURE: TELEPI Surface Waste Management Facility Authorized Agent	HONE NO.: 505-632-0615



## APPENDIX D

Photographic Documentation

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



Photograph 1 Photograph Description: View of in-process excavation activities.	<image/>
Photograph 2 Photograph Description: View of in-process excavation activities.	
Photograph 3 Photograph Description: View of in-process excavation activities.	

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#### SITE PHOTOGRAPHS

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



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.	

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#### SITE PHOTOGRAPHS

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



# 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

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



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



# APPENDIX E

Table 1 – Soil Analytical Summary

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# **ENSOLUM**

	TABLE 1         Lateral 10E-1 Pipeline Release         SOIL ANALYTICAL SUMMARY												
Sample I.D.	Date	Sample Type	Sample Depth	Benzene	Toluene	Ethylbenzene	Xylenes	Total BTEX	ТРН	ТРН	TPH	Total Combined	Chloride
		C- Composite G	(Feet)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	GRO	DRO	MRO	TPH	(mg/kg)
		- Grab							(mg/kg)	(mg/kg)	(mg/kg)	(GRO/DRO/MRO) (mg/kg)	
New Mexico Energy, Mineral & Natural Resources Department Oil Conservation Division Closure Criteria			10	NE	NE	NE	50				100	600	
				Composite Soi	I Samples Remove	d by Excavation and	Tranported to the	Landfarm for Disop	osal/Remediation				
S-1	3.11.20	С	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	С	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	С	Stockpile	0.54	2.8	0.44	2.3	6.1	48	760	250	1,058	950
S-5	3.23.20	С	0 to 9	0.032	0.29	0.063	0.40	0.79	30	230	390	650	<60
S-10	3.23.20	С	0 to 9	<0.017	< 0.034	<0.034	<0.068	ND	<3.4	27	73	100	63
S-11	3.23.20	С	5 to 9	<0.086	<0.17	<0.17	<0.35	ND	<17	89	130	219	370
S-13	3.27.20	С	8	<0.019	<0.038	<0.038	<0.076	ND	<3.8	14	<44	14	110
S-14	3.27.20	С	8	0.12	0.66	0.081	0.23	1.09	31	750	1,300	2,081	66
S-16	3.27.20	С	0 to 8	<0.022	<0.044	<0.044	<0.087	ND	<4.4	58	170	228	<60
				Co	mposite Soil Samp	les Representing So	il that was Remov	ed and Reused as B	ackfill				
S-15	3.27.20	С	0 to 9	<0.019	<0.037	<0.037	<0.075	ND	<3.7	<9.3	<47	ND	<60
S-17	3.27.20	С	0 to 8	<0.021	<0.042	<0.042	<0.084	ND	<4.2	16	<47	16	68
S-18	3.27.20	С	0 to 8	<0.021	<0.042	<0.042	<0.085	ND	<4.2	<9.1	<46	ND	<60
						Excavation Comp	osite Soil Sample	s					
S-3	3.23.20	С	9	<0.10	<0.20	<0.20	<0.40	ND	<20	<8.9	<45	ND	220
S-4	3.23.20	С	9	<0.019	<0.038	<0.038	<0.077	ND	<3.8	38	47	85	78
S-6	3.23.20	С	0 to 9	<0.020	<0.039	<0.039	<0.078	ND	<3.9	<9.6	<48	ND	<60
S-7	3.23.20	С	0 to 9	<0.026	<0.051	<0.051	<0.10	ND	<5.1	<9.5	<47	ND	140
S-8	3.23.20	С	0 to 9	<0.018	<0.037	<0.037	<0.073	ND	<3.7	<9.3	<47	ND	<60
S-9	3.23.20	С	0 to 9	<0.017	<0.034	<0.034	<0.068	ND	<3.4	<9.4	<47	ND	<60
S-12*	3.27.20	С	9	<0.081	<0.16	<0.16	<0.33	ND	<16	11	<45	11	<60
S-19	4.01.20	С	19	<0.022	<0.044	<0.044	<0.088	ND	<4.4	<9.4	<47	ND	<61
S-20	4.01.20	С	19	<0.020	<0.040	<0.040	<0.081	ND	<4.0	<10	<50	ND	<59
S-21	4.01.20	С	19	<0.019	<0.038	<0.038	<0.077	ND	<3.8	<9.2	<46	ND	<60
S-22	4.01.20	С	8 to 19	<0.018	<0.036	<0.036	<0.072	ND	<3.6	<9.8	<49	ND	98
S-23	4.01.20	С	8 to 19	<0.022	<0.044	<0.044	<0.087	ND	<4.4	<9.5	<48	ND	<60
S-24	4.02.20	С	19	<0.019	<0.037	<0.037	<0.074	ND	<3.7	<9.3	<47	ND	<60
S-25	4.02.20	С	19	<0.020	<0.040	<0.040	<0.081	ND	<4.0	<8.9	<44	ND	<60
S-26	4.02.20	С	8 to 19	<0.020	<0.039	<0.039	<0.078	ND	<3.9	<9.2	<46	ND	<60
S-27	4.03.20	С	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	Sample Depth	Benzene	Toluene	Ethylbenzene	Xylenes	Total BTEX	ТРН	ТРН	TPH	Total Combined	Chloride
		C- Composite G - Grab	(Feet)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	GRO	DRO	MRO	TPH (GRO/DRO/MRO)	(mg/kg)
		- Grab							(mg/kg)	(mg/kg)	(mg/kg)	(GRO/DRO/MRO) (mg/kg)	
		Natural Resources		10	NE	NE	NE	50				100	600
S-28	4.03.20	С	19	<0.022	<0.044	<0.044	<0.088	ND	<4.4	<9.1	<45	ND	<60
S-29	4.03.20	С	0 to 8	<0.023	<0.046	<0.046	<0.092	ND	<4.6	<9.4	<47	ND	<60
S-30	4.03.20	С	8 to 19	<0.023	<0.045	<0.045	<0.091	ND	<4.5	<9.7	<48	ND	<60
S-31	4.03.20	С	0 to 8	<0.022	<0.043	<0.043	<0.086	ND	<4.3	<9.6	<48	ND	<60
S-32	4.03.20	С	8 to 19	<0.022	<0.044	<0.044	<0.088	ND	<4.4	<9.2	<46	ND	<60
S-33	4.03.20	С	9 to 19	<0.021	<0.042	<0.042	<0.083	ND	<4.2	<10	<50	ND	<61
S-34	4.03.20	С	9 to 19	<0.098	<0.20	<0.20	<0.39	ND	<20	<9.1	<45	ND	<60
S-35	4.03.20	С	9 to 19	<0.020	<0.040	<0.040	<0.079	ND	<4.0	<9.4	<47	ND	<60
S-36	4.03.20	С	8 to 19	<0.022	<0.044	<0.044	<0.089	ND	<4.4	<10	<51	ND	<60
S-37	4.03.20	С	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



APPENDIX F

Laboratory Data Sheets & Chain of Custody Documentation



March 13, 2020

Kyle Summers ENSOLUM 606 S. Rio Grande Suite A Aztec, NM 87410 TEL: (903) 821-5603 FAX: Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

### Hall Environmental Analysis Laboratory, Inc.

Lab Order 2003535

Date Reported: 3/13/2020

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

Analyses	Kesuit	KL	Qual	Units	Dr	Date Analyzeu	Datch
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 OR	GANICS					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.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

Page 1 of 8

### Hall Environmental Analysis Laboratory, Inc.

Lab Order 2003535

Date Reported: 3/13/2020

CLIENT	: ENSOLUM	Client Sample ID: S-2
<b>Project:</b>	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 ORG/	ANICS					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. D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 2 of 8

### Hall Environmental Analysis Laboratory, Inc.

Lab Order 2003535

Date Reported: 3/13/2020

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 ORG	SANICS					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.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

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Batch ID: 51058

Analysis Date: 3/12/2020

PQL

1.5

15.00

Result

14

2003535

WO#:

RPDLimit

Qual

%RPD

Hall Environmental Analysis Laboratory, Inc.						
	OLUM ral 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 valu	e SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual				
Chloride	ND 1.5					
Sample ID: LCS-51058	SampType: Ics	TestCode: EPA Method 300.0: Anions				

SPK value SPK Ref Val %REC LowLimit

0

RunNo: 67231

93.3

SeqNo: 2317708

Units: mg/Kg

110

HighLimit

90

Analyte Chloride

Client ID: LCSS

3/12/2020

Prep Date:

#### 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

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## **QC SUMMARY REPORT** Hall Environmental Analysis Laboratory, Inc.

WO#:	2003535
	12 14 20

12 14 20
13-Mar-20

Client: ENSOL	UM
Project: Lateral	10E-1
Sample ID: LCS-51054	SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: LCSS	Batch ID: <b>51054</b> RunNo: <b>67226</b>
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) Surr: DNOP	ND 50 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           Australia         Data         Data         Data         Data
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
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- Analyte detected in the associated Method Blank в
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

	WO#:	2003535
l Environmental Analysis Laboratory, Inc.		13-Mar-20

Client:ENSOIProject:Lateral	-										
Sample ID: MB-51025	SampT	ype: ME	BLK	Tes	tCode: E	PA Method	8015M/D: Die	esel Range	e Organics		
Client ID: PBS	Batch ID: <b>51025</b>				RunNo: 67227						
Prep Date: 3/11/2020	Analysis D	ate: 3/	12/2020	S	eqNo: 2	317677	Units: %Red	•			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: DNOP	10		10.00		102	55.1	146				
	SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics										
Sample ID: MB-51054	SampT	ype: ME	BLK	Tes	tCode: E	PA Method	8015M/D: Die	esel Range	e Organics		
Client ID: PBS	•	ype: <b>ME</b> ID: <b>51</b>			tCode: E tunNo: 6		8015M/D: Die	esel Range	e Organics		
	•	ID: <b>51</b>	054	R		7227	8015M/D: Die Units: mg/K	J	e Organics		
Client ID: PBS	Batch	ID: <b>51</b>	054 12/2020	R	tunNo: 6 GeqNo: 2	7227 317678		J	e Organics RPDLimit	Qual	
Client ID: <b>PBS</b> Prep Date: <b>3/12/2020</b>	Batch Analysis D	ID: <b>51</b> ate: <b>3</b> /	054 12/2020	R	tunNo: 6 GeqNo: 2	7227 317678	Units: <b>mg/K</b>	g	-	Qual	
Client ID: <b>PBS</b> Prep Date: <b>3/12/2020</b> Analyte	Batch Analysis D Result	ID: <b>51</b> ate: <b>3/</b> PQL	054 12/2020	R	tunNo: 6 GeqNo: 2	7227 317678	Units: <b>mg/K</b>	g	-	Qual	

Qualifiers:

- Value exceeds Maximum Contaminant Level. \*
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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**ENSOLUM** 

Lateral 10E-1

**Client:** 

**Project:** 

## **QC SUMMARY REPORT** Hall Environmental Analysis Laboratory, Inc.

Sample ID: 2.5ug gro Ics	SampType: LC	SampType: LCS TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: G	67183	F	RunNo: 67	7183				
Prep Date:	Analysis Date: 3	/11/2020	S	SeqNo: 23	314718	Units: mg/K	g		
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: M	BLK	Tes	tCode: EF	PA Method	8015D: Gaso	line Rang	e	
Client ID: PBS	Batch ID: G	67183	F	RunNo: 67	7183				
Prep Date:	Analysis Date: 3	/11/2020	S	SeqNo: 23	314721	Units: mg/K	g		
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: M	BLK	Tes	tCode: EF	PA Method	8015D: Gaso	line Rang	e	
Client ID: PBS	Batch ID: 51	002	F	RunNo: 67	7183				
Prep Date: 3/10/2020	Analysis Date: 3	/11/2020	S	SeqNo: 23	315344	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: Ics-51002	SampType: LC	cs	Tes	tCode: EF	PA Method	8015D: Gaso	line Rang	e	
Client ID: LCSS	Batch ID: 51	002	F	RunNo: 67	7183				
Prep Date: 3/10/2020	Analysis Date: 3	/11/2020	S	SeqNo: 23	315345	Units: %Red	;		
Analyte	Result PQL		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
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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WO#: 2003535

13-Mar-20

## QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client:	ENSOLUM
Project:	Lateral 10E-1

Sample ID: 100ng btex Ics	SampType: LCS TestCode: EPA Method 8021B: Volatiles									
Client ID: LCSS	Batc	h ID: <b>B6</b>	7183	R	unNo: 67	7183				
Prep Date:	Analysis E	Date: 3/	11/2020	S	eqNo: 23	314724	Units: mg/K	g		
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	SampT	ype: ME	BLK	Test	Code: EF	PA Method	8021B: Volat	iles		
Client ID: PBS	Batc	h ID: <b>B6</b>	7183	R	unNo: 67	7183				
Prep Date:	Analysis E	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	SampT	уре: МЕ	BLK	Test	Code: EF	PA Method	8021B: Volat	iles		
Client ID: PBS	Batc	h ID: 51	002	R	unNo: 67	7183				
Prep Date: 3/10/2020	Analysis E	Date: 3/	11/2020	S	eqNo: 23	315396	Units: %Red	;		
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	SampT	ype: LC	S	Test	Code: EF	PA Method	8021B: Volat	iles		
Client ID: LCSS	Batc	h ID: 51	002	R	unNo: 67	7183				
Prep Date: 3/10/2020	Analysis E	Date: 3/	11/2020	S	eqNo: 23	315397	Units: %Red	;		
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

Page 8 of 8

WO#: 2003535

13-Mar-20

Page 48 of 130	Page	<b>48</b>	0	f 1	3	0
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HALL ENVIRONMEN ANALYSIS LABORATOR		Hall Environmenta All TEL: 505-345-397. Website: www.h	490 buquero 5 FAX:	01 Hawkins que, NM 87 505-345-4	NE 109 107	Sample Log-In Check List					
Client Name: ENSOL	UM AZTEC	Work Order Number	r: 200	3535			RcptNo: 1				
Received By: Yazmi	ne Garduno	3/12/2020 8:30:00 AM	٨		Mazmin	ulifindusti NAC					
Completed By: Erin M	elendrez	3/12/2020 8:49:09 AM	1		in	MAS	5				
Reviewed By:	2	3/11/10									
Chain of Custody											
1. Is Chain of Custody su	fficiently complete	?	Yes		No		Not Present				
2. How was the sample d	elivered?		Cou	rier							
Log In				_							
3. Was an attempt made	to cool the sample	es?	Yes		No		NA 🗌				
4. Were all samples recei	ved at a temperat	ure of >0° C to 6.0°C	Yes		No						
5. Sample(s) in proper co	ntainer(s)?		Yes		No						
6. Sufficient sample volum	ne for indicated te	st(s)?	Yes		No						
7. Are samples (except Vo	DA and ONG) pro	perly preserved?	Yes		No						
8. Was preservative adde	d to bottles?		Yes		No	<b>v</b>	NA 🗌				
9. Received at least 1 vial	with headspace <	1/4" for AQ VOA?	Yes		No		NA 🔽				
10. Were any sample cont	ainers received br	oken?	Yes		No		# of preserved bottles checked				
11. Does paperwork match (Note discrepancies on			Yes		No		for pH: (<2 or >12 unless noted)				
12. Are matrices correctly in	dentified on Chain	of Custody?	Yes	$\checkmark$	No		Adjusted?				
13. Is it clear what analyses	s were requested?	,	Yes		No						
14. Were all holding times a (If no, notify customer f			Yes	$\checkmark$	No		Checked by: 52 3 12 2				
Special Handling (if a	pplicable)										
15. Was client notified of a		vith this order?	Yes		No		NA 🗹				
Person Notified:	1	Date:									
By Whom:	Γ	Via:	eM	lail 🗌 Ph	none 🗌	] Fax	In Person				
Regarding: Client Instruction	s: [										
16. Additional remarks:											
17. <u>Cooler Information</u> Cooler No Temp	°C Condition	Seal Intact Seal No	Seal D	Date	Signed	By					

FNVTRONMENTAL	. >					10:42:5															(EPEOD)	ge 49 of
<b>MM</b>	ORA	E	Albuquerque, NM 87109	107					G	Səp		7142	×	×	X						- 3	
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Chain-of-Custody Record	LC		Mailing Address: (OUI) S, E'LO GRANDE SVITEA	01		email or Fax#:KSiMM&rS.@ @ nSolum , com QA/QC Package:	Level 4 (Full Validation)	Az Compliance	□ Other			Sample Name	S-1	S-2	SP-1						shed by:	shed by: Note Walter
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March 26, 2020

Kyle Summers ENSOLUM 606 S. Rio Grande Suite A Aztec, NM 87410 TEL: (903) 821-5603 FAX Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

OrderNo.: 2003A41

RE: Lateral 10E-1

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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

### Hall Environmental Analysis Laboratory, Inc.

Lab Order 2003A41

Date Reported: 3/26/2020

CLIENT: ENSOLUM Project: Lateral 10E-1			ient Sample II Sollection Dat		3 23/2020 1:35:00 PM	
Lab ID: 2003A41-001	Matrix: SOIL				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: GASOLI	NE RANGE				Analyst	DJF
Gasoline Range Organics (GRO)	ND	20	mg/Kg	5	3/24/2020 11:00:20 AM	GS67534
Surr: BFB	103	70-130	%Rec	5	3/24/2020 11:00:20 AM	GS67534
EPA METHOD 8015M/D: DIESEL RA	NGE 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 S	HORT LIST				Analyst	DJF
Benzene	ND	0.10	mg/Kg	5	3/24/2020 11:00:20 AM	SS67534
Toluene	ND	0.20	mg/Kg	5	3/24/2020 11:00:20 AM	SS67534
Ethylbenzene	ND	0.20	mg/Kg	5	3/24/2020 11:00:20 AM	SS67534
Xylenes, Total	ND	0.40	mg/Kg	5	3/24/2020 11:00:20 AM	SS67534
Surr: 4-Bromofluorobenzene	92.0	70-130	%Rec	5	3/24/2020 11:00:20 AM	SS67534
Surr: Toluene-d8	94.9	70-130	%Rec	5	3/24/2020 11:00:20 AM	SS67534

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
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 1 of 14

### Hall Environmental Analysis Laboratory, Inc.

Lab Order 2003A41

Date Reported: 3/26/2020

CLIENT: ENSOLUM Project: Lateral 10E-1		Client Sample ID: S-4 Collection Date: 3/23/2020 1:40:00 PM							
Lab ID: 2003A41-002	Matrix: SOIL         Received Date: 3/24/2020 8:25:00 A								
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch			
EPA METHOD 300.0: ANIONS					Analysi	: JMT			
Chloride	78	60	mg/Kg	20	3/24/2020 12:15:56 PN	51292			
EPA METHOD 8015D MOD: GASOLI	NE RANGE				Analyst	: DJF			
Gasoline Range Organics (GRO)	ND	3.8	mg/Kg	1	3/24/2020 11:59:28 AN	I GS67534			
Surr: BFB	101	70-130	%Rec	1	3/24/2020 11:59:28 AN	I GS67534			
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS				Analyst	BRM			
Diesel Range Organics (DRO)	38	8.8	mg/Kg	1	3/24/2020 10:07:12 AN	1 51283			
Motor Oil Range Organics (MRO)	47	44	mg/Kg	1	3/24/2020 10:07:12 AN	51283			
Surr: DNOP	103	55.1-146	%Rec	1	3/24/2020 10:07:12 AN	51283			
EPA METHOD 8260B: VOLATILES S	HORT LIST				Analyst	: DJF			
Benzene	ND	0.019	mg/Kg	1	3/24/2020 11:59:28 AM	I SS67534			
Toluene	ND	0.038	mg/Kg	1	3/24/2020 11:59:28 AN	I SS67534			
Ethylbenzene	ND	0.038	mg/Kg	1	3/24/2020 11:59:28 AN	I SS67534			
Xylenes, Total	ND	0.077	mg/Kg	1	3/24/2020 11:59:28 AN	I SS67534			
Surr: 4-Bromofluorobenzene	85.6	70-130	%Rec	1	3/24/2020 11:59:28 AN	I SS67534			
Surr: Toluene-d8	92.9	70-130	%Rec	1	3/24/2020 11:59:28 AN	I SS67534			

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
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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### Hall Environmental Analysis Laboratory, Inc.

Lab Order 2003A41

Date Reported: 3/26/2020

CLIENT: ENSOLUM Project: Lateral 10E-1		Client Sample ID: S-5 Collection Date: 3/23/2020 1:45:00 PM							
Lab ID: 2003A41-003	Matrix: SOIL         Received Date: 3/24/2020 8:25:00 A								
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	GS67534			
Surr: BFB	98.2	70-130	%Rec	1	3/24/2020 12:28:32 PM	GS67534			
EPA METHOD 8015M/D: DIESEL RANG	E 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 SHO	ORT LIST				Analyst	DJF			
Benzene	0.032	0.019	mg/Kg	1	3/24/2020 12:28:32 PM	SS67534			
Toluene	0.29	0.038	mg/Kg	1	3/24/2020 12:28:32 PM	SS67534			
Ethylbenzene	0.063	0.038	mg/Kg	1	3/24/2020 12:28:32 PM	SS67534			
Xylenes, Total	0.40	0.077	mg/Kg	1	3/24/2020 12:28:32 PM	SS67534			
Surr: 4-Bromofluorobenzene	78.4	70-130	%Rec	1	3/24/2020 12:28:32 PM	SS67534			
Surr: Toluene-d8	96.5	70-130	%Rec	1	3/24/2020 12:28:32 PM	SS67534			

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
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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### Hall Environmental Analysis Laboratory, Inc.

Lab Order 2003A41

Date Reported: 3/26/2020

CLIENT: ENSOLUM		Cli	ient Sample II	<b>D:</b> S-6	5	
Project: Lateral 10E-1		.3/2020 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 PN	51292
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	DJF
Gasoline Range Organics (GRO)	ND	3.9	mg/Kg	1	3/24/2020 12:58:13 PN	GS67534
Surr: BFB	100	70-130	%Rec	1	3/24/2020 12:58:13 PM	GS67534
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANICS				Analyst	BRM
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	3/24/2020 10:39:29 AN	51283
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/24/2020 10:39:29 AN	51283
Surr: DNOP	94.1	55.1-146	%Rec	1	3/24/2020 10:39:29 AN	51283
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	DJF
Benzene	ND	0.020	mg/Kg	1	3/24/2020 12:58:13 PN	SS67534
Toluene	ND	0.039	mg/Kg	1	3/24/2020 12:58:13 PN	SS67534
Ethylbenzene	ND	0.039	mg/Kg	1	3/24/2020 12:58:13 PM	SS67534
Xylenes, Total	ND	0.078	mg/Kg	1	3/24/2020 12:58:13 PM	SS67534
Surr: 4-Bromofluorobenzene	82.5	70-130	%Rec	1	3/24/2020 12:58:13 PM	SS67534
Surr: Toluene-d8	97.3	70-130	%Rec	1	3/24/2020 12:58:13 PM	SS67534

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
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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### Hall Environmental Analysis Laboratory, Inc.

Lab Order 2003A41

Date Reported: 3/26/2020

CLIENT: ENSOLUM Project: Lateral 10E-1		Client Sample ID: S-7 Collection Date: 3/23/2020 1:55:00 PM							
Lab ID: 2003A41-005	Matrix: SOIL		Received Dat	<b>e:</b> 3/2	4/2020 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: GASOLI	NE RANGE				Analyst	DJF			
Gasoline Range Organics (GRO)	ND	5.1	mg/Kg	1	3/24/2020 1:27:34 PM	GS6753₄			
Surr: BFB	95.1	70-130	%Rec	1	3/24/2020 1:27:34 PM	GS67534			
EPA METHOD 8015M/D: DIESEL RA	NGE 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 S	HORT LIST				Analyst	DJF			
Benzene	ND	0.026	mg/Kg	1	3/24/2020 1:27:34 PM	SS67534			
Toluene	ND	0.051	mg/Kg	1	3/24/2020 1:27:34 PM	SS67534			
Ethylbenzene	ND	0.051	mg/Kg	1	3/24/2020 1:27:34 PM	SS67534			
Xylenes, Total	ND	0.10	mg/Kg	1	3/24/2020 1:27:34 PM	SS67534			
Surr: 4-Bromofluorobenzene	84.5	70-130	%Rec	1	3/24/2020 1:27:34 PM	SS67534			
Surr: Toluene-d8	92.8	70-130	%Rec	1	3/24/2020 1:27:34 PM	SS67534			

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
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 5 of 14

### Hall Environmental Analysis Laboratory, Inc.

Lab Order 2003A41

Date Reported: 3/26/2020

CLIENT: ENSOLUM		Cl	ient Sample II	<b>D:</b> S-8	8	
Project: Lateral 10E-1		(	Collection Dat	<b>e:</b> 3/2	23/2020 2:00:00 PM	
Lab ID: 2003A41-006	Matrix: SOIL		<b>Received Dat</b>	<b>e:</b> 3/2	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: GASOL	INE 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 RA	NGE 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 S	SHORT LIST				Analyst	DJF
Benzene	ND	0.018	mg/Kg	1	3/24/2020 1:56:37 PM	SS67534
Toluene	ND	0.037	mg/Kg	1	3/24/2020 1:56:37 PM	SS67534
Ethylbenzene	ND	0.037	mg/Kg	1	3/24/2020 1:56:37 PM	SS67534
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	SS67534
Surr: Toluene-d8	97.4	70-130	%Rec	1	3/24/2020 1:56:37 PM	SS67534

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
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 6 of 14

### Hall Environmental Analysis Laboratory, Inc.

Lab Order 2003A41

Date Reported: 3/26/2020

CLIENT: ENSOLUM			ient Sample II		9 23/2020 2:05:00 PM	
Project:         Lateral 10E-1           Lab ID:         2003A41-007	Matrix: SOIL	,			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: GASOLI	NE 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 RA	NGE 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 AN	51283
Surr: DNOP	93.0	55.1-146	%Rec	1	3/24/2020 10:34:22 AM	51283
EPA METHOD 8260B: VOLATILES S	HORT LIST				Analyst	DJF
Benzene	ND	0.017	mg/Kg	1	3/24/2020 2:25:51 PM	SS67534
Toluene	ND	0.034	mg/Kg	1	3/24/2020 2:25:51 PM	SS67534
Ethylbenzene	ND	0.034	mg/Kg	1	3/24/2020 2:25:51 PM	SS67534
Xylenes, Total	ND	0.068	mg/Kg	1	3/24/2020 2:25:51 PM	SS67534
Surr: 4-Bromofluorobenzene	87.0	70-130	%Rec	1	3/24/2020 2:25:51 PM	SS67534
Surr: Toluene-d8	92.6	70-130	%Rec	1	3/24/2020 2:25:51 PM	SS67534

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
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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### Hall Environmental Analysis Laboratory, Inc.

Lab Order 2003A41

Date Reported: 3/26/2020

CLIENT: ENSOLUM			ient Sample II			
Project:         Lateral 10E-1           Lab ID:         2003A41-008	Matrix: SOIL	,			23/2020 2:10:00 PM 24/2020 8:25:00 AM	
Lao ID: 2003A41-008	Matrix: SOIL		Received Dat	e: 5/2	24/2020 8:23:00 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: GASOL	INE RANGE				Analyst	DJF
Gasoline Range Organics (GRO)	ND	3.4	mg/Kg	1	3/24/2020 2:55:26 PM	GS67534
Surr: BFB	104	70-130	%Rec	1	3/24/2020 2:55:26 PM	GS67534
EPA METHOD 8015M/D: DIESEL RA	NGE 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 S	SHORT LIST				Analyst	DJF
Benzene	ND	0.017	mg/Kg	1	3/24/2020 2:55:26 PM	SS67534
Toluene	ND	0.034	mg/Kg	1	3/24/2020 2:55:26 PM	SS67534
Ethylbenzene	ND	0.034	mg/Kg	1	3/24/2020 2:55:26 PM	SS67534
Xylenes, Total	ND	0.068	mg/Kg	1	3/24/2020 2:55:26 PM	SS67534
Surr: 4-Bromofluorobenzene	87.3	70-130	%Rec	1	3/24/2020 2:55:26 PM	SS67534
Surr: Toluene-d8	90.6	70-130	%Rec	1	3/24/2020 2:55:26 PM	SS67534

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
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 8 of 14

### Hall Environmental Analysis Laboratory, Inc.

Lab Order 2003A41

Date Reported: 3/26/2020

CLIENT: ENSOLUM		Cli	ent Sample II	D: S-	11						
Project: Lateral 10E-1		Collection Date: 3/23/2020 2:15:00 PM									
Lab ID: 2003A41-009	Matrix: SOIL		Received Dat	<b>e:</b> 3/2	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: GASOL	INE RANGE				Analyst	DJF					
Gasoline Range Organics (GRO)	ND	17	mg/Kg	5	3/24/2020 11:29:56 AN	GS67534					
Surr: BFB	104	70-130	%Rec	5	3/24/2020 11:29:56 AN	GS67534					
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS				Analyst	BRM					
Diesel Range Organics (DRO)	89	8.9	mg/Kg	1	3/24/2020 10:55:47 AN	51283					
Motor Oil Range Organics (MRO)	130	44	mg/Kg	1	3/24/2020 10:55:47 AN	51283					
Surr: DNOP	99.0	55.1-146	%Rec	1	3/24/2020 10:55:47 AN	51283					
EPA METHOD 8260B: VOLATILES S	SHORT LIST				Analyst	DJF					
Benzene	ND	0.086	mg/Kg	5	3/24/2020 11:29:56 AN	SS67534					
Toluene	ND	0.17	mg/Kg	5	3/24/2020 11:29:56 AN	SS67534					
Ethylbenzene	ND	0.17	mg/Kg	5	3/24/2020 11:29:56 AN	SS67534					
Xylenes, Total	ND	0.35	mg/Kg	5	3/24/2020 11:29:56 AN	SS67534					
Surr: 4-Bromofluorobenzene	87.7	70-130	%Rec	5	3/24/2020 11:29:56 AN	SS67534					
Surr: Toluene-d8	93.7	70-130	%Rec	5	3/24/2020 11:29:56 AN	SS67534					

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
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 9 of 14

	SOLUM eral 10E-1			
Sample ID: MB-51292	SampType: <b>mblk</b>	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: <b>mg/Kg</b>	
Analyte Chloride	Result PQL SPK value ND 1.5	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Sample ID: LCS-51292	SampType: Ics	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: <b>mg/Kg</b>	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual

 Result
 PQL
 SPK value
 SPK Ref Val
 %REC
 LowLimit
 HighLimit
 %RPD

 14
 1.5
 15.00
 0
 94.3
 90
 110

#### Qualifiers:

Chloride

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
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- ND Not Detected at the Reporting Limit
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- 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

Page 10 of 14

2003A41

26-Mar-20

WO#:

## QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc

Page 6	1 of 130
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_	WO#:	2003A41	
, Inc.		26-Mar-20	

Client: ENSOL	UM								
Project: Lateral	10E-1								
Sample ID: MB-51283	SampType:	MBLK	Tes	TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID: PBS	Batch ID:	51283	F	RunNo: 67	7512				
Prep Date: 3/24/2020	Analysis Date:	3/24/2020	S	SeqNo: 23	330406	Units: mg/K	g		
Analyte	Result PQ	L 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	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: LCSS	Batch ID:	F	RunNo: 67512						
Prep Date: 3/24/2020	Analysis Date:	3/24/2020	S	SeqNo: 23	330509	Units: mg/K	g		
Analyte	Result PQ	L 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: 2003A41-001AM	S SampType:	MS	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: S-3	Batch ID:	51283	F	RunNo: 67	7513				
Prep Date: 3/24/2020	Analysis Date:	3/24/2020	5	SeqNo: 23	331559	Units: mg/K	g		
Analyte	Result PQ	L 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: 2003A41-001AM	SD SampType:	MSD	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: S-3	Batch ID:	51283	F	RunNo: 67	7513				
Prep Date: 3/24/2020	Analysis Date:	3/24/2020	S	SeqNo: 23	331560	Units: mg/K	g		
Analyte	Result PQ	L 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:

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- 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 16 20

26-Mar-20

Client: ENSOLU Project: Lateral 1										
	0E-1									
Sample ID: mb1	Samp <sup>-</sup>	Гуре: <b>МЕ</b>	BLK	TestCode: EPA Method 8260B: Volatiles Short List						
Client ID: PBS	Batc	h ID: <b>SS</b>	67534	F	RunNo: 67534					
Prep Date:	Analysis [	Date: 3/	24/2020	S	SeqNo: 2	331524	Units: mg/k	٢g		
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 Ics	Samp	Гуре: <b>LC</b>	S	Tes	tCode: El	PA Method	8260B: Vola	tiles Short	List	
Client ID: LCSS	Batch ID: SS67534			F	RunNo: 6	7534				
Prep Date:	Analysis Date: 3/24/2020			S	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	Samp	Гуре: <b>М</b>	6	Tes	tCode: El	PA Method	8260B: Vola	tiles Short	List	
Client ID: S-3	Batc	h ID: <b>SS</b>	67534	RunNo: <b>67534</b>						
Prep Date:	Analysis [	Date: 3/	24/2020	5	SeqNo: 2	331526	Units: mg/k	٢g		
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: 2003a41-001ams	d Samp	Гуре: М	SD	Tes	tCode: El	PA Method	8260B: Vola	tiles Short	List	
Client ID: S-3	Batc	h ID: <b>SS</b>	67534	F	RunNo: 6	7534				
Prep Date:	Analysis [	Date: <b>3/</b>	24/2020	S	SeqNo: 2	331527	Units: mg/k	٢g		
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	
Oualifiers:										

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

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 12 of 14

B Analyte detected in the associated Method Blank

WO#: 2003A41 26-Mar-20

Client:	ENSOLUM
Project:	Lateral 10E-1

Sample ID: 2003a41-001amsd	SampT	SampType: MSD			TestCode: EPA Method 8260B: Volatiles Sho					
Client ID: S-3	Batch	ID: <b>SS</b>	67534	F	RunNo: 6	7534				
Prep Date:	Analysis D	ate: 3/	24/2020	5	SeqNo: 2	331527	Units: <b>mg/K</b>	g		
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:

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- ND Not Detected at the Reporting Limit
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- P Sample pH Not In Range
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Page 13 of 14

## **QC SUMMARY REPORT** Hall Environmental Analysis Laboratory, Inc.

WO#:	2003A41
	26 Mar 20

	ENSOLUM									
Project:	Lateral 10E-1									
Sample ID: mb1	Sam	рТуре: <b>МІ</b>	BLK	Test	Code: EF	PA Method	8015D Mod:	Gasoline I	Range	
Client ID: PBS	Ba	tch ID: G	67534	R	unNo: 67	7534				
Prep Date:	Analysis	Date: 3/	/24/2020	S	eqNo: 23	331548	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics Surr: BFB	(GRO) ND 500	5.0	500.0		101	70	130			
		_								
Sample ID: 2.5ug g		рТуре: <b>LC</b>					8015D Mod:	Gasoline I	Range	
Client ID: LCSS		tch ID: G		R	unNo: 67	7534				
Prep Date:	Analysis	Date: 3/	/24/2020	S	eqNo: 23	331549	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	. ,		25.00	0	87.4	70	130			
Surr: BFB	510		500.0		103	70	130			
Sample ID: 2003a41	1-002ams Sam	рТуре: М	S	Test	Code: EF	PA Method	8015D Mod:	Gasoline I	Range	
Client ID: S-4	Ba	tch ID: G	67534	R	unNo: 67	7534				
Prep Date:	Analysis	Date: 3/	/24/2020	S	eqNo: 2	331550	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Casalina Banga Organia										
Gasoline Range Organics	s (GRO) 19	3.8	19.23	1.585	90.2	70	130			
Surr: BFB	s (GRO) 19 390	3.8	19.23 384.6	1.585	90.2 102	70 70	130 130			
• •	390	3.8 pType: <b>M</b>	384.6		102	70		Gasoline	Range	
Surr: BFB	390 1-002amsd Sam		384.6 SD	Test	102	70 PA Method	130	Gasoline	Range	
Surr: BFB	390 1-002amsd Sam Ba	рТуре: М	384.6 SD S67534	Test	102 Code: EF	70 PA Method 7534	130		Range	
Surr: BFB Sample ID: 2003a41 Client ID: S-4	390 1-002amsd Sam Ba	pType: M tch ID: G Date: 3/	384.6 SD S67534 /24/2020	Test	102 Code: EF	70 PA Method 7534	130 8015D Mod:		Range RPDLimit	Qual
Surr: BFB Sample ID: 2003a4 Client ID: S-4 Prep Date:	390 I-002amsd Sam Ba Analysis Result	pType: M tch ID: G Date: 3/	384.6 SD S67534 /24/2020	Test R S	102 Code: EF	70 PA Method 7534 331551	130 8015D Mod: Units: mg/K	g	U	Qual

#### **Qualifiers:**

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- D Sample Diluted Due to Matrix
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- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- Analyte detected in the associated Method Blank в
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

ANAL	RONMEN YSIS Ratory	ΓAL		EL: 505-345	nental Analysis 4901 F Albuquerque, -3975 FAX: 50, ww.hallenviron,	awkins NE NM 87109 5-345-4107	Sa	mple Log-In Check List
Client Name:	ENSOLU	M AZTEC	Wo	k Order Nu	mber: 2003A4	1		RcptNo: 1
Received By:	Juan Ro	jas	3/24/2	020 8:25:00	D AM	44	untay	2
Completed By:	Anne Th	orne	1	020 8:40:09	9 AM	a	meny	1
Reviewed By:	NB		3/20	1/26			- //	
Chain of Cus	stody							
1. Is Chain of C	and the second se	ciently comple	ete?		Yes 🔽			Not Present
2. How was the	sample deli	vered?			Courier			
Log In								
3. Was an atten	npt made to	cool the sam	ples?		Yes 🗸	N	o 🗌	
4. Were all sam	ples receive	d at a tempera	ature of >0° C	to 6.0°C	Yes 🔽	N	•	
5. Sample(s) in	proper conta	ainer(s)?			Yes 🔽	N	o 🗆	
6. Sufficient sam	iple volume	for indicated t	est(s)?		Yes 🗸	No		
7. Are samples (	except VOA	and ONG) pr	operly preserv	ed?	Yes 🔽	No		
8. Was preserva	tive added to	bottles?			Yes 🗌	No		NA 🗌
9. Received at le	ast 1 vial wi	th headspace	<1/4" for AQ	/OA?	Yes 🗌	No		NA 🔽
10. Were any san	nple contain	ers received b	proken?		Yes	N		# of preserved
11.Does paperwo (Note discrepa			n)		Yes 🔽	No		bottles checked for pH: (<2 or ≥12 unless noted)
2. Are matrices c					Yes 🗸	No		Adjusted?
3. Is it clear what					Yes 🗸	No		
4. Were all holdir (If no, notify cu	ng times able	e to be met?			Yes 🔽			Checked by: DAD 3/24/20
Special Handli								
15. Was client not			with this order	,	Yes 🗌	No		NA 🗹
Person	Notified:			Date				
By Who Regardir	ng:			Via:	eMail [	Phone	] Fax	In Person
Client In 16. Additional ren	structions:							
			OIL JARS/at 3	124/20				
7. Cooler Inform	nation							
Cooler No 1	Temp °C 2.3	Condition Good	Seal Intact Yes	Seal No	Seal Date	Signed	Ву	

Page 1 of 1

Chain-of	Chain-of-Custody Record	Turn-Around Time:	Time:	SAME DAY		87.							Recei
Clien	nillec -	□ Standard	Rush	i lució	Л			MALL	E S	Z Z		AALL ENVIRONMENTAL	
		Project Name:				-	( >	sh.ww	www.hallenvironmental.com	onme	ntal.co		
	Mailing Address: 6005. 210 Grande Site A	Lateral				4901 Hawkins NE	lawkir	s NE	- Albu	duerq	ue, N	Albuquerque, NM 87109	<b>D: 1</b> 1
	STUID	Project #: See	ee nates			Tel. 505-345-3975	15-345	-3975		Fax 50	505-345-4107	-4107	/4/202
Phone #:							1		Analysis Request	is Re	duesi		20 1
email or Fax#: KSU	email or Fax#: KSUMMARCO ensolum, com	Project Mana	Project Manager: KSummer	nmers		-		_	⁺OS	-	(tuə		10:42
QA/QC Package:	Level 4 (Full Validation)				:08) s	PCB'		SMIS	,₄,		edA\f		2:57 A
		0	1.1.0.1	1.1		_	_	0/7	, <sub>2</sub> ,	_	uəs		( <i>M</i>
	Az compilance Other	On Ice:	PYes [	160 NO					DN '	(4)			
ype)		# of Coolers:	1					-		-			
		Cooler Temp(including CF):	(including CF): 7	23-0=23				_	_				
		Container	Preservative	100000			M) 8	(d гн. 8 АЯ:		N) 02	1.1.1.1	0142	_
Date Time Ma	Matrix Sample Name	Type and #	Type	201			_	-	_				
5 23 20 1335	S 5-3	1×402Jur	(co)	102	×					-		X	
1340	5 S-4	1×402 Jar	COUL	202	× X	X						X	
5/22/20 1345	S S-5	1×402 Jar	COOL	203	X	×						×	
32000 1350	5 S-6	1×402 Jur	coul	hoe	× ×	51						×	
32300 1355	S Sut	1×402 Jur	cool	205	×							×	
3/23/20 1400	S S-8	1×402 Jar	CON	306	×					_		×	
3/23 20 1405	5 5-9	1×402 Jar	CON	101	×					_		×	
3/23/20 1410	S S-10	1×402 Dor	coul	802	×					_	_	X	
3/23/20 INIS	S S-11	1+442 Jur	COBI	202	XX	X						×	
-			-								_		
						_	-			-			
DU /UU2	Relinquished by:	Received by:	Via:	120	Remarks: CAME DAU	J. K		P.M.C.	PM-TC Pay Key	EI	lenon EB3	Long (EPEOD	6
3,23,24,0 174 C	Kelinquished by:	Keceweed by:		Late time									ge 66 a
If necessary, eam	if necessary, agmples submitted to Hall Environmental may be subcoffracted to other		accredited laboratories.	This serves as	s possibilit	y. Any su	b-contra	cted data	will be c	early not	tated on	the analytical rep	
								-					0



March 31, 2020

Kyle Summers ENSOLUM 606 S. Rio Grande Suite A Aztec, NM 87410 TEL: (903) 821-5603 FAX Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

OrderNo.: 2003C57

Dear Kyle Summers:

RE: Lateral 10E 1

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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

### Hall Environmental Analysis Laboratory, Inc.

Lab Order 2003C57

Date Reported: 3/31/2020

CLIENT	ENSOLUM	Client Sample ID: S-12
<b>Project:</b>	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 ORG	ANICS				Analyst	ТОМ
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.

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- 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
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### Hall Environmental Analysis Laboratory, Inc.

Lab Order 2003C57

Date Reported: 3/31/2020

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 ORG	ANICS				Analyst	том
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.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

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### Hall Environmental Analysis Laboratory, Inc.

Lab Order 2003C57

Date Reported: 3/31/2020

CLIENT	ENSOLUM	Client Sample ID: S-14
<b>Project:</b>	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 ORG	SANICS					Analyst	: ТОМ
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.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

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### Hall Environmental Analysis Laboratory, Inc.

Lab Order 2003C57

Date Reported: 3/31/2020

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 ORG	ANICS				Analyst	том
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.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

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### Hall Environmental Analysis Laboratory, Inc.

Lab Order 2003C57

Date Reported: 3/31/2020

CLIENT: ENSOLUM		Client Sample ID: S-16
<b>Project:</b>	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.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

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## Hall Environmental Analysis Laboratory, Inc.

Lab Order 2003C57

Date Reported: 3/31/2020

CLIENT	ENSOLUM	Client Sample ID: S-17
<b>Project:</b>	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 ORG	SANICS				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.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

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## Hall Environmental Analysis Laboratory, Inc.

Lab Order 2003C57

Date Reported: 3/31/2020

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 ORG	ANICS				Analyst	том
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.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
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14

1.5

15.00

Client: Project:	ENSOLU Lateral 10										
Sample ID:	MB-51388	SampType	e: mbl	lk	Tes	tCode: E	PA Method	300.0: Anions	5		
Client ID:	PBS	Batch ID	: 513	88	F	unNo: 6	7692				
Prep Date:	3/29/2020	Analysis Date	: 3/2	9/2020	S	eqNo: 2	337003	Units: mg/K	g		
Analyte		Result F	QL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	1.5								
Sample ID:	LCS-51388	SampType	: Ics		Tes	tCode: E	PA Method	300.0: Anions	5		
Client ID:	LCSS	Batch ID	: 513	88	F	lunNo: 6	7692				
Prep Date:	3/29/2020	Analysis Date	: 3/2	9/2020	S	eqNo: 2	337004	Units: mg/Kg	g		
Analyte		Result F	QL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

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

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2003C57

31-Mar-20

WO#:

**ENSOLUM** 

**Client:** 

# **QC SUMMARY REPORT** Hall Environmental Analysis Laboratory, Inc.

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	WO#:	2003C57
<b>/, Inc.</b>		31-Mar-20

	31-Mar-20

Project: Lateral	10E 1									
Sample ID: LCS-51385	SampT	ype: LC	S	Test	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: LCSS	Batch	ID: 51	385	R	RunNo: 6	7660				
Prep Date: 3/28/2020	Analysis D	ate: 3/	29/2020	S	SeqNo: 2	335966	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO) Surr: DNOP	45 4.3	10	50.00 5.000	0	89.5 85.4	70 55.1	130 146			
Sample ID: MB-51385	SampT	ype: ME	BLK	Test	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: PBS	Batch	ID: 51	385	R	RunNo: 6	7660				
Prep Date: 3/28/2020	Analysis D	ate: 3/	29/2020	S	SeqNo: 2	335967	Units: mg/h	٢g		
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: 2003C57-001AM	S SampT	ype: <b>MS</b>	6	Test	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: S-12	Batch	ID: 51	385	R	RunNo: 6	7660				
Prep Date: 3/28/2020	Analysis D	ate: 3/	29/2020	S	SeqNo: 2	336117	Units: mg/h	٢g		
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: 2003C57-001AM	SD SampT	ype: <b>MS</b>	SD.	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: S-12	Batch	ID: 51	385	R	RunNo: 6	7660				
Prep Date: 3/28/2020	Analysis D	ate: 3/	29/2020	S	SeqNo: 2	336147	Units: mg/h	٢g		
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
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- Analyte detected in the associated Method Blank в
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range

RL Reporting Limit

# QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#:	2003C57

31-Mar-20

	SOLUM eral 10E 1									
Sample ID: mb	SampTy	/pe: <b>ME</b>	BLK	Test	Code: EF	PA Method	8015D: Gaso	line Rang	e	
Client ID: PBS	Batch	ID: <b>G6</b>	7672	R	unNo: 67	7672				
Prep Date:	Analysis Da	ate: <b>3/</b>	28/2020	S	eqNo: 23	336386	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRC Surr: BFB	0) ND 1000	5.0	1000		104	66.6	105			
Sample ID: 2.5ug gro Ic:	s SampTy	/pe: <b>LC</b>	S	Test	Code: EF	PA Method	8015D: Gaso	line Rang	e	
Client ID: LCSS	Batch	ID: <b>G6</b>	7672	R	unNo: 67	7672				
Prep Date:	Analysis Da	ate: <b>3/</b>	28/2020	S	eqNo: 23	336387	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRC	,	5.0	25.00	0	99.2	80	120			
Surr: BFB	1100		1000		110	66.6	105			S
Sample ID: 2003c57-001	a ms SampTy	/pe: <b>MS</b>	6	Test	Code: EF	PA Method	8015D: Gaso	line Rang	9	
Client ID: S-12	Batch	ID: <b>G6</b>	7672	R	unNo: 67	7672				
Prep Date:	Analysis Da	ate: 3/	28/2020	S	eqNo: 23	336389	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRC	)) 81	16	04 40	0		00.4	1.10			
	) 01	10	81.43	0	99.0	69.1	142			
Surr: BFB	3600	10	81.43 3257	U	99.0 111	69.1 66.6	142 105			S
Surr: BFB Sample ID: 2003c57-001	3600	-	3257		111	66.6		line Rang	9	S
	3600 a msd SampTy	-	3257	Test	111	66.6 PA Method	105	line Rang	9	S
Sample ID: 2003c57-001	3600 a msd SampTy	/pe: <b>MS</b> ID: <b>G6</b>	3257 SD 7672	Test	111 Code: EF	66.6 PA Method 7672	105	U	9	S
Sample ID: 2003c57-001 Client ID: S-12	3600 a msd SampTy Batch	/pe: <b>MS</b> ID: <b>G6</b>	3257 SD 7672 28/2020	Test	111 Code: EF	66.6 PA Method 7672	105 8015D: Gaso	U	e RPDLimit	S Qual
Sample ID: 2003c57-001 Client ID: S-12 Prep Date:	3600 <b>a msd</b> SampTy Batch Analysis Da Result	/pe: MS ID: G6 ate: 3/	3257 SD 7672 28/2020	Test R S	111 Code: EF unNo: 67 eqNo: 23	66.6 PA Method 7672 336390	105 8015D: Gaso Units: mg/K	g		

### **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

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**ENSOLUM** 

**Client:** 

## QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

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Project:	Lateral 10	E 1									
Sample ID: n	nb	SampT	уре: МЕ	BLK	Tes	tCode: EF	PA Method	8021B: Volat	iles		
Client ID: F	PBS	Batcl	n ID: <b>B6</b>	7672	R	RunNo: 67	7672				
Prep Date:		Analysis D	Date: 3/	28/2020	S	SeqNo: 23	336454	Units: mg/K	ſg		
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-Bromot	fluorobenzene	1.1		1.000		112	80	120			
Sample ID: 1	00ng btex lcs	SampT	ype: LC	S	Test	tCode: EF	PA Method	8021B: Volat	iles		
Client ID: L	CSS	Batcl	n ID: <b>B6</b>	7672	R	RunNo: 67	7672				
Prep Date:		Analysis D	Date: 3/	28/2020	S	SeqNo: 23	336455	Units: <b>mg/K</b>	(g		
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-Bromot	fluorobenzene	1.1		1.000		106	80	120			
Sample ID: 2	2003c57-002a ms	SampT	- уре: <b>МS</b>	3	Test	tCode: EF	PA Method	8021B: Volat	tiles		
Client ID: S	6-13	Batcl	n ID: <b>B6</b>	7672	R	RunNo: 67	7672				
Prep Date:		Analysis D	Date: 3/	28/2020	S	SeqNo: 23	336458	Units: mg/K	(g		
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			
				0.7634		108	80	120			
Surr: 4-Bromot	fluorobenzene	0.82		0.7004		100					
	fluorobenzene 2003c57-002a msd		уре: МS		Tes			8021B: Volat	iles		
	2003c57-002a msd	I SampT	ype: <b>MS</b> n ID: <b>B6</b>	SD			PA Method		iles		
Sample ID: 2	2003c57-002a msd	I SampT	n ID: <b>B6</b>	SD 7672	R	tCode: EF	PA Method 7672				
Sample ID: 2 Client ID: 5	2003c57-002a msd	I SampT Batcl	n ID: <b>B6</b>	SD 7672 28/2020	R	tCode: EF	PA Method 7672	8021B: Volat		RPDLimit	Qual
Sample ID: 2 Client ID: 5 Prep Date: Analyte	2003c57-002a msd	I SampT Batcl Analysis D	n ID: <b>B6</b> Date: <b>3/</b>	SD 7672 28/2020	R	tCode: EF RunNo: 67 SeqNo: 23	PA Method 7672 336459	8021B: Volat	ſg	RPDLimit 20	Qual
Sample ID: 2 Client ID: 5 Prep Date: Analyte Benzene	2003c57-002a msd	I SampT Batcl Analysis D Result	n ID: <b>B6</b> Date: <b>3/</b> PQL	5D 7672 28/2020 SPK value	R S SPK Ref Val	tCode: EF RunNo: 67 SeqNo: 23 %REC	PA Method 7672 336459 LowLimit	8021B: Volat Units: mg/K HighLimit	<b>⁄g</b> %RPD		Qual
Sample ID: 2 Client ID: 5 Prep Date: Analyte Benzene Toluene	2003c57-002a msd	I SampT Batcl Analysis D Result 0.72	n ID: <b>B6</b> Date: <b>3/</b> PQL 0.019	5D 7672 28/2020 SPK value 0.7634	R S SPK Ref Val 0.01076	tCode: EF RunNo: 67 SeqNo: 23 <u>%REC</u> 92.7	PA Method 7672 336459 LowLimit 78.5	8021B: Volat Units: mg/K HighLimit 119	<b>5g</b> <u>%RPD</u> 8.31	20	Qual
Sample ID: 2 Client ID: 5 Prep Date:	2003c57-002a msd	SampT Batcl Analysis E Result 0.72 0.73	Date: <b>3</b> /2 PQL 0.019 0.038	5D 7672 28/2020 SPK value 0.7634 0.7634	R S SPK Ref Val 0.01076 0.01252	tCode: EF RunNo: 67 SeqNo: 23 %REC 92.7 93.5	PA Method 7672 336459 LowLimit 78.5 75.7	8021B: Volat Units: mg/K HighLimit 119 123	<b>5g</b> %RPD 8.31 7.91	20 20	Qual

Analyte detected in the associated Method Blank

Analyte detected below quantitation limits

Value above quantitation range

Sample pH Not In Range

RL Reporting Limit

Qualifiers: \* Value exceeds Maximu

- \* 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

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2003C57

31-Mar-20

WO#:

. Released to Imaging: 5/17/2022 12:58:46 PM

HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental Alb TEL: 505-345-3975 Website: www.ha	490 uquerç FAX:	01 Hawkins que, NM 87 505-345-4	NE 109 107	Sample Log-In Check List				
Client Name: ENSOLUM AZTEC	Work Order Number	: 200	3C57			RcptNo: 1			
Received By: Erin Melendrez	3/28/2020 8:15:00 AM			ú	nt nt	5			
Completed By: Erin Melendrez	3/28/2020 9:45:27 AM			in	MA	5			
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?		Cou	<u>rier</u>						
Log In									
3. Was an attempt made to cool the samples	?	Yes	<ul> <li>Image: A start of the start of</li></ul>	No		NA			
4. Were all samples received at a temperature	e of >0° C to 6.0°C	Yes		No					
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) prope	rly 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 brok	en?	Yes		No		# of preserved	/		
1. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes		No		bottles checked for pH: (<2 or,≯12 unless note	ed)		
2. Are matrices correctly identified on Chain o	f Custody?	Yes		No		Adjusted?			
3. Is it clear what analyses were requested?		Yes		No					
4. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes		No		Checked by: JP 03 28 2	0		
Special Handling (if applicable)									
15. Was client notified of all discrepancies with	this order?	Yes		No		NA 🔽			
Person Notified: By Whom: Regarding:	Date: Via:	] eMa	ail 🗌 Ph	one 🗌	] Fax	In Person			
Client Instructions:									
16. Additional remarks:									
17. <u>Cooler Information</u> Cooler No Temp ºC Condition & 1 3.9 Good	Seal Intact Seal No S	eal Da	ate S	Signed	Ву				

Page 1 of 1

			C <b>D: 1</b> 1	1/4/2	020	10:4	2:57 A	M (N	J 10	) )	Air Bubbles								Page 80 of 1
	ANALYSIS LABORATORY		Albuquerque, NM 87109	505-345-4107	Analysis Request	5	LCB.	2808		0∧- (∀	8081 Pestid 8260B (VO) 8270 (Semi	X	×	×	×	X	×	*	Date Time Remarks: PM-Tom Long (EPRed) 3/2/20 1 Jyl SMNE DAY Pay Key - PB 21300 - Date Time SI5 2/78/20
NIN	STS	a contraction	Ibuquer	Fax 5	lysis <b>R</b>	-		_	1, <sub>5</sub> C	DN'I	D, A) enoinA								PM-70 Pay Key. Nun APC
	VALY	collod			Ana		(SMIS		82	0 ot	EDB (Metho PAH's (831 ВСКА 8 Ме								Part P
1			4901 Hawkins NE	Tel. 505-345-3975				(1	.81	4 pc	TPH (Metho	×		×	~	~	-	~	044
			4901	Tel.		(ʎյu	o seÐ)	Hd.	L +	BE	TM + XJT8 83108 H9T		×	×	×	×	×	×	Remarks:
					<u> </u>	(1	208) e	<del>.8M</del> .	± +	-38 	TM-+ X3T8	X	×	×	×	×	×	×	Rei
Turn-Around Time: SAME DAY	□ Standard ★ Rush 10070	Project Name:	Lateral 10E-1	Project #: See rutes		Project Manager: ICSUmmers		Sampler: 20echilly	Ø	Sample Temperature: 4_1-0.2 (CF)=3.9%	Container Preservative HEAL No. Type and # Type 2003C57	1x402Jur COCI - COI	1×4025ar cool -002	C001	1×402 Jar COUL	1×402 Jar COOI -005	1×402 JAC COOL -006	1×402 Jul 2007 -007	Time: Relinquished by: 1241 Time: Relinquished by: Time: Relinquished by: 138 Monetul Dele Time 1738 Monetul Dele Time 378120
Chain-of-Custody Record	C		Mailing Address: 606 S, Rio Counde Suite A			email or Fax#: ՀՏԱրդՈՈւշ @ בח כא / עאוי רטייז	Level 4 (Full Validation)				Sample Request ID	S-12	S-13	S-14	5-15	S-16	S-17	81-5	der her
of-Cu	mill	1	606 S,	STUID		Summe			□ Other		Matrix	S	S	5	S	S	S	S	Relinquished by: Relinquished by:
hain-	Ensolum		Address:	Aztec, NM STUID		Fax#: K	ackage: lard	ation	P	(Type)	Time	1015	1620	1025	1030	1035	1040	1045	Time: F 1241 - Time: F
U Releas	Client:	Im	Mailing	Azte	Phone #:	cemail or	AVQC Package:	Accreditation	D NELAP	□ EDD (Type)	Date	3/27/20	3/27/20	Slatlao	Sartau	3/27/20	3 2720	3/324/20	Date: Time: 3/27/20 1241 Date: Time: 3/27/26 1738



April 03, 2020

Kyle Summers ENSOLUM 606 S. Rio Grande Suite A Aztec, NM 87410 TEL: (903) 821-5603 FAX Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

OrderNo.: 2004059

Dear Kyle Summers:

RE: Lateral 10E 1

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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

## Hall Environmental Analysis Laboratory, Inc.

Lab Order 2004059

Date Reported: 4/3/2020

CLIENT	ENSOLUM	Client Sample ID: S-19
<b>Project:</b>	Lateral 10E 1	<b>Collection Date:</b> 4/1/2020 2:45:00 PM
Lab ID:	2004059-001	<b>Matrix:</b> MEOH (SOIL) <b>Received Date:</b> 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 OR	GANICS				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

Page 1 of 10

## Hall Environmental Analysis Laboratory, Inc.

Lab Order 2004059

Date Reported: 4/3/2020

CLIENT:	ENSOLUM	Client Sample ID: S-20
<b>Project:</b>	Lateral 10E 1	Collection Date: 4/1/2020 2:50:00 PM
Lab ID:	2004059-002	<b>Matrix:</b> MEOH (SOIL) <b>Received Date:</b> 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 OR	GANICS				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. D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 2 of 10

## Hall Environmental Analysis Laboratory, Inc.

Lab Order 2004059

Date Reported: 4/3/2020

CLIENT	ENSOLUM	Client Sample ID: S-21
<b>Project:</b>	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 OR	GANICS				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
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 3 of 10

## Hall Environmental Analysis Laboratory, Inc.

Lab Order 2004059

Date Reported: 4/3/2020

CLIENT	ENSOLUM	Client Sample ID: S-22
<b>Project:</b>	Lateral 10E 1	<b>Collection Date:</b> 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 OR	GANICS				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. D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 4 of 10

## Hall Environmental Analysis Laboratory, Inc.

Lab Order 2004059

Date Reported: 4/3/2020

CLIENT:	ENSOLUM	Client Sample ID: S-23
<b>Project:</b>	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 OF	RGANICS				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. D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 5 of 10

Client: Project:	ENSOLU Lateral 10										
Sample ID: MB	-51509	SampT	ype: <b>m</b> l	olk	Tes	tCode: EF	PA Method	300.0: Anion	S		
Client ID: PBS	S	Batch	n ID: <b>51</b>	509	F	RunNo: 67	7778				
Prep Date: 4/2	2/2020	Analysis D	ate: 4/	2/2020	5	SeqNo: 23	342104	Units: <b>mg/K</b>	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	1.5								
Sample ID: LCS	S-51509	SampT	ype: Ics	5	Tes	tCode: EF	PA Method	300.0: Anion	s		
Client ID: LCS	SS	Batch	n ID: 51	509	F	RunNo: 67	7778				
Prep Date: 4/2	2/2020	Analysis D	ate: 4/	2/2020	5	SeqNo: 23	342105	Units: <b>mg/K</b>	g		
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

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2004059

03-Apr-20

WO#:

# QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#:	2004059
	03-Apr-20

	-	
Client: ENSOL	LUM	
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 Surr: DNOP	Result         PQL         SPK value           3.7         5.000	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual 73.3 55.1 146
Sample ID: MB-51489	SampType: <b>MBLK</b>	TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: PBS	Batch ID: 51489	RunNo: <b>67768</b>
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: <b>51506</b>	RunNo: 67718
Prep Date: 4/2/2020	Analysis Date: 4/2/2020	SeqNo: 2340682 Units: mg/Kg
Analyte		SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO) Surr: DNOP	491050.003.95.000	0 97.5 70 130 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	

### Qualifiers:

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- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range

RL Reporting Limit

B Analyte detected in the associated Method Blank

# QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc

UKI	WO#:	2004059
lysis Laboratory, Inc.		03-Apr-20

Client: Project:	ENSOLU Lateral 10												
• 					Tee		DA Mathad			Onnenies			
•	LCS-51460	•	ype: LC		TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID:			n ID: <b>51</b>			lunNo: 67							
Prep Date:	3/31/2020	Analysis D	ate: 4/	2/2020	S	eqNo: 2	341419	Units: %Red	;				
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	SampT	ype: ME	BLK	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics			
Client ID:	PBS	Batch	D: 51	460	R	unNo: 67	7718						
Prep Date:	3/31/2020	Analysis D	ate: 4/	2/2020	S	eqNo: 2	341420	Units: %Red	;				
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	SampT	ype: <b>M</b>	6	Tes	tCode: EF	PA Method	8015M/D: Die	esel Range	e Organics			
Client ID:	S-19	Batch	n ID: 51	506	R	unNo: 67	7768						
	• .•	Dutor		500		unito. 0							
Prep Date:		Analysis D				SeqNo: 2		Units: <b>mg/K</b>	g				
Prep Date: Analyte				2/2020		SeqNo: 2		Units: <b>mg/K</b> HighLimit	<b>g</b> %RPD	RPDLimit	Qual		
Analyte		Analysis D	ate: 4/	2/2020	S	SeqNo: 2	341569	U	0	RPDLimit	Qual		
Analyte	4/2/2020	Analysis D Result	PQL	<b>2/2020</b> SPK value	SPK Ref Val	eqNo: 2: %REC	341569 LowLimit	HighLimit	0	RPDLimit	Qual		
Analyte Diesel Range ( Surr: DNOP	4/2/2020	Analysis D Result 43 3.9	PQL	2/2020 SPK value 49.16 4.916	SPK Ref Val 2.779	SeqNo: 2: %REC 82.6 78.5	341569 LowLimit 47.4 55.1	HighLimit 136	%RPD		Qual		
Analyte Diesel Range ( Surr: DNOP	4/2/2020 Drganics (DRO) 2004059-001AMSE	Analysis D Result 43 3.9 D SampT	Pate: <b>4/</b> PQL 9.8	2/2020 SPK value 49.16 4.916	SPK Ref Val 2.779 Test	SeqNo: 2: %REC 82.6 78.5	341569 LowLimit 47.4 55.1 PA Method	HighLimit 136 146	%RPD		Qual		
Analyte Diesel Range ( Surr: DNOP Sample ID:	4/2/2020 Drganics (DRO) 2004059-001 AMSE S-19	Analysis D Result 43 3.9 D SampT	PQL 9.8 9.8 ype: <b>M</b> \$ n ID: <b>51</b>	2/2020 SPK value 49.16 4.916 506	SPK Ref Val 2.779 Test R	SeqNo: 2: %REC 82.6 78.5	341569 LowLimit 47.4 55.1 PA Method 7768	HighLimit 136 146	%RPD		Qual		
Analyte Diesel Range ( Surr: DNOP Sample ID: Client ID:	4/2/2020 Drganics (DRO) 2004059-001 AMSE S-19	Analysis D Result 43 3.9 D SampT Batch	PQL 9.8 9.8 9.8 1D: <b>51</b> Pate: <b>4</b> /	2/2020 SPK value 49.16 4.916 506 2/2020	SPK Ref Val 2.779 Test R	SeqNo:         2:           %REC         82.6           78.5         78.5           tCode:         EF           seqNo:         61           SeqNo:         2:	341569 LowLimit 47.4 55.1 PA Method 7768	HighLimit 136 146 8015M/D: Die	%RPD		Qual		
Analyte Diesel Range ( Surr: DNOP Sample ID: Client ID: Prep Date: Analyte	4/2/2020 Drganics (DRO) 2004059-001 AMSE S-19	Analysis D Result 43 3.9 D SampT Batch Analysis D	PQL 9.8 9.8 9.8 1D: <b>51</b> Pate: <b>4</b> /	2/2020 SPK value 49.16 4.916 506 2/2020	SPK Ref Val 2.779 Tesi R S	SeqNo: 2: %REC 82.6 78.5 tCode: EF RunNo: 6 SeqNo: 2:	341569 LowLimit 47.4 55.1 PA Method 7768 341570	HighLimit 136 146 8015M/D: Die Units: mg/K	%RPD	e Organics			

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- P Sample pH Not In Range
- RL Reporting Limit

Page 8 of 10

# QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#:	2004059

03-Apr-20

	ENSOLUM									
Project:	Lateral 10E 1									
Sample ID: mb1	Sam	рТуре: <b>М</b>	BLK	Tes	tCode: EF	PA Method	8015D: Gaso	line Rang	9	
Client ID: PBS	Ba	tch ID: Ge	67775	F	RunNo: 67	7775				
Prep Date:	Analysis	Date: 4/	/2/2020	S	SeqNo: 23	341387	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	. ,	5.0								
Surr: BFB	990		1000		99.5	66.6	105			
Sample ID: 2.5ug gr	rolcs Sam	pType: <b>LC</b>	s	Tes	tCode: EF	PA Method	8015D: Gaso	line Rang	9	
Client ID: LCSS	Ba	tch ID: Ge	67775	F	RunNo: 67	7775				
Prep Date:	Analysis	Date: 4/	/2/2020	S	SeqNo: 23	341390	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	. ,	5.0	25.00	0	98.8	80	120			
Surr: BFB	1100		1000		110	66.6	105			S
Sample ID: 2004059				Taa		PA Method	8015D: Gaso	line Rang	9	
Sample ID. 2004039	9-001ams Sam	pType: MS	5	165				inte ixang	5	
Client ID: <b>S-19</b>		pType: MS tch ID: G6			RunNo: 67			inte rearig	5	
-	Ва		67775	F		7775	Units: mg/K	U	5	
Client ID: S-19	Ва	tch ID: <b>G</b>	67775 /2/2020	F	RunNo: 67	7775		U	RPDLimit	Qual
Client ID: S-19 Prep Date:	Ba Analysis Result	tch ID: <b>G</b>	67775 /2/2020	ਜ 2	RunNo: 67 SeqNo: 23	7775 341396	Units: <b>mg/K</b>	g		Qual
Client ID: <b>S-19</b> Prep Date: Analyte	Ba Analysis Result	tch ID: <b>G6</b> Date: <b>4</b> / PQL	57775 /2/2020 SPK value	F S SPK Ref Val	RunNo: 67 SeqNo: 23 %REC	7775 341396 LowLimit	Units: <b>mg/K</b> HighLimit	g		Qual S
Client ID: <b>S-19</b> Prep Date: Analyte Gasoline Range Organics	Ba Analysis Result (GRO) 21 1000	tch ID: <b>G6</b> Date: <b>4</b> / PQL	57775 2/2/2020 SPK value 22.08 883.4	F S SPK Ref Val 0	RunNo: 67 BeqNo: 23 %REC 94.6 115	7775 341396 LowLimit 69.1 66.6	Units: <b>mg/K</b> HighLimit 142	g %RPD	RPDLimit	
Client ID: <b>S-19</b> Prep Date: Analyte Gasoline Range Organics Surr: BFB	Ba Analysis Result (GRO) 21 1000 <b>D-001amsd</b> Sam	tch ID: <b>G6</b> 5 Date: <b>4</b> / PQL 4.4	57775 /2/2020 SPK value 22.08 883.4 SD	F S SPK Ref Val 0 Tes	RunNo: 67 BeqNo: 23 %REC 94.6 115	7775 341396 LowLimit 69.1 66.6	Units: <b>mg/K</b> HighLimit 142 105	g %RPD	RPDLimit	
Client ID: S-19 Prep Date: Analyte Gasoline Range Organics Surr: BFB Sample ID: 2004059	Analysis Result (GRO) 21 1000 9-001amsd Sam Ba	pType: <b>M</b>	57775 /2/2020 SPK value 22.08 883.4 SD 57775	F S SPK Ref Val 0 Tes F	RunNo: 67 SeqNo: 23 %REC 94.6 115 tCode: EF	7775 341396 LowLimit 69.1 66.6 PA Method 7775	Units: <b>mg/K</b> HighLimit 142 105	g %RPD line Rang	RPDLimit	
Client ID: S-19 Prep Date: Analyte Gasoline Range Organics Surr: BFB Sample ID: 2004059 Client ID: S-19	Analysis Result (GRO) 21 1000 9-001amsd Sam Ba	pType: MS bate: 4/ PQL 4.4 pType: MS tch ID: Ge bate: 4/	S7775 2/2020 SPK value 22.08 883.4 SD S7775 2/2/2020	F S SPK Ref Val 0 Tes F	RunNo: 67 SeqNo: 23 %REC 94.6 115 tCode: EF RunNo: 67 SeqNo: 23	7775 341396 LowLimit 69.1 66.6 PA Method 7775	Units: mg/K HighLimit 142 105 8015D: Gaso	g %RPD line Rang	RPDLimit	
Client ID: S-19 Prep Date: Analyte Gasoline Range Organics Surr: BFB Sample ID: 2004059 Client ID: S-19 Prep Date:	Ba Analysis Result (GRO) 21 1000 9-001amsd Sam Ba Analysis Result	pType: MS bate: 4/ PQL 4.4 pType: MS tch ID: G6 bate: 4/	S7775 2/2020 SPK value 22.08 883.4 SD S7775 2/2/2020	F SPK Ref Val 0 Tes F S	RunNo: 67 SeqNo: 23 %REC 94.6 115 tCode: EF RunNo: 67 SeqNo: 23	7775 341396 LowLimit 69.1 66.6 PA Method 7775 341397	Units: mg/K HighLimit 142 105 8015D: Gaso Units: mg/K	g %RPD line Rang	RPDLimit e	S

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**ENSOLUM** 

**Client:** 

	WO#:	2004059
boratory, Inc.		03-Apr-20

Project: Later										
Sample ID: mb1	Samp	Туре: <b>МЕ</b>	BLK	Tes	Code: EF	PA Method	8021B: Volat	tiles		
Client ID: PBS	Bato	h ID: <b>B6</b>	7775	R	unNo: 67	7775				
Prep Date:	Analysis I	Date: 4/	2/2020	S	eqNo: 2	341400	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Foluene	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 Ic	s Samp	Туре: <b>LC</b>	S	Tes	Code: EF	PA Method	8021B: Vola	tiles		
Client ID: LCSS	Bato	h ID: <b>B6</b>	7775	R	unNo: 67	7775				
Prep Date:	Analysis I	Date: 4/	2/2020	S	eqNo: 2	341401	Units: mg/k	٢g		
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: 2004059-002a	ams Samp	Туре: <b>МS</b>	5	Tes	Code: EF	PA Method	8021B: Vola	tiles		
Client ID: S-20	Bato	h ID: <b>B6</b>	7775	R	unNo: 67	7775				
Prep Date:										
	Analysis I	Date: 4/	2/2020	S	eqNo: 2	341407	Units: mg/k	٤g		
Analyte	Analysis I Result	Date: <b>4/</b> PQL		S SPK Ref Val	eqNo: <b>2:</b> %REC	<b>341407</b> LowLimit	Units: <b>mg/k</b> HighLimit	<b>(g</b> %RPD	RPDLimit	Qual
Analyte							Ū	•	RPDLimit	Qual
Analyte Benzene	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	•	RPDLimit	Qual
Analyte Benzene Toluene	Result 0.76	PQL 0.020	SPK value 0.8052	SPK Ref Val 0	%REC 94.0	LowLimit 78.5	HighLimit 119	•	RPDLimit	Qual
Analyte Benzene Foluene Ethylbenzene	Result 0.76 0.76	PQL 0.020 0.040	SPK value 0.8052 0.8052	SPK Ref Val 0 0	%REC 94.0 94.0	LowLimit 78.5 75.7	HighLimit 119 123	•	RPDLimit	Qual
Analyte Benzene Foluene Ethylbenzene	Result 0.76 0.76 0.77	PQL 0.020 0.040 0.040	SPK value 0.8052 0.8052 0.8052	SPK Ref Val 0 0 0	%REC 94.0 95.4	LowLimit 78.5 75.7 74.3	HighLimit 119 123 126	•	RPDLimit	Qual
Analyte Benzene Toluene Ethylbenzene Xylenes, Total	Result 0.76 0.76 0.77 2.3 0.87	PQL 0.020 0.040 0.040	SPK value 0.8052 0.8052 0.8052 2.416 0.8052	SPK Ref Val 0 0 0 0	%REC 94.0 95.4 97.1 109	LowLimit 78.5 75.7 74.3 72.9 80	HighLimit 119 123 126 130	%RPD	RPDLimit	Qual
Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene	Result           0.76           0.76           0.77           2.3           0.87	PQL 0.020 0.040 0.040 0.081	SPK value 0.8052 0.8052 0.8052 2.416 0.8052	SPK Ref Val 0 0 0 0 Test	%REC 94.0 95.4 97.1 109	LowLimit 78.5 75.7 74.3 72.9 80 PA Method	HighLimit 119 123 126 130 120	%RPD	RPDLimit	Qual
Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene Sample ID: <b>2004059-002a</b>	Result           0.76           0.76           0.77           2.3           0.87	PQL 0.020 0.040 0.040 0.081 Type: MS	SPK value 0.8052 0.8052 2.416 0.8052 5D 7775	SPK Ref Val 0 0 0 0 Tesi R	%REC 94.0 94.0 95.4 97.1 109	LowLimit 78.5 75.7 74.3 72.9 80 PA Method 7775	HighLimit 119 123 126 130 120	%RPD	RPDLimit	Qual
Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene Sample ID: <b>2004059-002a</b> Client ID: <b>S-20</b>	Result           0.76           0.76           0.76           0.76           0.77           2.3           0.87	PQL 0.020 0.040 0.040 0.081 Type: MS	SPK value 0.8052 0.8052 2.416 0.8052 5D 7775 2/2020	SPK Ref Val 0 0 0 0 Tesi R	%REC 94.0 94.0 95.4 97.1 109 Code: EF	LowLimit 78.5 75.7 74.3 72.9 80 PA Method 7775	HighLimit 119 123 126 130 120 8021B: Volat	%RPD	RPDLimit	Qual
Analyte Benzene Toluene Ethylbenzene Kylenes, Total Surr: 4-Bromofluorobenzene Sample ID: <b>2004059-002a</b> Client ID: <b>S-20</b> Prep Date: Analyte	Result           0.76           0.77           2.3           0.87           amsd         Samp           Bato           Analysis	PQL 0.020 0.040 0.081 Type: MS th ID: B6 Date: 4/	SPK value 0.8052 0.8052 2.416 0.8052 5D 7775 2/2020	SPK Ref Val 0 0 0 0 Tesi R S	%REC 94.0 94.0 95.4 97.1 109 Code: EF cunNo: 6 SeqNo: 2	LowLimit 78.5 75.7 74.3 72.9 80 PA Method 7775 341408	HighLimit 119 123 126 130 120 8021B: Volat Units: mg/k	%RPD		
Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene Sample ID: <b>2004059-002a</b> Client ID: <b>S-20</b> Prep Date: Analyte Benzene	Result           0.76           0.76           0.76           0.77           2.3           0.87           Imsd         Samp           Bato           Analysis I           Result	PQL 0.020 0.040 0.081 Type: MS th ID: B6 Date: 4/ PQL	SPK value 0.8052 0.8052 2.416 0.8052 5D 7775 2/2020 SPK value	SPK Ref Val 0 0 0 Test R SPK Ref Val	%REC 94.0 94.0 95.4 97.1 109 Code: EF cunNo: 67 SeqNo: 23 %REC	LowLimit 78.5 75.7 74.3 72.9 80 PA Method 7775 341408 LowLimit	HighLimit 119 123 126 130 120 8021B: Volat Units: mg/P HighLimit	%RPD tiles %g %RPD	RPDLimit	
Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene Sample ID: <b>2004059-002a</b> Client ID: <b>S-20</b> Prep Date: Analyte Benzene Toluene	Result           0.76           0.76           0.76           0.77           2.3           0.87           Imsd         Samp           Bato           Analysis           Result           0.76	PQL 0.020 0.040 0.081 Type: MS th ID: B6 Date: 4/ PQL 0.020	SPK value 0.8052 0.8052 2.416 0.8052 5D 7775 2/2020 SPK value 0.8052	SPK Ref Val 0 0 0 Test R SPK Ref Val 0	%REC 94.0 94.0 95.4 97.1 109 COde: EF cunNo: 6 beqNo: 2 %REC 94.2	LowLimit 78.5 75.7 74.3 72.9 80 PA Method 7775 341408 LowLimit 78.5	HighLimit 119 123 126 130 120 8021B: Volat Units: mg/H HighLimit 119	%RPD tiles (g %RPD 0.298	RPDLimit 20	
Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene Sample ID: <b>2004059-002a</b> Client ID: <b>S-20</b> Prep Date:	Result           0.76           0.76           0.76           0.77           2.3           0.87             amsd           Samp           Bato           Analysis           Result           0.76           0.77	PQL 0.020 0.040 0.040 0.081 Type: MS th ID: B6 Date: 4/ PQL 0.020 0.040	SPK value 0.8052 0.8052 2.416 0.8052 5D 7775 2/2020 SPK value 0.8052 0.8052	SPK Ref Val 0 0 0 0 Test SPK Ref Val 0 0	%REC 94.0 94.0 95.4 97.1 109 Code: Ef SunNo: 6 SeqNo: 2 %REC 94.2 95.3	LowLimit 78.5 75.7 74.3 72.9 80 <b>PA Method</b> 7775 341408 LowLimit 78.5 75.7	HighLimit 119 123 126 130 120 8021B: Volat Units: mg/k HighLimit 119 123	%RPD tiles 5g 0.298 1.32	RPDLimit 20 20	

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- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

ANA	L TRONMENT LLYSIS ORATORY	AL	TE	ll Environment Al L: 505-345-39 Website: www.t	49 Ibuquer 75 FAX	01 Hawki que, NM 8 : 505-345	ns NE 87109 -4107	Sample Log-In Check List				
Client Name	ENSOLUM	AZTEC	Work	Order Numbe	er: 200	4059			RcptNo: 1			
Received By	Isaiah Or	tiz	4/2/202	0 8:16:00 AM	r.		7	-	24			
Completed B Reviewed By		tiz	4/2/202	0 8:16:36 AM			2		2-×			
<u>Chain of C</u>	in here I do not											
	Custody suffic		e?		Yes		N	o 🗌	Not Present			
2. How was t	ne sample deliv	vered?			Cou	<u>irier</u>						
Log In 3. Was an att	empt made to o	cool the samp	les?		Yes		N	<b>o</b> 🗌				
4. Were all sa	mples received	l at a tempera	ture of >0° C	to 6.0°C	Yes		N	•				
5. Sample(s)	in proper conta	iner(s)?			Yes		N					
6. Sufficient s	ample volume f	for indicated te	est(s)?		Yes		No					
7. Are sample				ed?	Yes							
8. Was preser			1.1910.000		Yes	_			NA 🗌			
9. Received a	least 1 vial wit	h headspace ·	<1/4" for AQ \	/OA?	Yes		No					
10. Were any s					Yes							
11.Does paper		ttle labels?			Yes				# of preserved bottles checked for pH: (<2_or >12 unless note	(be		
12. Are matrice					Yes		No		Adjusted?			
13. Is it clear w	nat analyses we	ere requested	?		Yes	~	No			- 1		
14. Were all ho (If no, notify	ding times able customer for a				Yes		No		(Checked by: DPD 4/2/2	20		
Special Han												
15. Was client		State State State	vith this order?	,	Yes		No					
	on Notified:	Г		Date:		-191						
Rega	hom: rding: t Instructions:	 		Via:	eM	ail 🗌 F	Phone [	] Fax	In Person			
16. Additional	remarks:											
17. <u>Cooler Int</u> Cooler	Committee and the second second	Condition	Seal Intact	Seal No	Seal D	ata	Signed	Du	T			
4	1.0	Good	Yes	ocarno	Jeal D	ale	Signed	Бу				

Page 1 of 1

	I ABORATORY	ental.com	37109		Request		bCB,2	280	)8 \ (≜ 2 ≤	Sebi	A, Toions (F, C 8081 Pestic 8260B (VOV 8250 (Semi- 701 ひし 701 ひし 701 ひし 701 ひし 701 ひし 701 ひし 701 ひし	X	X	×		X		- TOM Land (EP20D) Ley- RESADOO AFE- NY7709 Clearly notated on the analytical report.
		www.hallenvi	4901 Hawkins NE - Albu	505-345-3975	Anal	(0)		(	1.81 1.40 728	) ol 99 20	TPH 8015B TPH (Metho EDB (Metho PAH's (8310 PAH's (8310		×	X	$\times$	×		DAY POW Key
			490	Tel.		(Λμ	no seĐ)	) Ha	н Т <del>і</del>	· 38	втех + мт втех + мт		×	X	×	×		SAM C
SAME OAY	100%					mes			D No	-0.2/ce/ 1.0.c	HEAL No.	100-	200.	- 003	100-	-CUS		Date Time $\frac{4}{1}, \frac{1}{20}, \frac{1}{1053}$ Date Time $\frac{4}{1}, \frac{1}{20}, \frac{08}{10}$
	DKRush_		1 100-1	stores		Project Manager: XS UMM 23		- illion oor	5	N	Preservative Type	C00]	(00)	Ceol	000	(cov)		Corrections
Turn-Around Time:	□ Standard	Project Name:	Lateral	Project #: See notes		Project Mana		Sampler 7	On Ice: B-Yes	Sample Temperature:	Container Type and #	IxYuzJor	1×402Jor	1×402 Jur	1+402 Jen	1x 402 Jur		Received by: Received by:
Chain-of-Custody Record	C		Mailing Address: (0010 S. Rio (GRANDE SLITHE A	10	~	email or Fax#: KSUMMERSPENSOLUM, (GIM	Level 4 (Full Validation)				Sample Request ID	9-19	5-20	S-21	S-22	S-23		Time:     Relinquished by:     Received by:     Date     Time     Remarks:     PM-TOM     PM-TOM
-of-Cu	Client: Ensolum, LLC	1	s: (oblo S.	VINEX W		Summe			□ Other		Matrix	5	5	5	S	S		Relinquished by: Relinquished by:
Chain	t: Enso		ng Addres	MIN, 194,0A	e#:	or Fax#:	↓ QA/QC Package: □ Standard	Accreditation	O NELAP	□ EDD (Type).	e	S INN S	0 1450	0 juss	0 1500	20 1505		Date:         Time:           U/1/20         JU573           Date:         Time:           U/1/20         I/1/47           If necessary.         If necessary.
Rolons	Clien	Ima	Mailir	4	Phone #:	c email	QA/Q	Accre			Date	4/1/20	4/1/20	4/1/20	4/1/20	4/1/20		Date: U 1/2D Date: f1/20

. Released to Imaging: 5/17/2022 12:58:46 PM



April 05, 2020

Kyle Summers ENSOLUM 606 S. Rio Grande Suite A Aztec, NM 87410 TEL: (903) 821-5603 FAX Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

OrderNo.: 2004126

Dear Kyle Summers:

RE: Lateral 10E 1

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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

## Hall Environmental Analysis Laboratory, Inc.

Lab Order 2004126

Date Reported: 4/5/2020

CLIENT: ENSOLUM		C	lient Sample I	<b>D:</b> S-2	24	
<b>Project:</b> Lateral 10E 1			_		2/2020 12:45:00 PM	
Lab ID: 2004126-001	Matrix: SOIL		Received Dat	e: 4/3	3/2020 8:00:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: JMT
Chloride	ND	60	mg/Kg	20	4/3/2020 12:02:14 PM	51532
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				Analys	t: 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	1				Analys	t: 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					Analys	t: 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
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 1 of 7

## Hall Environmental Analysis Laboratory, Inc.

Lab Order 2004126

Date Reported: 4/5/2020

CLIENT: ENSOLUM		C	ient Sample I	<b>D:</b> S-2	25	
Project: Lateral 10E 1		(	Collection Dat	t <b>e:</b> 4/2	2/2020 12:50:00 PM	
Lab ID: 2004126-002	Matrix: SOIL		Received Dat	t <b>e:</b> 4/3	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	E				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. D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 2 of 7

## Hall Environmental Analysis Laboratory, Inc.

Lab Order 2004126

Date Reported: 4/5/2020

CLIENT: ENSOLUM		Cl	ient Sample II	<b>D:</b> S-2	26	
Project: Lateral 10E 1		(	Collection Dat	<b>e:</b> 4/2	2/2020 12:55:00 PM	
Lab ID: 2004126-003	Matrix: SOIL		<b>Received Dat</b>	<b>e:</b> 4/3	8/2020 8:00:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: JMT
Chloride	ND	60	mg/Kg	20	4/3/2020 12:51:37 PM	51532
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS				Analys	t: 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 RANG	GE				Analys	t: 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					Analys	t: 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. D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range RL
  - Reporting Limit

Page 3 of 7

Client: Project:		OLUM al 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 Da	ate: 4/	3/2020	S	SeqNo: 23	342819	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	SampTy	ype: Ics	5	Tes	tCode: EF	PA Method	300.0: Anion	S				
Client ID:	LCSS	Batch	ID: <b>51</b>	532	F	RunNo: 67	7815						
Prep Date:	4/3/2020	Analysis Da	ate: 4/	3/2020	5	SeqNo: 23	342820	Units: mg/K	g				
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

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2004126

06-Apr-20

WO#:

	WO#:	2004126
Environmental Analysis Laboratory, Inc.		06-Apr-20

	DLUM al 10E 1												
Sample ID: LCS-51531	SampT	ype: LC	S	TestCode: EPA Method 8015M/D: Diesel Range Organics									
Client ID: LCSS	Batch	Batch ID: 51531 RunNo: 67813											
Prep Date: 4/3/2020	Analysis D	ate: 4/	3/2020	S	SeqNo: 2	342461	Units: mg/k	٢g					
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	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics				
Client ID: PBS	Batch	n ID: 51	531	F	RunNo: 6	7813							
Prep Date: 4/3/2020	Analysis D	ate: 4/	3/2020	S	SeqNo: 2	342462	Units: mg/k	٤g					
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
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Practical Quanitative Limit PQL
- % Recovery outside of range due to dilution or matrix S

- Analyte detected in the associated Method Blank В
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

Page 5 of 7

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RPDLimit

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	WO#:	2004126
nental Analysis Laboratory, Inc.		06-Apr-20

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	DLUM al 10E 1										
Sample ID: 2.5ug gro Ics	Samp	Type: LC	s	TestCode: EPA Method 8015D: Gasoline Rang							
Client ID: LCSS	Batc	h ID: <b>Ge</b>	67819	F							
Prep Date:	Analysis [	Date: 4/	3/2020	5	SeqNo: 2	342508	Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	I		
Gasoline Range Organics (GRO)	24	5.0	25.00	0	96.7	80	120				
Surr: BFB	1100		1000		110	66.6	105				
Sample ID: mb	Samp	Гуре: М	BLK	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	е		
Client ID: PBS	Batc	h ID: <b>Ge</b>	57819	F	RunNo: 6	7819					
Prep Date:	Analysis [	Date: 4/	3/2020	5	SeqNo: 2	342518	Units: mg/k	٢g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	I		

1000

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

Gasoline Range Organics (GRO)

Surr: BFB

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

Page 6 of 7

# QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Sample ID: 100ng btex Ics	Samp	ype: LC	S	Tes	TestCode: EPA Method 8021B: Volatiles									
Client ID: LCSS	Batc	h ID: R6	7819	F	unNo: 67	7819								
Prep Date:	Analysis [	Date: 4/	3/2020	S	eqNo: 2	342520	Units: mg/K	g						
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							
Occurring ID		_		_										
Sample ID: mb	Samp	Гуре: <b>МЕ</b>	BLK	Tes	tCode: EF	PA Method	8021B: Volat	iles						
Sample ID: <b>mb</b> Client ID: <b>PBS</b>		「ype: <b>ME</b> h ID: <b>R6</b>			tCode: EF		8021B: Volat	iles						
		h ID: R6	7819	F		7819	8021B: Volat							
Client ID: <b>PBS</b>	Batc	h ID: R6	7819 3/2020	F	unNo: 67	7819			RPDLimit	Qual				
Client ID: <b>PBS</b> Prep Date:	Batc Analysis [	h ID: <b>R6</b> Date: <b>4/</b> 3	7819 3/2020	٦ S	tunNo: 67	7819 342530	Units: <b>mg/K</b>	g	RPDLimit	Qual				
Client ID: <b>PBS</b> Prep Date: Analyte	Batc Analysis I Result	h ID: <b>R6</b> Date: <b>4/</b> : PQL	7819 3/2020	٦ S	tunNo: 67	7819 342530	Units: <b>mg/K</b>	g	RPDLimit	Qual				
Client ID: <b>PBS</b> Prep Date: Analyte Benzene	Batc Analysis I Result ND	h ID: <b>R6</b> Date: <b>4/</b> : PQL 0.025	7819 3/2020	٦ S	tunNo: 67	7819 342530	Units: <b>mg/K</b>	g	RPDLimit	Qual				
Client ID: <b>PBS</b> Prep Date: Analyte Benzene Toluene	Batc Analysis I Result ND ND	h ID: <b>R6</b> Date: <b>4/</b> <u>PQL</u> 0.025 0.050	7819 3/2020	٦ S	tunNo: 67	7819 342530	Units: <b>mg/K</b>	g	RPDLimit	Qual				

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 7 of 7

WO#: **2004126** 

06-Apr-20

Page 102 of 13	30
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HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental Alb TEL: 505-345-3975 Website: www.ha	490 uquero FAX:	01 Hawkins NL que, NM 87109 505-345-4107	5 9 <b>S</b> 7	Sam	ple Log-In Check List
Client Name: ENSOLUM AZTEC	Work Order Number	: 200	4126			RcptNo: 1
Received By: Isaiah Ortiz	4/3/2020 8:00:00 AM			I.	-0-	*
Completed By: Anne Thorne	4/3/2020 8:10:34 AM			1.	Am	
Reviewed By: JR 413/20				am	Alim	
Chain of Custody						
1. Is Chain of Custody sufficiently complete?		Yes		No		Not Present
2. How was the sample delivered?		Cou	rier			
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) proper	ly preserved?	Yes		No		
8. Was preservative added to bottles?		Yes		No		NA 🗌
9. Received at least 1 vial with headspace <1/2	" for AQ VOA?	Yes		No		NA 🔽
10. Were any sample containers received broke	n?	Yes		No		
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes		No	_	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of	Custody?	Yes	~	No		Adjusted?
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		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				nitrease .	
By Whom:	Via:	] eM	ail 🗌 Phon	e 🗌	Fax	In Person
Regarding:	and an operation of the state of the state of the state					
Client Instructions:			1.4.3110.214.3.2.4.4	A	H SI CA	
16. Additional remarks: CUSTODY SEALS INTACT ON SOIL	JARS/04/03/20 at					
17. <u>Cooler Information</u>				27.4 4		
Cooler No Temp °C Condition S 1 4.1 Good Ye	the second s	eal D	ate Sig	ned B	sy	

Page 1 of 1

	12		D: 1	1/4/2	2020	10:	42:57 A	<u>М</u> (N J	0 7)	) səlddu8 1iA									5	ge 103 a	f 130
	VSTS I ARODATOD		Albuqueraue, NM 87109	70						CHIOLIC	$\times$	$\times$	$\times$						Racio (EPRO)	)	analytical report.
		und und	NM 8	505-345-4107	st			(৮		AOV) 80828 -im92) 0728							_		6001	)	on the a
È	¥ _	1 th	aue.	15-34	Request	-	PCB's	7808 /	_	AOV) 80828	-						-	-	Lam 1	5	otated
	ANAL ENVI		auer	Fax 5(	sis R	(*(			-	ID, F) snoinA					-				PIN-TU	It	learly n
		envii	Albu	ű	Analysis				_	PCRA 8 Met									-wd	Non	vill be c
	ANAI	led v	Ч	975	A		(SMI	S 0728	) OL	01£8) a'HA9	-								010	.2	I data w
5		- MMM	4901 Hawkins NE	505-345-3975		1				EDB (Metho									1		Itracted
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SAME DAY	10670					ners	1	No	-0.1 kr / 4.5.	4,7-0.1(a/4 HEAL No. ZOOHIZU	100	202	203						Date Time	Date Time	is serves as notice of t
ime:	KRush		106-1	ee notes		ger: KSummers		BYes Dres	21.4	ative	Coul	C001	Coul						u ( ) Color	Control	credited laboratories. Th
Turn-Around T	□ Standard	Project Name:	Lateral	Project #: See notes		Project Manag		Sampler:	Temp	A-ot [1320 Container Type and #	1×402701	1×402501	1×402Jer						Received by:	Received by:	ontracted to other acc
Chain-of-Custody Record	110		Mailing Address: LOCOS, Rio Granne Suite A	0		email or Fax#: KSUMMACS @ ENSOLUM/COM	Level 4 (Full Validation)	er		Sample Request ID	S-24	5-25	5-26						ed by:	ed by:	o Hall Envi
1-of-CI	Ensolum LC	-	s: locios	V STULO		KSUMM	v	□ Other		Matrix		5	S						Relinquished by	Relinquished by:	samples sub
hain			Addres	ec, NM	-	r Fax#:	QA/QC Package:	itation AP	EDD (Type)	Time	1245	1250	1255					-	Time:	Time:	necessary
	Client:		· Mailing	Antec	Phone #	email o	QA/QC	Accreditation		Date	21/2/2	4/2/20 1250	4/2/20/1255	-					Uppolition	Time: Ture: Table 1827	



April 06, 2020

Kyle Summers ENSOLUM 606 S. Rio Grande Suite A Aztec, NM 87410 TEL: (903) 821-5603 FAX Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

OrderNo.: 2004184

Dear Kyle Summers:

RE: Lateral 10E 1

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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

## Hall Environmental Analysis Laboratory, Inc.

Lab Order 2004184

Date Reported: 4/6/2020

CLIENT	ENSOLUM	Client Sample ID: S-27
Project:	Lateral 10E 1	Collection Date: 4/3/2020 3:20:00 PM
Lab ID:	2004184-001	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 ORG	GANICS				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. D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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## Hall Environmental Analysis Laboratory, Inc.

Lab Order 2004184

Date Reported: 4/6/2020

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 ORG	SANICS				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. D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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## Hall Environmental Analysis Laboratory, Inc.

Lab Order 2004184

Date Reported: 4/6/2020

CLIENT	ENSOLUM	Client Sample ID: S-29
<b>Project:</b>	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 ORG	GANICS				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. D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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## Hall Environmental Analysis Laboratory, Inc.

Lab Order 2004184

Date Reported: 4/6/2020

CLIENT	ENSOLUM	Client Sample ID: S-30
<b>Project:</b>	Lateral 10E 1	<b>Collection Date:</b> 4/3/2020 3:35:00 PM
Lab ID:	2004184-004	<b>Matrix:</b> MEOH (SOIL) <b>Received Date:</b> 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 OR	GANICS				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. D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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### Hall Environmental Analysis Laboratory, Inc.

Lab Order 2004184

Date Reported: 4/6/2020

CLIENT	ENSOLUM	Client Sample ID: S-31
<b>Project:</b>	Lateral 10E 1	Collection Date: 4/3/2020 3:40:00 PM
Lab ID:	2004184-005	<b>Matrix:</b> MEOH (SOIL) <b>Received Date:</b> 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 ORG	ANICS				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. D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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## Hall Environmental Analysis Laboratory, Inc.

Lab Order 2004184

Date Reported: 4/6/2020

CLIENT:	ENSOLUM	Client Sample ID: S-32
<b>Project:</b>	Lateral 10E 1	<b>Collection Date:</b> 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 ORG	SANICS				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. D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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## Hall Environmental Analysis Laboratory, Inc.

Lab Order 2004184

Date Reported: 4/6/2020

CLIENT:	ENSOLUM	Client Sample ID: S-33
Project:	Lateral 10E 1	<b>Collection Date:</b> 4/3/2020 3:50:00 PM
Lab ID:	2004184-007	<b>Matrix:</b> MEOH (SOIL) <b>Received Date:</b> 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 ORG	SANICS				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. D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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### Hall Environmental Analysis Laboratory, Inc.

Lab Order 2004184

Date Reported: 4/6/2020

CLIENT	ENSOLUM	Client Sample ID: S-34
<b>Project:</b>	Lateral 10E 1	<b>Collection Date:</b> 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	t: CAS
Chloride	ND	60	mg/Kg	20	4/4/2020 10:58:21 PM	51561
EPA METHOD 8015M/D: DIESEL RANGE OR	GANICS				Analyst	t: 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	t: 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	t: 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. D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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### Hall Environmental Analysis Laboratory, Inc.

Lab Order 2004184

Date Reported: 4/6/2020

CLIENT	ENSOLUM	Client Sample ID: S-35
<b>Project:</b>	Lateral 10E 1	<b>Collection Date:</b> 4/3/2020 4:00:00 PM
Lab ID:	2004184-009	<b>Matrix:</b> MEOH (SOIL) <b>Received Date:</b> 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 ORG	GANICS				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. D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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### Hall Environmental Analysis Laboratory, Inc.

Lab Order 2004184

Date Reported: 4/6/2020

CLIENT	ENSOLUM	Client Sample ID: S-36
<b>Project:</b>	Lateral 10E 1	<b>Collection Date:</b> 4/3/2020 4:05:00 PM
Lab ID:	2004184-010	<b>Matrix:</b> MEOH (SOIL) <b>Received Date:</b> 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 ORG	GANICS				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. D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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### Hall Environmental Analysis Laboratory, Inc.

Lab Order 2004184

Date Reported: 4/6/2020

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

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	t: CAS
Chloride	ND	60	mg/Kg	20	4/4/2020 11:35:22 PM	51561
EPA METHOD 8015D MOD: GASOLINE RANG	GE				Analyst	t: 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 OR	GANICS				Analyst	t: 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 LI	ST				Analyst	t: 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. D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Client: Project:	ENSOL Lateral										
Sample ID: ME	B-51561	SampTy	/pe: <b>ml</b>	olk	Tes	tCode: EF	PA Method	300.0: Anion	s		
Client ID: PB	BS	Batch	ID: <b>51</b>	561	F	RunNo: 67	7852				
Prep Date: 4	/4/2020	Analysis Da	ate: 4/	4/2020	S	SeqNo: 23	343786	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	1.5								
Sample ID: LC	CS-51561	SampTy	/pe: Ics	5	Tes	tCode: EF	PA Method	300.0: Anion	S		
Client ID: LC	SS	Batch	ID: 51	561	F	RunNo: 67	7852				
Prep Date: 4	/4/2020	Analysis Da	ate: 4/	4/2020	S	SeqNo: 23	343787	Units: mg/K	g		
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			

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- P Sample pH Not In Range
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2004184

06-Apr-20

WO#:

## **QC SUMMARY REPORT** Hall

L.		tal Analysis Laborato	wo#:	2004184 <i>06-Apr-20</i>
Client:	ENSOI	LUM		
Project:	Lateral	10E 1		
Sample ID: M	B-51555	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics	

Sample ID: MB-51555	SampT	ype: ME	BLK	Tes	tCode: EF	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: PBS	Batch	n ID: 51	555	F	RunNo: 67	7858				
Prep Date: 4/4/2020	Analysis D	ate: 4/	5/2020	S	SeqNo: 2	344047	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10					5			
Notor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.5		10.00		84.8	55.1	146			
Sample ID: LCS-51555	SampT	ype: LC	S	Tes	tCode: EF	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: LCSS	Batch	n ID: 51	555	F	RunNo: 67	7858				
Prep Date: 4/4/2020	Analysis D	ate: 4/	5/2020	S	SeqNo: 2	344048	Units: mg/k	٢g		
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	SampT	ype: MS	6	Tes	tCode: EF	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: S-27	Batch	n ID: 51	555	F	RunNo: 67	7858				
Prep Date: 4/4/2020	Analysis D	ate: 4/	5/2020	S	SeqNo: 2	344054	Units: mg/k	٢g		
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: 2004184-001AMS	D SampT	ype: <b>MS</b>	SD	Tes	tCode: EF	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: S-27	Batch	n ID: 51	555	F	RunNo: 67	7858				
Prep Date: 4/4/2020	Analysis D	ate: 4/	5/2020	S	SeqNo: 23	344055	Units: mg/k	٢g		
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	

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WO#:	2004184
	06 1 20

06-Apr-20

	DLUM al 10E 1		
Sample ID: 2.5ug gro Ics	SampType: LCS	TestCode: EPA Method 801	15D: Gasoline Range
Client ID: LCSS	Batch ID: G67819	RunNo: 67819	
Prep Date:	Analysis Date: 4/3/2020	SeqNo: 2342508 Ur	nits: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit H	lighLimit %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 801	15D: Gasoline Range
Client ID: PBS	Batch ID: G67819	RunNo: 67819	
Prep Date:	Analysis Date: 4/3/2020	SeqNo: 2342518 Ur	nits: mg/Kg
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit H	lighLimit %RPD RPDLimit Qual
Gasoline Range Organics (GRO) Surr: BFB	ND 5.0 1100 1000	109 66.6	105 S
Sample ID: Ics-51420	SampType: LCS	TestCode: EPA Method 801	15D: Gasoline Range
Client ID: LCSS	Batch ID: 51420	RunNo: 67819	
Prep Date: 3/30/2020	Analysis Date: 4/3/2020	SeqNo: 2343527 Ur	nits: %Rec
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit H	lighLimit %RPD RPDLimit Qual
Surr: BFB	1100 1000	109 66.6	105 S
Sample ID: mb-51420	SampType: MBLK	TestCode: EPA Method 801	15D: Gasoline Range
Client ID: PBS	Batch ID: 51420	RunNo: 67819	
Prep Date: 3/30/2020	Analysis Date: 4/3/2020	SeqNo: 2343529 Ur	nits: %Rec
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit H	lighLimit %RPD RPDLimit Qual
Surr: BFB	990 1000	98.6 66.6	105

Qualifiers:

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- E Value above quantitation range
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**ENSOLUM** 

Lateral 10E 1

**Client:** 

**Project:** 

## **QC SUMMARY REPORT** Hall Environmental Analysis Laboratory, Inc.

Sample ID: 100ng btex lcs	SampT	ype: LC	S	Tes	tCode: EF	PA Method	8021B: Volat	iles		
Client ID: LCSS	Batc	h ID: R6	7819	F	RunNo: 67	7819				
Prep Date:	Analysis E	Date: 4/	3/2020	S	SeqNo: 23	342520	Units: mg/K	ſg		
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	SampT	Гуре: <b>МЕ</b>	BLK	Tes	tCode: EF	PA Method	8021B: Volat	iles		
Client ID: PBS	Batc	h ID: <b>R6</b>	7819	F	RunNo: 67	7819				
Client ID: <b>PBS</b> Prep Date:	Batcl Analysis E				RunNo: <b>6</b> SeqNo: <b>2</b>		Units: <b>mg/K</b>	ſg		
			3/2020		SeqNo: 2:		Units: <b>mg/K</b> HighLimit	<b>(g</b> %RPD	RPDLimit	Qual
Prep Date:	Analysis [	Date: 4/	3/2020	S	SeqNo: 2:	342530	Ŭ	0	RPDLimit	Qual
Prep Date: Analyte	Analysis I Result	Date: <b>4/</b> PQL	3/2020	S	SeqNo: 2:	342530	Ŭ	0	RPDLimit	Qual
Prep Date: Analyte Benzene	Analysis E Result ND	Date: <b>4/</b> PQL 0.025	3/2020	S	SeqNo: 2:	342530	Ŭ	0	RPDLimit	Qual
Prep Date: Analyte Benzene Toluene	Analysis E Result ND ND	Date: 4/ PQL 0.025 0.050	3/2020	S	SeqNo: 2:	342530	Ŭ	0	RPDLimit	Qual
Prep Date: Analyte Benzene Toluene Ethylbenzene	Analysis I Result ND ND ND	Date: 4/ PQL 0.025 0.050 0.050	3/2020	S	SeqNo: 2:	342530	Ŭ	0	RPDLimit	Qual
Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total	Analysis I Result ND ND ND ND 1.1	Date: 4/ PQL 0.025 0.050 0.050	3/2020 SPK value 1.000	SPK Ref Val	SeqNo: 2: %REC 114	342530 LowLimit 80	HighLimit	%RPD	RPDLimit	Qual

Client ID: PBS	Batch	n ID: R6	7819	F	RunNo: 6	7819				
Prep Date:	Analysis D	ate: 4/	3/2020	S	SeqNo: 2	342530	Units: mg/K	g		
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	SampT	ype: LC	s	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: LCSS	Batch	n ID: 51	420	F	RunNo: 6	7819				
Prep Date: 3/30/2020	Analysis D	ate: 4/	3/2020	S	SeqNo: 2	343576	Units: %Red	•		
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	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: PBS	Batch	n ID: 51	420	F	RunNo: 6	7819				
Prep Date: 3/30/2020	Analysis D	ate: 4/	3/2020	S	SeqNo: 2	343578	Units: %Red	;		
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:** 

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- Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit ND

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

- в Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits

Р Sample pH Not In Range

RL Reporting Limit Page 15 of 18

WO#: 2004184

06-Apr-20

WO#:	2004	4184
	04.4	•

06-Apr-20

Client: ENSOLU	JM									
Project: Lateral 1	0E 1									
Sample ID: mb-51528	SampT	Гуре: МЕ	BLK	Tes	tCode: El	PA Method	8260B: Volat	iles Short	List	
Client ID: PBS	Batcl	h ID: <b>51</b>	528	F	RunNo: 6	7853				
Prep Date: 4/2/2020	Analysis E	Date: 4/	4/2020	S	SeqNo: 2	343875	Units: %Red	•		
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: Ics-51528	SampT	Гуре: <b>LC</b>	:S4	Tes	tCode: El	PA Method	8260B: Volat	iles Short	List	
Client ID: BatchQC	Batc	h ID: 51	528	F	RunNo: 6	7853				
Prep Date: 4/2/2020	Analysis E	Date: 4/	4/2020	S	SeqNo: 2	343876	Units: %Red	•		
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	SampT	Гуре: <b>МЕ</b>	BLK	Tes	tCode: El	PA Method	8260B: Volat	iles Short	List	
Client ID: PBS	Batcl	h ID: 51	530	F	RunNo: 6	7853				
Prep Date: 4/2/2020	Analysis E	Date: 4/	5/2020	S	SeqNo: 2	343895	Units: <b>mg/K</b>	g		
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	0 5000		05.0	70	400			
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: Ics-51530	SampT	Гуре: <b>LC</b>	:S4	Tes	tCode: El	PA Method	8260B: Volat	iles Short	List	
Client ID: BatchQC	Batc	h ID: <b>51</b>	530	F	RunNo: 6	7853				
Prep Date: 4/2/2020	Analysis E	Date: 4/	5/2020	S	SeqNo: 2	343896	Units: <b>mg/K</b>	g		
Analyte	Result	PQL		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			

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PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

E Value above quantitation range

- J Analyte detected below quantitation limits
- P Sample pH Not In Range

RL Reporting Limit

•

B Analyte detected in the associated Method Blank

200418	WO#:
06-Anr-2	

Client: ENSOLUM Project: Lateral 10E 1

Sample ID: mb-51487	SampType: MBLK TestCode: EPA Method 8				8260B: Volati	les Short	List				
Client ID: PBS		n ID: <b>51</b>		RunNo: 67881							
Prep Date: 4/1/2020	Analysis D	)ate: 4/	/5/2020	S	SeqNo: 2	345162	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: Ics-51487 SampType: LCS4 TestCode: EPA Method			8260B: Volati	les Short	List						
Client ID: BatchQC	Batch	n ID: <b>51</b>	487	RunNo: 67881							
Prep Date: 4/1/2020	Analysis D	ate: 4/	5/2020	S	SeqNo: 2	345164	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				

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2004184	WO#:
06 1 20	

06-Apr-20

Client: ENSOLU	JM					
Project: Lateral 1	0E 1					
Sample ID: mb-51528	SampType: <b>MBLK</b>	estCode: EPA Method	8015D Mod: Gasoline F	Range		
Client ID: PBS	Batch ID: <b>51528</b>	RunNo: 67853				
Prep Date: 4/2/2020	Analysis Date: 4/4/2020	SeqNo: 2343912	Units: %Rec			
Analyte	Result PQL SPK value SPK Ref V	al %REC LowLimit	HighLimit %RPD	RPDLimit Qual		
Surr: BFB	490 500.0	98.2 70	130			
Sample ID: Ics-51528	SampType: LCS 1	estCode: EPA Method	8015D Mod: Gasoline F	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 V	al %REC LowLimit	HighLimit %RPD	RPDLimit Qual		
Surr: BFB	490 500.0	98.3 70	130			
Sample ID: mb-51530	D: 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: <b>mg/Kg</b>			
Analyte	Result PQL SPK value SPK Ref V	al %REC LowLimit	HighLimit %RPD	RPDLimit Qual		
Gasoline Range Organics (GRO)	ND 5.0					
Surr: BFB	490 500.0	97.5 70	130			
Sample ID: Ics-51530	SampType: LCS	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 V	al %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	1		
Sample ID: mb-51487	SampType: MBLK 1	estCode: EPA Method	8015D Mod: Gasoline F	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 V		HighLimit %RPD	RPDLimit Qual		
Surr: BFB	490 500.0	98.6 70	130			
Sample ID: Ics-51487	SampType: LCS	SampType: LCS TestCode: EPA Method				
Client ID: LCSS	Batch ID: 51487	RunNo: 67881				
Prep Date: 4/1/2020	Analysis Date: <b>4/5/2020</b>	SeqNo: 2345214	Units: %Rec			
Analyte	Result PQL SPK value SPK Ref V	al %REC LowLimit	HighLimit %RPD	RPDLimit Qual		
			Tigheinin /ortho			

#### Qualifiers:

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- P Sample pH Not In Range
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HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental Alb TEL: 505-345-3975 Website: www.ha	490 uquerq 5 FAX:	l Hawkin ue, NM 8 505-345-	as NE 7109 S 4107	ample	Log-In (	Page Check List
Client Name: ENSOLUM AZTEC	Work Order Number	: 2004	184			RcptNo	p: 1
Received By: Erin Melendrez	4/4/2020 8:15:00 AM			in	K		
Completed By: Erin Melendrez Reviewed By: ENM	4/4/2020 8:43:19 AM 4/4/20			ino	4		
Chain of Custody							
1. Is Chain of Custody sufficiently complete?		Yes	~	No		ot Present	
2. How was the sample delivered?		Cour	ier				
<u>Log In</u>							
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	<b>~</b>	No			
5. Sample(s) in proper container(s)?		Yes	✓	No			
<ol> <li>Sufficient sample volume for indicated test(s</li> </ol>	;)?	Yes	<b>v</b>	No [			
7. Are samples (except VOA and ONG) proper	ly preserved?	Yes	~	No [			
8. Was preservative added to bottles?		Yes		No		NA 🗌	
9. Received at least 1 vial with headspace <1/4	I" for AQ VOA?	Yes		No [			
0. Were any sample containers received broke	en?	Yes		No	# of p	preserved es checked	
1. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes		No [	for pl	1:	or >12 unless noted)
2. Are matrices correctly identified on Chain of	Custody?	Yes	~	No [		Adjusted?	
3. Is it clear what analyses were requested?		Yes	~	No [			04/04/20
<ol> <li>Were all holding times able to be met? (If no, notify customer for authorization.)</li> </ol>		Yes	✓	No		Checked by:	0 110315-
pecial Handling (if applicable)							JP CHICHIPD
5. Was client notified of all discrepancies with	this order?	Yes		No		NA 🗸	
Person Notified: By Whom: Regarding:	Date: Date: Via:	eMa	il 🗌 P	'hone 🗌	Fax 🗌 In	Person	
Client Instructions:							
6. Additional remarks: 7. <u>Cooler Information</u>							
Cooler No Temp °C Condition S 1 0.3 Good	eal Intact Seal No S	eal Da	te	Signed B	У		

Page 1 of 1

suit.4	Project Name:						
suit.4 win							
to M	ateral 105-1		4901 Hawkins NE		Albuqueraue. NM 87109	0111 M 87109	<b>D:</b> 11
(C) M	i#: See notes		Tel. 505-345-3975		Fax 505-345-4107	-4107	/4/202
SSUMMERSCORSULUM, COM				Analy	Analysis Request		201
	Project Manager: KSur	ks ummer	(OS	_	(tne		0:42
QA/QC Package:			SCB, <sup>2</sup>		edA		2:57 A
	- CA		) 85 פ גענ	-	luəs		<i>M</i> -
	ei. Hueecville	No	08/9	-	110	50	
(be)	olers: 1		Sebi Sebi	slet	OV.	<i><b>P</b></i>	_
Cooler	Cooler Temp(including CF): 0	3-01CF)=0.3 (°C)	ethc ethc	əM e	-imə	201	
Time Matrix Sample Name Type and #	ner Preservative	HEAL No.	21EX / 108:H9 108:H9 108(M	а ена 2028 в 2014 в	V) 0580 (V 270 (S 7481 Cd	47	
5-27 5-27	1	-001	a 3 L ×	4	3	×	
1525 S S-ag	-Jur 1601	200-	XX			×	
1530 5 S-29	0	- 613	XX			×	
20 1535 S S-30 1 ×410-201	Ter cool	HND-	XX			×	
3/20 1540 S S-31 1 ×402 XM		- 205	XX			×	
4320 1545 S S-32 1×4025W	)	-006	XX			×	
3 pulsão S S-33 [1+40250		- 007	$\times \chi$			$\times$	
4/2/20/1555 S S-34 1×41251		- 108	XX			X	
4/3/20 1000 5 S-35 1 ×402	ster cool	-009	XX		1 1	X	
412/20 16 05 S S-36 1×402	Jar	- 010	XX			X	
12/20 1610 S S-37 11×410500		-011	XX			X	
Time: Relinquished by: Received by:	d by: Via	Date Time	Remarks:	Mq	Tom D	( Dng (Epeod)	_
7 district		0	SANEORY	Par Ley	' BB	10	Pag
13 Bu 1830 MALA A	d by: Via:COUR	ICC <sup>Date Time</sup> U/U/20		NonAt	10		e 124 of



# APPENDIX G

**Regulatory Correspondence** 

Steve Austin
Long, Thomas; "Smith, Cory, EMNRD"
Stone, Brian
RE: Lateral 10E-1 - UL H Section 36 T27N R13W; 36.531891 -108.161737
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



From: Smith, Cory, EMNRD <<u>Cory.Smith@statenm.us</u>>
Sent: Thursday, April 2, 2020 8:24 AM
To: Long, Thomas <<u>tilong@eprod.com</u>>; Steve Austin <<u>nnepawq@frontiernet.net</u>>
Cc: Stone, Brian <<u>bmstone@eprod.com</u>>
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 <<u>tilong@eprod.com</u>>
Sent: Wednesday, April 1, 2020 2:24 PM
To: Smith, Cory, EMNRD <<u>Cory.Smith@state.nm.us</u>>; Steve Austin <<u>nnepawq@frontiernet.net</u>>
Cc: Stone, Brian <<u>bmstone@eprod.com</u>>
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



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



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



This message (including any attachments) is confidential and intended for a specific individual and purpose. If you are not the intended recipient, please notify the sender immediately and delete this message.

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

#### CONDITIONS

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